[Report 1913] / Medical Officer of Health, York City.

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CITY OF YORK.

1913.

Annual Reports

OF

The Medical Officer of Health,
The Tuberculosis Officer,
The Inspector of Nuisances,
and the Public Analyst.

YORK:
PRINTED AT WOOD'S EXCELSIOR PRINTERIES, KING'S SQUARE,
1914.

CITY AND COUNTY BOROUGH OF YORK.

THE HEALTH COMMITTEE.

November, 1912, to November, 1913.

THE RT. HON. THE LORD MAYOR (ALDERMAN SIR JOSEPH SYKES RYMER).

ALDERMAN THOMAS CARTER, J.P., *Chairman.*

COUNCILLOR J. B. INGLIS, *Vice-chairman.*

Alderman	J. Birch, J.P.	Councillor	F. Birch	Councillor	A. Wilkinson
,,	W. Birch, J.P.	,,	O. Rowntree	,,	Glew
Councillor	Robinson	,,	Pollard	,,	C. Morrell
,,	Hibbett	,,	Davies	,,	Wright
		,,	Wilberforce	,,	Horsman

THE FEVER HOSPITAL SUB-COMMITTEE.

Alderman	W. Birch	Councillor	O. Rowntree	Councillor	A. Wilkinson
Councillor	Hibbett	,,	Davies	,,	Wright
,,	Robinson	,,	C. Morrell		

PUBLIC BATHS SUB-COMMITTEE.

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Councillor	Robinson	,,	O. Rowntree	,,	Wilkinson
,,	F. Birch	,,	Wilberforce		

MIDWIVES ACT SUB-COMMITTEE.

Councillor	Robinson	Councillor	Horsman	Councillor	Wilberforce

HOUSING SUB-COMMITTEE.

Councillor	Robinson	Councillor	Horsman	Councillor	Wilberforce
,,	Rowntree	,,	A. Wilkinson	,,	Glew
,,	Davies	,,	Pollard	,,	Wright

TUBERCULOSIS SUB-COMMITTEE.

Alderman	W. Birch	Councillor	Davies	Councillor	Rowntree
		,,	C. Morrell		

PUBLIC ABATTOIR SUB-COMMITTEE.

Alderman	J. Birch	Councillor	Rowntree	Councillor	A. Wilkinson
Councillor	Robinson	,,	Pollard	,,	Glew
,,	Wright	,,	Horsman		

The Chairman and Vice chairman of the Health Committee are *ex-officio* Members of all its Sub-committees.

STAFF OF THE HEALTH COMMITTEE,

DURING THE YEAR 1913.

Medical Officer of Health and School Medical Officer—
EDMUND M. SMITH, M.D., C.M. Edin., D.P.H. Camb.

Tuberculosis Officer—
J. BELL FERGUSON, M.B., Ch.B., D.P.H.

Chief Inspector of Nuisances—
*A. E. DRUMMOND, A.R. San. Inst. and Certificated Meat Inspector.

Deputy Chief and Special Drainage Inspector—
*E. RIDSDALE, A.R. San. Inst. and Certificated Meat Inspector.

Assistant Inspectors of Nuisances—

R. Hagyard,
A. Longstaff,*
E. Richardson,*
J. W. Beaumont,*†
F. Fishburn,*
Senior Clerk—J. Thompson,

} Certif. Royal San. Institute.

Health Visitors—Nurse Boston and Nurse Hirst.

Junior Clerks—F. Powell and J. Haithwaite.

Disinfector—F. W. Volans.

Canal Boats Inspector—J. B. Mummery.

Matron of Fever Hospital—MISS KNIGHT.

Meat and Cattle Inspector—W. FAWDINGTON, M.R.C.V.S.

* Also holds the Meat Inspector's Certificate of the Royal Sanitary Institute.

† Holds Certificate of Royal Sanitary Institute in Sanitary Science as applied to Buildings and Public Works.

Town Clerk—HENRY CRAVEN.
(Succeeded in June by PERCY J. SPALDING, B.A., LL.M.)

City Treasurer—J. W. DAVISON.

City Surveyor—F. W. SPURR.

Public Analyst—JOHN EVANS, F.I.C., Sheffield.

Assistant School Medical Officer—
E. S. GALBRAITH, L.R.C.P. and S., D.P.H.

School Nurses—Nurse Simpson and Nurse Grant.

YORK, *May, 1914.*

To the Right Hon. The Lord Mayor, The Aldermen, and Councillors of the City of York.

My Lord Mayor and Gentlemen,

I have the honour to present my Annual Report on the Health of the City and its Sanitary Conditions, and on the work of the Health Department, during the year 1913. This constitutes my sixteenth Annual Report.

The death-rate for the year (viz.:—12·4) was nearly as low as that for 1909, which was the lowest on record, viz.:—12·2.

We had a remarkably dry summer—a great contrast to the cool and wet summer of 1912. The infantile mortality, however, fell again below 100 per 1,000 births, viz.:—to 94, the same as in 1910, which was the lowest recorded rate for York. The birth-rate was rather higher than in the previous year, viz.:—23·7.

Full tables and graphic charts concerning the mortality statistics will be found in the text of this Report.

The year under review was a remarkably busy one, comprising the development of the scheme for the prevention and treatment of all forms of human Tuberculosis, with its increased sanatorium arrangements at the Isolation Hospital, Yearsley Bridge, the development of the Tuberculosis Dispensary, the formation of the After-care Committee, negotiations with the local Insurance Committee, negotiations with the adjacent County Councils as to a joint sanatorium scheme, &c. Early in the year the Local Government Board made all forms of Tuberculosis notifiable—a long-hoped-for and essential step in the prevention of the "great white scourge." All this work will be found recorded in the accompanying Annual Report of the Tuberculosis Officer (Dr. J. Bell Ferguson), who has had a very busy year in the organisation of his department.

Amongst other numerous matters which have received consideration have been the question of establishing a public abattoir for York, the extension of the Fever Hospital, proposed sanitary provisions in the York Corporation Bill of 1914, the present difficulties in the housing of the working classes in the city and

the question of the Sanitary Authority providing various types of dwellings; the inspection of the large Walmgate district, and a lot of detailed work under the Housing Acts. These matters will be found to be referred to in detail in the text of the Report.

My most cordial thanks are due to the Chairman (Mr. Alderman Carter), and to the Vice-chairman (Mr. Councillor J. B. Inglis) and Members of the Health Committee for their counsel and support, to my Colleagues in office and in my profession, to the Head Teachers in the schools, and to the Chief Sanitary Inspector and the other members of my staff, for their earnest co-operation in the work of my department.

I am, my Lord Mayor and Gentlemen,

Yours obediently,

EDMUND M. SMITH,

Medical Officer of Health.

CITY AND COUNTY BOROUGH YORK.

STATISTICAL SUMMARY FOR 1913.

Area in acres, 3,730.

Population of County Borough, Census 1911, 82,282.

Do. at middle of 1913, 83,329. (Registrar-General's estimate).

Number of "families or separate occupiers," 18,078 } Census 1911.
Do. inhabited houses .... 17,517 }

Proportion of persons per acre, 22·06 } Census 1911.
Do. do. per family, 4·33 }

Birth-rate, 23·7 per 1,000 living.

Nett general death-rate, 12·4 per 1,000 living.

Infantile mortality, 94 per 1,000 births.

Total Zymotic mortality	0·80	per 1,000	living at all ages.
Death-rate of Diarrhœa and Enteritis (under two years)	0·43	,,	,,
Death-rate of Bronchitis and Pneumonia and other Respiratory Diseases	1·66	,,	,,
Phthisis death-rate	0·88	,,	,,
Total Tuberculosis death-rate	1·15	,,	,,
Cancer death-rate	0·92	,,	,,
Epidemic Influenza death-rate	0·25	,,	,,

ANNUAL REPORT, 1913.

POPULATION.

The Registrar-General's estimate of the *Population of the City at the end of June, 1913*, (based upon the rate of increase during the previous decade, 1901—1911, as ascertained at the National Census taken in April, 1911) was 83,329, and it is upon that estimate that the birth-rates and death-rates for the City for the year 1913 are calculated.

The weekly, quarterly and annual birth-rates and death-rates are always based upon the Registrar-General's estimate of the mean population of the year, *i.e.*, the estimated population at June 30th, the middle of each year.

National Census Results, 1911:—

In my Annual Report for the year 1912, I inserted tables comprising the principal results of the national Census of 1911 concerning the City of York and neighbourhood under the following headings:—

1. The principal figures for the City and County Borough of York.
2. Populations of Institutions in or near York.
3. Populations of the City Wards.
4. Populations of the Sanitary Sub-districts.
5. Populations of the Registration Sub-districts.
6. Populations of some neighbouring Towns and Districts, and of York Parliamentary Borough.
7. Populations of neighbouring Rural Districts and Villages.
8. Populations of Yorkshire Ridings and County Boroughs.

9 & 10. Population of the United Kingdom.

11 & 12. Populations of Urban and Rural Districts in England and Wales.

13. Apportionment of the land area of England and Wales.
14. Classification of dwellings and other buildings in the City.

In the red "Year Book for the use of the City Council" for 1913—14, we inserted, in addition to the above-mentioned, tables giving the following information:—

The area of, and the number of houses in, the Ridings and in the City.

Tenements in the City in the occupation of private families.

The total number of tenements, and tenements of less than five rooms, with the total numbers of persons per tenement, in the City of York.

The ages and sex of the inhabitants of the City.

Showing the condition as to marriage of the inhabitants of the City.

These last-mentioned tables (inserted in the red Year Book) may be useful to a wider circle, and are therefore reprinted as an appendix to this Report, together with the following tables which have been extracted from Census volumes subsequently received:—

Occupations of males and females in the City. (The "condensed list" given in the Census report is too long to be given in this Report, and this table, therefore, is only a summary of it).

Birthplaces of residents in the City.

Total number of persons blind, deaf, feeble-minded, &c., in the City of York.

By special arrangement with the Registrar-General, we were able to obtain information as to the *number of inhabitants in each street and court in the City*, together with the ages of such inhabitants. This information has been tabulated for permanent record and the streets grouped together in the "Areas" which I constituted in 1910, and the populations of such areas as enumerated at the census will be found in *Table 16* of this Report.

TABLE I.—CITY OF YORK, 1891—1913.

YEAR.	A. Census Totals and Registrar-General's original inter-censal estimates of population.	B. Population as estimated according to excess of births over deaths year by year (natural increase).	C. Estimates of population at June 30th each year, revised according to annual rates of increase as revealed by results of Census 1901 and Census 1911.	D. Revised birth-rates based upon the figures in column C.	E. Revised death-rates based upon the figures in column C.
1891 (census)	67,004	67,004	*67,841	30·0	23·8
(before extension)					
1892	67,807	67,691	68,848	31·9	20·9
1893	69,388	69,388	69,388	29·0	19·9
(Extended City)					
1894	70,053	70,175	70,395	30·8	17·4
1895	70,723	71,071	71,402	31·0	19·2
1896	71,400	71,951	72,500	30·4	17·8
1897	72,083	72,863	73,604	30·8	18·4
1898	72,774	73,747	74,708	30·0	18·5
1899	73,474	74,762	75,812	30·3	16·6
1900	74,177	75,547	76,916	29·3	20·3
1901 (census)	77,914	76,461	78,023	30·2	16·6
1902	79,114	79,201	78,450	29·8	15·5
1903	80,186	80,441	78,879	29·6	16·5
1904	81,268	81,402	79,311	28·8	16·6
1905	82,362	82,383	79,745	28·8	14·7
1906	83,467	83,567	80,181	27·6	14·2
1907	84,730	84,542	80,620	27·0	15·8
1908	85,861	85,493	81,061	27·0	13·7
1909	87,004	86,536	81,505	25·4	12·2
1910	88,159	87,611	81,951	24·2	12·8
1911 (census)	82,282	88,458	82,399	23·6	13·5
1912	—	89,133	82,863	22·9	13·8
1913	—	90,038	83,329	23·7	12·4

Average birth-rate during ten years 1903—1912 inclusive=26·5. Average death-rate during ten years 1903—1912 inclusive=**14·4**.

The difference between the figures stated in columns B and C from 1893 to 1901 may be said to indicate the amount of immigration then going on.

The difference between the figures in the same columns from 1902—1911 may be said to indicate the amount of emigration then going on.

Column B ignores emigration and immigration.

* Population of City as afterwards extended in 1893.

THE BIRTH-RATE.

The total number of births notified to me by the Sub-Registrars during the calendar year ending December 31st, 1913, was 1,985, but of these a nett total of *eight* births has been deducted by the Registrar-General (on a system introduced during 1911) as not belonging to the City, the mothers having been brought into the City for child-birth. The nett City total of births for the year was, therefore, 1,977.

(The nett number of births in 1912 was 1894.)

The birth-rate in 1913 was 23·7 per 1,000 living, being 0·8 higher than that recorded for 1912.

The average birth-rate for the 96 Great Towns for the same period was 25·1, and for England and Wales 23·9, which was 2·6 lower than the average for the previous ten years.

The average birth-rate in York for the ten years 1903—12 was 26·5. These birth-rates do not include the still-births, which ought also to be registered.

The births in 1913 were registered as follows :—

	Whole City.	SANITARY SUB-DISTRICTS.		
		Bootham district.	Micklegate district.	Walmgate district.
First quarter of year ...	513	83	188	242
Second „ „ ...	496	115	155	226
Third „ „ ...	490	113	163	214
Fourth „ „ ...	486	86	185	215
Gross Total ...	1985	397	691	897
Less "transferable births" deducted by Registrar-General	8			
Nett Total ...	1977			

Males ...	1023	Registered as legitimate ...	1881
Females ...	954	Registered as illegitimate ...	96
	1977		1977

The following are the birth-rates for the three Sanitary Sub-districts calculated upon the estimated populations of those districts for 1913:—

Whole City	Bootham district	17·9
	Micklegate do.	23·6
23·7	Walmgate do.	28·1

TABLE 2.—SHOWING TOTAL BIRTHS AND DEATHS AND THE NATURAL INCREASE OF POPULATION.

(Excess of Births over Deaths) since 1903.

Year.	Total births.	Total (nett) deaths.	Excess of births over deaths.
1903	2337	1304	1033
1904	2288	1316	972
1905	2298	1170	1128
1906	2216	1143	1073
1907	2181	1276	905
1908	2192	1108	1084
1909	2067	994	1073
1910	1983	1047	936
1911	1948	1113	835
1912	1894	1142	752
1913	1977	1034	943

The natural increase of population in Sanitary Sub-districts of the City in 1913 was as follows:—

Bootham district	158
Micklegate district	338
Walmgate district	447

The low figure for Bootham district is due to the low birth-rate of that district; the higher birth-rate of Walmgate district compensates for its higher death-rate.

Illegitimate Births.

The total number of births registered as illegitimate in 1913 (viz., 96), was equal to 4·9 per cent. of the total nett births, this rate being equal to that recorded in 1912.

Of the total of 96 illegitimate births, 13 of the mothers resided in Bootham district, 42 in Micklegate and 41 in Walmgate district. A total of 22 births occurred in the Workhouse, 17 of which were illegitimate.

Year.	Total births (legitimate and illegitimate.	Total illegitimate births.	Illegitimate births per cent. of total births.		Illegitimate births per 1,000 persons living.	
			York.	England and Wales.	York.	England and Wales.
Averages for 5 years, 1903-1907	2264	106	4·6	4·0	1·3	1·1
1908	2192	98	4·5	4·0	1·1	1·1
1909	2067	106	5·1	4·1	1·3	1·1
1910	1983	103	5·2	4·1	1·3	1·0
1911	1948	89	4·6	4·3	1·2	1·0
1912	1894	92	4·9	...	1·1	...
Averages for 5 years, 1908-1912	2017	98	4·8	4·1	1·19	1·05
1913	1977	96	4·9	...	1·15	...

The Marriage Rate.

I am indebted to the Superintendent Registrar for the following data regarding the number of marriages solemnized in the City :—

Year.	Total number of marriages in York.	Marriage-rate per 1,000 of population in York.		Marriage-rate in England and Wales.			
				Per 1,000 of total population at all ages.		Per 1,000 marriageable persons.	
1901	617	15·8		15·9		49·0	
1902	608	15·5		15·9		48·9	
1903	626	15·8	16·0	15·7	15·6	48·2	48·0
1904	587	14·8		15·3		47·0	
1905	719	18·0		15·3		47·1	
1906	668	16·6		15·7		48·2	
1907	676	16·7		15·9		48·9	
1908	654	16·1	15·8	15·1	15·3	47·2	46·8
1909	606	14·8		14·7		45·0	
1910	613	14·9		15·0		45·8	
1911	649	15·8		15·2		46·5	
1912	669	16·1		15·5		...	
1913	656	15·7		...		...	

Infantile Vaccination.

I am indebted to the Vaccination Officer for the following information. (The figures for 1913 are not yet available).

The total number of children successfully vaccinated in 1912 was 1,161 (total births 1,894); vaccination was postponed in 20 cases; 7 children were declared insusceptible; there were 450 certificates of "conscientious objection"; 119 died unvaccinated; 145 have left the City or remained unvaccinated.

During the year ending September 30th, 1913, 29 persons were re-vaccinated by the Public Vaccinator.

TABLE 3.—YORK UNION.

Year.	Successfully vaccinated.	Percentage of total births.	Vaccination postponed or certified as insusceptible of vaccination.	Died or removed from York unvaccinated	Certificates of "conscientious objection" obtained.		Re-vaccinated by Public Vaccinator.
					No.	Percentage.*	
Averages for 5 years, 1901—05.	1,994	84·3	23	268	35	...	...
1906	1,885	84·3	38	273	41	2·1	43
1907	1,774	81·6	16	286	99	5·3	26
1908	1,673	77·5	22	203	256	13·0	34
1909	1,536	74·3	23	231	292	16·1	24
1910	1,411	71·2	19	187	371	20·9	16
1911	1,226	62·9	31	316	380	23·7	38
1912	1,161	61·3	27	264	450	28·1	29

The above table shows that the 1907 Act is resulting in a large increase in the percentage of unvaccinated children in York, as in the rest of the country. Since 1906 there is an increase of 1,097 per cent. of such persons, who will be a danger to the rest of the community in a smallpox epidemic.

* = Percentage of total births less figures in columns 4 and 5.

THE GENERAL DEATH-RATE.

The gross total number of deaths registered within the City of York during the calendar year ending December 31st, 1913, was 1,055, giving a death-rate of 12·7 per 1,000 living.

If the deaths of 60 persons not belonging to the City ("Non-residents") be deducted, and those of 39 citizens ("Residents") who died outside the City be added (as required by the Local Government Board), *the nett total number of deaths was 1,034 giving a nett "recorded" death-rate of 12·4 per 1,000 living.*

The deaths in 1913 were registered during the four quarters of the year as follows:—

	WHOLE CITY.	SANITARY SUB-DISTRICTS.		
		Bootham.	Micklegate.	Walmgate.
First quarter ...	303	74	98	131
Second „ ...	284	64	98	122
Third „ ...	201	41	68	92
Fourth „ ...	246	52	89	105
Totals ...	1034	231	353	450

The distribution of the deaths of York citizens, according to Sanitary Sub-districts and age periods, was as follows:—

AGE-PERIODS.	SANITARY SUB-DISTRICTS.			WHOLE CITY. Totals.	
	Bootham.	Micklegate.	Walmgate.		
0—1	33	51	101	185	
1—2	6	7	27	40	70
2—5	3	11	16	30	
5—15	1	14	19	34	
15—25	4	16	10	30	
25—45	25	52	49	126	
45—65	63	86	92	241	
65 and over	96	116	136	348	
Totals ...	231	353	450	1034	

The deaths of males numbered 500, of females 534.

The average death-rate for the 96 Great Towns in 1913 was 14·3; for England and Wales, 13·7.

The average death-rate in York for the preceding ten years 1903—1912, was 14·4.

The gross totals and death-rates, and the nett totals and death-rates, in previous years, are set forth in the following Table 5 (L.G.B. Table 1), columns 6 and 7, 12 and 13.

The following are the general death-rates in each of the Sanitary Sub-districts of the City during the year 1913, calculated upon the estimated populations of those districts for the year.

Whole City ... 12·4	Bootham district	... ...	10·4
	Micklegate „	... ...	12·0
	Walmgate „	... ...	14·1

Of the deaths in Bootham district, 17 occurred in the York Union Workhouse and had no other residence. The death-rate of that district, if those deaths be deducted, was 9·94 per 1,000 persons living in the district (minus the population of the Workhouse).

Of the deaths in Walmgate district, 5 were of persons connected with the regiments stationed in the Barracks in that district.

There were no uncertified deaths, whereas the percentage of deaths in which the cause was uncertified was in England and Wales 1·2, and in the 96 Great Towns 0·8.

Comparing the totals of 1913 with those of 1912, it will be observed in Table 6 that there was a *decrease* in 1913 in the deaths from the following causes:—

	Total deaths in 1912.	Total deaths in 1913.	Decrease in 1913.
Diphtheria	17	8	9
Phthisis	92	73	19
Other Tuberculous diseases ...	36	23	13
Bronchitis	86	65	21
Pneumonia	91	57	34
Bright's Disease	128	107	21

There was an *increase* in the deaths due to the following causes:—

	Total deaths in 1912.	Total deaths in 1913.	Increase in 1913.
Whooping Cough	1	11	10
Diarrhœa and Enteritis	15	44	29
Influenza	16	21	5

The great need for the amendment of the *Acts relating to registration of births and deaths and to burials* still exists.

Deaths of York Residents (total 192) occurring in the Public Institutions within the City during the year 1913:—

	Total deaths.	PREVIOUS RESIDENCE OR HOME ADDRESS.			
		Sanitary Sub-districts.			Union Workhouse
		Bootham.	Micklegate.	Walmgate.	No other address known.
York Union Workhouse ...	111	32	21	58	13
Bootham Park (formerly called York Lunatic Asylum)	1	...	1	...	...
York County Hospital (General Infirmary)	74	12	32	30	...
Maternity Hospital ...	6	3	...	3	...

In the statistical tables the above deaths are allocated to the Sanitary Sub-districts in which the deceased resided.

Deaths of "Non-residents," i.e., persons coming into the district and dying in Public Institutions, &c.:—

At the Union Workhouse	7	60
At Bootham Park (Asylum)	4	
At the Retreat (Asylum)	9	
At the County Hospital	23	
At other Hospitals and Asylums...	10	
At private residences	3	
By accidents in rivers, &c.	4	

The percentage of the deaths of York residents dying in Public Institutions within and without the City area was 21·1, as compared with 21·2 for England and Wales, and 27·8 for the 96 Great Towns.

Deaths of "Residents," i.e., of citizens who died outside the City area:—

WHERE DIED.	Total.	From—		
		Bootham district.	Micklegate district.	Walmgate district.
In York Corporation Fever Hospital...	6	...	3	3
In York City Asylum, Water Fulford (including two from York Workhouse—no other residence known)	15	6	5	4
In River Ouse, at Fulford & Riccall ...	2	...	2	...
In other towns and districts	16	4	8	4
	39	10	18	11

TABLE 4.

COMPARATIVE MORTALITY DURING LAST DECENNIUM.

The following Table shows the Principal Causes of Death in the City for the past ten years:—

CAUSE OF DEATH.	NUMBER OF DEATHS.									
	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Zymotic Diarrhœa and Enteritis	154	77	85	45	60	28	50	69	15	44
Other Principal Zymotic Diseases	97	40	66	60	56	28	24	52	55	23
Epidemic Influenza ...	7	21	10	35	21	6	19	12	16	21
Tuberculosis (including Phthisis)	149	136	128	146	104	115	97	101	128	96
Infantile Developmental Causes (Premature birth and Debility) under five years of age ...	169	153	123	133	112	98	75	96	83	82
Bronchitis & Pneumonia ...	163	161	143	207	160	151	180	153	177	122
Cancer	64	63	73	77	77	73	87	74	74	77
Organic Disease of Heart...	114	100	104	119	103	115	93	101	122	114
Senile Decay	100	95	102	88	107	82	91	100	128	107
Diseases of Brain and Nervous System ...	99	99	88	125	99	107	91	117	108	95
Bright's Disease	32	29	34	31	33	38	38	41	27	34
Violence (Accidents, Suicide, and Manslaughter) ...	36	45	35	42	31	30	35	40	43	46

TABLE 5.—CITY OF YORK.—(LOCAL GOVERNMENT BOARD'S TABLE 1).

Vital Statistics of Whole District during 1913 and previous Years. The rates are per 1,000 living.

Year.	Population estimated to middle of each year.	Births.			Total Deaths registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncorrected Number.	Nett.						Under 1 year of Age.		At all Ages.	
			Number.	Rate.	Number.	Rate.	Of Non-residents registered in the District.	Of Residents not registered in the District.	Number.	Rate per 1,000 nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1908	81,061	...	2,192	27·0	1,134	14·0	52	26	227	104	1,108	13·7
1909	81,505	...	2,067	25·4	1,023	12·6	54	25	206	100	994	12·2
1910	81,951	...	1,983	24·2	1 058	12·9	42	31	186	94	1.047	12·8
1911	82,399	1,955	1,948	23·6	1,133	13·8	61	41	222	114	1,113	13·5
1912	82,863	1,902	1,894	22·9	1,146	13·9	58	54	184	97	1,142	13·8
1913	**83 329**	**1,985**	**1,977**	**23·7**	**1,055**	**12·7**	**60**	**39**	**185**	**94**	**1,034**	**12·4**

NOTES.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. For years before 1911 some of the corrected rates are not available.

"Transferable Deaths" are deaths of persons who, having a fixed or usual residence in England or Wales, died in a district other than that in which they resided.

The following special cases arise as to Transferable Deaths:—

(1) Persons dying in Institutions for the sick or infirm, such as hospitals, lunatic asylums, workhouses, and nursing homes (but not almshouses) are regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such Institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement are referred to the district of fixed or usual residence of the parent.

(3) Deaths from Violence are referred (*a*) to the district of residence, under the general rule; (*b*) if this district is unknown or the deceased had no fixed abode, to the district where the accident occurred, if known; (*c*) failing this, to the district where death occurred, if known; (*d*) failing this, to the district where the body was found.

Area of District in acres (land and inland water). 3,730

Total population at all ages 82,282
Number of inhabited houses 17,517
Average number of persons per house ... 4·33
At Census of 1911.

TABLE 6.—CITY OF YORK.

CAUSES OF, AND AGES AT DEATH DURING THE YEAR 1913. (LOCAL GOVERNMENT BOARD'S TABLE III).

CAUSES OF DEATH.		Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-residents" in Institutions in the District.
		All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 & upwards.	
		2	3	4	5	6	7	8	9	10	11
All Causes	Certified	1034	185	40	30	34	30	126	241	348	238
	Uncertified	Nil	...	...	...	...	...	...	...	...	...
1. Enteric Fever		3	...	...	...	...	1	1	1	...	...
2. Small Pox		...	...	...	...	...	...	...	...	...	...
3 Measles		...	...	...	...	...	...	...	...	...	...
4. Scarlet Fever...		1	...	...	...	1	...	...	...	...	...
5 Whooping Cough		11	4	5	2	...	...	...	...	...	...
6. Diphtheria and Croup		8	...	2	1	5	...	...	...	...	...
7. Influenza		21	...	...	...	...	1	4	3	13	6
8. Erysipelas		2	...	...	...	...	...	...	2	...	...
9. Phthisis (Pulmonary Tuberculosis	96	73	2	...		4	12	36	14	5	15
10. Tuberculous Meningitis ...		12	2	2	3	4	1	...	...	...	4
11. Other Tuberculous Diseases		11	...	1	2	1	2	5	...	...	5
12 Cancer, malignant disease		77	...	...	...	...	...	5	38	34	18
13 Rheumatic Fever		5	...		...	3	...	...	2	...	1
14. Meningitis		12	4	4	2	...	...	...	2	...	1
15. Organic Heart Disease		114	...	...	...	1	1	10	40	62	21
16. Bronchitis		65	13	2	1	1	...	...	13	35	8
17. Pneumonia (all forms) ...	138	57	23	9	5	1	1	8	10	...	12
18. Other diseases of respiratory organs		16	3	1	3	...	2	...	5	2	3
19. Diarrhœa and Enteritis		44	29	7	1	...	...	4	...	3	4
20. Appendicitis and Typhlitis		6	...	...	...	2	...	2	2	...	6
21. Cirrhosis of Liver		5	...	...	...	...	...	...	4	1	1
21a. Alcoholism		2	...	...	...	...	...	1	1	...	...
22 Nephritis and Bright's Disease ..		34	...	...	...	...	1	7	12	14	4
23 Puerperal Fever		1	...	...	...	...	...	1	...	...	2
24. Other Accidents and Diseases of Pregnancy and Parturition ...		7	2	...	...	...	...	5	...	...	...
25. Congenital Debility & Malformation including Premature Birth ..		82	79	1	2	...	...	...	...	...	13
26. Violent Deaths, excluding Suicide...		35	2	2	4	5	3	8	7	4	15
27. Suicide		11	...	...	...	...	1	3	6	1	2
28. Other Defined Diseases		316	22	4	4	6	4	23	79	174	96
29. Diseases ill-defined or unknown ...		3	...	...	...	...	...	3	...	...	1
		1034	185	40	30	34	30	126	241	348	238

Sub-Entries included in above figures.

17 (a). Lobar Pneumonia	19	1	...	...	...	1	7	10	...	5
28 (a). Poliomyelitis	1	...	...	...	1	...	...	...	...	...
„ Lead Poisoning	1	...	..	...	...	...	...	...	1	...
„ Infantile Convulsions	16	14	1	1	...	...	...	...	...	...
„ Senile Decay	107	...	...	...	...	...	...	1	106	35
„ Various Cerebral Diseases ..	75	...	...	...	...	1	4	27	43	15
„ Insanity	4	...	...		...	...	2	1	1	2
„ Diseases of Spinal Cord ..	4	...	..	...	...	...	1	3	...	...
„ Diseases of Stomach	9	...	1		..	...	1	6	1	3
„ Diabetes Mellitus	8	...	...	...	...	1	1	4	2	3

TABLE 6a.—CITY OF YORK.

CHIEF CAUSES OF DEATH DISTRIBUTED ACCORDING TO SANITARY SUB-DISTRICTS.

CAUSES OF DEATH	Bootham.	Micklegate.	Walmgate.	Whole City.
Small-pox	...	...	...	...
Measles	...	...	...	...
Scarlet Fever	...	...	1	1
Diphtheria and Membranous Croup	...	3	5	8
Whooping Cough	3	2	6	11
Enteric Fever	1	1	1	3
Zymotic Diarrhœa and Enteritis	6	11	27	44
Epidemic Influenza	7	7	7	21
Puerperal Fever	...	1	...	1
Phthisis (Pulmonary Tuberculosis)	14	27	32	73
Tuberculous Meningitis	2	2	8	12
Other forms of Tuberculosis	...	5	6	11
Cancer	24	30	23	77
Premature Birth and Developmental Diseases...	16	22	44	82
Infantile Convulsions	2	4	10	16
Senile Decay	31	35	41	107
Meningitis	4	2	6	12
Various other Cerebral Diseases	15	28	32	75
Organic Heart Disease	29	37	48	114
Bronchitis	16	19	30	65
Pneumonia	6	19	32	57
Other Diseases of Respiratory Organs... ..	1	10	5	16
Nephritis and Bright's Disease	4	16	14	34
Cirrhosis of Liver...	2	2	1	5
Appendicitis	1	3	2	6
Diabetes Mellitus	4	2	2	8
Deaths by Accident	3	16	15	34
Deaths by Suicide	2	6	3	11
Homicide	...	...	1	1
All other Causes	38	43	48	129
ALL CAUSES	231	353	450	1034

A study of the following Tables will prove of considerable interest:—

TABLE 7. CITY OF YORK.

DEATH-RATES PER 1,000 LIVING IN YEAR 1913.

as compared with those for England and Wales.

	Average for England and Wales.	Average of the 96 great towns including York.	Average of the 145 smaller towns.	Rural England and Wales.	YORK.
Birth-rate	23·9	25·1	23·9	22·2	23·7
General death-rate ("standardized")* ...	13·4	14·7	13·0	12·1	12·3
Infant mortality (per 1,000 births) ...	109	117	112	96	94
Measles death-rate...	0·28	0·34	0·30	0·20	0·00
Scarlet Fever death-rate	0·06	0·07	0·05	0·05	0·012
Diphtheria death-rate	0·12	0·13	0·11	0·11	0·096
Whooping Cough death-rate	0·14	0·17	0·13	0·12	0·132
Typhoid Fever death-rate	0·04	0·04	0·05	0·04	0·036
Diarrhœa and Enteritis death-rate (under 2 years) per 1,000 births	23·4	29·3	24·7	14·4	18·2
Average birth-rate for 10 years, 1903—12	26·3	...	...	...	26·5
„ general death-rate do. —	14·9	...	...	...	14·4
„ infant mortality do. —	122	...	...	...	121

	Index death-rate 1901-1911.	Crude death-rate 1913.	Standardised * death-rate 1913.
England and Wales ...	18·9	13·7	13·4
96 Great Towns	17·13	14·3	14·7
City of York	17·67	12·4	12·3

*To compare the crude death-rate with that of other towns it is necessary to make allowance for the difference in age and sex constitution of the different towns. This is done by obtaining a "factor for correction" and multiplying the crude death-rate by this factor—the resulting figure is the "standardised death-rate." The "factor for correction" is obtained by dividing the "index" death-rate in England and Wales by the "index" death-rate in each town.

The "index" death-rate signifies the rate at all ages calculated on the hypothesis that the rates for each sex at each of twelve age-periods in each town were the same as in England and Wales during the ten years 1901—10.

The Registrar-General in his Annual Report for 1911 has adopted the term "standardized death-rate" in preference to "corrected death-rate," as the former seems to be "an obvious improvement." He says: "The term 'corrected death-rate' is to some extent both misleading and ambiguous because death-rates may be 'corrected' for other considerations than the sex-and-age constitution of the populations concerned.* Standardization is, in fact, a method of handicapping. Populations which from their favourable constitution (*e.g.*, comprising a low percentage of aged persons) enjoy an advantage in comparison with the standard population have their mortalities increased by a handicap, in the form of a 'standardizing factor,' while the mortalities of unfavourably constituted populations (*e.g.*, comprising a high percentage of aged persons) are diminished in the same way. The handicap or factor, once determined, necessarily remains constant until a new census (or alteration of boundaries) reveals a change in the constitution of the population concerned. The method of ascertaining the required handicap is as follows: The mean death-rates for England and Wales during 1901-1910 at certain age-groups for males and females respectively are applied to the numbers enumerated at the latest census at the corresponding ages in the case of the population in question; the sum of the products gives the deaths that would have occurred in a year had the mortality of each sex-and-age group been the same as that in England and Wales as a whole; and the death-rate obtained by applying this sum to the population in question as enumerated at the census, formerly known as the 'standard death-rate,' but now, in view of the adoption of the term standardized death-rate, better described as the 'index death-rate,' indicates the degree to which that population is favourably or unfavourably constituted. If the population contains a high proportion of persons at the ages at which mortality in England and Wales exceeds that of persons at all ages its index death-rate will be high, as under the converse conditions it will be low.

"The mortality-rates for England and Wales during 1901—1910 then represent the foot-rule by which the constitution of each population is measured, and the index death-rate the reading in each case of this measure. When this reading has been taken the required handicapping is performed by comparing it with the index death-rate for the population of England and

* Thus, all the rates in this report are "corrected" by the inclusion of residents dying away from home, and by the exclusion of non-residents who have died within the city.

Wales in 1901 calculated in the same way. If the index death-rate of the area dealt with is high the constitution of its population is unfavourable, and its recorded mortality must be proportionately reduced by a handicap or 'standardizing factor,' which is obtained by dividing the index death-rate for England and Wales in 1901 by the (higher) index death-rate of the population in question, and is therefore necessarily less than unity. Where the index death-rate is low, indicating a favourable constitution, the factor is greater than unity, and when multiplied into the recorded death-rate increases it. The result in either case is termed the 'standardized death-rate."

TABLE 8—ANNUAL DEATH-RATE PER 1,000 LIVING IN DECENNIAL PERIODS.

Decennial Periods.	City of York.		England and Wales.
	Recorded or crude death-rate.	Death-rate corrected by exclusion of Non-residents, &c.	
1841—50	24·0	Not so corrected at that time.	22·4
1851—60	24·0		22·2
1861—70	24·0		22·5
1871—80	...	20·2	21·4
1881—90	...	18·7	19·1
1891—1900	...	17·0	18·2
1901—05	...	16·0	16·0
1906—10	...	13·7	14·7
1911	...	13·5	14·6
1912	...	13·8	13·3
1913	...	12·4	13·7

TABLE 9.—AVERAGE RATE OF MORTALITY AT AGE-PERIODS, PER 1,000 LIVING AT EACH AGE-PERIOD, DURING DECENNIAL & QUINQUENNIAL PERIODS.

(a) CITY OF YORK.

Age-periods.	Years.					
	1871-1880.	1881-1890.	1891-1900.	1901-1905.	1906-19 0	1911-1913.
0— 5 years ...	59·5	55·4	58·2	53·8	39·3	33·2
5—15 ,, ...	4·9	4·2	3·3	3·3	2·6	2·5
15—25 ,, ...	5·6	5·7	4·6	3·4	3·0	2·4
25—65 ,, ...	19·6	18·6	17·5	10·8	9·9	10·0
65 and over ...	122·1	119·0	118·8	86·1	80·4	81·4
At all ages ...	20·2	18·7	17·0	16·0	13·7	13·2

It will be observed that the mortality at the age-periods 5-15 and 25-65 have fallen during 1911-13 nearly 50% since 1871-80, and that of the age-period 15-25 has fallen more than 50 per cent. Comparison of the above figures for York for the age-periods 0—5 and 65 years and over with those for England and Wales given below are interesting and striking, and may be further commented upon in my next Report if time permits, as I hope, for a closer study of the results of the last National Census.

(b) ENGLAND AND WALES.

Age-periods.	Years.					
	1871-1880.	1881-1890.	1891-1900.	1901-1905.	1906-1910.	1911.
0— 5 years ...	63·4	56·8	57·7	50·2	41·7	43·7
5—15 ,, ...	5·1	4·2	3·4	3·0	2·7	2·8
15—25 ,, ...	6·3	5·0	4·2	3·6	3·3	3·2
25—65 ,, ...	17·8	16·9	16·3	14·5	13·5	12·7
65 and over ...	171·8	162·2	148·4	148·4	149·3	138·9
At all ages ...	20·4	18·6	18·1	16·0	14·4	14·3

TABLE 10.—CITY OF YORK.

TOTAL DEATHS AT AGE-PERIODS EXPRESSED AS PERCENTAGES OF TOTAL DEATHS AT ALL AGES.

Year.	Age-Periods						Total deaths at all ages.
	Under 1 year.	1 to 5 years.	5 to 15 years	15 to 25 years.	25 to 65 years.	65 years & upwards.	
1903	27·5	14·8	5·3	2·4	28·3	21·4	1304
1904	29·5	10·8	4·6	4·6	27·6	22·8	1316
1905	25·5	8·0	3·4	5·3	30·8	26·8	1170
1906	24·0	11·1	3·3	5·3	30·1	26·1	1143
1907	21·2	10·6	3·4	3·2	33·8	27·5	1276
1908	20·5	10·7	4·8	4·1	30·1	29·6	1108
1909	20·7	7·2	3·5	4·1	34·8	29·7	994
1910	17·8	9·8	3·7	4·0	34·1	30·6	1047
1911	20·0	9·1	3·2	3·0	34·5	30·1	1113
1912	16·1	8·8	4·5	3·9	35·2	31·4	1142
Averages for 10 yrs. 1903—12	22·3	10·1	4·0	4·0	31·9	27·6	1161
1913	17·9	6·8	3·3	2·9	35·5	33·7	1034

It will be observed that the proportion of persons dying under one year of age is declining, whilst that of aged persons is increasing, but the information given by Table 9 (a) is much more valuable as a guide to the decline in mortality at different age-periods.

TABLE 11.—CITY OF YORK.

Vital Statistics of Separate Localities in 1913 and Previous Years.

Names of Localities.	1. Whole City.				2. Bootham Sanitary Sub-district.				3. Micklegate Sanitary Sub-district.				4. Walmgate Sanitary Sub-district.			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages	Deaths under 1 year.
	a.	*b*	*c*	*d.*	*a.*	*b.*	*c*	*d*	*a*	*b.*	*c*	*d*	*a*	*b*	*c.*	*d.*
1903	78,879	2337	1304	359	20,660	543	303	74	27,152	771	382	101	31,067	1023	619	184
1904	79,311	2288	1316	388	20,790	526	290	82	27,361	818	428	118	31,160	944	598	188
1905	79,745	2298	1170	299	20,918	467	263	49	27,570	786	405	96	31,257	1045	502	154
1906	80,181	2216	1143	275	21,048	440	272	57	27,779	761	381	83	31,354	1015	490	135
1907	80,620	2181	1276	271	21,176	432	300	54	27,989	753	399	92	31,455	996	577	125
1908	81,061	2192	1108	227	21,303	467	245	37	28,201	744	366	83	31,557	981	497	107
1909	81,505	2067	994	206	21,433	435	239	39	28,415	702	340	66	31,657	930	415	101
1910	81,951	1983	1047	186	21,561	446	262	30	28,627	688	343	61	31,768	849	442	95
1911	82,399	*1955	1113	222	21,691	393	270	34	28,841	677	358	75	31,867	885	485	113
1912	82,863	*1902	1142	184	21,827	377	276	27	29,063	661	369	53	31,973	864	497	104
Averages of years 1903—12	80,852	2142	1161	262	21,241	453	272	48	28,099	736	377	83	31,511	952	512	131
1913	83,329	*1985	1034	185	22,150	397	231	33	29,306	691	353	51	31,873	897	450	101

NOTE.—Deaths of "residents" occurring in public institutions beyond the district are included in sub-columns *c* of this Table, and those of non-residents registered in public institutions in the district excluded. (See note on Table 5 as to meaning of terms "resident" and "non-residents.")

Deaths of "residents" occurring in public institutions, whether within or without the district, are allotted to the respective localities according to the addresses of the deceased.

* Gross totals of births are here given. Nett totals for sub districts are not furnished by the Registrar-General.

TABLE 12.—ANNUAL BIRTH & DEATH-RATES IN THE SANITARY SUB-DISTRICTS OF BOOTHAM (B), MICKLEGATE (M) & WALMGATE (W).

Year.	Birth-rate per 1,000 living in each district.				Per 1,000 of estimated population in each district at all ages.								Infantile Mortality per 1,000 births (0—1 year).			
					General Death-rate.				Death-rate of children under the age of five years.							
	B.	M.	W.	Whole City	B.	M.	W.	Whole City.	B.	M.	W.	Whole City.	B.	M.	W.	Whole City.
1904	25·3	29·9	29·2	28·8	13·9	15·6	19·1	16·6	4·9	6·8	8·4	6·7	156	144	199	170
1905	22·3	28·5	33·4	28·8	11·6	14·7	16·0	14·7	2·8	5·1	6·2	4·9	105	122	147	130
1906	20·9	27·4	32·3	27·6	12·9	13·7	14·6	14·2	3·8	4·3	6·4	5·0	129	109	133	124
1907	20·4	26·9	30·6	27·0	14·2	14·2	18·3	15·8	4·0	4·5	6·4	5·0	125	122	125	124
1908	21·9	26·3	31·0	27·0	11·5	13·0	15·7	13·7	2·4	4·4	5·5	4·3	89	112	109	104
1909	20·3	24·6	29·3	25·4	11·2	12·0	13·0	12·2	2·6	3·0	4·3	3·4	90	94	109	100
1910	20·8	24·0	26·7	24·2	12·2	12·0	13·9	12·8	2·3	3·1	4·7	3·5	68	89	112	94
1911	18·1	23·4	27·7	23·6	12·4	12·4	15·2	13·5	2·7	3·4	5·2	3·9	89	111	128	114
1912	17·3	22·7	27·0	22·9	12·6	12·7	15·5	13·8	2·2	2·9	4·7	3·4	72	80	120	97
1913	17·9	23·6	28·1	23·7	10·4	12·0	14·1	12·4	1·9	2·4	4·5	3·1	83	74	112	94
Averages for the 10 years.	20·5	25·7	29·5	25·9	12·3	13·2	15·5	14·0	3·0	4·0	5·6	4·3	100	106	129	115

TABLE 13.

1913.—THE QUARTERLY GENERAL DEATH-RATES PER 1,000 LIVING.

	England and Wales.	96 Great Towns.	City of York.
First Quarter— (Jan., Feb. and March) ...	16·1	16·9	14·5
Second Quarter— (April, May and June) ...	13·2	13·5	13·6
Third Quarter— (July, August and Sept.) ...	12·2	12·7	9·6
Fourth Quarter— (October, Nov. and Dec.) ...	13·2	14·2	11·8
Whole Year	13·9	14·3	12·4

TABLE 14.

1913.—QUARTERLY DEATH-RATES IN THE SANITARY SUB-DISTRICTS.

General Death-rate from all causes and at all ages per 1,000 of the estimated population in each district.

Sanitary Sub-districts.	Estimated Population.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Whole Year.
Bootham	22,150	13·4	11·6	7·4	9·4	10·4
Micklegate ...	29,306	13·4	13·4	9·3	12·1	12·0
Walmgate... ...	31,873	16·4	15·3	11·5	13·2	14·1
Whole City ...	83,329	14·5	13·6	9·6	11·8	12·4

CITY OF YORK.

TABLE 15.—QUARTERLY DEATH-RATES FOR TEN YEARS, 1904—1913.

GENERAL DEATH-RATE PER 1,000 LIVING.

Quarter of Year	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
First	16·5	16·9	16·0	19·8	16·9	15·4	15·4	14·6	18·4	14·5
Second	14·8	14·2	12·6	12·6	11·7	11·4	11·0	12·3	13 2	13·6
Third	19·7	13·6	14·2	11·1	12·4	9 8	11·1	12·6	10·6	9·6
Fourth	15·3	13·9	14·3	19·7	13·6	12·3	13·6	14·5	13·0	11·8
Whole Year	16·6	14·7	14·2	15·8	13·7	12·2	12·8	13·5	13·8	12·4

DEATH-RATE DUE TO BRONCHITIS AND PNEUMONIA PER 1,000 LIVING.

Quarter of year.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
First	2·97	3·10	2·64	3·57	2·81	3·44	2·88	2·27	3·77	2·56
Second	2·32	1·85	1·50	2·13	1·38	1 33	1·41	1·70	2·37	1·30
Third	0·76	0·60	0·40	0·99	0·89	0·59	1·76	0·66	0 82	0·77
Fourth	2·17	2 51	2·59	3·57	2·81	2·06	2·68	2·72	1·59	1·26
Whole Year	2·05	2·02	1·78	2·57	1·97	1·86	2·19	1·88	2·13	1·47

EPIDEMIC OR ZYMOTIC DEATH-RATE PER 1,000 LIVING.

First	1·01	0·85	1·60	0·69	1·67	0·74	0·20	0 87	1·50	0·38
Second	1·41	0·70	1·05	0·40	0 59	0·54	0·39	0 87	0 39	0·62
Third	8·01	3·75	3·79	0·69	1·58	1·13	1·56	2·77	0 96	1 25
Fourth	2·22	0·55	1·10	3 42	1·87	0·34	1·46	1·36	0 51	0·96
Whole Year	3·16	1·47	1·88	1·30	1·43	0·68	0·90	1·47	0·84	0·80

INFANTILE MORTALITY (AGES 0—1 YEAR), PER 1,000 BIRTHS.

First	129	102	119	112	102	135	84	89	156	121
Second	103	114	97	100	73	63	65	78	76	69
Third	311	194	161	79	120	106	104	168	78	88
Fourth	123	104	92	201	124	94	128	114	78	95
Whole Year	170	130	124	124	104	100	94	114	97	94

TOTAL DEATHS IN SMALL AREAS OF THE CITY, 1913

A few years ago (1908 and 1909) repeated requests were made by members of the Council that mortality rates should be quoted for areas or districts smaller and more distinct in character than our Sanitary Sub-districts. In order to comply with these requests, it was necessary to ascertain the populations of such small districts, as approximately as possible, and accordingly a special clerk was engaged in the early part of the year 1910 to compile a Local Census of the total occupied houses and total occupants. Although I was very dubious as to obtaining reliable results, as we had no legal authority to take a census or to compel householders to give information, yet useful information was obtained, and I divided the City into 25 small districts, which I termed "Areas," the boundaries of which were so arranged that each Ward and each Sanitary Sub-district contained its own Areas in their entirety. Since the National Census of 1911, the Census Office agreed to provide us with figures for each street and court in the City. These figures arrived in October, 1913, and they have been carefully tabulated in permanent form, and the results are set forth in the following Tables 16 (a), (b), (c), relating to the Areas.

From the very first I was dubious as to obtaining reliable mortality rates, even when we had the exact populations of these Areas, for reasons to be presently stated. But in each Annual Report since and including the year 1910, I have endeavoured to respond to the abovementioned requests, and tables similar to the following have been given in which the total deaths have been allocated to the Areas as well as to the Wards and Sanitary Sub-districts. The general death-rate and the chief age-periods at death have also been stated for each Area, and the chief causes of death where noteworthy. Here be it noted that in my Annual Reports for 1910 and 1911 I pointed out that "the death-rates for these Areas—surprising as some of them will be observed to appear—should not be accepted for a single year as absolutely indicative of the healthiness or unhealthiness of those Areas, because the estimated populations could not take into consideration the differences, which very probably exist, in the age-constitution of the inhabitants of the different Areas. For instance, there may be

many more aged, perhaps dying, persons in the "Mount" Area than in "Leeman Road" Area." In the subsequent Tables 16 (a), (b), (c), the high death-rates for some of the Areas, compiled on the exact populations ascertained at the Census of 1911, will be observed to be somewhat astonishing. In some of the Areas the high death-rates may be due to the insanitary conditions in the Areas, but to interpret rightly all of them it is necessary to study Table 16d, and the new Table 16f. In Table 16d the preponderance of deaths at certain age-periods is specially indicated in the type; in the new Table 16f the varying proportions of the population at certain age-periods at the Census are set forth as percentages of the total population in each Area, and it will be observed that they vary very considerably, and that the figures for the "Mount" and "Leeman Road" Areas tend to confirm the above remark about those Areas.

I hope to study this matter more closely before the issue of another Annual Report (if local and government demands upon one's time and energies permit) but I am inclined to think that the compilation of death-rates for these Areas is no longer worth while, as the Areas vary so much in the composition of their respective populations, and therefore, the death-rates are apt to be misleading for comparative purposes.

"Deductions from a small number of individual facts are never so trustworthy as when the basis on which an inference is founded is wider, and accidental causes of variation are thus to a large extent eliminated."

It cannot be too clearly understood that these "Area" death-rates, calculated as they are on such small and varying populations, demand very careful analysis before any deductions as to the health conditions of any particular Area are drawn therefrom. Take, for instance, Area "E" (The Mount district): from Table 16b, the death-rate will be found to be 17·1 per 1,000 persons living—a very high rate considering the social class of the residents in this Area. But, from the National Census returns (see Table 16f), we find that this Area contains a larger number of aged persons (of 65 years and over) in proportion to the total population of that Area, than any other Area, the percentage of such persons being 7·45. See also the figures for the following other areas containing high percentages of aged persons:—

Area.	General Death-rate.	Percentages of population aged 65 years and over.	Deaths at 65 years and over expressed as percentages of total deaths in each Area.
E. Mount	17·1	7·5	44
M. Tower Street	19·7	7·4	47
L. Skeldergate	23·6	7·3	34
S. Central	15·6	7·2	34
V. Clarence Street	10·7	6·7	41

We may contrast these figures with those for the Areas which have a low percentage of aged persons:—

F. South Bank	10·2	2·3	11
G. Nunthorpe	8·3	2·5	(No deaths at this age-period).
A. Leeman Road	10·3	2·6	22
X. Burton Lane	5·8	3·3	19
Z. Layerthorpe	14·4	3·3	29

It must also be remembered that those Areas which have a high proportion of persons approaching 65 years of age (55 years to 65—another age-period with heavy mortality) may have higher general death-rates in consequence of that factor in their composition.

The age-group of children under 5 years of age is still more important. As Dr. Newsholme says: "The death-rate at this age-period forms perhaps a more important sanitary test than the death-rate at any subsequent age-period." By reference to Table 16f, the high percentage of the total population of each of the following Areas comprised within the age-period under 5 years of age will be observed, namely: Areas N, O, P, T, Z, and the number of deaths in each of those Areas at that age-period, quoted in Table 16d, will be observed to be one-third, or nearly one-third of the total deaths in those Areas,

whilst the deaths under 5 years of age in Area O (Fulford Road district) actually amounted to 36 per cent. of the total deaths at all ages; whereas Areas W, B, F, with high percentages of children have a much lower mortality amongst children.

The death-rates for the Areas stated in the following Tables are per 1,000 persons living at the Census, 1911. Those for the Wards and Sanitary Sub-districts are based upon their populations which are stated as estimated at the middle of 1913.

TABLE 16a.—BOOTHAM SANITARY SUB-DISTRICT (including Institutions).

Ward.	Area.	At Census 1911.		1913.	
		Total occupied houses.	Population.	Total deaths.	Death-rate.
Bootham	U. Marygate Estate ..	235	1,279	11	8·6
	V. Clarence Street... ..	768	3,832	41	10·7
	W. Haxby Road (including Workhouse residents*)	1,276	6,360	77	12·1
	X. Burton Lane	842	3,608	21	5·8
	Y. Clifton	653	2,794	20	7·2
	Totals in Bootham Ward ...	3,774	18,251	170	9·3
Guildhall	S. Central (larger portion of Guildhall Ward) ...	827	3,889	61	15·6
	Totals for Bootham Sub-district	4,601	22,140	231	10·4
NOTE.					
Haxby Road (excluding Workhouse residents*) ...			5,740	60	10·4
Bootham Ward (excluding Workhouse residents*)...			17,631	153	8·6
Bootham Sanitary Sub-district (excluding Workhouse residents*)			21,530	214	9·9

* That is: deaths of "residents" who had no other home than the Workhouse.

TABLE 16b.

MICKLEGATE SANITARY SUB-DISTRICT.

Ward.	Area.	At Census 1911.		1913.	
		Total occupied houses.	Population.	Total deaths.	Death-rate.
Micklegate	A. Leeman Road	754	3,487	36	10·3
	B. Poppleton Road	303	1,352	22	16 3
	C. Acomb Road	282	1,150	6	5·2
	D. Holgate Road	597	2,739	29	10·6
	E. The Mount	216	1,047	18	17·1
	F. South Bank	854	3,539	36	10·2
	K. Nunnery Lane ... .. (with Blossom Street) ...	932	4,082	50	12·2
	Totals for Micklegate Ward ...	3,938	17,959	197	11·0
Castlegate	G. Butcher Terrace, Nunthorpe	133	601	5	8·3
	H. Scarcroft	812	3,217	38	11·8
	J. Clementhorpe...	795	3,729	25	6 7
	L. Skeldergate (with North St.)	658	3,084	73	23·6
	M. Tower St. (including Castle)	140	760	15	19·7
	Totals for Castlegate Ward ...	2,538	11,347	156	13 7
	Totals for Sanitary Sub-district...	6,476	29,306	353	12·0

TABLE 16c.

WALMGATE SANITARY SUB-DISTRICT.

Ward.	Area.	At Census 1911.		1913.	
		Total occupied houses.	Population.	Total deaths.	Death-rate.
Walmgate.	N. George St. (with Walmgate)...	1,067	4,907	114	23·0
	O. Fulford Rd. (with Heslington Road and including the Barracks)	1,386	8,327	86	10·3
	P. Hull Rd. (with Lawrence St)	1,138	5,123	67	13·1
	Totals for Walmgate Ward ...	3,591	18,503	267	144
Monk.	Q. Heworth	603	2,838	21	7·4
	R. Groves	1,373	6,183	84	13·6
	Z. Layerthorpe	586	2,843	41	14·4
	Totals for Monk Ward	2,562	12,068	146	12·1
Guildhall	T. Hungate	287	1,312	37	28·4
	Totals for Sanitary Sub-district...	6,440	31,883	450	14·1
	Totals for Guildhall Ward (areas S. and T.)	1,114	5,201	98	18·8

TABLE 16d.—TOTAL DEATHS DISTRIBUTED IN AREAS AND IN AGE-PERIODS CHIEFLY AFFECTED.

Area.	Under 1	1—5	25—65	65 and upwards.	All Ages.
A. Leeman Road	10	1	14	8	36
B. Poppleton Road	4	2	5	6	22
C. Acomb Road	1	2	3	...	6
D. Holgate Road	3	2	8	13	29
E. Mount	...	...	10	8	18
F. South Bank	8	2	15	4	36
G. Nunthorpe	...	...	4	...	5
H. Scarcroft	2	...	15	19	38
J. Clementhorpe	7	...	10	7	25
K. Nunnery Lane	5	3	20	19	50
L. Skeldergate	11	5	29	25	73
M. Tower Street	...	1	5	7	15
N. George Street	26	12	34	30	114
O. Fulford Road	24	7	20	30	86
P. Hull Road	13	8	25	14	67
Q. Heworth	1	3	7	10	21
R. Groves	16	8	29	29	84
S. Central	11	2	26	21	61
T. Hungate	9	3	12	11	37
U. Marygate	...	...	5	6	11
V. Clarence Street	8	1	14	17	41
W. Haxby Road	8	3	18	30	60
X. Burton Lane	4	2	11	4	21
Y. Clifton	1	1	8	8	20
Z. Layerthorpe	12	2	14	12	41
Workhouse (no other address) ...	1	...	6	10	17
TOTALS	185	70	367	348	1034

TABLE 16e.—SPECIAL INCIDENCE OF FATAL DISEASE IN THE AREAS.

Cause.	A	B	D	E	F	H	K	L	N	O	P	Q	R	S	V	W	Z
Premature Birth and Development Causes ...	...	6	...	...	...	...	..	5	9	12	10	...	6	5	...	...	...
Old Age	...	...	6	...	...	5	5	10	9	12	..	...	7	6	...	9	6
Tuberculosis (all forms) ...	...	...	...	..	6	...	5	5	12	5	8	...	13	...	...	...	...
Cancer	...	...	...	5	...	...	...	...	...	6	...	..	7	...	...	11	...
Bronchitis & Pneumonia	5	...	...	...	5	...	5	11	14	10	13	...	10	6	7	.	9
Heart Disease	...	...	...	...	6	5	5	7	12	9	7	7	..	8	6	5	5
Diseases of Brain and Nervous System ...	...	...	...	...	...	5	...	..	9	...	...	...	7	...	...	6	...

TABLE 16f.—NATIONAL CENSUS, 1911.

PERCENTAGES AT DIFFERENT AGE-PERIODS OF TOTAL POPULATION OF EACH AREA & SANITARY SUB-DISTRICT.

Area.	0—5 years.	5—25 years.	25—65 years.	65 years and over.
U. Marygate ...	5·1	45·0	43·6	6·2
V. Clarence St. ...	8·6	37·9	46·8	6·7
W. Haxby Road ... (Minus Union Workhouse)	10·7	39·3	45·9	4·2
X. Burton Lane ...	11·5	36·5	49·0	3·3
Y. Clifton... ..	6·4	33·0	54·9	5·8
S. Central ...	6·9	35·8	50·0	7·2
Bootham Sanitary Sub-district	8·7	36·6	48·5	6·2
A. Leeman Road..	13·9	41·7	41·8	2·6
B. Poppleton Road	15·8	36·9	46·3	2·9
C. Acomb Road ...	7·4	36·2	52·6	3·9
D. Holgate Road..	8·7	37·0	48·7	5·6
E. Mount	3·7	35·0	53·8	7·5
F. South Bank ..	14·3	35·9	47·4	2·3
G. Nunthorpe ...	12·6	37·6	47·2	2·5
H. Scarcroft ...	6·5	33·3	53·6	6·6
J. Clementhorpe...	12·8	39·1	43·6	4·6
K. Nunnery Lane	10·2	37·2	46·9	5·8
L. Skeldergate ...	9·5	36·2	47·0	7·3
M. Tower Street ...	6·1	38·4	48·2	7·4
Micklegate Sanitary Sub-district	10·7	37·2	47·3	4·9
N. George Street...	12·2	38·5	44·3	5·1
O. Fulford Road...	10·8	41·3	43·7	4·2
P. Hull Road ...	12·7	38·4	44·6	4·3
Q. Heworth ...	9·5	37·4	48·1	5·0
R. Groves... ...	11·3	40·1	43·3	5·3
T. Hungate ...	14·3	42·8	38·1	4·7
Z. Layerthorpe ...	13·7	43·3	39·7	3·3
Walmgate Sanitary Sub-district	11·7	40·0	43·7	4·6
City	9·3	39·3	46·2	5·1

Death-rate of England and Wales:—

The following interesting notes are abstracted from the Annual Reports of the Principal Medical Officer to the Local Government Board for 1912—13:—

"The state of the public health, so far as it can be summarised in terms of reduction of death-rates from all causes and from special diseases is shown in the following figures:—

Comparing the experience of 1912 with the average experience of 1891—1900, the rate of infant mortality has declined 38 per cent.; the death-rate from Measles 16 per cent.; from Scarlet Fever 66 per cent.; from Whooping Cough 40 per cent.; from Diphtheria and Croup 57 per cent.; from Enteric Fever 75 per cent.; from Tuberculosis (all forms) 32 per cent.; and from Pulmonary Tuberculosis 25 per cent."

DEATHS AT ADVANCED AGES.

Age-periods.	Sanitary Sub-districts.			Total.
	Bootham.	Micklegate.	Walmgate.	
At ages 65 to 75 years	52	55	75	182
„ 75 to 85 years	37	51	43	131
„ 85 years and over	11	12	12	35
Totals	100	118	130	348

348 = 33·6 per cent. of total deaths at all ages.

Chief causes of death:—Cancer, Cerebral Diseases, Heart Disease, Bronchitis, and Senile Decay.

INFANT MORTALITY.

DEATHS UNDER THE AGE OF TWELVE MONTHS.

The nett total number of deaths in 1913 was 185, or 94 per 1,000 births (or 17·9 per cent. of the nett total number of deaths at all ages), as compared with 116 per 1,000, the average for the 96 great towns, and 109 for England and Wales.

TABLE 17.—INFANT MORTALITY RATE.

Year.	YORK.				ENGLAND AND WALES.
	No. of deaths.	* Proportion per 1,000 births.	Percentage of total deaths at all ages.	* Proportion per 1,000 births, after deducting the deaths due to premature birth.	Proportion per 1,000 births.
1903	359	154	27·5	132	132
1904	388	170	29·3	149	145
1905	299	130	25·5	105	128
1906	275	124	24·0	100	132
1907	271	124	21·2	98	118
1908	227	104	20·5	84	120
1909	206	100	20·7	78	109
1910	186	94	17·7	81	105
1911	222	144	20·0	89	130
1912	184	97	16·0	78	95
Average for ten years, 1903—1912.	261	121	22·3	99	121
1913	**185**	**94**	**17·9**	**74**	**109**

* The difference between the figures in these two columns may be said to represent the pre-natal influences, which, in the present conditions of social life—of the labouring classes in particular—are not nearly so much under control as is possible with post-natal influences.

TABLE 18.—INFANT MORTALITY IN 1913.

DEATHS UNDER ONE YEAR PER 1,000 BIRTHS.

	England and Wales.	96 Great Towns	City of York.
First Quarter	122	125	121
Second ,, ...	89	91	69
Third ,, ...	112	125	88
Fourth ,, ...	113	125	95
Whole Year	109	117	94

TABLE 19.

The York deaths in 1913 occurred as follows:—

	Sanitary Sub-districts.			Total.
	Bootham.	Micklegate.	Walmgate.	
First quarter of year ...	9	21	32	62
Second „ „	8	10	16	34
Third „ „	5	8	30	43
Fourth „ „	11	12	23	46
Whole Year	33	51	101	185

TABLE 20.

1913. Quarterly Infant Mortality rates in the Sanitary Sub-districts (viz., deaths under one year of age per 1,000 births in each district):—

Sanitary Sub-districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Whole Year.
Bootham	108	70	44	128	83
Micklegate	112	65	49	65	74
Walmgate	132	71	140	107	112
Whole City	121	69	88	95	94

The smallness of all the figures for the second quarter, and of the Bootham and Micklegate figures for the third quarter, is worthy of remark. The high figure for Bootham in the fourth quarter was due largely to premature birth. The high figure for Walmgate in the third quarter was due to various infantile developmental diseases.

The Walmgate Sub-district has the highest birth-rate and still demands the most vigorous educational and other efforts in order to further reduce its excessive mortality amongst infants.

TABLE 21.—CITY OF YORK.

INFANT MORTALITY RATES IN THE SECOND AND THIRD QUARTERS OF SEVEN RECENT YEARS.

DISTRICT.	2ND QUARTERS.							3RD QUARTERS.						
	1907	1908	1909	1910	1911	1912	1913	1907	1908	1909	1910	1911	1912	1913
Bootham	115	57	73	55	59	80	70	58	108	58	36	132	51	44
Micklegate ...	88	106	58	33	101	57	65	91	88	110	118	128	87	49
Walmgate... ...	102	54	63	98	66	92	71	78	146	125	132	210	85	140
Whole City ...	100	73	63	65	78	76	69	79	120	106	104	170	78	88
Whole Year— Whole City ...	124	104	100	94	114	97	94	124	104	100	94	114	97	94

The year 1911 was an extraordinarily hot summer; hence the high infant mortality rates in the Third Quarter.

TABLE 22.

ANNUAL AVERAGE INFANT MORTALITY PER 1,000 BIRTHS

during decennial and quinquennial periods.

	York.	England and Wales.	* 96 Great Towns.
Ten years, 1861—70	157	154	...
,, ,, 1871—80	157	149	...
,, ,, 1881—90	154	142	...
,, ,, 1891—1900	167	154	...
Five ,, 1901—05	143	138 } 127	147
,, ,, 1906—10	109	117 }	126
1911	114	130	140
1912	97	95	101
1913	94	109	117

N.B.—The figures down to 1900 are from the Registrar-General's Decennial Reports. The figures for 1901 - 1913 are from our own records.

* The "77 Great Towns" of recent years were increased to 96 during 1913.

Although our Infant Mortality has declined during recent years in a most gratifying manner, experience demands that preventive efforts must be maintained and not relaxed. The mortality is only an index of the total amount of disease. For every death there are many cases of illness, of prolonged debility, and of permanent damage.

The following Table, numbered 23 (Local Government Board's Table IV), sets forth in detail the deaths of infants under the age of twelve months in York in 1913, classified according to the principal causes of death, and the ages at death, in weeks and months. It will be observed that the chief causes of Infant Mortality during the year were as follows:—

Premature Birth	38 }	79
*Other Developmental Causes	41 }	
Diarrhœal Diseases		29
Convulsions		14
Pneumonia	23 }	36
Bronchitis	13 }	
Meningitis (non-tuberculous)		4
Tuberculosis		4
Whooping Cough		4
Congenital Syphilis		4

* This group of diseases comprises the deaths registered as due to "Debility at Birth," Congenital Defects, "Want of breast-milk," Atrophy, "Marasmus," and Rickets.

TABLE 23.—CITY OF YORK.

INFANT MORTALITY, 1913.

Nett Deaths from stated causes at various Ages under 1 Year of Age.

(LOCAL GOVERNMENT BOARD'S TABLE IV).

Causes of Death.	Under 1 week	1—2 weeks.	2—3 weeks.	3—4 weeks.	Total under 4 weeks.	4 weeks and under 3 mths	3 months & under 6 mths.	6 months & under 9 mths.	9 months & under 12 mths.	Total deaths under 1 year.
All causes { Certified ...	42	15	10	10	77	36	37	22	13	185
All causes { Uncertified ...	...	...	...	...	...	...	...	...	...	0
Small-pox	...	...	...	...	...	...	...	...	...	0
Chicken-pox	...	...	...	...	...	...	...	...	...	0
Measles	...	...	...	...	...	...	...	...	...	0
Scarlet Fever	...	...	...	...	...	...	...	...	...	0
Whooping Cough	...	...	...	...	...	...	3	1	...	4
Diphtheria and Croup ...	...	...	...	...	...	...	...	...	...	0
Erysipelas	...	...	...	...	...	...	...	...	...	0
Tuberculous Meningitis ...	...	...	..	1	1	1	...	...	...	2
Abdominal Tuberculosis ...	...	...	...	...	...	...	...	...	...	0
Other Tuberculous Diseases	...	...	..	...	...	...	...	1	1	2
Meningitis *(not Tuberculous)* ...	...	...	...	1	1	...	2	1	...	4
Convulsions	3	2	1	1	7	4	1	1	1	14
Laryngitis	...	...	...	...	...	1	...	...	...	1
Bronchitis	1	1	1	1	4	3	2	3	1	13
Pneumonia (all forms) ...	...	...	...	...	...	9	6	6	2	23
Diarrhœa ... ... / Enteritis	...	...	2	...	2	5	11	6	5	29
Gastritis	...	...	...	...	...	...	...	...	...	0
Syphilis	...	...	1	...	1	2	1	...	...	4
Rickets	...	...	...	...	...	...	...	...	1	1
Suffocation, overlying ...	...	...	...	...	...	...	...	...	...	0
Injury at Birth	...	...	...	...	...	...	...	...	...	0
Atelectasis	...	...	...	...	...	...	...	...	...	0
Congenital Malformations	2	3	1	1	7	2	...	...	...	9
Premature Birth	27	6	1	2	36	2	...	...	...	38
Atrophy, Debility, and Marasmus	6	3	2	3	14	4	10	2	1	31
Other Causes	3	...	1	...	4	3	1	1	1	10
Totals	42	15	10	10	77	36	37	22	13	185

Nett Births in the year { legitimate ...	1,881	Nett Deaths in the year of { legitmate infants ...	164
{ illegitimate ...	96	{ illegitmate „ ...	21

TABLE 24.—CITY OF YORK.

(a) The age-distribution of the Infant Mortality in York in 1913 may be stated thus:—

Age-period.	Total Deaths.	Percentage of total Infant Deaths.
In first week of life	42	22·7
In first month of life	77	41·6
In second and third months	36	19·5
In fourth, fifth and sixth months	37	20·0
In seventh to twelfth months	35	19·0

There were 113 deaths in the first three months of life, or 61 per cent. of the total infant deaths; and 150 deaths in the first six months of life, or 81 per cent. The chief causes of these deaths were Immaturity, Atrophy, and Debility.

The 35 deaths between six and twelve months were due chiefly to Diarrhœa, Bronchitis, and Pneumonia.

(b) Total deaths of infants in the Sanitary Sub-districts due to the following causes:—

1913.	Botham.	Micklegate.	Walmgate.	Whole City.	
				Total deaths.	Percentage of total infant deaths.
Premature birth and other developmental causes	15	20	44	79	42·7
Bronchitis and Pneumonia ...	6	12	18	36	19·5
Diarrhœal diseases	4	4	21	29	15·7

"The declining birth-rate gives added importance to the study of the causes of Infant Mortality, and to the practice of means for saving child life and for rendering it a more satisfactory prelude to a higher standard of health in youth and adult life. It is satisfactory to find that the saving of infant life is being secured on a large scale; and that the general evidence points to improvement in higher ages." *(Vide Dr. Newholme's Annual Report, 1910-11).*

Hard work still lies before us however in the difficult task of saving the infants within the first six months of life, amongst whom the mortality is appalling, as witness the above and following tables.

TABLE 25.—CITY OF YORK.

(a) Year.	Total deaths under one year of age.	Total deaths at ages:— Under one week.	Under one month.	Under three months.	Under six months.	From seven to twelve months.	Total deaths due to:— Premature birth & other developmental causes.	Diarrhœal diseases.	Bronchitis and Pneumonia.	Common infectious diseases.
1905	299	69	97	151	206	93	139	72	27	7
1906	275	58	90	141	194	81	118	65	29	14
1907	271	70	105	161	200	71	126	40	34	13
1908	227	61	87	129	167	60	103	48	30	11
1909	206	53	85	127	155	51	97	24	39	5
1910	186	36	51	92	135	51	69	36	26	6
1911	222	43	86	133	170	52	93	55	21	13
1912	184	48	73	107	129	55	84	14	39	14
1913	185	42	77	113	150	35	79	29	36	4

(b)—Percentages of Total Infant Deaths.

Year.	At ages:— Under one week.	Under one month.	Under three months.	Under six months.	From seven to twelve months.	Due to following causes:— Premature birth and other developmental causes.	Diarrhœal diseases.	Bronchitis and Pneumonia.	Common infectious diseases.
1905	23·0	32·0	50	70	30	46·5	24·0	9·0	2·4
1906	21·0	32·0	51	70	30	43·0	23·6	10·0	5·0
1907	25·6	38·7	59	74	26	46·5	14·8	12·5	4·9
1908	26·8	38·0	57	74	26	45·4	21·0	13·2	4·9
1909	25·7	41·2	62	70	24	47·0	11·6	19·0	2·4
1910	19·3	27·4	49·5	72·5	27·4	37·1	19·3	14·0	3·2
1911	19·4	38·7	59·9	76·5	23·4	41·9	24·8	9·5	5·9
1912	26·1	40·0	58·0	70·0	30·0	45·6	7·7	21·2	7·7
1913	22·7	41·6	61·1	81·1	19·0	42·7	15·7	19·5	2·2

(c). Total Deaths under One Year of Age occurring in the Sanitary Sub-districts.

Year.	Bootham.	Micklegate.	Walmgate.	Whole City.
1905	49	96	154	299
1906	57	83	135	275
1907	54	92	125	271
1908	37	83	107	227
1909	39	66	101	206
1910	30	61	95	186
1911	34	75	113	222
1912	27	53	104	184
1913	33	51	101	185

(d). Percentages of the Total Infant Deaths of the City occurring in Sanitary Sub-districts.

Year.	Bootham.	Micklegate.	Walmgate.
1905	16	32	51
1906	20	30	49
1907	20	34	46
1908	16	36	47
1909	19	32	49
1910	16	33	51
1911	15	34	51
1912	15	29	56
1913	18	28	56

The Causes or Predisposing Causes of Infant Mortality may be summarised as follows:—

1. Deficient nutrition and care of mother during pregnancy.
2. Early marriages, improvident marriages, unhealthy marriages.
3. Inherited constitutional conditions.
4. Damaging effects of drugs, etc., used by some in the endeavour to produce abortion.
5. Illegitimacy of birth.
6. Carelessness and ignorance as to the rearing of infants on the part of parents and untrained nurses.
7. Bottle-feeding—often with unsuitable or polluted foods. Consequent gastric and intestinal disorders.
8. Excessive feeding and drugging.
9. Positive neglect of children and of their ailments, and exposure to cold.
10. Poverty, starvation, or semi-starvation.
11. Alcoholism in one or both parents.
12. Insanitary housing conditions.
13. Overcrowding, per house and per acre.
14. Want of cleanliness in house, person, clothing and habits.
15. Employment of mothers outside home.

Still-births.—In continuance of the arrangement made with the Registrar of the York Cemetery in 1907, I have received from him weekly returns of the particulars concerning each still-born sent to the cemetery for burial. We are greatly indebted to him for the regularity and completeness of the returns. Particulars of 109 such burials (of children at all stages of pregnancy) were received from him during the year 1913, and when considered necessary some further enquiries were made concerning them.

CITY OF YORK.

STILLBIRTHS NOTIFIED BY REGISTRAR OF YORK CEMETERY.

Year.	Certified for Burial by			Totals.
	Doctors.	Registered Midwives.	Unregistered Midwives.	
1907 (part year)	35	18	6	59
1908	77	39 (2 certified by Coroner's Inquests)	3	121
1909	73	32	2	107
1910	72	33	0	105
1911	65	41	0	106
1912	67	22	0	89
1913	63	46	0	109

CITY OF YORK.

DEATHS OF ILLEGITIMATE INFANTS.

Year.	Total illegitimate births.	Total deaths of illegitimates under the age of twelve months.	Mortality of illegitimate children per 1,000 illegitimate births.	Mortality of legitimate children per 1,000 legitimate births.
1905	116	44	380	117
1906	118	32	271	116
1907	115	32	278	115
1908	98	27	275	95
1909	106	21	198	94
1910	103	24	233	86
1911	89	28	314	104
1912	92	14	152	94
1913	96	21	219	87

The death-rate amongst these unfortunate babes still continues very excessive.

1913. Sub-districts.	Total number of deaths of illegitimates.	Mortality per 1,000 of illegitimate births in that district.	Mortality per cent. of illegitimate births in that district.
Botham	3	231	23·1
Micklegate	8	190	19·0
Walmgate	10	244	24·4

These deaths in 1913 occurred at the following ages:—

Under one week	4	Three to six months... ...	4
One to four weeks	7	Six to twelve months ...	4
One to three months ...	2		

And were certified as due to the following causes:—

Premature Birth	3	Pneumonia	1
Atrophy, Debility & Marasmus	7	Syphilis, Congenital	1
Diarrhœa and Enteritis ...	5	Burns	1
Convulsions	1	Accident at Birth	2

DEATHS OF CHILDREN UNDER THE AGE OF FIVE YEARS.

The nett total number of deaths of children under the age of five years (0—5) was 255, or 24·6 per cent. of the nett total of deaths at all ages, or 3·1 per 1,000 living at all ages in the whole City, as compared with 3·4 per 1,000 for 1912.

Year.	Total deaths under five years.	Year.	Total deaths under five years.
1901	470	1908	346
1902	403	1909	277
1903	553	1910	288
1904	531	1911	324
1905	393	1912	285
1906	402	1913	255
1907	407		

The deaths at this age-period occurred during the year as follows:—

First quarter	84, or 27·7	per cent. of total deaths at all ages in that quarter.
Second „	50, or 17·6	
Third „	58, or 28·8	
Fourth „	63, or 25·6	

*The following average death-rates for decennial periods for England and Wales (of children under five years of age) are quoted from the Registrar-General's Reports:—

1841—1850	66·0	1871—1880	63·4	1901—1905	50·2
1851—1860	67·6	1881—1890	56·8	1906—1910	41·7
1861—1870	68·6	1891—1900	57·7	1911	43·7

The deaths under the age of five years in 1913 were distributed as follows:—

Sanitary Sub-district.	Totals.	Percentages of total deaths at all ages in that district.	Death-rate per 1,000 living at all ages in that district.
Bootham	42	18·2	1·9
Micklegate	69	19·5	2·4
Walmgate	144	32·0	4·5

Of the deaths under the age of five years, it will be observed that over 56 per cent. occurred in Walmgate Sanitary Sub-district.

* See also Tables 9a and 9b.

The total deaths in 1913 in three age-groups, in the three Sanitary Sub-districts were as follows:—

Sanitary Sub-districts.	Age 0—1.	Age 1—5.	At all ages over 5.	Totals.
Bootham district ...	33	9	189	231
Micklegate „ ...	51	18	284	353
Walmgate „ ...	101	43	306	450
Totals	185	70	779	1034

The chief causes of death amongst the 70 children between one and five years of age were as follows:—

Diphtheria	3
Whooping Cough	7
Tuberculosis (Tuberculosis of Lungs, Tubercular Meningitis, Tabes Mesenterica, etc.)	8
Bronchitis and Pneumonia	17
Meningitis (only cause named)	6
Accidental	6

Inquests on deaths of young children.

During the year 20 inquests were held on the deaths of children under the age of five years, 2 children belonging to Bootham District, 9 to Micklegate District, and 9 to Walmgate District. The causes of death were registered as follows:—

Under one year of age.		At ages one to five years	
Whooping Cough	1	Convulsions	1
Convulsions	6	Croup	1
Debility	1	Burns	2
Broncho-pneumonia	1	Scalds	2
Respiratory	1	Other Accidents	2
Operation	1		
Burns	1		
	12		8

The Prevention of Infant Mortality.

Further National Measures are still awaited in the following directions:—

(*a*) The earlier *registration* of births (within say seven days). The shorter period for registration would largely prevent the leakages due to the present long period of forty-two days, in which period the parent or parents often remove from the place of birth.

(*b*) The medical certification and registration of all still-births.

(*c*) The extension of the existing legislation regarding the milk supply so as to cover dirty milk and *all* diseases of cows likely to affect their milk. The use of chemical preservatives in milk sold for human consumption was prohibited by the Milk and Cream Regulations, 1912.

(*d*) "That all preparations offered or sold as food for infants should be certified by a Government analyst as non-injurious, and that each packet should contain its analysis."

The Control of Infant Mortality in York:—

The following special measures have been adopted by the Corporation Health Department:—

1. Visitation of mothers by two qualified Health Visitors;
2. The adoption of the Notification of Births Act, to enable such visits to be made;
3. Special visitation amongst young children during periods of Epidemic Diarrhœa, and other sickness;
4. The copious distribution of leaflets on "The Care and Feeding of Infants," the "Prevention of Diarrhœa," and "The Dangers of House Flies";
5. The improved sanitation of dwellings in which infants are found to be living under insanitary conditions, improvement of pantries, abolition of privy-middens, insanitary manure-heaps and ashbins, &c.
6. Gratis distribution of disinfectants to the above houses, and in cases of Summer Diarrhœa;
7. Inspection and instruction of midwives.

8. Occasionally enquiries are made about the circumstances attending still-births in the practice of midwives, and about the deaths of young children from preventable diseases, such as Diarrhœa, Measles, &c.

9. Some excellent work has been done in the direction of the teaching of the senior girls in the elementary schools on "Infant Care and Management," and also at the new Domestic Centre at White Cross Lodge, near Haxby Road Council School, and on twelve occasions during the year the Corporation's Health Visitors and School Nurses have given demonstrations to these pupils (who are often deputy-mothers at home) on the washing and dressing and personal hygiene of a live baby (the mother of which has always been present).

The Medical Inspection of School Children, carried on under the control of the Education Committee, is referred to later on in this Report, and, at greater length, in the special Annual Report issued by that Committee. The Medical Officer of Health is School Medical Officer.

Since last August, an open-air school for twenty tubercular or pre-tubercular children has been carried on by the Education Committee in the garden of No. 11 Castlegate. This class has been well-managed and has been a great help to the little ones.

The notification of Births Act and the work of the Health Visitors:—

The Notification of Births Act of 1907, with the consent of the Local Government Board, was adopted by the York Corporation, and came into operation in the City on the 12th February, 1908. Stamped postcards for the purpose of notification are supplied to all the medical practitioners and registered midwives.

Operation of the Act in the City of York during the year 1913:

Total births registered with the Sub-registrars...				1985
Ditto	notified to the Medical Officer of Health within 36 hours, as required by the Act	1501	87·2 per cent. of total births occurring during 1913.	
Ditto	notified after 36 hours after birth...	283		
		1784		
Total births *not* notified at all		262	(percentage 12·8).	
Total births notified by general medical practitioners...				264
Ditto	by registered ("certified") midwives			1298
Ditto	by nurses			37
Ditto	by parents or occupiers of houses			185
				1784
Total births notified (of the above 1784) as still-births (after 28th week of pregnancy)				75

The following are the duties of the Health Visitors :—

(*a*) To advise mothers about the rearing and feeding of their infants. In about 75 per cent. of births, such visits are made, and from 4 to 12 re-visits per case, according to need.

(*b*) To advise mothers *re* cleanliness and other points in domestic hygiene.

(*c*) To investigate and advise in cases of diarrhœa, ophthalmia neonatorum, and infantile paralysis.

(*d*) To help in the supervision of the certified midwives.

(*e*) To enquire into causes of still-birth, as notified by the midwives, and into causes of death from other preventable diseases.

As it is essential that the Health Visitors should give sufficient time to their visits in order to establish friendly relationships with the people they visit, and to have helpful conversation with them, it is impossible to summarise the work fully by means of statistics, but so far as statistics go, the following will be of interest :—

TABLE 26.

Summary of work performed by Health Visitors during the year 1913:—

Houses Visited :—	East side of City.	West side of City.	Total.
First visits *re* Births	792	593	1385
Re-visits to Infants	1874	3362	5236
Re Still-births (to verify and advise)	14	8	22
Re Midwives (inspection and advice)	61	78	139
Re Phthisis cases (advice and help)	115	83	198
Re Diarrhœa cases and Infantile deaths (as to causation, &c.)	40	8	48
Re Cases of Sickness notified to M.O.H. ...	77	76	153
Re other matters	68	32	100
Housing Defects, &c., referred to Medical Officer of Health and Chief Sanitary Inspector	44	44	88

The Health Visitors are strictly instructed not to visit *re* births whilst a doctor or a good midwife is in attendance, and they are not to press their visits upon reluctant people. If their advice is not desired, there is no need for anything but a polite refusal. The nurses have found that at most of the homes their

visits were well received on the part of the mothers and householders, who are generally glad to receive advice and help in the rearing of their infants. They report that the mothers on the whole have also been most willing to carry out any advice tending to the improved cleanliness of the home or of the children.

Facts regarding the feeding of the infants visited, as observed at different periods after birth (July 1st, 1912 to July 1st, 1913):—

It is our rule not to make any notes in infant visiting, in the homes, of such a character as to give the people the idea that we are spies or detectives. The notes made in the homes are only such as may be necessary in order to secure help for the mother, but the following facts regarding the feeding and cleanliness of the infants visited have been compiled from notes made out of the home and are of considerable interest. It is not until after six or eight weeks that the evils of weaning and artificial feeding occur in York to any appreciable extent.

TABLE 27.

Total births given to visit, 1,566	About the end of 3rd month.	About the end of 6th month.
Total children being breast-fed entirely	948	714
,, breast-fed plus bottle (cow's milk and water)	84	72
,, breast-fed plus tinned whole milk ...	6	...
,, breast-fed plus spoon-food (starchy foods)	17	19
,, bottle-fed (cow's milk & water) entirely	169	313
,, bottle-fed (tinned whole milk) ...	22	30
,, bottle-fed (starchy foods)	23	51
Percentage entirely breast-fed	74·7	51·2
Percentage entirely bottle-fed (with various foods) ...	16·8	32·9

	First Visit.	Second Visit.
Total babies in clean condition	1,198 ...	1,154
,, dirty ,, ...	71 ...	45
Total houses in clean condition	1,204 ...	1,142
,, dirty ,, ...	65 ...	57
Total babies ailing at time of visits	...	140
Visits declined	...	22
Total deaths occurring amongst infants visited	...	66
Not visited (for various reasons)	...	121
Removed or left City during the six months ...	...	88

Your Medical Officer of Health attended, as delegate of the York Corporation, the deeply interesting English-speaking Conference held under the auspices of the National Association for the Prevention of Infant Mortality, in London last August. He had intended issuing a special Report to the Corporation on the proceedings, but he regrets that personal illness and pressure of other urgent work have so far made that impossible of achievement. He attended the previous special Conferences on the same great theme held in 1906 and 1908, Conferences which, as is now well known, have advanced the national and local campaign for the prevention of infant mortality enormously, and led to the foundation, in June 1912, of the National Association for the Prevention of Infant Mortality and for the Welfare of Infancy. That Association comprises representatives of all bodies and societies interested in child welfare. The next of these Conferences is to be held in Liverpool in July, 1914. Last year's Conference had representatives from every English-speaking country, and from twenty-two such Governments—500 delegates in all. The subjects dealt with comprised:—

The work carried on in the United States of America, in Canada and in New Zealand;

The responsibility of Central and Local Authorities in the matter of Infant and Child Hygiene;

The Medical Inspection of Children under School Age;

The Administrative Control of the Milk-supply;

The Necessity for Special Education in Infant Hygiene;

Medical Milk Problems; the Use of Dried Milk;

Ante-natal Hygiene; Practical Work among Expectant Mothers;

Congenital Syphilis as a cause of Infant Mortality and the Preventive Measures necessary;

The Working of the Maternity Benefit.

Voluntary work carried on in the City relating to the prevention of sickness and mortality amongst Mothers, Infants and young Children.

(*a*) In the latter part of the year, the York Health and Housing Reform Association (which some years ago did such excellent work amongst the mothers and infants through the efforts of Miss Hutchinson and others) promoted the formation of the *York Infants' Welfare Association*, of which the Archbishop of York is Patron, Mrs. Edwin Gray is Chairman, and Dr. Micklethwait is Hon. General Secretary. The objects of the Association are stated as follows:—

(1) "The training of mothers in the proper care of their children.

(2) The weighing and general supervision of the child for at least the first year of its life, and, if possible, till it is of school age.

(3) The provision of dinners for a certain number of necessitous expectant and nursing mothers. It is not intended that these dinners should be entirely gratuitous—where possible, a small payment will be asked for; neither are they to be indiscrimately given, for no one will be accepted without careful enquiry."

("It will be remembered that in the year 1912, there was in existence what was called a Mothers' Welcome, which provided dinners for necessitous mothers three months before the birth of a child and some six or nine months after, so long as the child was being fed by the mother. It was found, however, that if the mothers did not attend regularly, there was a considerable drop in the weight and general condition of the child, which, of course, discounted much of the former benefit derived and greatly hindered the achievement of permanent results. Consequently, the work was not at all encouraging, and moreover, subscriptions were not forthcoming satisfactorily, so that the institution never really got on to a sound footing.")

(4) Demonstrations in cooking and laundry work are contemplated.

(5) There is also a Thrift Club, a kind of savings' bank, for expectant and nursing mothers, who "may pay in weekly or fortnightly from a penny upwards, and draw out as soon as desired after the baby is born."

(6) Weekly classes of mothers are held for special instruction. "All kinds of warm baby garments are sold at cost price. If a mother cannot pay for a garment at once, she may pay what she can each week until it is paid for. Then it belongs to her and she may take it away."

"A cup of tea is provided during the meetings. The superintendent has a friendly chat with the mothers and will give them any advice they may need for themselves or for the expected baby."

Central premises entirely occupy the house No. 18 Castlegate, and there is a branch at No. 74 Stamford Street, Leeman Road. These were opened in December, 1913. Expectant mothers are received at each place once a week, and an Honorary Medical Officer attends twice a week for "Infant Consultations," to give advice to mothers regarding themselves or their infants. A trained Superintendent Nurse is employed whole-time, and she is assisted by several able and earnest voluntary workers. The Corporation Health Visitors have been the means of supplying a large proportion of the "clients," and they are usually present and help at the consultations, where their previous knowledge of the "clients" is of value. Over 200 mothers and children have so far been under the care of the Association. Cases requiring actual medical treatment are referred to the County Hospital or to the Dispensary where weekly "Infant Consultations" with a view to treatment are held by the Hon. Lady Medical Officer; 190 cases were thus treated last year.

In some towns this movement has been undertaken municipally, as in Bradford, for instance, where the Local Health Committee have supervision over what is called Infants' Consultations. This service aims at the skilled supervision of infants during the first year of their lives, and includes the regular medical inspection of the infants and the regulation of their hygiene, special attention being paid to their feeding. The babies, in this case, are mainly those in which special danger to life is apprehended. For a very large proportion of these, it has been found, satisfactory medical attention is not, under ordinary circumstances, available, and it has become necessary in many cases to follow up the medical inspection with treatment when the infants are sick. The number of infants in attendance at the consultations in the first year of working was 1,523, and the total number of attendances when the last report was issued was 13,812.

(*b*) The York Maternity Hospital, opened in November, 1908, has already fully justified its existence, and established its claim to an assured position among the charities of York. It has grown rapidly in usefulness and popularity, as the record of the number of patients cared for in it shows. In the first fourteen months 42 patients were admitted; in 1910 there were 54 admissions; in 1911, 67; in 1912, 94; and in 1913, 97.

That there was need for such an institution in York is clearly shown by the fact that very few weeks pass without application being made by some one or other of the medical men practising in the City for the admission of anxious and difficult cases which could not be cared for to so great advantage in their own homes.

(*c*) This Hospital, too, is a Teaching Institution. It trains women for the certificate of the Central Midwives' Board, and here it has been as successful as in the other departments of its work. Forty midwives have so far been trained in this Institution. Only a few of these have settled to practise in the City. The proper training of midwives, in view of the immense amount of maternity work carried on by midwives (especially since the Midwives Act of 1902 came into force) and of their care of infants within the first few days of life, has obviously a most vital preventive relationship in regard to infant mortality.

(*d*) Also helpful is the York Association of Midwives, founded a few years ago, and now numbering 40 members, all certified under the Midwives Act. It is affiliated with the national association called the Midwives Institute, and its proceedings consist of papers by medical men and others on matters connected with midwifery and the care of mothers and infants. Mrs. Edwin Gray is President, the Matron of the Maternity Hospital is Secretary, and your Medical Officer of Health is a Vice-president.

(*e*) A Crèche, carried on by the private charity of the Sisters of St. Vincent de Paul, established in 1896, which takes charge, on weekdays only, of from 2 to 20 infants, belonging to mothers who are obliged to go out to work.

(*f*) In connection more particularly with children after infancy, the work of the Children's Help Committee of the York Charity Organisation Society, of which the Hon. Mrs. Lumley is Chairman and Miss J. K. Welch, Secretary, deserves special mention. This Committee works on the lines of the Invalid Children's Aid Association of London, and provides, amongst other forms of

help, prolonged convalescent treatment, expensive surgical apparatus required, hospital and dispensary notes, continued visiting to see that special medical instructions are carried out, boarding-out children at a convalescent home or at a moorland farm, supplies of extra milk, special food, &c.

(*g*) A certain amount of irregular distribution of milk, &c., by "Soup Kitchens," &c.

(*h*) The foster-children (mostly illegitimate) which are received by persons who "undertake for payment the nursing and maintenance of any child apart from its parents for more than 48 hours," and which are under the supervision of the Board of Guardians by virtue of the Children Act of 1908, are visited and cared for by five voluntary lady workers (in addition to the three inspectors employed by the Guardians). The condition of these children has greatly improved through the working of the above Act.

(*j*) The work of the York District Nursing Association and its branches obviously has also its helpful relation to preventive work.

(*k*) So also the manifold work of the County Hospital and the Dispensary.

THE PRINCIPAL EPIDEMIC DISEASES.

The "seven principal" Epidemic Diseases in this country are:—Small-pox, Measles, Scarlatina, Whooping Cough, Diphtheria, Typhoid Fever, and Summer Diarrhœa.

The total number of deaths from these Epidemic Diseases in the year 1913 was 67, equivalent to a death-rate of 0·80 per 1,000 living at all ages, as compared with 0·84 for 1912.

This "Zymotic" death-rate, however, demands analysis, and the following Table gives the death-rates for each of these principal diseases:—

TABLE 28.

EPIDEMIC DEATH-RATES PER 1,000 LIVING.

for 1903—12 and 1913.

	YORK—1913.		Average Death-rate in York, 1903—12.	Average Death-rate, 96 Great Towns, 1913.
	Total Deaths.	Death-rate.		
Small-pox	0	...	...	...
Measles	0	...	0·220	0·34
Scarlet Fever...	1	0·012	0·092	0·07
Diphtheria	8	0·096	0·116	0·13
Whooping Cough	11	0·132	0·200	0·17
Typhoid Fever	3	0·036	0·092	0·04
Diarrhœa and Enteritis ...	44	0·528	0·790	...
Infant Mortality (per 1,000 births)	...	94	121	117

From this Table it will be seen that in 1913 all the York death-rates for Epidemic Diseases were below the City's averages for the preceding ten years, and below the averages for the 96 Great Towns.

TABLE 29.

The following figures show how large a constituent of the "Zymotic" death-rate, that for Zymotic or Summer Diarrhœa has been in some recent years:—

Year.	Seven principal "Zymotic" Diseases.		Zymotic Diarrhœa & Enteritis.
	No. of Deaths.	Rate per 1,000 living.	Death-rate per 1,000 living.
1903	169	2·14	0·73
1904	251	3·16	1·94
1905	117	1·47	0·90
1906	151	1·88	1·06
1907	105	1·30	0·56
1908	116	1·43	0·74
1909	56	0·68	0·34
1910	74	0·90	0·61
1911	121	1·47	0·84
1912	70	0·84	0·18
Average Death-rates, 1903—12.	123	1·53	0·79
1913	**67**	**0·80**	**0·53**

The distribution of the cases and of the deaths due to the Epidemic or Zymotic diseases in 1913, in districts and in age-periods, will be found in the large Tables 6 and 6a and is referred to at greater length in the section of the Report dealing with each of the diseases.

The occurrence of the Seven Principal and other infectious diseases will now be discussed more in detail.

SUMMER DIARRHŒA (EPIDEMIC OR ZYMOTIC ENTERITIS).

There were 44 deaths due to this distinct and specific disease in 1913, equivalent to a death-rate of 0·52 per 1,000 living at all ages. Of these 44 deaths, 36 were of children under two years of age (as compared with 15 last year), which is equivalent to 18·2 per 1,000 births. The average death-rate for this disease for the years 1903—12 was 0·79.

Twenty-two of the 44 deaths occurred in the third or Summer quarter of the year. Six deaths occurred in Bootham,

11 in Micklegate, and 27 in Walmgate Sanitary Sub-district.

For the death-rates in previous years, see above Tables.

Epidemic, Summer, or Zymotic Diarrhœa is a specific, infective, and very fatal disease, and now receives the more accurate title of *Epidemic or Zymotic Enteritis*. It is due to *micro-organisms* which are usually most active in the heat of the third quarter of the year (July 1st to September 30th), and their activity is associated with certain conditions, viz., a high air temperature and a low rainfall, the prevalence of flies, and, also, it has been said, a high temperature of the superficial soil. The numerous organisms in polluted refuse, soil, and dust are then easily detached, and carried by flies or by gravitation into milk and other moist food, where they rapidly multiply and produce the toxins or poisons which cause the specific Enteritis (inflammation of the mucous membrane of the intestines). It is, therefore, a filth disease, and its prevalence is reduced by all measures tending to secure pure water, pure milk, pure food, a pure soil, and the prevention of and prompt destruction of filth and flies. It is decidedly predisposed to by improper feeding, and a dirty sour feeding-bottle forms a fatally favourable nidus for the organisms of the disease to thrive in. The evidence as to the evil influence of the common house-fly as the carrier of filth and germ-life to milk and other food is now overwhelming. The special investigations of the Local Government Board and others have demonstrated that house-flies deposit their eggs in almost incredible numbers in warm, fermenting deposits of refuse, especially in manure heaps and in kitchen refuse, as in open ashbins; that their eggs come to life in about a week, the maggot feeds on the refuse, and the fly emerges in from two to three weeks, and is also a feeder on filth as well as on sweets, such as the sugar in milk, jam, &c.

There is great need therefore for a vigorous, persistent, public campaign as to the duty of the individual and of the community in the prevention of the breeding of flies, and in their destruction.

The great lesson which all require to realise to the full is that no refuse of any kind, especially manure, should be allowed to accumulate long enough to become the breeding-ground of flies. Such a campaign has been carried on by our Health Department for years. There is still great room for improvement in manure receptacles and in expeditious removal of their contents.

The summer of 1913 was not so hot, and therefore not quite so favourable to the prevalence of flies and of Zymotic Enteritis, as that of the year 1911, but it was a remarkably warm and dry summer, as will be seen from the meteorological figures given below, and therefore, although the summer death-rate was greatly lower than years ago, yet the 44 deaths now referred-to point to work still before us in the attainment of civic and domestic cleanliness. We should be able to have a warm, dry summer with no Diarrhœa. I believe that public opinion is rapidly making practical headway as to the evils of flies, and it behoves the Sanitary Authority to keep well ahead in the maintenance of clean roadways and causeways, &c.

During the year 1913, the maximum temperature of the air attained in York was 82° Fahrenheit, viz., on August 4th. There were 34 days with a maximum temperature of 70° and over.

The Mean Temperature of the air for the 3rd Quarter was 58·6, and the total rainfall 2·56 inches. The total rainfall for the year was only 20·5 inches, as compared with the average of 24·0 inches for the last ten years.

The temperature of the earth at 4-feet depth reached 56° Fahrenheit on July 18th, and was then maintained until October 8th (83 days). It then fell, and continued at 54 until October 20th, after which it declined steadily. The maximum attained was 57·2 on September 3rd.

TABLE 30.

Year, 1913.	Temperature of the air.		Maximum 4-ft earth Temperature attained	Total rainfall in inches.	Total deaths due to Zymotic Diarrhœa and Enteritis.	Total cases of Enteric Fever notified.
	Mean Temperature.	Maximum Temperature attained.				
May	53·1	78	51·0	1·97	2	2
June	58·7	79	54·9	1·47	2	4
July	58·1	75	56·4	0·44	1	1
August	59·6	82	56·8	0·85	6	3
September ...	58·2	79	57·2	1·27	15	4
October	53·6	63	56·8	2·37	12	3

For further meteorological data, see Tables at end of this Report.

TABLE 31.

Death-rates due to Diarrhœa and Enteritis under two years of age per 1,000 nett births in 1913 :—

	3rd Quarter.	4th Quarter.	Whole Year.
City of York	44·82	20·58	18·2
96 Great Towns	65·09	34·98	29·3
England and Wales	50·62	28·24	23·4

TABLE 32.

AVERAGE DEATH-RATES PER 1,000 LIVING FROM SUMMER DIARRHŒA.

during the following decennial and quinquennial periods.

Year.	City of York.	The Great Towns, (including York).*	England and Wales.
1871—1880	1·23	...	0·94
1881—1890	1·08	...	0·68
1891—1900	1·14	...	0·71
1901—1905	1·05	0·87	0·65
1906—1910	0·66	0·59	0·44
1911	0·84	1·31	1·06
1912	0·18	...	...
1913	0·53	...	...

* The Registrar-General's decennial reports do not appear to contain any statistics relating to Diarrhœa death-rates in the Great Towns prior to 1901.

In connection with the new statistical tables prescribed in 1911 by the Local Government Board, the following instruction was given :—" Under this heading (Diarrhœa and Enteritis) are to be included deaths registered as due to Epidemic Diarrhœa, Epidemic Enteritis, Summer Diarrhœa, Choleraic Diarrhœa, Cholera (other than Asiatic), Gastro-enteritis, Gastro-intestinal Catarrh, Muco-enteritis, Colitis, &c. Deaths from Diarrhœa secondary to some other well-defined disease should be included under the latter." The whole nomenclature and classification of these affections is still unsatisfactory, however. Some one scientific term should be made to cover this class of disease, and the use of it in the death certificates should be made compulsory.

Special advice on the Prevention of Summer Diarrhœa and the evil work of *Flies* in the pollution of milk and other foods (the chief intermediary cause of this disease) was given in leaflets and by advertisements in the public press and personally by our Inspectors and Health Visitors, and disinfectants were given freely to poor households.

MEASLES.

It is very satisfactory to record that not a single death from Measles occurred during the year 1913.

WHOOPING COUGH.

There were 11 deaths certified as due to Whooping Cough equal to a death-rate of 0·13 per 1,000 living. The rate, however, is considerably below the average for the last 10 years.

TABLE 33.

Year.	Total deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.
1903	36	0·46	46
1904	23	0·29	29
1905	6	0·07	7
1906	17	0·21	21
1907	18	0·22	22
1908	10	0·12	12
1909	14	0·17	17
1910	11	0·13	13
1911	25	0·30	30
1912	1	0·01	1
Averages 1903—12	16·1	0·20	20
1913	**11**	**0·13**	**13**

The deaths in 1913 occurred as follows:—

Districts.		Ages.		Quarter of the Year.	
Bootham	3	0 — 1	4	First	2
Micklegate	2	1 — 2	5	Second	5
Walmgate	6	2 — 5	2	Third	2
				Fourth	2
Whole City ...	11	All ages	11		11

Five cases of whooping cough died of secondary broncho-pneumonia.

Of four deaths certified as due to broncho-pneumonia only, two had recently had an attack of whooping cough, one had had measles and one bronchitis.

Educational leaflets about the disease were widely distributed and numerous calls were made upon, and letters of advice sent to Head Teachers of the schools affected.

TABLE 34.

THE NOTIFIABLE INFECTIOUS DISEASES.

INFECTIOUS DISEASE (NOTIFICATION) ACTS, 1889, AND 1899, AND PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.*

CASES NOTIFIED TO THE SANITARY AUTHORITY IN EACH YEAR, 1904—1913.

DISEASE.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Small-pox	15	1	...	...	...	...	...	...	...	...
Scarlet Fever	636	219	217	360	184	127	169	331	358	161
Diphtheria and Membranous Croup	63	104	104	93	86	79	66	52	93	107
Typhoid (Enteric) Fever	100	70	79	39	50	47	14	59	28	26
Puerperal Fever ...	4	3	5	11	13	3	1	1	5	3
Erysipelas	48	68	34	57	28	32	26	69	40	25
*Phthisis (Tuberculosis of Lungs)	...	...	...	...	...	...	...	...	182	196
*Other forms of Tuberculosis	...	...	...	...	...	...	...	...	...	109
Cerebro-Spinal Fever (made notifiable in York, July 10th, 1912)								...	1	0
Ophthalmia Neonatorum (Infantile Ophthalmia), (made notifiable in York, July 10th, 1912)								...	7	6
Acute Poliomyelitis (Infantile Paralysis), do. do. do.								...	6	2

* The Compulsory Notification of Phthisis came into operation on January 1st, 1912, and of all Forms of Tuberculosis on February 1st, 1913.

TABLE 35.—CITY OF YORK.

NOTIFICATION OF INFECTIOUS DISEASES.

Average annual number of notifications in quinquennial periods:—

	Small-pox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Puerperal Fever.
1886—90	1·4	186·4	16·0	172·8	3·0
1891—95	15·4	121·8	30·0	172·0	5·0
1896—1900	1·2	270·6	23·0	143·4	5·2
1901—05	9·4	336·6	55·4	79·8	3·0
1906—10	...	211·2	85·3	45·4	6·3
1911	...	331	52	59	1
1912	...	358	93	28	5
1913	...	161	107	26	3

TABLE 36.—CITY OF YORK.

DEATHS DUE TO INFECTIOUS DISEASES.

Average annual number of deaths in quinquennial periods:—

	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Typhoid Fever.	Diarrhœa & Enteritis.
1886—90	0·2	26·6	5·8	6·4	30·4	23·0	113·6
1891—95	1·2	20·4	2·2	10·0	30·0	24·4	126·4
1896—1900	0·2	28·4	5·4	3·8	23 0	22·4	150·6
1901—05	1·4	23·4	13·0	8·0	19·2	10·8	85·2
1906—10	...	14·3	3·0	8·0	16·0	7·1	53·3
1911	...	9	4	7	25	7	69
1912	...	27	3	17	1	7	15
1913	...	...	1	8	11	3	44

(See notes in the section referring to each disease).

TABLE 37.—CITY OF YORK. (LOCAL GOVERNMENT BOARD'S TABLE II).

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1913.

NOTIFIABLE DISEASE.	Number of Cases Notified.								Total Cases Notified in each Sanitary Sub-district.			No. of Cases Removed to Hospital from each of the Sanitary Sub-districts.			Total cases removed to Hospital.
	At all Ages.	At Ages—Years.							Bootham	Micklegate.	Walmgate.	Bootham	Micklegate.	Walmgate.	
		Under 1	1 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years	65 and upwards							
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous croup)...	107	...	18	61	18	10	...	...	38	24	45	22	12	27	61
Erysipelas	25	...	...	2	3	9	10	1	4	13	8	...	...	...	...
Scarlet Fever	161	2	45	87	20	7	...	...	38	67	56	16	36	39	91
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	26	...	...	8	4	8	4	2	5	9	12	...	3	2	5
												1	4	3	8*
Puerperal Fever ...	3	...	...	...	...	3	...	...	1	2	...	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis (Infantile Paralysis)	2	...	...	1	1	...	...	...	...	2	...	...	...	...	...
Pulmonary Tuberculosis	196	2	5	34	54	81	18	2	28	69	99	1	2	1	4*
												15	48	48	111
Other forms of Tuberculosis	109	2	18	47	26	11	5	...	18	34	57	...	...	3	3*
Ophthalmia Neonatorum	6	6	...	...	...	...	...	...	...	3	3	...	...	...	...
Totals	635	12	86	240	126	129	37	5	132	223	280	55	105	123	283

* These cases were received into the York County Hospital (General Infirmary), all the other cases were received into the City Isolation Hospital. The York Isolation Hospital, and the Small-pox Hospital (The Bungalow) are both situate in Flaxton Rural District

1913. **TABLE 38.**

Shewing the Attack-rate (i.e., the number of persons attacked by the disease) per 100,000 of the population for infectious diseases in various County Boroughs and in neighbouring Rural Districts, and the aggregate for 78 County Boroughs.

County Boroughs, &c.	Population. (approx.)	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Erysipelas.
YORKSHIRE:—						
Hull	283,000	136	153	54	7	60
Middlesbrough	106,500	786	141	8	6	65
Barnsley	52,000	137	141	25	...	37
Bradford	290,000	182	154	25	5	77
Dewsbury	53,600	142	54	19	7	35
Halifax	101,000	111	111	17	7	56
Huddersfield	109,500	262	57	18	9	62
Leeds	450,000	289	194	19	10	85
Rotherham	63,500	664	148	38	9	91
Sheffield	466,500	768	180	16	12	104
CITY OF YORK	82,863	193	128	31	4	30
RURAL DISTRICTS:—						
Escrick	6,000	151	403	...	...	...
Riccall	3,300	152	...	...	30	...
Easingwold	10,000	49	39	...	...	88
Flaxton	9,000	208	323	23	...	46
Bishopthorpe	2,000	474	142	...	...	...
Great Ouseburn	10,800	231	74	37	9	18

TABLE 38—*continued.*

VARIOUS COUNTY BOROUGHS:—						
Bournemouth	81,000	175	153	44	5	25
Devonport	83,000	581	234	55	2	52
Grimsby	76,000	224	231	38	7	34
Northampton	90,500	483	133	30	2	71
Reading...	88,500	115	103	9	10	64
Rochdale	92,500	623	67	15	8	73
St. Helens	98,000	750	164	26	5	77
Wallasey	82,000	388	56	23	2	28
Walsall	93,000	177	48	9	5	83
Wigan	90,000	81	38	108	7	63
Wolverhampton	95,500	317	73	9	6	58
Merthyr Tydfil...	82,500	396	79	24	8	23
Newport (Mon.)	86,000	955	90	29	5	43
Aggregate for 78 County Boroughs...	11,563,682	429	149	25	7	73

TABLE 39.—CITY OF YORK.

CASES NOTIFIED DURING EACH MONTH, 1913.

	Scarlet Fever.		Diphtheria.		Enteric Fever.
January	10		10		...
February	15		4		...
March	28	78	4		3
April	16		3		1
May	19		8		2
June	6		6		3
July	14		4		1
August	6		8		3
September	10		14		4
October	15		15	60	3
November	11		18		4
December	11		13		2
Totals for year ...	161		107		26

1913. **TABLE 40.**

DISTRIBUTION OF TOTAL NOTIFIED CASES OF SCARLET FEVER AND DIPHTHERIA AMONGST SCHOOL-CHILDREN AND OTHERS DURING THE YEAR 1913.

	Scarlet Fever.	Diphtheria.
Upper Schools	38 (8 secondary)	30 (5 secondary)
Infant Schools	46 (6 secondary)	24 (3 secondary)
Patients over 8 years of age (not attending school)	31	30
Patients under 8 years of age (not attending school)	40	17
Attending:—		
Private Schools	5	1
Fulford School	1	...
Garrison School	...	5
Total Cases Notified ...	161	107

SCARLATINA (SCARLET FEVER).

During the year 1913, 161 cases were notified, 91 (56·5 per cent.) of which were received into the Fever Hospital (see Table 35).

There was one death, giving a death-rate of 0·012 per 1,000 (1·2 per 100,000) living, as compared with 0·07 for the 96 Great Towns.

TABLE 41. CITY OF YORK.—SCARLET FEVER.

(Revised 1912).

Year.	Total cases notified.	Persons attacked per 1,000 of population.	Total deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.	Mortality per cent. of cases.	Total cases removed to Fever Hospital.	Percentage of total cases removed to Hospital.
1904	636	8·0	31	0·391	39·1	4·9	296	46·5
1912	358	4·3	3	0·036	3·6	0·84	183	51·1
Averages 10 years, 1903—12.	289	3·6	7·4	0·092	9·3	2·2	154	55·4
1913	161	1·9	1	0·012	1·2	0·62	91	56·5

The attack rate in England and Wales in 1913 was 3·57 per 1,000 of the population.

The occurrence of the notified cases was distributed through the year as follows:—

Sanitary Sub-district.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bootham	14	6	7	11	38
Micklegate	25	21	10	11	67
Walmgate	13	14	14	15	56
Whole City	52	41	31	37	161

Four cases were imported into the City.

One case notified as Scarlatina, and removed to Hospital, proved doubtful, no definite illness developing.

The districts of the City chiefly affected by Scarlet Fever were:—Bishopthorpe Road; Burton Lane; Fulford Road; Haxby Road; Holgate Road District; Leeman Road; Lawrence Street and Hull Road; Groves; South Bank; Monkgate; Nunthorpe Road.

The City Schools chiefly affected were St. Paul's (Holgate) (12 cases), St. Lawrence's (9), Scarcroft (9), Priory Street (7) and South Bank (Temporary) (6). Five cases occurred in the County Hospital.

There were 31 cases amongst persons over school age, and 40 cases amongst children under eight years of age not attending any school; 5 cases attended private schools, and 1 a school outside the City area; 84 cases attended public elementary schools in the City.

As usual, the disease was principally of mild type, which accounted for the spread of the disease.

Five "missed" cases were subsequently heard of, and 17 cases were "peeling" before being notified. Five cases occurred in each of two families, and 3 in each of two families.

No particular milk-supply was affected.

The following *special measures of prevention* were carried out, as usual, in addition to Hospital Isolation:—

(1) Copies of the leaflets on the character and prevention of Scarlet Fever and on isolation and disinfection were issued to every affected household.

(2) Numerous cases of sore-throat and other school "suspects" were investigated, and kept under observation by the School Nurses or Inspectors until clear of suspicion. One such case of sore-throat proved to be Scarlatina.

(3) Intimations *re* infected books were sent to the Libraries. The books were disinfected or destroyed.

(4) Advice notes were sent to Head-teachers of schools and Superintendents of Sunday Schools.

(5) Thorough disinfection of affected houses and persons was strictly enforced.

(6) Convalescents were excluded from school attendance for at least another month after leaving Hospital or sick room, so as to secure their freedom from infection and their full restoration to health, and they were visited by our School Nurses during that month, in order to see that they were keeping well enough to return to school. Some of them were, for special reasons, re-examined and advised by me personally—our endeavour being to secure return to school free from discharges from ears and nose, clear of enlarged tonsils and of adenoids, etc.,—in short, in as perfect health as possible.

(7) The parents were given a printed note of advice as to treatment of the child during convalescence.

Hospital Isolation of Scarlet Fever:—

Sixteen cases were received into the City Fever Hospital from Bootham Sanitary Sub-district, 36 from Micklegate District, and 39 from Walmgate District; total 91.

The total number of probable "return" cases from the same households in the City was 11, being 12·1 per cent. of total cases received into Hospital, 7 cases coming from 3 houses.

The 67 primary cases removed to Hospital were followed by 4 secondary cases in the same homes, all being removed to Hospital. These secondary cases are equivalent to 5·9 per cent. of total primary cases removed.

Eleven secondary cases had occurred in the homes before or at the time of the removal of the primary cases to Hospital.

The 57 primary cases retained at home in the City gave rise to 13 secondary cases in the same homes, or 22·8 per cent. of the total primary cases retained at home. All these cases were retained at home.

Thirteen cases were declined admission to Hospital owing to lack of accommodation.

TABLE 42.

CASES OF SCARLET FEVER IN YORK.

YEAR.	RETURN CASES.	SECONDARY CASES.	
	Percentage of cases treated in Hospital.	Cases secondary to primary cases removed to Hospital, per cent	Cases secondary to cases retained at home, per cent.
1904	4·0	14·6	34·3
1905	5·0	10·0	27·5
1906	4·1	8·3	42·0
1907	1·7	6·6	36·5
1908	5·0	8 0	20·0
1909	2·4	20·0	10·8
1910	3 0	3·4	50·0
1911	5·7	5·7	74·2
1912	6·6	7·6	58 9
1913	12·1	5·9	22·8

"The general course of the death-rate from Scarlet Fever has been one of steady decline, as shown below:—

AVERAGE DEATH-RATE FROM SCARLET FEVER PER 100,000 OF POPULATION.

	1871-80	1881-90	1891-1900	1901-10	1911	1912	1913
England and Wales ...	72	34	16	11	5	6	6

The death-rate in 1911 had declined 60 per cent. from that in 1901."

DIPHTHERIA AND MEMBRANOUS CROUP.

During the year 1913, 107 cases were notified, and there were 8 deaths, giving a death-rate of 0·096 per 1,000 living, and a case-mortality of 7·5 per cent.

TABLE 43.—CITY OF YORK.—DIPHTHERIA.

(Revised 1912).

Year.	Total cases notified.	Persons attacked per 1,000 of population.	Total Deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.	Mortality per cent. of cases.	Total cases removed to Hospital	Percentage of total cases removed to Hospital.
1903	38	0·48	9	0·114	11·4	23·7	4	10·5
1904	63	0·79	14	0·177	17·7	22·2	2	3·1
1905	104	1·30	7	0·088	8·8	6·7	15	14·4
1906	104	1·29	13	0·162	16·2	12·5	29	28·0
1907	93	1·15	11	0·136	13·6	11·8	35	37·6
1908	86	1·06	8	0·098	9·8	9·3	23	26·7
1909	79	0·96	6	0·073	7·3	7·6	33	41·8
1910	66	0·80	2	0·024	2·4	3·0	36	54·5
1911	52	0·63	7	0·085	8·5	13·4	28	53·8
1912	93	1·12	17	0·205	20 5	18·3	46	49·5
Averages ten years. 1903—12	78	0·96	9·4	0·116	11·6	12·9	25·1	32·0
1913	**107**	**1·28**	**8**	**0·096**	**9·6**	**7·5**	**61**	**57·0**

The attack-rates in England and Wales in 1913 was 1·39 per 1,000 of the population.

The average death-rate for the 96 Great Towns in 1913 was 0·13.

The cases notified in 1913 were distributed as follows:—

Quarters of the Year.		Sanitary Sub-district.		Ages.	
1st Quarter ...	18 cases	Bootham ...	38 cases	0—1 year	0
2nd ,, ...	15 ,,	Micklegate ...	24 ,,	1—5 years	18
3rd ,, ...	26 ,,	Walmgate ...	45 ,,	5—15 ,, ...	61
4th ,, ...	48 ,,			15—25 ,, ...	18
	107			25—45 ,, ...	10
				45—65 ,, ...	0

Sixty-one of the cases were received into the City Fever Hospital, 1 after having had Tracheotomy performed at the Military Hospital. A nurse at the Union Workhouse who contracted Diphtheria was treated there until recovery. The remaining 46 cases were treated at their homes. Two cases received into the Fever Hospital proved to tonsillitis only. There was one "return" case. One case had Tracheotomy performed at the Fever Hospital, and aferwards died; the case admitted from the Military Hospital also died.

Two home cases proved to be doubtful cases. The cases retained at home gave rise to 2 secondary cases.

Six secondary cases had occurred in the homes before or at the time of removal of the primary cases to Hospital.

There was one "missed" case, and 3 cases were discovered by the School Nurses. Four cases were imported into the City.

The 98 primary cases notified at all ages were mostly distributed amongst the following areas:—

	Houses.
Groves and Monkgate Districts	6
Leeman Road District	7
Nunnery Lane District	6
Fishergate and Fulford Road Districts	19
Clifton and Burton Lane Districts	17
Clarence Street and Haxby Road Districts ...	13
Lawrence Street and Hull Road Districts... ...	9

School Cases.

The Infant Schools affected numbered 11:—Shipton Street school had 6 cases, Fishergate 4 cases, and St. Clement's 3 cases.

The 68 primary cases at ages 8 to 15 years wese distributed amongst 16 schools.

DISTRIBUTION OF THE CASES IN 1913 AMONGST CHILDREN AND ADULTS.

		Primary Cases.	Secondary Cases.
Under 8 years of age.	Attending City Public Infant Schools ...	21	3
	Attending Private Schools	3	...
	Not attending School	16	1
		40	4
At ages 8—15.	Attending City Public Elementary Schools (Upper Departments)	25	5
	Attending Private Schools	3	...
Over 14 years of age		30	...
	Full Totals	98	9

Shipton Street School:—

There was again a limited outbreak of the disease in Shipton Street School, viz., in November, but it was suppressed upon active measures (viz., swabbing and treatment of suspects and contacts, &c.) being taken. The total notified cases numbered 9. Total cases in Infants' Department, 6; total in Girls' Department, 3.

Total positive suspects discovered, 7; suspects swabbed with negative results, 3. Total positive contacts discovered, 2; contacts swabbed with negative results, 11.

Adult Cases:—At 15 of the houses affected by adult cases there were sanitary defects. Ten patients were confectionery workers, 1 a teacher, 2 were hospital nurses, 2 were servants, 2 soldiers, 2 housewives, and the others were of various occupations.

At the 98 separate houses in which cases of Diphtheria occurred during the year:—

There were foul midden-privies at	8 houses.
No sufficient ashbin at...	17 ,,
Defective water-closets at	2 ,,
Other defects of drainage at	17 ,,
Foul and defective sinks at	11 ,,
Defective sink waste-pipes at	20 ,,
Defective yard pavements at	7 ,,
Defective floors at	11 ,,
Dampness at	7 ,,
Overcrowding at	1 house.

Although the occurrence of Diphtheria is by no means entirely dependent upon insanitary conditions of dwellings, yet such conditions undoubtedly predispose persons, especially children, to the disease, and therefore demand investigation and amendment. All the above defects were duly remedied.

The *Milk Supply* of the cases was distributed amongst 57 milk dealers.

The following measures of prevention were carried out during the year :—

(1) Hospital isolation (City Fever Hospital and County Hospital), where desirable ; no cases were declined admission. Tracheotomy was performed upon 1 Laryngeal case, but the patient died nevertheless. Altogether 7 persons died in the Hospital, but most of the cases were extremely ill on admission.

(2) Thorough disinfection of infected houses.

(3) Sanitary defects at affected houses were duly remedied.

(4) Numerous "swabs" from suspicious throats were examined for the bacillus of Diphtheria, and in nearly all positive cases two or more negative swabs were obtained before the patient returned to school or work.

(5) Cases of "sore-throat" were excluded from school attendance and investigated. Three such cases (apart from the Shipton Street outbreak), discovered by the School Nurses, proved to be Diphtheria upon bacteriological examination.

(6) Seeing that the bacillus tends to linger in the throat in some cases for several weeks after the symptoms of the disease have disappeared, children who had suffered from the disease were excluded from school from four to eight weeks after apparent cure, in order to ensure the safety of their return to school, and their complete restoration to health.

(7) Antitoxin was administered, as in previous years, to every true or suspected case admitted to the Fever Hospital. The diagnosis of 67 of the notified cases of Diphtheria had been confirmed by bacteriological examination.

(8) The free supply of Antitoxin to medical practitioners for use in poor cases was established upon the order of the Local Government Board, in 1910; 28 cases were so served during the year 1913. It is still to be regretted that some of

the medical practitioners do not administer this vital and harmless remedy more promptly and sufficiently, even when the case is not fully diagnosed.

(9) The following and other leaflets of advice were distributed to every house affected by Diphtheria or "sore-throat," and to infected schools and districts:—

CITY OF YORK.

SORE-THROAT. CAUTION.

Parents are hereby warned to be particularly careful at the present time about attacks of sore-throat (also discharges from the nose, scabby spots about the lips, enlarged neck glands, or hoarse cough), amongst their children, as such symptoms may prove to be due to mild Diphtheria.

Children suffering from such symptoms should be isolated, and must on no account be sent to school, Sunday school, or to any other gatherings of children, or into other houses. The cause of their absence from school should be reported at once to the Head Teacher, or to this office, and the School Nurse will call to see the child, will advise you, and will let you know when the child can return to school.

Diphtheria is a highly infectious and dangerous disease, amongst both children and adults, but especially amongst young children.

Sometimes it is very mild, and if care be not exercised by parents it is overlooked, other persons are infected thereby, and much trouble and mischief produced.

All cases, however mild, are capable of spreading infection, and a mild case may cause severe or fatal attacks in other persons.

Diphtheria is very apt to spread through a family or through a school; therefore, the greatest care is necessary for the sake of others as well as for your own family.

EDMUND M. SMITH, M.D., C.M., D.P.H.,
Medical Officer of Health.

"The general course of Diphtheria mortality is shown in the following summarised statement.

AVERAGE DEATH-RATE FROM DIPHTHERIA PER 100,000 OF POPULATION.

	1871-80.	1881-90.	1891-1900.	1901-10.	1911.	1912.	1913.
England and Wales ...	12	16	26	18	13	11	12

"It is characteristic of Diphtheria that it invades a town slowly, and usually persists for several years before ceasing to be epidemic. This is evident when the annual death-rates for different towns are compared, as is also the fact that the maximum incidence of Diphtheria falls at different periods on these towns."

TABLE 44.—CITY OF YORK.

AVERAGE RATES FOR DIPHTHERIA.

Years.	Average Fatality per cent. of cases.	Average Attack-rate per 100,000 population.	Average Percentage removed to Hospital.	Average Mortality per 100,000 population.
1890—1900	24·9	35	...	9·3
1901—05	16·4	70	8·1	10 0
1906—10	8·8	105	37·7	9·8
1911	13·4	63	53·8	8·5
1912	18·3	112	49·5	20·5
1913	7·5	128	57·0	9·6

ENTERIC (TYPHOID) FEVER.

During the year 1913, 26 cases were notified as Enteric or Typhoid Fever. Eight of the total cases were of children under the age of 15. Eight of the notified cases were received into the County Hospital, and 5 into the City Fever Hospital.

Of these, 1 case received into the County Hospital proved to be "Enteritis" and 1 "phlebitis and varicose eczema." The Widal test was used in at least 10 cases, in 1 with negative result.

Of the remaining 24 cases, 3 died—1 in the Fever Hospital and 2 at the patients' homes—equal to a death-rate of 0·036 per 1,000 living, or 12·5 per cent. of the nett total of cases.

One case was imported into the City, the patient having travelled from Constantinople.

The average death-rate for the ten years, 1903—1912, in York, was 0·092 per 1,000 living, and the average for the 96 Great Towns in 1913 was 0·04.

During the first half of the year (January 1st to June 30th) 8 positive cases occurred; during the second half of the year (July 1st to December 31st), 16 cases occurred.

TABLE 45.—CITY OF YORK—ENTERIC (TYPHOID) FEVER.

Year.	Total cases.	Persons attacked per 1,000 of population.	Total cases.	Death-rate per 1,000 living.	Death-rate per 100,000 living.	Mortality per cent of cases.	Total cases removed to County or Fever Hospital.	Percentage of total cases removed to Hospitals.
1903	47 nett	0·59	5	0·06	6	10·6	14	27·0
1904	89 ,,	1·12	14	0·17	17	15·7	58	58·0
1905	63 ,,	0·79	8	0·10	10	12·7	40	50·0
1906	75 ,,	0·93	14	0·17	17	18·6	41	54·6
1907	30 ,,	0·37	8	0·09	9	23·5	19	48·7
1908	50 ,,	0·61	7	0·08	8	14·0	27	54·0
1909	38 ,,	0·46	3	0·03	3	8·0	29	61·7
1910	14 ,,	0·17	4	0·04	4	28·6	5	35·7
1911	58 ,,	0·70	7	0·09	9	12·0	30	51·7
1912	24 ,,	0·29	7	0·09	9	29·1	16	66·6
Averages, ten years, 1903-12.	49	0·6	7·7	0·092	9·2	17·3	27·9	50·8
1913	**24** nett	**0·29**	**3**	**0·036**	**3·6**	**12·5**	**13**	**54·2**

The attack-rate for England and Wales was 0·22 per 1000 persons.

In the recent sanitary history of York nothing has been more remarkable than the enormous reduction in the prevalence of this disease. The general experience here, as in other towns, is that as privy-middens, pail-closets and flies are abolished, so Typhoid Fever and Diarrhœa disappear.

In 1913, as usual, full investigation was made in order to discover the possible origin of each case. The consumption of shell-fish, ice-creams and water-cress was inquired into; but in no case was there any history of consumption of these things.

The Milk-supply of the Typhoid cases was distributed amongst 18 milk-dealers.

The special pails for the collection and removal of the excreta of Typhoid cases, purchased in August, 1900, served 9 cases, and prevented, therefore, the specific pollution of 9 privies or house drains. The pails were sent out containing deodorant fluid; and the excretal contents were emptied direct into a main sewer.

Foul and infected midden-privies were abolished, and all defects of drainage, yard pavements, sewer ventilators, street gullies, etc., were promptly remedied.

The following notes set forth the chief facts about the houses affected by the cases:—

BOOTHAM SANITARY SUB-DISTRICT.

Street.	Sanitary Convenience.	Chief Sanitary Defects.	Remarks about Patients.
Peter Lane... ...	W.C.	Two dilapidated and dirty houses adjoin	10 years of age
Barker's Terrace, Clifton... ...	W.C.	... ...	Died; had eaten mushrooms
Clifton	W.C.	... ...	Imported case from abroad
Gillygate	W.C.	Patient's workplace inspected and drainage found defective ...	

MICKLEGATE SANITARY SUB-DISTRICT.

Cecelia Place (2 cases)	W.C.	Defective floors	
South Bank Avenue	W.C.	Untrapped sink wastepipe	Died
Carlisle Street ...	W.W.C.	Untrapped sink wastepipe	
Dale Street... ...	W.C.	Drains choked	
Russell Street ...	Privy.	Privy wet, foul & offensive	
Park Lane	W.C.	Defective floors	
Hampden Street ...	W.C.	Foul privies adjoin ...	

WALMGATE SANITARY SUB-DISTRICT.

Fishergate	W.C.	... ...	Died
Kidd's Terrace, Layerthorpe ...	W.C.	... ...	
Steward's Buildings, Fitzroy Terrace...	W.C.	Defective sink wastepipe	Aged 8 years
Wood's Yard, Long Close Lane ...	W.C.	House referred for Housing improvement work	
Abbott Street ...	W.C.	Defective floors	
Garden Terrace ...	W.C.	No ashbin, defective floors	Aged 7 years
Garden Place ...	W.C.	... ...	
Foss Bank	W.C.	Insufficient flush to W.C., drainage very defective	
Wood Street ...	Privy.	Privy wet, foul & offensive, defective yard surface...	
Wesley Place ...	W.C.	... ...	
Heworth	Privy.	Privy very foul & offensive, drainage defective ..	
Lowther Street ...	W.C.	Defective floors	

The general course of the mortality from this disease will be seen from the following summary:—

AVERAGE DEATH-RATE FROM ENTERIC FEVER PER 100,000 OF POPULATION.

	1871-80.	1881-90.	1891-1900.	1901-10.	1911.	1912.	1913.
England and Wales ...	33	20	17	9	7	4	4

In England and Wales the annual death-rate due to Enteric (Typhoid) Fever declined 68 per cent. between 1901 and 1910.

SMALL-POX.

Since the epidemic of 1901-05 subsided, *deaths* from Small-pox have occurred in England and Wales as follows:—

1906	21	1910	19
1907	10	1911	23
1908	12	1912	10
1909	21	1913	2

Most of the outbreaks were imported into the country; they have been successfully restricted, but the rapidly decreasing amount of Vaccination is laying the Kingdom open to another extensive invasion of Small-pox, in the near future it is to be feared.

"No cases have occurred in York since April, 1905, but in England and Wales, excluding ports, 90 cases of Small-pox were notified during 1913, as compared with 111 in 1912 and 265 in 1911. 48 cases occurred in towns connected with ports, viz., 1 at Birkenhead, Gravesend, Great Yarmouth, Maldon, Manchester, Southampton, and South Shields, 3 at Cardiff and Liverpool, 6 at Kingston-upon-Hull, 7 at Newport (Mon.) and 22 at Newhaven. Of the remaining 42 cases, London had 3, of which 2 were at Poplar and 1 at Shoreditch; 4 occurred in Salford, 8 in Oldham, and 9 in Royton. In addition, 25 cases as compared with 12 in 1912 and 30 in 1911, were notified to Port Sanitary Authorities, being chiefly imported cases. Of these, 11 occurred in Liverpool, 8 in London, 2 in Cardiff, 2 in Weymouth, 1 in Hull and Goole, and 1 in Newport (Mon.) port sanitary districts."*

* *vide* L.G.B. Annual Statistics.

Intimation was sent to me by the Southampton Port Sanitary Authority of three "contacts" who had landed there and travelled to York; cases of Small-pox had occurred on their respective ships. We kept them under observation until out of danger.

TYPHUS FEVER.

No cases have occurred in York for many years.

"In England and Wales, 18 cases of typhus fever were notified, as compared with 31 in 1912 and 65 in 1911. These cases occurred in 14 sanitary districts, including 4 in Liverpool, and 2 in Stepney."*

PUERPERAL FEVER.

Under this general term or heading are included the following diseases: Puerperal Pyæmia, Puerperal Septicæmia, Puerperal Sapræmia, Puerperal Pelvic Peritonitis, Puerperal Peri- or Endo-Metritis.

During the year 1913, three cases were notified.

The figures regarding this disease for recent years are as follows:—

Year.	Cases notified.	Total deaths.	Mortality per cent. of cases.
Five years ... 1901—05 ... (Midwives Act came into force in 1905)	15	10	66·6
Five years ... 1906—10 ...	33	12	36·4
1911	1	...	...
1912	5	3	60·0
1913	3	1	33 3

No. of deaths from Puerperal Fever and the Accidents of Pregnancy and Childbirth, in England and Wales:—

Ten years, 1897—1905	...	Death of one mother to 228 births.				
Year 1907	...	,,	,,	,,	261	,,
,, 1908	...	,,	,,	,,	280	,,
,, 1909*	...	,,	,,	,,	270	,,
,, 1910	...	,,	,,	,,	281	,,
,, 1911	...	,,	,,	,,	272	,,

The mortality from Puerperal Fever (or sepsis) in England and Wales has declined 37 per cent. since 1901, and from Accidents of Childbirth 14 per cent.

* "Of the total deaths from all causes at the ages of 15—45 in each sex, among women 8·2 per cent. were caused by Puerperal Fever and Accidents of Childbirth, among men 8·8 per cent. were caused by general accidents and negligence. Childbirth therefore demands a toll on the lives of women which, stated in proportion to their general mortality, is nearly equal to the corresponding toll paid by men in connection with accidental causes."

In all cases of Puerperal Fever which come to our notice in York, the Health visitors make careful enquiries, advice is given regarding precautions, and all possible disinfection is carried out at the end of the case. Where a midwife or nurse is in attendance on the case, her clothing, &c., are disinfected thoroughly. Useful work can be done in receiving such cases into the Isolation Hospital, and the risks of conveyance of infection by doctor or midwife are thereby prevented, but it is seldom that we have the accommodation for such a case, or that removal is applied for; the same must also be said as to cases of Ophthalmia Neonatorum and Erysipelas.

ERYSIPELAS.

The figures regarding this septic and contagious disease for recent years are as follows:—

Year.	Cases notified.	Total deaths.	Mortality per cent. of cases.
Five years ... 1901—05 ...	260	18	6·9
Five years ... 1906—10 ...	177	13	7·3
1911	69	9	13·0
1912	40	1	2·5
1913	25	2	8·0

OPHTHALMIA NEONATORUM.

(Ophthalmia of the Newborn).

This disease was made notifiable (under the Infectious Disease Notification Acts of 1889 and 1899), in York, on July 10th, 1912. Intimation was sent to each medical practitioner and midwife practising in the city and district. The disease was notifiable at the end of the year 1913 in 287 sanitary areas, and a total of 2,078 cases were notified in those districts.

"It is satisfactory to note indications that gratifying success has been obtained in some districts in the prevention of blindness. It is even more satisfactory to know that, judging by Army and Navy statistics, and by such civil experience as is available, the prevalence of gonorrhœa, which is the main cause of serious ophthalmia of the newborn, is decreasing, and that in making systematic endeavour to prevent and to cure promptly ophthalmia of the newborn, to which a high proportion of the total blindness in this country is due, sanitary authorities are combating an evil, the main source of which is less widely distributed than in the past."

(Vide Dr. Newsholme's Annual Report to the Local Government Board for 1910-11).

Six notifications were received up to the end of the year 1913—two from the York County Hospital—as compared with seven in 1912.

Each of the cases was visited by the Health Visitors until well, and the following information was elicited:—

Four of the children were legitimate and two illegitimate.

Four had been attended at confinement by certified midwives, one had been attended by both a certified midwife and a doctor, and one was born in the Union Workhouse.

In at least four cases, the origin was most probably gonorrheal, in one instance the diagnosis was confirmed by bacteriological examination. Four cases attended as out-patients at the County Hospital. No cases were received into the City Isolation Hospital.

Five of the cases recovered without loss of an eye, and one died of "Eczema." Three were mild cases.

CEREBRO-SPINAL FEVER AND ACUTE POLIOMYELITIS.

In consequence of the numerous outbreaks of these two diseases (which are somewhat allied), during recent years, the fatality of the diseases, their indefiniteness, and the mystery attached to some other outbreaks in the country, the Local Government Board issued Memoranda on both diseases on 12th December, 1911, recommending both diseases to be made notifiable, and this system was adopted in York, commencing on 10th July, 1912. Since then an Order of the Board, dated 15th August, 1912, has made both diseases notifiable throughout England and Wales.

Cerebro-spinal Fever:—

This disease consists of inflammation of the membranes covering the brain and spinal cord, caused by the invasion of a definite organism—the Meningococcus. In Europe and in the United States widespread and fatal epidemics of the disease have been observed and recognised at intervals, sometimes prolonged, covering a long series of years. During recent years considerable outbreaks have occurred at Glasgow, Belfast and Swansea, and similar outbreaks in London, Essex and other districts. The disease so much resembles other forms of Meningitis, also Typhus and Typhoid Fever, that it is sometimes not recognised. The infection appears to enter and to be given off by the nasal passages.

No cases of this disease were notified in the City of York during the year 1913, but 93 cases were notified in London, 83 in the County Boroughs, 72 in other Boroughs and Urban Districts, 56 in Rural Districts, a total of 304 in England and Wales. "The disease, while absent in some districts, was in considerable excess in others." (*vide* Local Government Board Annual Statistics).

Acute Poliomyelitis (Infantile Paralysis).

This disease consists in inflammation of the spinal cord, caused by an unknown organism, and in recent years some serious outbreaks of the disease have occurred in England and Wales. 728 cases were notified in England and Wales during the year 1913 (mostly between the end of May and the end of November), viz., 147 in London, 179 in County Boroughs, 291 in

other Boroughs and Urban Districts, 111 in Rural Districts. "The disease was absent from many districts." (*vide* Local Government Board Annual Statistics).

"Since the epidemic of poliomyelitis in Sweden in 1905 and 1906, the disease has been carefully studied, and has been ascertained to occur in epidemic form in various parts of the world, notably in Northern Europe, and also in the United States of America, where outbreaks of a greater or less intensity have been reported in many different States since 1907. In this country the occasional appearance of small groups of associated cases has been recognised for some years past, and it has frequently been suspected that these cases have in fact formed part of a much more considerable and more widely spread local prevalence.

"Isolated cases of poliomyelitis are well-known; an attack of this disease being the common cause of infantile paralysis, which leaves a wasted limb in adult life. The occurrence of poliomyelitis in groups of cases has been recognised in recent years. The evidence now accumulated points definitely to its infectivity. In the epidemic form of the disease, adults as well as children are attacked, and paralysis does not always occur as the result of the attack. The milder cases are extremely difficult to recognise; and it is likely that their non-recognition is an important factor in the spread of the disease."*

Important investigations upon some of the above outbreaks have been made during recent years by medical inspectors of the Local Government Board, and reports published thereon in the Annual Report of the Chief Medical Officer of the Board, together with reports on the general characters of the disease.

It cannot yet be stated with any certainty the mode in which infection is conveyed to the sufferer, and no specific remedy for the disease is known.

Two cases of this disease were notified in York during the year 1913, and another came to our knowledge which was not notified at all, making a total of three cases. All of these were enquired into by the M.O.H. and Health Visitors, with the results set out below:—

Both notified cases were received into the County Hospital as in-patients, and both had been previously diagnosed as

* (Vide Dr. Newsholme's Report from 1911-12).

"Influenza." The following are brief notes about these cases:—

Girl, aged 12, died a fortnight after sudden attack. (A case in same district occurred in September, 1912, which recovered with permanent paralysis).

Girl, aged 15, died in November, 1913, from "Tubercular Peritonitis"; her paralytic illness commenced in July, 1912; she had never recovered from the paralysis of both legs.

The unnotified case, discovered in April, was a girl aged 6; illness commenced autumn 1912; last seen early in 1914, the paralysis had almost entirely disappeared, but the child had tubercular glands.

All three cases commenced with sudden febrile symptoms.

HUMAN TUBERCULOSIS.

Deaths due to Tuberculosis of Lungs:—

(Phthisis Pulmonalis, or "Consumption" of the Lungs).

In 1913 there were 73 deaths due to Phthisis, equal to a death-rate of 0·88 per 1,000 living (88 per 100,000); or 7·1 per cent. of total deaths from all diseases.

They occurred during the year as follows:—

1st Quarter	...	19	3rd Quarter	...	15
2nd Quarter	...	18	4th Quarter	...	21

Fourteen deaths occurred in Bootham Sanitary Sub-district (including 2 in the Workhouse); 27 occurred in Micklegate District; and 32 in Walmgate District.

The District death-rates from Phthisis per 1,000 living were as follows:—

Bootham District	...	...	0·63 (63 per 100,000)
Micklegate „	...	...	0·92 (92 per 100,000)
Walmgate „	...	...	1·00 (100 per 100,000)

The following tables state the Tubercular mortality in recent years; and the numbers of cases notified are stated later on:—

TABLE 46.—CITY OF YORK.

DEATHS DUE TO PHTHISIS. (Revised).

Year.	Number of Deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.	Percentage of total number of deaths from all diseases.
1903	98	1·24	124	7·5
1904	109	1·37	137	8·2
1905	93	1·16	116	7·9
1906	90	1·12	112	7·9
1907	114	1·41	141	8·9
1908	75	0·92	92	6·8
1909	90	1·10	110	9·0
1910	69	0·84	84	6·6
1911	68	0·82	82	6·1
1912	92	1·11	111	9·7
Averages of ten years, 1903—12.	90	1·11	111	7·9
1913	**73**	**0·88**	**88**	**7·1**

TABLE 47.—CITY OF YORK.

Deaths due to other forms of Tuberculosis:—

*Tubercular Meningitis, Tubercular Enteritis, Tabes Mesenterica, "Acute Miliary," "General Tuberculosis," Tuberculosis of Joints, Skin and other Organs. (Revised).

Year.	Number of Deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.	Tubercular Meningitis only. Number of Deaths.
1903	35	0·44	44	17
1904	40	0·50	50	15
1905	43	0·54	54	21
1906	38	0·47	47	17
1907	32	0·39	39	19
1908	29	0·36	36	14
1909	25	0·30	30	18
1910	28	0·34	34	16
1911	33	0·40	40	16
1912	35	0·43	43	17
Averages of ten years, 1903—12.	34	0·42	42	17·0
1913	**23**	**0·28**	**28**	**12**

* Tubercular Meningitis is tubercular disease of the membranes of the brain.
Tubercular Enteritis is tubercular disease of the intestine.
Tabes Mesenterica is tubercular disease of the mesenteric glands in the abdominal cavity.
The other terms relate to form and distribution of tubercular disease.

TABLE 48.

Deaths due to all forms of Tuberculosis in 1913:—

	Bootham district.	Micklegate district.	Walmgate district.	Whole City Totals.
Phthisis	14	27	32	73
Tubercular Meningitis	2	2	8	12
Other forms of Tuberculosis	...	5	6	11
Totals	16	34	46	96
Total Tuberculosis death-rate per 1,000 living in each district ...	0·72	1·16	1·44	1·15

The total of 96 deaths was equivalent to a death-rate of 1·15 per 1,000 living (115 per 100,000), and constituted 9·28 per cent. of total deaths from all diseases.

TABLE 49. CITY OF YORK.

Deaths due to Tuberculosis in previous years:—

Year.	Phthisis.	Other Tubercular Diseases.	Totals.	All forms of Tuberculosis (Revised rates).	
				Death-rate per 1,000 living.	Death-rate per 100,000 living.
1903	98	35	133	1·68	168
1904	109	40	149	1·87	187
1905	93	43	136	1·70	170
1906	90	38	128	1·59	159
1907	114	32	146	1·81	181
1908	75	29	104	1·28	128
1909	90	25	115	1·41	141
1910	69	28	97	1·18	118
1911	68	33	101	1·22	122
1912	92	36	128	1·54	154
Averages of ten years, 1903-12.	90	34	124	1·53	153
1913	**73**	**23**	**96**	**1·15**	**115**

TABLE 50.

Showing the decline in Tubercular mortality since 1871.

(a) Average death-rates per 100,000 living during the following decennial and quinquennial periods:—

Year.	Tuberculosis of Lungs, (Phthisis).		Other forms of Tubercular Disease.		All forms of Tuberculosis.	
	City of York.	England and Wales.	City of York.	England and Wales.	City of York.	England and Wales.
1871—1880 ...	213	213	62	63	275	276
1881—1890 ...	198	173	76	69	274	242
1891—1900 ...	156	139	65	61	221	201
1901—1905 ...	129	122	52	52	181	174
1906—1910 ...	108	111	37	46	145	157
1911 ...	82	106	40	41	122	147
1912 ...	111	*	44	*	154	*
1913 ...	88	*	28	*	115	...

* The figures for England and Wales for 1912 and 1913 are not yet published.

(b) Pulmonary Tuberculosis, which is chiefly a disease of adults, causes about 70 per cent. of the total mortality from Tuberculosis. The total number of deaths from pulmonary and non-pulmonary tuberculosis in England and Wales was stated by Dr. Newsholme for the year 1910 as follows:—

	Deaths. Total at all ages.	Percentage at ages.		
		0—5.	5—15.	15—25 & over.
Pulmonary Tuberculosis ...	36,334	3·2	4·0	92·8
Non-pulmonary Tuberculosis	14,983	51·5	18·7	29·8
All Forms of Tuberculosis	51,317	17·3	8·3	74·4

TABLE 51. CITY OF YORK.—1913.

(*a*) The incidence of Tubercular mortality, in each of the three Sanitary Sub-districts, contrasted with the mortality from Bronchitis, Pneumonia, and the other Respiratory Diseases, (which are also related to insanitary housing, dampness, and infective dust) is shown in the following table :—

Disease.	Deaths per 1,000 persons living.			
	Bootham.	Micklegate.	Walmgate.	Whole City.
Pulmonary Tuberculosis	0·63	0·92	1·00	0·88
Other Forms of Tuberculosis	0·09	0·24	0·43	0·28
Total Tubercular mortality	0·72	1·16	1·43	1·15
Respiratory Diseases	1·04	1·64	2·10	1·66

CITY OF YORK.

(*b*) DEATH-RATES PER 1,000 LIVING FOR RECENT YEARS.

	1903.	1904.	1905	1906.	1907.	1908.	1909.	1910.	1911.	1912.	Average 1903-12	1913.
Pulmonary Tuberculosis...	1·24	1·37	1·16	1·12	1·41	0·92	1·10	0·84	0·82	1·11	1·11	0·88
Respiratory Diseases ...	2·58	2·05	2·02	1·78	2·57	1·97	1·86	2·19	1·88	2·27	2·12	1·66

If the decimal points be omitted in the above tables the reader will obtain the rates per 100,000 of the population—perhaps a more vivid way of expressing the facts.

"Non-pulmonary Tuberculosis, as a fatal disease, occurs chiefly in infancy and childhood, and its control offers a most hopeful field for further reduction of the death-rate in early life. This control is very largely a matter of public health administration, and it is bound up with reducing to a minimum the

possibilities of infection from milk and from human cases of open Tuberculosis, and with increasing the resistance of young children to infection, by safeguarding them against acute infections, such as measles and whooping cough, by remedying such conditions as adenoids, carious teeth, &c., which favour the entry of infection, and by further measures tending to increase the power of resistance, among which adequate food and an approach to an open air life must take first place."

The different factors which have brought about the reduction in the death-rate from Tuberculosis already realised are associated with the improving social and sanitary conditions of the people, and may be thus summarised according to Dr. Newsholme:—

(a) More efficient medical attendance.

(b) Better housing. ("The close association between bad housing and excessive Tuberculosis is well known. Hence the importance attaching to the work of the Board and of local authorities under the Housing Acts, to the efforts to prevent overcrowding in houses, to remedy defective lighting and ventilation, to prevent permanent dampness in houses, and diminish and prevent future congestion of houses on area. Improving housing doubtless increases the resistance to Tuberculosis; still more it implies diminished opportunities for infection. The provision of better houses implies more room and more rooms, enabling separate sleeping accommodation for adults and children, and for the weakly and the healthy, to be obtained to an increased extent.")

(c) Less unhealthy conditions of occupation.

(d) More wholesome and more abundant food and clothing.

(e) Improved habits and cleanliness of the people, less spitting in the streets, &c., the disappearance of the spittoon in private houses.

(f) A much more completely separate treatment of the sick is now secured than ever has been practised in the past.

"The increasing dissociation of the sick from the healthy has been one of the most outstanding features of the last 30 years. In the year 1910 in England and Wales 20·5 per cent., and in London 43·4 per cent. of all the deaths from all causes occurred

in public institutions for the sick. The facts are even more striking in reference to Pulmonary Tuberculosis, so far as they can be ascertained from the available official figures. Thus in London, in the year 1910, over 56 per cent. of the total male deaths from Phthisis and over 45 per cent. of the total female deaths from Phthisis occurred in public institutions, the average aggregate stay in these institutions of each patient covering the most serious period of his sickness.

"In a high proportion of the homes of the wage-earners, satisfactory arrangements for the domestic treatment of serious illness are still found to be unattainable.

"Tuberculosis is an infective disease, which usually progresses slowly, and from which the majority of those affected recover, even when a definite attack of the disease has been experienced. Many undergo minor attacks which are not recognised. These recoveries from recognised, and still more from unrecognised attacks, account for the discovery of slight old tuberculous lesions in a high proportion of autopsies made on patients who have died of diseases other than Tuberculosis. It cannot be inferred from this discovery that the infection of Tuberculosis is ubiquitous to an extent which would cause recognisable disease. The evidence points to the conclusion that, apart from the attacks of Tuberculosis caused by infected food, tubercle bacilli in effective dosage are present chiefly in the immediate vicinity of consumptive patients who are careless in their habits.

"The recovery of the vast majority of those who have slight attacks may be ascribed to the small dosage of infection received by them, or to their fortunately high powers of resistance to the disease. This resistance varies, not only in different persons, but probably even more in the same person from time to time. It is diminished greatly, for instance, after an attack of Measles, or Influenza, or Enteric Fever, or as the result of frequent or protracted overwork, or of alcoholic excess. The importance of good housing in increasing resistance, as well as in diminishing the opportunities for infection, has already been emphasised. The nutriment of the individual has great influence in increasing resistance; and, as Dr. Niven has pointed out, it is extremely important that social efforts be directed towards helping the family of the consumptive as well as the patient himself." *

* Vide the report of the Chief Medical Officer of the Local Government Board for 1910–1911.

(*a*) *Per Notification of Cases :—*

The system of notification—an absolutely necessary preliminary to official preventive measures—has rapidly developed in recent years by the following local and national stages :—

TABLE 52.

	Total new cases of Phthisis notified in York.						Totals.
	1902-11 (ten years).	1909-10 (two years).	1911.	1912.	1913.	1913.	
Voluntary notification of cases of Phthisis, adopted in York from 1st January, 1902	519	...	...	...	...	...	519
Per National Measures :—							
Poor-law cases of Phthisis made compulsorily notifiable per the "Public Health (Tuberculosis) Regulations, 1908," commencing 1st Jan., 1909	...	57	11	11	2	...	81
Hospital and Dispensary cases of Phthisis made compulsorily notifiable per the "Public Health (Tuberculosis in Hospitals) Regulations, 1911," commencing 1st May, 1911	...	...	26	59	3	...	88
All cases of Phthisis (private as well as institutional) made compulsorily notifiable, per "Public Health (Tuberculosis) Regulations, 1911," commencing 1st January, 1912	...	...	...	112	10 (January only)	...	122
					From Feb. to Dec., 1913.		
All cases of all forms of Tuberculosis made compulsorily notifiable, per "Public Health (Tuberculosis) Regulations, 1912," commencing 1st February, 1913	...	...	...	...	Pulmonary (Phthisis). 188	Non-Pulmonary (all other forms of Tuberculosis). 105	293
Totals	519	57	37	182	203	105	1103

Grand total of cases of Phthisis notified during life, 1902—1913 (twelve years) = 998.

TABLE 53. CITY OF YORK.—COMPULSORY NOTIFICATION OF ALL FORMS OF HUMAN TUBERCULOSIS (PER PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912).

Summary of notifications received during the period from 1st Feb., 1913, to week ending Jan. 3rd, 1914 (inclusive).

Age Periods :—	Number of Notifications per Form A. — Primary Notifications of New Cases.												Total Notifications (*i.e.*, including cases previously notified by other doctors).	No. of Notifications per Form B. — Primary Notifications.				Total Notifications (*i.e.*, including cases previously notified by other doctors).	No. of Notifications on Form C. from	
	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 & up.	Total.		0 to 5.	5 to 10.	10 to 15.	Total.		Poor Law Institutions.	Sanatoria.
Pulmonary, Males ...	1	1	4	8	8	17	26	16	4	2	2	89	102	0	0	1	1	2	0	6
„ Females	0	4	8	10	15	15	27	7	8	2	0	96	103	0	0	2	2	3	0	0
Totals	1	5	12	18	23	32	53	23	12	4	2	185	205	0	0	3	3	5	0	6
Non-pulmonary, M.	1	10	9	9	10	2	3	3	1	1	0	49	55	0	2	5	7	8	0	0
„ F.	0	10	9	7	6	5	2	2	2	1	0	44	50	0	1	4	5	5	0	0
Totals	1	20	18	16	16	7	5	5	3	2	0	93	105	0	3	9	12	13	0	0
Grand Totals ...	2	25	30	34	39	39	58	28	15	6	2	278	310	0	3	12	15	18	0	6

The number of notifications received under the latest Regulations during the period February 1st, 1913, to January 3rd, 1914, classified according to ages and sex, is shown in the accompanying Table 53 (as supplied to the Local Government Board.

The notifications are sent in to the Medical Officer of Health classified per different forms as follows:—

Form A. (Notification by Medical Practitioners of cases not previously notified, *i.e.*, Primary Notifications);

Form B. (Notification by School Medical Inspector of cases among school children);

Form C. (Notification by Medical Officers of Poor Law Institutions and Sanatoria of patients who are suffering from tuberculosis on admission and who have been notified before admission);

Form D. (Notification by ditto. on discharge of patients).

The attack-rate (*i.e.*, the number of persons notified during the year as suffering from Tuberculosis, per 1,000 of the population is given below for England (excluding London), for London, and for the City of York:—

(*a*) **TABLE 54.**—1913.

	Pulmonary Tuberculosis.	Other forms of Tuberculosis (since 1st Feb.)	All forms of Tuberculosis.
	Rate per 1,000.	Rate per 1,000.	Rate per 1,000
England ...	2·32	1·11	3·43
London ...	5·01	1·55	6·56
City of York	2·26	1·26	3 52

(*b*) CITY OF YORK.—1913.

Sanitary Sub-districts.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Total Tuberculosis.
Bootham	1·26	0·81	2·07
Micklegate	2·35	1·16	3·51
Walmgate	3·11	1·79	4·90
Whole City	2·26	1·26	3·52

If the decimal points be omitted, the reader will obtain the rates per 100,000 of the population—perhaps a more vivid way of expressing the facts.

Of the 325 cases notified, 40 died within the year 1913 (33 from Phthisis and 7 from other forms of Tuberculosis), and 19 have died in the early months of 1914 (16 Phthisis, and 3 other forms).

Specimens of Sputum, from 38 of the cases notified, were examined for the presence of Tubercle Bacilli by the Tuberculosis Officer, 32 with positive and 17 with negative results; and 3 positive examinations were intimated by the notifying practitioners.

(b) Per Investigation of cases:—

Under the voluntary system of notification, 519 cases of Phthisis were notified by Medical Practitioners to the Medical Officer of Health during the ten years 1902—11;

566 other cases of Phthisis were also notified per the Sub-registrars' weekly *death* returns during the same period; a total of 1179 city cases of Phthisis thus came to the knowledge of the City Medical Officer of Health;

Of these, 1043 were investigated and assisted by the Health Department as fully as was possible under a voluntary system;

Personal advice was given per printed leaflet and personally by the Sanitary Inspectors and Health Visitors,* overcrowding of houses and structural sanitary defects were largely remedied, sputum was examined bacteriologically, disinfection of house and bedding was also advised upon and, in the majority of cases, was largely carried out by the workmen of the sanitary staff. But no medical treatment was given by the Corporation, except to such cases as happened to be isolated for other reasons at the Fever Hospital. The only institutional treatment was furnished by the County Hospital wards, the County Hospital and Dispensary Out-patient Departments, and the Union Workhouse wards.

In the investigation of each case the following were the chief points of enquiry, and the results have been fully stated in the Annual Reports, 1902—1912:—

Previous and present cases in same family or house;

The question of heredity;

* Since the year 1899 a continuous educational campaign about human tuberculosis has been carried on in this city, officially and per voluntary associations and workers—lectures, "health talks," public addresses, the Tuberculosis Exhibition, 1910, &c., &c.

The gross possibilities of infection;

The sleeping arrangements of patient and others;

Overcrowding of house and area;

Recent removal of patient from one house to another;

Cleanliness of house and occupants;

Sanitary structural conditions of house and precincts, especially as to ventilation, access of daylight, dampness, general fitness for habitation.

Thousands of leaflets have been distributed, also large card warnings against indiscriminate spitting in tramcars, workshops, inns, &c.

Since the opening of the Tuberculosis Dispensary and the commencement of the work of the Tuberculosis Officer, he, and his Secretary and his Tuberculosis Nurse make the enquiries about the personal factors of the case, and the Health Department investigates the sanitary structural conditions of the home. The chief personal factors and some of the chief home conditions are recorded at the Tuberculosis Dispensary, whilst some of the chief personal factors and the detailed home conditions are recorded at the Health Department, per the "card" sytem. The details of the Tuberculosis Dispensary's investigation of the cases of 1913 will be stated in the attached Annual Report of the Tuberculosis Officer.

The investigations of his new Department have advanced upon our old system of investigation by three very important items, viz.:—

(a) Detailed enquiries into the health of, and medical examination of, other members of the household, in order to discover "missed" or commencing cases of tuberculosis amongst them and to secure their early treatment;

(b) More detailed enquiries into the possible source of infection of the patients—whether at home, amongst friends, or at work;

(c) Enquiries as to how far the affected household requires financial or other help.

The following is a brief summary of the sanitary defects of the homes of cases visited during the year 1913, as inspected by the Health Department:—

	1913	Totals for 11 years. 1902—12.
No. of houses damp	41	91
„ „ ill-ventilated...	47	244
„ „ ill-lighted	38	169
„ „ back-to-back or not through	41	154
„ „ with gross sanitary defects...	39	401
„ „ declared to be unfit for habitation	2	25

All these insanitary conditions have been remedied or are in process of being remedied.

LIST OF CLOSED-IN STREETS AND COURTS IN THE CITY CONTAINING HOUSES IN WHICH TWO OR MORE CASES OR DEATHS FROM TUBERCULOSIS HAVE OCCURRED SINCE VOLUNTARY NOTIFICATION COMMENCED IN JANUARY, 1902.

	Cases
Albert Street	19
Alne Terrace, Heslington Road	13
Apollo Street	4
Bedern, Ebor Buildings ...	7
Bilton Street	15
Caroline Street	6
Dennis Street	17
Garden Street, Groves... ...	13
Groves Lane	7
Hungate area	36
Hope Street	25
Layerthorpe	40
Long Close Lane	6
March Street, Groves	15
Micklegate	5
Navigation Road	3
Newbro' Street...	5
North Street	21
Orchard Street	2
Price St., Lorriman's Buildings	6
Regent Street	6
Rougier Street	9
School Street	2
Skeldergate	3
Spen Lane	5
Swann Street	5
Tanner Row	14
Tanner Street	8
Trinity Lane	13
Walmgate	16
Waterloo Place...	4
William Street	2

(*c*) *Per Advice:—*

During 1913, our three leaflets of advice and instruction:— (1) "The Prevention of Consumption and of the Other Forms of Tuberculosis." (2) "Special Advice to Consumptive Persons." (3) The Prevention of Consumption—Disinfection after recovery, removal or death of a Consumptive Person." were sent by the Health Department or Tuberculosis Dispensary to every affected house or person, according to need. Verbal advice has also been given by the Tuberculosis Officer and his Staff according to need, and they have paid numerous periodical revisits of advice and encouragement.

(*d*) *Per Disinfection:—*

During 1913, one hundred and ninety-two infected houses, with bedding and other unwashable goods, were disinfected by our servants, 67 after death, 29 after removal to other houses, and 96 after removal for sanatorium treatment—the householder doing the cleansing work; wall-papers were stripped, ceilings and walls white or colour-washed, &c., and in some poor cases help has been given per gifts of limewash, &c. In the case of dirty houses, cleansing has been procured by compulsory order (Notice to cleanse and limewash), and overcrowding has been remedied as far as poverty would permit.

(*e*) *Per Treatment:—*

There are now the following facilities for the treatment of tubercular cases in York:—

"Hospital" beds (a varying number) at the County Hospital for insured persons, subsidised by the Local Insurance Committee;

Ditto. for non-insured persons, subsidised by the Corporation;

Other beds and the Out-patients' room at the County Hospital;

York Dispensary Out-patients' room;

York Corporation Tuberculosis Dispensary, No. 11 Castlegate, opened December 12th, 1912;

A small Open-air Class for 22 tubercular school children, situated in the garden behind the Tuberculosis Dispensary, organised by the Tuberculosis Officer, the Medical Officer of Health, and the Education Department, now supervised by the School Medical Officer and Assistant School Medical Officer, with clinical co-operation and treatment by the Tuberculosis Officer;

(Plans for a larger Open-air School for 100 ailing, tubercular, and crippled children are now before the Board of Education);

York Corporation Open-air Ward, Shelters, and Balcony at the Isolation Hospital at Yearsley Bridge, opened 25th January, 1912. Accomodation for 22 cases. (The Ward cost £656, and has been much admired by patients and visitors);

Union Workhouse, a varying number of beds used for the treatment mostly of advanced cases.

(For further details *re* these Institutions and their work see attached Annual Report of the Tuberculosis Officer).

It may be mentioned that the nearest other available sanatoria are:—Gateforth Hall, near Selby; Hull and East Riding, Withernsea, near Hull; Bradford Poor Law, Skipton; Wensleydale, Aysgarth; Dean Head, Horsforth; Eldwick, near Bingley; Morton Banks, near Keighley; Westmorland, near Grange; Stanhope and Wolsingham, County Durham; Barrasford, Northumberland.

The Health Committee and its officials are much disappointed that so far the prolonged negotiations with the North and East Riding County Councils have not yet resulted in any combination for the establishment of the special Sanatorium on the hills so long desired by the citizens of York. The North Riding C.C. abandoned negotiations some time ago. We are also disappointed that these Councils have not yet availed themselves of the use of the York Tuberculosis Dispensary for the inhabitants of the neighbouring Flaxton and Escrick Rural Districts.

It is hoped to provide for advanced cases of Phthisis in the approaching extension of the Isolation Hospital at Yearsley Bridge.

(f) The Tuberculosis Sub-committee of the Health Committee, which now deals with the detailed consideration and management of the Tuberculosis Dispensary and of the Corporation work and schemes for the prevention of human tuberculosis, met on five occasions during the year 1913.

(g) It was arranged that the Tuberculosis After-care Committee, for the after-care of cases which had been under treatment, be organised by the York Health and Housing Reform Association, and this was accomplished during the year 1913.

DEATHS DUE TO BRONCHITIS, PNEUMONIA, AND OTHER RESPIRATORY DISEASES.

From Bronchitis, Pneumonia, and other Respiratory Diseases, in 1913, there were 138 deaths registered, or 1·66 per 1,000 living, or 13·3 per cent. of total deaths from all diseases.

The following are the figures for recent years:—

TABLE 55.—CITY OF YORK.
(Revised 1912).

Year.	Total Deaths—ascribed to—							Bronchitis, Pneumonia and other Respiratory Diseases.		
	Acute Bronchitis.	Chronic Bronchitis.	Total Bronchitis.	Lobar Pneumonia.	Broncho-Pneumonia.	Total Pneumonia.	Other Respiratory Diseases.	Total Deaths.	Death-rate per 1,000 living.	Percentage of total deaths (all causes).
1903	...	...	100	...	...	104	...	204	2·58	15·6
1904	...	...	96	...	...	67	...	163	2·05	12·3
1905	...	...	86	...	...	75	...	161	2·02	13·7
1906	...	...	76	...	...	67	...	143	1·78	12·5
1907	57	40	97	40	63	103	7	207	2·57	16·2
1908	48	39	87	25	45	70	3	160	1·97	14·4
1909	45	40	85	22	44	66	1	152	1·86	15·3
1910	46	53	99	24	56	80	1	180	2·19	17·2
1911	37	51	88	27	38	65	2	155	1·88	13·8
1912	47	39	86	28	63	91	11	188	2·27	16·5
1913	32	33	65	19	38	57	16	138	1·66	13·3

The average death-rate for these diseases for ten years, 1903—12, was 2·12.

The deaths from Bronchitis and Pneumonia in 1913 occurred as follows:—

First Quarter	... 53	=	2·54
Second „	... 27	=	1·30
Third „	... 16	=	0·77
Fourth „	... 26	=	1·24

per 1,000 living.

Their distribution in districts and in age-periods is shown in Tables 6 and 6a.

The "other Respiratory Diseases" comprise various diseases of the larynx, false croup, pulmonary congestion and œdema, gangrene of lung, pleurisy, empyema, &c.

DISEASES OF THE HEART.

The total number of deaths due to Diseases of the Heart was 114 (11·0 per cent. of total deaths from all causes), which is equivalent to a death-rate of 1·37 per 1,000 living. For the number of deaths in previous years see Table 4, and for the distribution of the deaths in 1913 see Tables 6 and 6a.

The certification of the exact class of Heart Disease is so often stated in vague terms that classification is rendered very difficult. The certification in 1913 gives the following totals :—

Disease of Aortic Valves ...	4	Fatty Degeneration	8
Disease of Mitral Valves ...	39	Other form of Degeneration ...	1
Indefinitely certified as "Valvular Disease"	18	Senile	2
Indefinitely certified as "Heart Disease" or "Cardiac Disease"	37	Angina Pectoris	2
Dilatation	3	**Total Deaths**	**114**

Seventy-six of these deaths occurred between the ages of 45 and 75.

CANCER.

Under the title "Cancer" are comprised :—Deaths from Cancer, Carcinoma, "Malignant Disease," Scirrhus, Epithelioma, Sarcoma, Villous Tumour and Papilloma of Bladder, and Rodent Ulcer—different terms for, or different structural manifestations of the disease.

During the year 1913 there were 77 deaths from Cancer in the City (7·4 per cent. of total deaths from all causes) or 0·92 per 1,000 living. The figures for previous years are as follows :—

TABLE 56. CITY OF YORK.

Deaths from Cancer (Revised).

Year.	Total Deaths.	Death-rate per 1,000 living.	Death-rate per 100,000 living.
1903	68	0·86	86
1904	64	0·81	81
1905	63	0·79	79
1906	73	0·90	90
1907	77	0·96	96
1908	77	0·95	95
1909	73	0·89	89
1910	87	1·06	106
1911	74	0·88	88
1912	74	0·89	89
Averages of ten years, 1903–12.	73·0	0·90	90
1913	**77**	**0·92**	**92**

Twenty-four occurred in Bootham Sanitary Sub-district (including the Workhouse); 30 in Micklegate Sub-district; and 23 in Walmgate Sub-district.

The deaths in 1907—1913 occurred in the following age-periods:—

Age-perio 's.	1907.	1908.	1909.	1910	1911.	1912.	1913.
5—15 years	0	0	1	0	1	2	0
15—25 „	1	2	1	1	0	0	0
25—35 „	2	3	1	4	0	3	0
35—45 „	11	10	6	8	6	6	5
45—55 „	20	17	18	17	21	19	17
55—65 „	15	19	21	24	14	19	21
65—75 „	21	13	20	19	25	19	24
75 and over	7	13	5	14	7	6	10
Totals	77	77	73	87	74	74	77

The following table differentiates the deaths, according to the certified primary seat of the disease, as accurately as possible considering that the certification is sometimes vague or incomplete:—

CARCINOMA.

Lip	1
Jaw	2
Neck	2
Œsophagus (Gullet)	2
Larynx	1
Female Breast...	4
Pancreas	2
Liver	10
Stomach and Pylorus	17
Intestine (colon, cœcum, &c.)...	8
Ovary and Uterus	9
Rectum	6
Lungs	1
Abdomen	1
Bladder	2
Not defined	2
	70

SARCOMA.

Neck	1
Jaw	1
Chest	1
	3

EPITHELIOMA.

Mouth	1
Lip and Neck	1
Tongue	1
Female Genitals	1
	4

INQUESTS.

During the year 1913, 90 Inquests (8·7 per cent. of total deaths) were held on deaths of York citizens, as compared with 99 Inquests (8·7 per cent. of total deaths) in 1912. They are classified as follows :—

Deaths from Natural Causes.

Whooping Cough	1	Parturition	2
Croup	1	Epilepsy	1
Developmental causes	1	Respiratory Diseases	1
Infantile "Convulsions" ...	7	Heart Failure	2
Intestinal Obstruction	3	Use of abortion medicine ...	1
Heart Disease	7	Ruptured Aneurysm	1
Bronchitis	1	Bursting of Blood Vessel ...	1
Pneumonia	2	Miscellaneous causes	2
Bright's Disease...	1		
Diseases of Stomach	2		—
Cerebral Disease	6	Total ...	44
Septic Disease	1		—

Of these 44 Inquests, 10 were of residents in Bootham Sanitary Sub-district, 12 in Micklegate and 22 in Walmgate.

Deaths by Accident and Suicide.

There were 34 deaths due to Accident, 11 to Suicide, and 1 to Homicide, which may be scheduled as follows :—

ACCIDENTS.	Sanitary Sub-districts.			
	Bootham.	Micklegate.	Walmgate.	Totals.
Burns	1	4	...	5
Scalds	...	1	1	2
Drowning	...	5	5	10
Falls	2	3	5	10
Killed on Railway	...	3	3	6
Operation	...	...	1	1
Totals	3	16	15	34

SUICIDES.	Sanitary Sub-districts.			
	Bootham.	Micklegate.	Walmgate.	Totals.
Shooting	1	1	1	3
Cut Throat	...	1	..	1
Hanging	1	2	2	5
Drowning	...	1	...	1
Poisoning	...	1	...	1
Totals	2	6	3	11
Homicide	...	...	...	1

THE CITY ISOLATION HOSPITALS.

The following cases of Infectious Disease were admitted into the Hospitals during the year 1913, (for further details of City cases see Table 37, and the sections of the Report relating to each disease) :—

	Scarlet Fever.	Diphtheria	Typhoid Fever.	Phthisis.	Totals.
From the City	91	61	5	111	268
„ Flaxton Rural District	9	17	...	...	26
„ Escrick „ „	4	9	...	...	13
Totals	104	87	5	111	307

Of the City cases, 20 paid the full weekly charge of ten shillings for maintenance in Hospital, and 22 were attended by their own medical attendants ; 22 cases partially paid for maintenance ; 223 were for various reasons received as free cases.

One of the City cases of Scarlet Fever received proved doubtful, and two "Diphtheria" cases proved to be Tonsillitis.

There were 11 "return" cases of Scarlet Fever from the City (=12·1 per cent. of total City cases treated in Hospital), 7 coming from three houses. There was one "return" case of Diphtheria from the City.

Three of the Flaxton and one of the Escrick cases were secondary to previous cases.

DEATHS:—There was one death from Scarlet Fever in the Hospital—a City case.

There was one death in Hospital due to Typhoid Fever—a City case.

Of the 59 actual Diphtheria cases treated, 7 were fatal (11·9 per cent.).

As indicating the varied character of the nursing work, it may be mentioned that the following *complications* occurred amongst the cases:—

Amongst Scarlet Fever cases:—

"Inflammation" and discharge from ears (Otorrhœa)	19
Rhinorrhœa	10
Albuminuria	2
Rheumatism	3
Pneumonia	2
Abscess	6
Impetigo	2
Diphtheria	1

Amongst Diphtheria cases:—

Otorrhœa	2
Paralysis	6
Scarlet Fever	5
Rhinorrhœa	1
Albuminuria	1

The cost of board for patients and staff in Hospital varied from 6/3 to 8/2 per week, per head, during the year.

The Staff consisted of:—Matron, two Charge Nurses, two Assistant Nurses, and five Probationer Nurses; seven Maids, (cook, housemaid, two wardmaids, kitchenmaid, and two laundresses), and Porter—18 in all. One extra nurse was engaged temporarily for a special surgical case.

Probationer Nurses are engaged for Fever training, for an inclusive term of two years' service—salary £15 to £18 a year. All the female members of the staff are provided with indoor uniform, in addition to salary. No outdoor uniform is provided or required. To the Probationers I gave the usual course of demonstrations on Elementary Physiology and Fever Nursing.

The administration of the Hospitals is under my supervision; I have much pleasure in testifying to the devotion with which Dr. Angove attended the large number of poorer cases, and with which the Matron (Miss Knight), and her staff performed their work. During the year numerous messages of gratitude and of appreciation of the beneficent work of the Hospital were received from patients and their friends.

The work of the Fever Hospital has been greatly increased during the past year by the extensive nursing of tubercular cases which has been carried on in the new Open-Air Ward and on the Typhoid Balcony, and in the small shelters. This work has induced new phases of nursing, besides the responsibilities of another disease being added to the variety of diseases already nursed at the Hospital ; this has consequently involved some increase in the nursing staff, and the Health Committee granted an extra honorarium of £20 to the Matron and a like honorarium of £10 to the Deputy-Matron in view of their extra work.

In the Spring, extra accommodation being required for the nursing staff, it was resolved to build the ambulance driver's house of the Fever Hospital Extension Scheme in advance, and use it temporarily as a nurses' home. This was accomplished at a cost of £450, and a very nice building was the result. The nurses' quarters were romoved to this house entirely from the old administrative block. Some new pathways were made and were temporarily illuminated with electric light. A new piano for the recreation of the nurses was a prominent item of the furnishing of the nurses' block.

At the Open-air Ward the kitchen was enlarged and a cloak-room added, the asphalted lounge in front of the Ward enlarged, a larger gas-main inserted, and some other slight improvements were made. A bagetelle-board was provided for the recreation of the patients.

At the Typhoid Pavilion some of the pine floors had to be relaid as they had worn away very badly, and arrangements were being made at the end of the year to add a new bath-annexe to this Pavilion.

During the year the Health Committee resolved that a scheme for the extension of the Fever Hospital be proceeded with, that the City Surveyor be asked to prepare a scheme as soon as possible, and that the Chairman and Vice-chairman, together with the City Surveyor and the Medical Officer of Health, be authorised to visit such recently-erected fever hospitals in other towns as it might be desirable to inspect before completing the plans of our own extensions. Such visits were accordingly paid to Keighley and Huddersfield Fever Hospitals, and, (by the Medical Officer of Health) to Southampton, and the preparation of the plans is now in the hands of the City Surveyor.

Enquiries were also made as to the probable cost of a motor

fever ambulance and motor bedding-van, and tenders were actually obtained, but the Committee decided not to proceed any further with the matter, so a new ambulance horse was purchased at a cost of £37.

An attempt was again made during the year to obtain the milk supply for the Fever Hospital from a dealer whose cattle had been tested by the tuberculin test, but the only person who would contract to supply the milk said that he would rather not do so at all if the tuberculin test was to be insisted upon, so there our efforts ended.

GEOLOGY AND CLIMATE OF THE CITY.

The surface soil of York is very diversified in character. It is described as consisting of boulder clay, with strips of warp, river sand and gravels along the river, whilst here and there (*e.g.*, Bishopthorpe and Heslington) occur ridges of glacial gravel, or shallow basins or pockets of dark peaty soil, the remains probably of shallow meres and swamps which have dried up or have been artificially drained.

The City is situate in the centre of the Great Plain of York, and its level varies from 25 to 53 feet above ordnance datum.

The climate is rather enervating during Autumn; during Spring it is sometimes bleak, owing to the prevalence of east or north-east winds. A defect in the climate is the want of interchange of air between hill and dale, there being no hills of appreciable height nearer than twelve miles away.

But, on the whole, York is now a very healthy city, as witness its health statistics during recent years. Its mortality from rheumatic fever, pneumonia and phthisis, compares very favourably with most towns, especially those on a clay soil, and its former notoriety for typhoid fever has now disappeared. It has a pure water supply, and is immediately surrounded by open country with good, level roads, making walking, cycling, motoring and driving easy. The City also possesses its large strays and other "town lungs," several bowling-greens, three golf-courses, and excellent boating on the broad and safe river Ouse. There are few towns with such hygienic advantages.

THE WATER SUPPLY OF THE CITY.

The water supply of the City still maintains its remarkable purity. The supply is extended to several of the surrounding villages.

It is in the hands of a private Company—the York Waterworks Company. The water is drawn from the River Ouse at a point about a mile above the centre of the City. The Ouse is a free flowing river of great volume, with a water-shed area above York of about 1,200 square miles (including its tributaries—the Swale, Ure, and Nidd). The sources of the river are in the mountainous and moorland districts of North-West Yorkshire. The water is free from lead-solvent properties. The water supply is practically unlimited, and the distribution to consumers is uninterrupted.

Great care is taken in the purification of the water at the Waterworks; the process consisting of (1) screening, (2) settlement in subsiding reservoirs, (3) rough filtration through Jewell filters containing 4 feet depth of quartz sand, (4) and then it is passed through the "slow" or "English" sand filter beds containing 4½ feet depth of fine river sand.

By this process the river-water bacteria are reduced in number by 99 per cent. The number of colonies in the filtered water averages less than 11 colonies per cubic centimetre; water containing not more than 100 colonies per cubic centimentre is considered by expert water analysts as "very pure water."

The Water Company possesses two fully equipped laboratories, and employs the whole-time services of a qualified analyst, who tests the water, chemically and bacteriologically, daily.

It is almost unnecessary, however, to say that it behoves both the Corporation and the Water Company to maintain a close watch upon all sources of pollution above the Company's intake.

Water is supplied free of charge to the Corporation for flushing drains, watering streets and other public purposes.

The total number of dwellings supplied at the end of the year 1913 was about 18,600.

There are a few surface and deep wells still existent in the City. They are usually closed by the owners when found to be polluted.

PUBLIC BATHS.

The Public Baths are under the control of the Health Committee and the City Surveyor. St. George's Baths were taken over to be managed by the Corporation in 1901. Scholars of the Elementary Schools are admitted free for learning swimming.

YEAR ENDING 31st MARCH, 1914.

Total persons who paid for use of :—	At St. George's Baths.	At New Yearsley Baths.
First-class swimming baths ...	6,470	admission free.
Second-class „ „ ...	4,419	
First-class slipper baths	1,605	2,938
Second-class „ „	3,969	...

These totals do not include coupon, monthly and season ticket holders. Facilities for the Blue Coat and other schools were extended, and free scholarships for swimmers were established in conjunction with the Education Committee.

The City of York New Yearsley Swimming Bath, presented to the Corporation by Messrs. Rowntree & Co., in 1909, is very well managed, and gives great satisfaction to its numerous users.

POLLUTION OF STREAMS.

During recent years considerable trouble has been caused by serious pollutions of the River Foss, Tang Hall Beck, and Holgate Beck.

(1) The River Foss is, or was, liable to the following pollutions from the Flaxton Rural District, viz.:—

(a) Untreated sewage direct from several houses in Huntington village.

(b) Untreated sewage from Barton's Cottages and—via the South Beck—from Wray's Cottages, Huntington Road, also from Mill Crux House, and from new houses beyond Yearsley Bridge.

The sewage from three new houses recently erected just beyond the Bridge is unsatisfactorily treated, and has been reported upon.

The effluent from the sewage plant of New Earswick village also passes into River Foss, but it is quite a satisfactory effiuent.

(2) The Foss still receives storm overflows from the city sewers below the old Yearsley Swimming Bath.

(3) The Tang Hall Beck, which flows into the River Ouse at the Blue Bridge, New Walk, is polluted by:—

(a) Sewage from the new Whitby Avenue Estate, Stockton Lane, in the Flaxton Rural District. This caused strong complaints in 1913 in Hempland Lane. Arrangements have been made whereby the Corporation will receive this sewage into the City sewers, and an application for sanction to the scheme has been made to the Local Government Board.

(b) Sewage from the mansion of "Burnholme."

(4) The Holgate Beck is polluted at times by the overflow from the water-logged sewage farm at Acomb, and from their imperfect septic tank. During the year there was not so much ground for complaint as in previous years.

On January 11th, 1912, the Health Committee instructed the City Surveyor to "report to the Baths Sub-committee as to the condition of the Old Yearsley Bath, and the Medical Officer of Health was also instructed to report to that Sub-committee as to the condition of the water in the Old Yearsley Bath and in the river above Yearsley Lock," and my report was summarised in last year's Annual Report.

The pollutions of the Foss have at times made me uneasy as to the use of the Old Yearsley Bath, but I should be extremely reluctant to recommend the closure of the bath, as it is so popular. The results of my investigations went to show that the most serious present pollution of the river in regard to the safety of the Old Yearsley Bath comes from *below* the Bath, namely, from the two or more overflows from the Huntington Road sewer, in the neighbourhood of the Railway Bridge. I informed the Committee in the previous year that I had ascertained that the river water at this point sometimes contained bacilli indistinguishable from the Typhoid Bacillus. We have observed over and over again that, owing to the river being held up at Castle Mills Bridge, and owing to the pumping there, in still weather there is often an actual slow current *upwards towards* the Bath, and my investigations show that the river is twice as foul bacterially below the bath as what it is in the centre of the bath, and there, of course, it is much less bacterially pure than it is above the bath or above Yearsley Bridge.

There is evidence of a fair amount of pollution in Huntington village, but the river purifies itself considerably before it reaches Yearsley Bridge.

It is therefore evident that we must take early steps to rid the river Foss of direct pollutions from the city sewers, and to stop serious pollutions above Yearsley Bridge, or the Yearsley Old Bath should be abandoned altogether, or it should be transferred to a safer position higher up the river, say, somewhere in the neighbourhood of the new Yearsley Bath, or in the neighbourhood of Mill Crux House. It must be remembered that any water into which sewage flows, may at any time happen to contain Typhoid Bacilli, which are obviously, therefore, a source of danger to bathers.

The City Surveyor also reported upon the matter, and, as a consequence, the necessity of providing additional sewerage for the Huntington Road district was referred to the Streets and Buildings Committee to be carried out as soon as possible, as a matter of urgency.

MILK AND MEAT AND GENERAL FOOD SUPPLY.

Continuous attention has been given to securing the purity of our milk supply, and rapid improvement is being achieved, although there is still much left to be desired. A close watch upon our meat and general food supply is also maintained. Our Chief Sanitary Inspector and his Assistants are particularly zealous in this matter.

The now established system whereby butchers request our inspection of doubtful meat, as the outcome of their system of insurance of animals, is exceedingly helpful, and operates very considerably in favour of a wholesome meat supply.

The inspection of meat is carried out by a Veterinary Surgeon, who is Meat Inspector and Veterinary Inspector, along with the Chief Inspector of Nuisances, who possesses the qualifying certificate of the Royal Sanitary Institute in Meat Inspection; five of his assistant Inspectors also possess the said certificate in Meat Inspection. There are 70 private slaughter-houses, over which constant supervision is maintained, and to which frequent surprise visits are paid at the times of slaughtering, in addition to the numerous occasions on which the opinion of the inspectors is requested by the butchers as to the condition of freshly-slaughtered carcases. The result of such inspections, and the action taken thereupon, both in regard to milk, meat, and

other foods, will be found fully stated in the reports of the Inspector of Nuisances and the Public Analyst, forming part of this volume.

The number of private slaughter-houses is diminishing; in 1900 there were 92, and at the present time there are 70.

From time to time the dairy cows in the City are examined by the Veterinary Inspector of the Corporation, and samples of milk from tubercular suspects are sent when required to the pathological department of the Leeds Medical School, for inoculation test, and subsequent action is taken, when found necessary and as far as possible, under the model Milk (Tuberculosis) Clauses contained in the York Corporation Act of 1902, and under the Dairies, Cowsheds, and Milkshops Order and Regulations.

There are 57 Cowsheds in the City, and these are periodically inspected, as also are the premises of retail purueyors of milk and cream.

There can be no question but that the excessive susceptibility of dairy cattle to tuberculosis depends on the unhealthy conditions under which they are, alas, too often kept in cowsheds. Dr. Thomas Gibson, reporting in this connection to the Wakefield City Council, writes: "The ill-lighted, ill-ventilated, and overcrowded cowshed is an ideal place for propogating the disease, and unless we can get dairymen and farmers, assisted as they should be by their landlords, to improve the sanitary conditions of their cowsheds, in respect of the points I have mentioned, we need never hope to eradicate tuberculosis from our cattle herds. It is unfortunately my duty from time to time to seize tubercular cows in our slaughterhouses, cows that have been bought apparently in good health in the open market, and for which good prices have been paid. Most of the cattle, one may say all of them, have acquired the disease very largely through being kept under insanitary conditions, and I do think it is an injustice that the butcher should have to pay the penalty, which should properly fall on the shoulders of those responsible for the conditions under which the disease is known to be propagated."

There came into force on October 1st, 1912, the Public Health (Milk and Cream) Regulations, 1912, forbidding the sale of ***milk*** containing chemical preservatives, and prescribing con-

ditions under which *cream* containing chemical preservatives shall be sold. Copies of the Regulations, along with the following covering circular, were sent to all the City dealers in milk and cream :—

GUILDHALL, YORK,

May, 1913.

DEAR SIR OR MADAM,

PRESERVATIVES IN MILK AND CREAM.

A WARNING.

I have been desired by the Health Committee of the Corporation to address a communication to York Cream Purveyors with reference to the use of Preservatives in Milk and Cream, and to direct your attention to the Public Health (Milk and Cream) Regulations, 1912, issued by the Local Government Board, and dated August 1st, 1912, a copy of which is herewith enclosed.

I have specially to direct your attention to Part II, Articles III, IV, V, VI, VII, also Part III, Article VIII, of the said Regulations, and also to the Regulations in the Schedule thereto with respect to the Labelling of Preserved Cream. The Departmental Committee on "Preservatives in Foods" appointed by the Local Government Board (1901) recommended :—

(a) That the only Preservatives which should be permitted in Cream should be Boric Acid, Borax, or mixtures of Boric Acid and Borax.

(b) That those Preservatives should not be added in amounts exceeding 0·25 per cent., expressed as Boric Acid (*i.e.*, 17½ grains of Boric Acid per lb., or 175 grains per gallon, of cream).

(c) A recent report of the Local Government Board extended this permissible percentage to a maximum of 0·40 (*i.e.*, 28 grains of Boric Acid per pound, or 280 grains per gallon, of cream) from May to October inclusive, only, provided that in both winter and summer all cream in which such Preservative is permitted should contain at least 35 per cent. of milk-fat.

I have to inform you that the Corporation will take summary proceedings in all cases where the said Regulations are not complied with.

Yours faithfully,

H. CRAVEN,

Town Clerk.

In accordance with the requirements of the Local Government Board, the following statement with regard to the action taken during the year 1913 under the Milk and Cream Regulations was sent to the Board :—

REPORT OF ADMINISTRATION IN CONNECTION WITH THE PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912,

during the year ended 31st December, 1913.

1. MILK and CREAM not sold as Preserved Cream.

	(a) Number of samples examined for the presence of a preservative.	(b) Number in which a preservative was reported to be present.
Milk ...	65	Nil.
Cream ...	1	The sample contained 0·33 of Crystallised Boric Acid. The vendor was written to by the Town Clerk calling his attention to the fact that the sample should have been labelled as "Preserved Cream."

2. CREAM sold as Preserved Cream.

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

(i) Correct statements made ...	1
(ii) Statement incorrect	0
	1

(b) Determinations made of milk fat in cream sold as preserved cream.

(i) Above 35 per cent.	1 (47·72)
(ii) Below 35 per cent.	0
	1

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the Regulations have not been observed.

Nil.

(d) Particulars of each case in which the Regulations have not been complied with, and action taken.

Nil.

3. Thickening substances. Any evidence of their addition to cream or preserved cream.

Nil.

Cases of Food Poisoning :—

The only cases of food poisoning brought to our notice during the year occurred in April, when ten members of a household of twelve were more or less affected through partaking of shrimp-sauce, along with cod. The shrimp-sauce was ordinary white sauce into which "picked" shrimps were mixed. These shrimps were sold by the fishmonger from out of a stock tin. The tin was one of a consignment of twelve tins received from Holland, via the Port of Harwich. The fishmonger had been accustomed to receive similar consignments of tinned shrimps from the same source for some years before. Two out of the present consignment of tins had beeen detained at the Port of Harwich because the tins were badly "blown." There were really two distinct outbreaks in this household, and in both cases no other food came under suspicion except the cod and shrimp-sauce prepared in the same way on both occasions. The cod appears to have been beyond suspicion. In the first outbreak only one member of the household was seriously affected, and he was very ill, with severe vomiting and diarrhoea. In the second outbreak there was only one member of the household seriously affected and that in a similar manner ; this case was very severe. The other members of the household who were much less seriously affected suffered from symptoms of colic and diarrhoea in varying degree.

Specimens of the vomit and of the shrimps were submitted to bacteriological examination and both shewed the presence of a sewage organism, the *Bacillus Enteriditis Sporogenes* which has aforetime been associated with the occurrence of similar illness. The chemical examination made by the Public Analyst was

absolutely negative. Our enquiries failed to hear of any other cases about the same time, but this may be accounted for by mere accident, or by some difference in the preparation of the food.

The fishmonger was advised to communicate with the original vendor of the shrimps in his own and the public interest, and as in duty bound I also warned the Local Government Board of the suspicions attached to these goods.

The working of the Bovine Tuberculosis Order of 1913 was undertaken by the Markets Committee, and our Veterinary Inspector is employed in connection therewith. The Health Department has so far not been officially connected with the working of this Order.

Owing to numerous complaints having been received from time to time as to the *conveyance of carcases* and hides upon railway and other drays through the public streets, *uncovered*, the attention of dealers in skins, hides, horns, &c., and of the North Eastern Railway Company, was called in regard to the matter—to the fact that there is a City Bye-law requiring these things to be covered in transit, as they are frequently not only offensive to sight, but sometimes offensive to smell. A strict observation of the Bye-law was requested. Similar intimation was also sent to the one knacker in the City. It was also suggested to the Railway Company that the drays used for the conveyance of such things should be thoroughly cleaned after such conveyance before being used again for other goods; also, that care should be taken that foods and other goods be not conveyed with carcases and skins in such a manner that the former might be contaminated thereby.

Public Abattoir:—

A sub-committee met on several occasions to consider the question of the provision of *a* public abattoir for the City, and they visited and reported upon the comparatively new abattoir at South Shields. It was ultimately decided that, there being so many difficulties in connection with the establishment of such an institution in this City, it was not expedient to proceed with a Public Abattoir Scheme at present. In fact, it was felt that national legislation upon this matter was first required. It was at first resolved to appoint a special Meat Inspector, but in view of the fact that three of the Assistant Sanitary Inspectors had

just obtained the qualifying Meat Inspector's Certificate of the Royal Sanitary Institute, it was ultimately decided to make each of them a Meat Inspector in his own sub-district, and to increase his salary accordingly.

THE DISPOSAL OF EXCREMENT AND REFUSE.

The scavenging and sewerage of the City are under the control of the City Surveyor, and to him I am indebted for some of the following facts:—

The methods in vogue in the City consist of:—

(1) About 3,300 midden-privies (a steadily diminishing number) the contents of which are removed systematically once a month by and at the cost of the Corporation. The manure is sold to farmers, part being forwarded from the City by rail.

(2) About 12,580 wash-down water-closets and 2,000 waste water-closets. The provision of the latter is now discouraged.

(3) About 14,600 ashtubs and galvanised iron receptacles (or ashbins) in use at houses where there are water-closets and no brick ashpits or midden privies. The contents are collected by the scavengers twice a week and destroyed in a Manlove and Alliot's Refuse Destructor of six cells, which consumes about 50 tons of refuse per working day, and produces about 17 tons of clinker per day. The heat generated works the day load at the Electric Light and Power Station of the Corporation.

During the 30 years ending December 31st, 1902, 2,454 midden-privies had been substituted by water-closets voluntarily or by order of the Sanitary Authority, under either Section 91 or 36 of the Public Health Act. Since the end of 1902, 2,598 midden-privies have been substituted by water-closets in similar manner, making a total of 5,052.

Measures are constantly taken, under Section 36 of the Public Health Act, to secure the provision of proper iron ashbins (with covers), in lieu of wooden boxes, old tins, and other leaky and lidless receptacles.

LABORATORY WORK.

During the year the following work was carried out in the Medical Officer of Health's Laboratory, and at the Yorkshire Pathological Laboratory, Leeds:—

Samples of beck water analysed			1
Sputum, specimens examined for Tubercle Bacilli by the Tuberculosis Officer:—			
With positive result	64		
With negative result	226	...	290
*Swabs examined for Diphtheria Bacilli:—			
From suspected cases, positive... ...	60		
Do. do. negative ...	202		
From convalescent cases, positive ...	106		
Do. do. negative ...	278		
From contact cases, positive	6		
Do. do negative	36	...	688
Blood submitted to Widal's test for Typhoid Fever:—			
With positive result	5		
With negative result	13	...	18
Faeces examined for Tubercle Bacilli:—			
With negative result	5	...	5
Urine examined for Tubercle Bacilli with negative result ...	7		
Do. for B. Coli, sterile	1		
Do. for Albuminuria, negative	1	...	9
Pus from eyes examined for Gonococcus, positive	2		
Do. urethra do. do. positive	1		
Do. vagina do. do. negative	1	...	4
Pus examined for Tubercle Bacilli positive, ...	1		
Do. do. do. negative ...	1	...	2
Pus from vagina examined for Tubercle Bacilli, negative	2	...	2
Nasal discharge examined for Tubercle Bacilli, negative	1	...	1
Gland tissue examined for Tubercle Bacilli, positive	1	...	1
Milk examined for Tubercle Bacilli, negative	2	...	2
Hairs examined for Ringworm Spores, positive ...	130		
Do. do. do. negative ...	23	...	153
	Total		1175

*(Examined at Health Department Laboratory, 320
Do. Leeds Pathological Laboratory, 368)

A large proportion of the Swabs were from children attending the Elementary Schools, and some were therefore examined by the Assistant School Medical Officer; I am indebted to him for his able assistance in this work.

HOUSING OF THE WORKING CLASSES.

"I have systematically tried to turn fiction to the good account of showing the preventable wretchedness and misery in which the masses of the people dwell, and of expressing again and again the conviction, founded upon observation, that *the reform of their habitations must precede all other reforms*, and that without it all other reforms must fail."—CHARLES DICKENS.

On the 3rd December, 1909, the *Housing and Town Planning Act of 1909* came into force, and largely superseded the Housing Acts of 1890 and its Amending Acts.

The Medical Officer of Health, in his Annual Report, must state fully and in tabular form the work done under Section 17 of the Act.

The City Council relegated the working of Part 1 of rhe Act to the Health Committee, and its Housing Sub-Committee meets once or twice a month and has done important work during the past year, although it has been much hampered by the shortage of houses which was somewhat suddenly realised during the year. This matter will presently be referred to again.

One of the Assistant Inspectors of Nuisances was specially allocated as Housing Inspector—to carry out the immense amount of detailed inspection, "following up," and clerical work, and in other ways to assist the Medical Officer of Health and Chief Inspector of Nuisances in the work involved by the Act and Regulations.

The records required by the Regulations are kept on the *card* system *("one house—one card,")* and such cards are now building up a valuable house to house inspection record.

HUNGATE AREA.—The improvement work following upon my special "Report upon the sanitary conditions of the Hungate District," issued in 1908, proceeds with regretful slowness. owing to the extreme dilatoriness of some owners and to the housing shortage. The Sub-committee has visited the district on various occasions and works concerning some of the unhealthy blocks of

houses are still in progress, or in snspense. Numerous houses have been made through houses and otherwise improved, and some important clearances and improvements have taken place, and the Area will soon wear a much altered appearance. Some of the small open spaces should now be purchased by the Corporation and maintained as open spaces. Two such spaces have been so dealt with and asphalted. Opportunities for the making or widening of streets—much needed air channels through this congested area—have also appeared and should be taken advantage of soon.

WALMGATE AREA.—I regret that, owing to pressure of work entailed by parliamentary and other urgent schemes, I have not yet been able to present my report on the sanitary conditions of this Area, formally, but I have, some months ago, sketched its main lines to the Housing Sub-Committee and to the Health Committee, and it is now nearly ready for formal presentation.

Some considerable work of housing improvement in the Area has been carried out, in quite recent years, and some very urgent points are being dealt with now.

It is common knowledge that during recent years there has been an immense improvement in the general sanitary conditions and cleanliness of the dwelling-houses of the City, and of their surrounding yards, streets and other places.

It is our aim that even the humblest cottage should have the maximum access of light and maximum capacity for through ventilation possible; that roofs should be water-tight; that very damp walls should be repaired and provided with damp courses and that they should be as free as possible from the access of damp from outside; that floors should be in good repair, properly laid and not damp; that, if houses are closed-in, their situation should be opened out as much as possible; that there should be provision of proper water-closet accommodation, proper water-supply and proper drainage. We are also endeavouring, where possible, to make back-to-back houses into through houses, and in numerous instances houses which were not back-to-back, but which had not through ventilation, have been so provided. It goes without saying that all dilapidations have to be made good.

I have a growing conviction that there is much need for action in regard to *business offices* on similar lines, with more definite powers as to the inspection and supervision thereof.

The improvements and small clearances in Hungate, Walmgate and elsewhere, have been carried out with a minimum of hardship and inconvenience to owners and occupiers.

In my last Annual Report I pointed out that "the number of empty houses, so conspicuous a few years ago, has now declined, but the building of new cheap houses has been somewhat stationary. If private or philanthropic enterprise does not soon step in, there will be need for serious municipal consideration of the problem of the provision of cheap dwellings. In the meantime, it is impossible for a Sanitary Authority to permit the continued existence of many of the closed-in, damp, ill-lighted, ill-ventilated, or dilapidated dwellings in the older courts and streets of the City."

The Shortage of houses and the serious problems arising therefrom became so acute during the year 1913 that special Committee Meetings were held to consider the matter, and I submitted, on November 10th, a special memorandum or report on "The present difficulty in the Housing of the Working Classes in York," and as a consequence of the deliberations an excellent suburban building site of about 50 acres was provisionally secured.

The principal points in my report were as follows:—

There is no doubt that, during the last few months, the City has become faced by something of a house famine. The 717 dwelling-houses vacant at the National Census of April, 1911, and the 233 cheaper houses vacant, according to the Assistant Overseers, on March 31st, 1913, have been filled up. This scarcity of dwellings is now becoming marked in most towns and districts, at any rate in the North of England.

We have 26 cases of overcrowding in hand, in which the occupiers plead that they cannot find any larger houses to let. Some owners decline to accommodate large families.

We have Closing Orders upon 273 houses and tenements, 230 of which require or are receiving improvement, 17 of which should be closed altogether, and 26 are now closed altogether, and upon 73 of which notices have been served upon the tenants to quit, under Section 17 of the Housing, Town Planning, &c., Act 1909, because the owners do not take any steps to carry out the required improvements.

We are having to be very lenient in requiring occupiers to quit the houses, because they find great difficulty in obtaining other houses fit for human habitation. Yet it is unthinkable that we should not continue the work of improvement or demolition of existing unhealthy dwellings.

Early in the summer I requested the Assistant Inspectors to note all the vacant non-condemned dwelling-houses they met with in the course of their work; they have so far met with extremely few, and house agents say they have none on their lists.

Within a comparatively recent time, private enterprise was apparently satisfying the demand for the better type of houses, at from, say, 6s. to 8s. or more per week.

The crux of the Housing Problem so far as been considered to be the people who could only afford 2s. 6d. to 5s. per week, but until recently these people have not had great difficulty in getting such houses in this old city.

It is well known that the rate of cottage building has greatly diminished during the past 10 years, as witness the following figures:—

Total New Houses Completed of all Rentals.

Year.	Total houses built.	At Rentals of £13 or under.	At Rentals between £14 and £18.	At Rentals. Over £18.
1902	351	130	194	27
1912	90	21	45	23

Our work in the direction of housing reform does not account by any means for the shortage of houses, its progress has been so slow. Only 136 dwellings have thus been demolished since the census of 1901. Below I also give the total dwellings abolished since the same date to make way for new business premises (by private owners), and for street improvements:—

Houses demolished per street improvements, recreation grounds, &c.	88
Houses demolished per private owners for business developments, &c.	197
Houses demolished through operation of Housing of Working Classes Acts	136
Houses combined with others into through houses ...	44
Houses closed as hopelessly unfit dwellings, but not demolished	57
	522

We must reckon also with the natural increase of the population (the yearly gain of births over deaths) the young people growing up and requiring separate bedrooms. the young couples marrying and wanting separate dwellings, and so forth.

I hope shortly to be able to submit to the Committee the long-delayed report which I was requested to make upon the Housing conditions of the Walmgate Area. I may say here that in my opinion the only possible improvement of that area will involve the displacement and re-housing of a large number of people (about 180 houses will probably have to be cleared).

It appears evident, therefore, that—

(1) The municipality will soon have to provide a large number of dwellings;

(2) That, meanwhile, we shall be obliged to stay our hand as to the ***permanent*** closing of unhealthy dwellings, except !n extreme cases.

There may now be said to be four ***types of working-class dwellings*** in most old towns, viz.:—

(A) The dwellings in the oldest, most central, and most crowded parts of the town—the so-called "slums" of to-day (rents from 1s. 6d. to 5s. a tenement per week).

(B) An intermediate class of dull, drab, monotonous rows, or squares of cottages, with perhaps just passable structural arrangements, and with hardly a decent minimum of street space in front and of yard space behind (rents 3s. 6d. to 5s. 6d.).

(C) A newer type of house, built according to recent Bye-laws, with wider streets and ample back yards and back roads, but still in long, monotonous rows or terraces (rents 6s. to 8s. 6d.).

(D) The most recent of houses, with three or four bedrooms, built in limited number per acre, on "Garden City" lines (rents 6s. 6d. to 10s. 6d.).

These rents include rates.

The question arises:

What class of dwellings should a Local Authority provide?

And what number of houses should be built forthwith?

(a) Should we try directly to meet the wants of the poorer classes?

(b) Or should we build for the better-paid artisan class in the outskirts, on "Garden City" lines?

(A) *For the poorer classes* no one has built in the recent past, and it is less likely that they will do so in the future. Many of the people living in slum areas are unable to afford more than very low rents, true though it be that others are improvident and wasteful, and could afford more rent if they would. Many of these people say they require to live near the centre of the town because of their employment. Then there is the well-known *habit* of living in the oentre, which it is very difficult to induce these people to break. There are very few suitable sites left in the centre. Upon them it may not be possible to build a sufficient number of houses as self-contained cottages, and, therefore we might build *flats*. Personally, I do not see any great objection to flats of not more than three stories in height (inciuding the ground floor), and containing flats only on each side of the staircase, with cross-ventilated annexe for sanitary conveniences on each floor level, and with large common yard or drying ground at the back.

There is the alternative of *two-storied flats*, *i.e.*, one house on top of another, each house having separate entrances, yards, and sanitary conveniences, as in some parts of Edinburgh.

A combination of methods has been put into practice in some places, where tenements have been erected containing the more expensive as well as the cheaper apartments, so that the average rental obtained on the whole yields a profit.

In my Report on a "Housing Investigation tn York" in 1905 I suggested building, or converting old mansions into, *sanitary flats* (as described in Dr. Sykes' Book on "Public Health and Housing") of two or three rooms, for aged couples; widows with two or three children, or grown-up son or daughter; man and wife without family: persons not of regular wage-earning class, &c.,— at about 1s. to 1s. 3d. rent per room, the letting and control to be entirely in the hands of the Corporation, through a Sanitary Inspector collector, but my proposal was not adopted.

Yet we might as well provide for these people, even at some loss, as let them drift into the Union Workhouse, and become a charge on the rates.

If we have to build dwellings for them, we must endeavour to raise their environment and habits a stage or two higher, as they have done at Liverpool.

Although a self-contained house is the ideal for every household, even the poorest, for workers with short hours for meals and no money to spare for transit, who must live in the centre where land is dear, it may be necessary for yet another generation or so to build two or three-storied flats·

Whatever class of house a Local Authority builds for the poorer classes it seems to me to be absolutely desirable that the Local Authority should keep the letting and supervision of such houses in their own hands, and that the rents should be collected and the houses and tenants supervised by a person qualified, as a Sanitary Inspector or otherwise, in sanitation,

A capable resident superintendent is said to be absolutely essential in blocks of flats. All weekly rents should be collected in advance.

(B) On the other hand, it is held that if we build a modern type of self-contained house on the outskirts of the city, or outside the city area, say on "*Garden City*" *lines*, we should probably not only stimulate private enterprise, and provide local builders with models, but we should promote a much-to-be-desired flow of the better wage-earning population outwards, the poorer classes moving into the houses thus left vacant. This movement has, of course, been going on in our's and in most towns for years past, as an unpremeditated result of private enterprise in cottage building.

There has, however, been one marked disadvantage revealed by experience in this system, namely, that it operates very slowly, because, for reasons, some of which have already been stated, it is difficult to induce slum dwellers to "move up."

Another disadvantage of this system has been alleged, namely, that in the "*moving-up*" *process*, previously better districts tend to become converted into slums—to the disgust and loss of the landlords of those districts, who have little or no control over their tenants. Therefore, there is opposition by the owners of dwellings in the better districts in accepting these previous slum dwellers as tenants, especially if they have large families.

Yet, again, there is another risk which tends to operate in the "moving-up" process, and that is the very undesirable kind of overcrowding which often follows upon a family "moving-up" into a house too large for them, and rooms of which they, therefore, sub-let to other persons or families. For moral reasons alone, every family should have its own self-contained dwelling.

It would appear, then, that the local authority is *the only body to be relied upon* to build houses for the poor tenant with a large family. and also for building dwellings, be they flats or otherwise, to meet the needs of the slum-dweller who has been turned out of his slum by Housing Work, street improvements, or the building of new factories, and for that course there are the following additional reasons:—

The local authority can borrow money more cheaply than can private enterprise.

The local authority may, as a matter of public health, afford to house the people even at a loss (it spends infinitely more money as it is on unremunerative undertakings.)

It is the only body that can see to it that the new cheap dwellings are inhabited only by those who need to be re-housed, or who have had difficulty in finding decent, cheap dwellings.

It is the only body that can *supervise and enforce* the maintenance of cleanly habits and the proper sanitation of such dwellings. This latter system has been most successfully carried out at Liverpool, with remarkably good results in changing the habits of many previous slum dwellers. To quote a Liverpool report :—

"It is indeed a matter for sincere congratulation that out of 5,866 people displaced in certain areas, 4,597, or 74 per cent., have been re-housed; whilst in one scheme 94 per cent. were re-housed, and in another 99½ per cent., so that almost every person turned out of an old unhealthy home was replaced in a new sanitary dwelling."

After giving the matter a good deal of consideration, it seems to me that probably the present policy of the York Corporation should be to carry out both of the above alternatives, viz. :—

(a) In order to cope with the immediate necessities of dispossessed persons, and large families of the poorer classes, to build cheap cottages in short rows of six to ten, or "concentrated" dwellings of the "flat" type, in such situations as far from the centre as will meet the need of the workers and will also take them a stage away from the centre.

(b) To build more houses of the D type, the "Garden City" type—as recently erected at Alma Terrace—for the better-class artisan, so as to coax him more and more to go into the suburbs.

TABLE 57.

TABULATED STATEMENT OF ACTION TAKEN DURING THE YEAR, MARCH, 1913 TO MARCH, 1914, UNDER SECTION 17 OF THE HOUSING ACT OF 1909.

(*As required by the "Housing Inspection of District Regulations, 1910."*)

DISTRICT.	Total dwellings inspected.	Total dwellings or tenements unfit.	Representations for Closing Orders.	Closing Orders made.	Improved without Closing Order.	Improved after Closing Order.	Total dwellings awaiting further action.	Total dwelling unaltered.	Total on which work is in progress.	Total on which Demolition Orders were made.	Total Houses demolished.	Back to back houses made, or to be made through houses.
Hungate District	35	35	35	35	3	13	...	10	9	...	...	...
Miscellaneous	32	32	32	32	...	...	...	11	17	...	4	...
Totals	67	67	67	67	3	13	...	21	26	...	4	...

TABLE 58a.—HUNGATE AREA.—Action taken during the year March, 1913, to March, 1914.

Situation of House.	Number of houses or tenements.	Chief Defects.	Chief works of Improvement carried out.
No. 5 Haver Lane and 1 St. John's Place	2	Damp, ill-ventilated	Improvements carried out after Closing Order. Closing Order determined.
Nos. 23, 25 & 27 Garden Place	3	Dilapidated	Work completed without Closing Order being made.
Nos. 1 & 2 Cross Wesley Place	1	Damp, dilapidated, & badly lighted	Improvements carried out after Closing Order; latter about to be determined.
No. 3 Cross Wesley Place & Nos. 1, 3, 5, 7 & 7a Low Wesley Place	6	Dilapidated, damp	Improvements carried out after Closing Order; latter determined.
Nos. 2, 3 & 4 St. John's Place	3	Damp, ill-ventilated & closed-in	Improved after Closing Order; latter determined.
Nos. 5 and 6 St. John's Place	2	Damp, ill-ventilated & closed-in	Improved after Closing Order; latter determined.
Nos. 3 and 5 Hungate	2	Ill-ventilated	Closing Order made; No. 3 closed; further action pending.
Nos. 7 & 8 Haymarket	2	Dilapidated	Improved after Closing Order.
Nos. 6, 8, 10, 12, 14, 16, Haver Lane	6	Dilapidated	Closing Orders made.
Nos. 1 & 3 Haver Lane	2	Damp, ill-ventilated	Closing Order made; houses closed.
Nos. 13 and 15 Garden Place	2	Damp and dilapidated	Closing Order made; works of improvement in progress
Nos. 7, 9 & 11, Garden Place	3	Damp and dilapidated	Closing Order made; works of improvement in progress

TABLE 58b.—MISCELLANEOUS HOUSES—Action taken during the year March, 1913, to March, 1914.

Situation of House.	Number of Houses or tene-ments.	Chief defects.	Chief works of improvement carried out.
Nos. 1, 2, 3, 4 Church Cottages, Lawrence Street	4	Damp and very dilapidated	Closed ; to be made into a parish reading-room
Nos. 10 and 11 Newgate	2	Closed-in, very damp	Closing Order made, houses closed
Nos. 4, 8, and 10 Lord Mayor's Walk & Nos. 1, 2, 3, 4, 5, and 6, Hill's Court	11	Damp, closed-in	Closing Order made, works of improvement in progress
Rose and Crown Yard Cottage, Lawrence Street	1	Closed-in, ill-ventilated	Closing Order made ; house closed
Nos. 2, 3, & 4 Pinder's Court	3	Damp, dilapidated	Closing Order made ; works of improvement almost completed
Nos. 1, 2, 3, 4 Hornby's Court	4	Very dilapidated, ill-ventilated	Closing Order made ; houses demolished without Demolition Order
Nos. 1 & 2 Hurworth's Cottages	2	Dilapidated, damp	Closing Order made
No. 2 All Saint's Court	1	Dilapidated, ill-ventilated	Closing Order made
Nos. 1, 2, 3, 4 and 5, Hudson's Yd., Clifton	5	Closed-in, ill-ventilated	Closing Order made ; works of improvement in progress

TABLE 58c.—HUNGATE AREA—Action taken during the year March, 1913, to March, 1914, respecting houses previously reported on.

Situation of House.	Number of houses or tenements.	Chief defects.	Chief works of improvement carried out.
Nos. 22, 24, 26, 28, 30 and 32 Garden Place	6	Damp, dark, dilapidated	Improvements completed, Closing Order determined
Nos. 7, 8, 9, 10, 11, 12, 13 and 14 St. John's Place	8	Damp, dark, dilapidated—congested	Closing Orders made, Nos. 7, 8, 9 and 10 voluntarily demolished by Owner
Nos. 1, 2, 3, 4, 5, 6 and 7 Dundas Street	7	Small, congested, ill-ventilated	Action deferred, further action pending
Nos. 8, 9, 12 and 13 Dundas Street	4	Small, congested, ill-ventilated	
Nos. 10, 11 and 11½ Dundas Street	3	Small, congested, ill-ventilated	
Nos. 14 and 15 Dundas Street	2	Small, congested, ill-ventilated	
Nos. 16, 17, 18 and 19 Dundas Street	4	Damp, dark, ill-venilated	
Nos. 20, 21 & 22 Dundas Street	3	Damp, dark, ill-ventilated	Closing Orders made; improvements almost completed

TABLE 58c. *continued*—HUNGATE AREA—Action taken during the year March, 1913 to March, 1914, respecting houses previously reported on.

Situation of House	Number of houses or tenements.	Chief defects.	Chief works of improvement carried out.
Nos. 1, 3 and 5 Lower Dundas Street	3	Congested, ill-ventilated	Closing Orders made; further action pending
Nos. 7, 9, 11, 13, 19, 23, 25, 27, 29 and 31 Lower Dundas Street	10	Congested, ill-ventilated, some back-to-back	Closing Orders made; about to be improved
Nos. 15 and 17 Lower Dundas Street	2	Congested, ill-ventilated, some back-to-back	Closing Orders made; works of improvement in hand
Nos. 1, 2, 3, 4 and 5 Providence Place	5	Congested, ill-ventilated, some back-to-back	Closing Orders made; to be made through houses, one to be abolished
Nos. 2, 4, 6, 8 and 10 Lower Dundas Street	5	Back-to-back, dilapidated	Closing Orders made; works of improvement in hand, being made through houses—almost completed
Nos. 1, 2, 3, 4 and 5 Dundas Court	5	Back-to-back, dilapidated	Closing Orders made; works of improvement in hand, being made through houses—almost completed
Nos. 1, 2, 3 & 4 Brunswick Place	4	Very congested, dark, ill-ventilated	Closing Orders made; works of improvement in hand
Nos. 5, 6 & 7 Clarke's Yd. & No. 18 Palmer Lane	4	Very damp, dark, ill-ventilated	Closing Orders made; two houses to be demolished, and two made into one through house

TABLE 58c. *continued*—HUNGATE AREA—Action taken during the year March, 1913, to March, 1914, respecting houses previously reported on.

Situation of House.	Number of houses or tenements.	Chief defects.	Chief works of improvement carried out.
No. 7 Haver Lane	1	Ill-ventilated	Closing Order made ; house closed ; further action pending
No. 19 Palmer Lane	1	Ill-ventilated	Closing Order made ; further action pending
Nos. 5a and 8 Brunswick Place	2	Dilapidated, ill-ventilated	Closing Orders made ; No. 5a demolished (after Demolition Order); No. 8 made fit for habitation
Nos. 5 & 7 Brunswick Place	2	Dilapidated, ill-ventilated	Closing Orders made ; improvements almost completed
Nos. 2, 3, 4 & 5 Tower Buildings and No. 25 Dundas Street	5	Damp, dilapidated, defective drainage	Closing Orders made ; works of improvement in progress
Nos. 6, 7, 8 & 9 Tower Buildings	4	Very damp	Closing Orders made; works of improvement in progress
Nos. 7, 9, 11 and 13 Palmer Lane	4	Damp, dilapidated, box privies	Closing Orders made ; further action pending
No. 15 Palmer Lane	1	Damp. dilapidated	Action deferred

TABLE 58c. *continued*—HUNGATE AREA—Action taken during the year March, 1913, to March, 1914, respecting houses previously reported on.

Situation of House.	Number of houses or tenements.	Chief defects.	Chief works of improvement carried out.
Nos. 13, 13a and 15 Hungate	5	Ill-ventilated and dilapidated	No. 13a partly demolished; other improvements almost completed
No. 6 Carmelite Street	1	Dark and ill-ventilated	Improved after Closing Order; Closing Order determined
Nos. 8, 10, 12, 14, 16, 18, 20, 22 and 24 Carmelite Street	9	Dark and ill-ventilated	Improved after Closing Orders; Closing Orders determined
Nos. 33, 35, 37, 39 and 41 Hungate	5	Dilapidated	Closing Orders made; works of improvement almost completed
Nos. 4. 5, 6 and 7 Cross Wesley Place, & 2, 4, 6 & 8 Leadley's Yard	8	Back-to-back, damp	Closing Orders made; work in progress, to be made through houses
Nos. 10, 12, 14 16 & 18 Lower Wesley Place	6	Back-to-back, damp	Closing Orders made; work in progress, to be made through houses

TABLE 58d. MISCELLANEOUS HOUSES—Action taken during the year March, 1913, to March, 1914, respecting houses previously reported on.

Situation of House.	Number of houses or tenements.	Chief Defects.	Chief works of improvement carried out.
Nos. 6, 7, 8, 6½, 7½ & 8½ Duke of York Street	6	Back-to-back, damp	Closing Orders determined; houses made through and much improved
Cundall's Buildings (Tenement flats)	15	Congested, dilapidated, ill-ventilated	Closing Orders made; improvement scheme on foot
Nos. 1 and 2 Queen's Staith Road	2	Back-to-back, dilapidated	Closing Orders made; demolition order deferred
No. 27 North Street	1	Damp and dilapidated	Closing Order determined after improvements were carried out

Special consideration was given to 108 houses in Regent Street and Back Regent Street, respecting the obvious desirability of converting all these back-to-back houses into through houses, as well as converting the remaining midden-privies in this street into water-closets, and the Housing Sub-Committee visited the premises. In view, however, of the pressing shortage of houses in the City at the time, it was resolved to defer, sine die, the conversion of the houses into through houses, but to proceed to order the conversion of the privy-middens into water-closets forthwith.

The Streets and Buildings Committee purchased the following sites of unhealthy houses upon which Closing Orders had been made under the Housing Acts by the Health Department, viz :—

(1) Nos. 7, 8 and 9 Hope Street.

(2) Nos. 10 and 12 Hungate.

(3) Nos. 1, 2, 3, 4 and 5 Black Horse Passage and No. 1 Upper Wesley Place (houses demolished voluntarily by owners).

These sites were either added to the street or converted into children's playgrounds.

The Health Department is glad to observe the continued work in the direction of tar-macadam paving of the cobbled streets. Amongst these, the laying of St. Sampson's Square (the site of the weekly fish and meat market) with impervious paving was a very welcome improvement long desired.

The 30 houses built on a site in Alma Terrace to compensate for the removal of dwellings in Dennis Street, were eagerly taken up by tenants at rents of 5/-, 5/3, and 5/6, plus rates.

The City Surveyor and a special Committee have been engaged for some time past in considering Town Planning Schemes, first of all in regard to the Heworth, Clifton and Huntington Road districts, and these schemes are now on the way to realization. The areas being considered extend to a radius of 2½ miles from the centre of the City.

From the Annual Reports of the Building Inspectors we learn that the following *New Houses* have been erected in the City since 1902.

TABLE 59.

Total number of new houses completed in the City of York since 1902, of all rentals :—

Year.	Total Whole City.	Micklegate Sanitary Sub-district.	Bootham Sanitary Sub-district.	Walmgate Sanitary Sub-district.
Totals, 1902—12	1785	926	384	475
1913	82	44	4	34

Classification of the smaller houses completed during the year 1913:—

Probable rentals	East side of river.	West side of river.	Totals.	
£13 or under ...	34 ...	12 ...	46	Total 82.
£14 to £18 ...	3 ...	26 ...	29	
£18 to £30 ...	1 ...	6 ...	7	

No new privy-middens or waste water closets were erected during the year.

Plans for the building of new houses pass through the hands of the City Surveyor and the Streets and Buildings Committee, who approve or reject them according to the Bye-Laws in force. Occasionally such plans are referred to the Medical Officer of Health for his opinion as to site, position, &c., of proposed new buildings.

The totals of vacant houses as ascertained by the Assistant Overseers during recent previous years were as follows :—

Census, April, 1901 ...	404	March 31st, 1909 ...	611
March 31st, 1905 ...	564	„ „ 1910 ...	543
„ „ 1906 ...	796	At Census 1911 ...	658
„ „ 1907 ...	855	March 31st 1912 ...	397
„ „ 1908 ...	711	„ „ 1913 ...	334

Of the vacant houses in 1911, 246 were under £10 gross rental, and 123 were between £10 and £20 gross rental.

Of the vacant houses in 1912, 196 were under £10 gross rental, and 90 were between £10 and £20 gross rental.

Of the vacant houses in 1913, 158 were under £10 gross rental, and 75 were between £10 and £20 gross rental.

Average number of persons per house (whole City):—

At Census of 1861	4·90
„ 1871	4·79
„ 1881	4·88
„ 1891	4·82
„ 1901	4·71
„ 1911	4·33

MEDICAL INSPECTION AND SUPERVISION OF THE CHILDREN IN THE PUBLIC ELEMENTARY SCHOOLS.

(For complete report, see Annual Report of Education Committee for 1913).

The Medical Officer of Health is the "School Medical Officer" recognised by the Board of Education. He supervises and directs the work, formulates any necessary reports and schemes, and attends the meetings of the Education Committee and its Sub-Committees when the work is under discussion. He also frequently attends the Sites Sub-Committee to give assistance in devising improvements in the older school buildings, and in designing new schools.

A whole-time Assistant School Medical Officer carries out the detailed work of inspection and of the clinic, and assists his chief in preparing reports, leaflets, etc. He is assisted by two whole-time School Nurses at the schools, at the clinic, and in the homes, as required, and by two Lady Clerks. There are also part-time Ophthalmic and Dental Surgeons. The cost of the work is borne by the Education Committee, the clerical work and clinic work being carried out in their new medical offices.

During the year 1913, 2,758 children (including 1,424 beginners and 1,334 leavers) were inspected and the details recorded according to schedule.

It is impracticable and unnecessary to try to condense our full report within the limits of this one, but the following brief statement of some of the results of the inspections may be appropriately given here, as they are matters of public health importance, and, first, the following figures are interesting:—

Percentage of all the children inspected.	Who had in previous years suffered from	And of these children the following percentages had been affected before 5 years of age.
77	Measles	62
38	Whooping-cough	58
30	Chicken-pox	55
13	Mumps	27
7½	Scarlet Fever	33
3	Diphtheria	34

On September 30th, 1913, there were 14,409 children on the school registers, distributed as follows:—

Upper Department,	Boys	... ...	4,899
,, ,,	Girls	... ...	4,821
Infants' ,,	Boys	... ...	2,395
,, ,,	Girls	... ...	2,294

Among the Infants are included 1,114 children under 5 years of age (571 boys and 543 girls.)

Average attendance for the school year ended 30th September, 1913, 12,640 (88 per cent.).

TABLE 60.

Principal Conditions observed at the time of Inspection in 1913 (and compared with the percentages obtained in the first complete year of medical inspection, viz., 1909).

	Perecentage of total children inspected.	
	1909.	1913.
Verminous heads—boys and girls	31·0	5·8
,, girls—affected with "nits" ...	51·0	26·3
,, infants ,, ,, ...	38·7	20·6
Ringworm	3·0	0·1
Ragged, insufficient, or very dirty clothing... ...	2·1	11·1
Defective footgear	5·4	11·9
Ill-nourished (malnutrition)	8·7	0·9
External diseases of eye	3·7	0·6
Anæmia and nervous debility...	1·5	1·3
Mouth-breathers (Adenoids, enlarged tonsils, &c.) ...	12·3	10·8
Enlarged Glands	3·3	1·0
Defective hearing	2·4	0·9
Discharging Ears	0·5	0·4
Mentally dull or deficient	4·3	2·3
Defective speech	1·5	1·4
Deformities	1·3	2·3
Tubercular disease	—	0·4*
Defective Teeth	90·0	65·0

About 3.3 per cent. of the children inspected in school in 1913 had unclean or verminous conditions of the body; 0.3 heart disease; 1.3 bronchial affections; 0.4 infectious diseases.

In every case of disease or defect the parents or guardians were advised personally or by letter to obtain qualified medical

treatment. Every effort has been, and is being, made to stimulate and encourage parents to be true to their responsibilities in regard to obtaining proper medical advice and treatment, and to devote more attention to the general health and hygiene of their children. On the whole the response made by parents to these efforts has improved. During 1913, notwithstanding, 63 per cent. of defective teeth, 32 per cent. of defective vision, and 55 per cent. of adenoids had not been attended to by parents. Care Committees, to stimulate and help parents to obtain proper treatment, have been working in connection with at least four of the schools; it is desirable that all the other schools should follow suit.

Our gratitude is due to the Teachers, Managers, and School Attendance Officers for their co-operation in this great, beneficent work; also to the School Nurses for a vast amount of hard work, requiring intelligence, tact and patience.

The plans for a joint permanent school for mentally defective boys and girls and open-air school for delicate, tubercular, and physically defective children, are now before the Board of Education. In the Fulford Field House Estate a splendid site has been secured.

The School Clinic now comprises the conservative treatment of defective teeth and the skilled examination of eyes and prescribing of spectacles (by a part-time Dental Surgeon and by a part-time Ophthalmic Surgeon, respectively), in addition to the work carried on in the general clinic with respect to ringworm and other contagious diseases, diseases of the ear and external eye, &c., &c. There is now no excuse for parents not obtaining treatment for the more common defects, with the Clinic and Medical Charities at hand.

School Clinic:—1,715 children attended during 1913, including 182 cases of ringworm, 134 of lice or nits, 149 of impetigo, 225 of eczema, 15 of itch, 103 of contagious ophthalmia, 28 of abscess, 104 of discharging ears, 1,225 with defective teeth, and 353 children with defective vision.

Parents of all cases of verminous scalp or body have been compelled to effect the complete cure thereof.

During the year, the sale of cheap toothbrushes to the children in the elementary schools was instituted, and the co-operation of the teachers solicited in regard thereto, and in the active teaching of dental hygiene and of proper feeding and mastication.

Cleansing of School Children under the Children Act of 1908 (Section 122.) during 1913.

Number of Cleansing Notices served on parents by the Education Department (with printed directions)	67
Number of children referred to the Medical Officer of Health ...	27
These were dwelling in 54 houses—	
of which were—very filthy	10
„ „ filthy	12
„ „ moderate clean	32
Number of children cleansed at home by parents	56
Number of children cleansed at Disinfecting Station	11
Number of houses where bedding was removed for steam disinfection by Sanitary Department	27
Number of houses where bedding was not removal owing to:—	
Bedding being clean	27
Number of schools affected	17

The lack of power to compel the other, probably verminous, members of the household to be cleansed (adults included) largely defeats the purpose of this section of the Act, as the cleansed child returns to sleep with such persons. It is hoped to remedy this detect in law in the York Corporation Bill of 1914. The Medical Officer of Health caused the homes of the verminous children to be cleansed and disinfected, and the call of the disinfecting ambulance, &c., in dealing with such cases has had more beneficial effect than the mere operation of the Act would otherwise have had.

Arrangements have been made whereby the Tuberculosis Officer and the Assistant School Medical Officer co-operate in the diagnosis and treatment of tubercular school children. Several such children were treated at the Open-air Ward at the Isolation Hospital, Yearsley Bridge. They also co-operate in the supervision of the tubercular children at the Open-air Class at Castlegate, referred to in the Tuberculosis Section of this Report.

"*The Regulations regarding Contagious or Communicable Diseases* in the York Public Elementary Schools" compiled by by your Medical Officer of Health, and first issued to the Head Teachers by the Education Committee in 1906, which have proved so useful in controlling and supervising such cases amongst the school children, were very carefully revised last year—involving, amongst other things, some alterations which will still further reduce the amount of absence from school—and re-issued in the autumn to all Head Teachers, and, also, (largely as a medium of instruction) to all the assistant teachers. These Regulations follow pretty closely the similar instructions ("Memorandum on Closure of and Exclusion from School"), issued jointly by Dr. Newsholme and Dr. Newman in the year 1909.

TABLE 61. CITY OF YORK.

Cases of Disease Notified to the Medical Officers by Head Teachers of Elementary Schools (under "The Regulations regarding Contagious Diseases") during the year 1913.

Disease or Condition.	Absentees notified by Head Teachers.		Suspects sent home from school by Head Teachers.		Total.
	Upper Department.	Infants' Department.	Upper Department.	Infants' Department.	
Scarlet Fever...	19	23	2	2	46
Diphtheria	7	3	2	...	12
Sore Throat	95	35	19	7	156
Mumps	24	63	15	22	124
Measles	10	105	2	2	119
Whooping Cough	14	234	6	24	278
Chicken-pox	38	299	7	25	369
Influenza or Cold	42	81	1	1	125
Pneumonia	1	...	...	...	1
Ophthalmia or Sore Eyes ...	23	16	14	14	67
Blepharitis (sore Eye-lids) ...	2	1	3	...	6
Ringworm	51	60	15	16	142
"Sore Head"... ...	63	59	28	25	175
"Dirty Head" ...					
Impetigo					
Eczema					
Head Lice	10	4	46	...	60
Body Lice	6	...	6	...	12
Scabies (Itch)	3	...	...	...	3
Enlarged Glands	13	14	...	5	32
Scabs	2	4	...	6	12
Phthisis	9	...	...	...	9
Various	162	142	22	28	354
Not stated	169	89	7	2	267
Totals	763	1232	195	179	2369

A vast amount of advice and supervision regarding the above affections is given by the School Nurses in the schools and in the homes, and they frequently discover "missed" cases of such diseases as scarlatina, diphtheria, measles, &c.

ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901.

During the year 1913, 458 workshops were on the register, and the names of 86 out-workers (or home-workers) were received.

On the whole the workshops, retail bakehouses, etc., were found to be in a satisfactory condition. No legal proceedings had to be instituted.

The following is a summary of the work carried out during the year 1913 under the Act:—

Total number of Workshops on the Register—458, including:

Retail Bakehouses	59
Laundries	11
"Workplaces"	24
Number of "Domestic Factories"	0

Number of lists of Outworkers received, representing 28 Employers and 86 Outworkers, 85 of whom are engaged in making wearing apparel, and one in furniture and upholstery work	54
Notices of Occupation of Workshops received from H.M. Inspector of Factories	37

WORKSHOPS AND DOMESTIC WORKSHOPS:—

Number inspected	366
Number of inspections made	438
Notices served under Public Health Acts *re* Sanitary defects	11
Number of notices to cleanse and limewash... ...	17
Number of notices to abate over-crowding	0
Number of notices to provide means of ventilation (Sec. 7)	3
Number of notices *re* wet floors (Sec. 8)	0
Summary proceedings taken	0

RETAIL BAKEHOUSES (59 in number):—

Number inspected	59
Number of inspections	70
Notices served as to water-closets	2
Notices served as to water-cisterns...	0
Notices to remove drain openings	0
Notices served to limewash	1
Number of Bakehouses dealt with as sanitarily unfit (underground bakehouses)	0
Summary proceedings taken	0
Number where sanitary arrangements improved ...	3

WORKPLACES (Restaurant Kitchens, Stables, &c.):—

Number on Register	24
Number inspected	14
Number of inspections	14
Notices or other action taken	0

SANITARY CONVENIENCES IN WORKSHOPS:—

Closets were insufficient or unsuitable or defective at ...	10*
There were "no closets separate for the sexes" at ...	0

*(These were dealt with under Section 22 of the Public Health Acts Amendment Act, 1890, which was adopted by York Corporation, April 4th, 1892).

HOMEWORK (Sections 107 to 115):—

Number of inspections	121
Number of outworkers' premises inspected	115
Number found unwholesome and occupiers ordered to cleanse	6
Work stopped because of the prevalence of infectious disease, vide Section 110	0
Names of outworkers, with places of employment, forwarded to the Clerks of Councils in whose districts their places of employment were situated ...	3
Number of employers failing to send in lists ...	0

Five premises were reported to the York Sanitary Authority by H.M. Inspector of Factories during 1913, viz:—

(1) Factory-laundry not provided with such reasonable means of escape in case of fire for the persons employed therein.

(2) Factory—Sanitary conveniences in a dirty state.

(3) Factory-Laundry: Sanitary conveniences for women in offensive state.

(4) Workshop: No separate sanitary conveniences.

(5) Factory: Sanitary conveniences opening directly into factory without the intervention of a ventilated space.

Four infringements of the Act were reported by me to H.M. Inspector of Factories, under Section 133.

Full details of the Workshops and of our Inspections were placed upon record, in accordance with Act.

WORKSHOPS ON THE REGISTER AT THE END OF 1913.

Bakehouses, retail	59
Blacksmiths	6
Bottling	1
Boot and Shoe Making and Repairing	41
Blind Making...	1
Brickmaking	2
Brushmaking	1
Bookbinding	2
Basket Making	1
Cabinet Makers	8
Coach Builders	4
Carver and Gilder	1
Cycle Making and Repairing	12
Corset Making	3
Cork Cutting	1
Dressmaking	70
Fellmonger	1
French Polishing	2
Gelatining Show Cards ...	1
Halter Weaving	1
Jam Making	1
Joiners...	13
Laundries	11
Leather covering of scientific instruments	1
Mantle Making	1
Marine Stores...	2
Milliners	41
Malting	1
Mackintosh Making	1
Needlework	2
Paper Bag Making	1
Painters	1
Plumbing	14
Picture Framing	2
Printing	1
Photography	2
Restaurants	14
Rope Making...	1
Saddlers	10
Salt Packing	1
Stable Yards	3
Sculptor	1
Shoeing Smiths	2
Shirt Making	3
Stocking Knitters	2
Sugar Boiling	2
Ticket Writers	2
Tailoring	61
Taxidermist	1
Tinsmiths	12
Umbrella Making	1
Upholsterers	3
Whitesmiths	5
Watch Makers and Repairers	10
Wheelwrights...	5
Workplaces	5
Weighing Machine Repairer	1
Total	458

ADMINSTRATION OF THE MIDWIVES ACT (1902) DURING THE YEAR 1913.

On April 1st, 1905, the last date for enrolment of all midwives then practising, the midwives certified under the act residing in the City of York numbered 68, (27 of whom were certificated after training and 41 were untrained.)

During the year 1913, 7 certified midwives have left the City, 2 have died, 1 has retired, and 1 was struck off the Roll of the Central Board, and 5 have been added to the local Roll.

There are now *14 certified midwives not practising* as such, of whom 5 possess the Central Midwives Board's new certificate (by training and by examination); 4 are working as general, medical, surgical, or monthly nurses, in Institutions or otherwise; 8 are wholly engaged in housekeeping; and 3 are working as Nurses under the York Corporation.

There is now, therefore, a total of 45 certified midwives on the Roll, residing in or working in the City.

The present composition of the local Roll is as follows :—

	Hospital trained.	Untrained.	Total.
Certified at April 1st, 1905	27	41	68
Certified practising midwives—			
Of above, still in York	4	17	21
Have settled in City since above date... ...	2	1	3
York women who have qualified since above date	6	...	6
Admitted to Roll under the extension of time to September 30th, 1910	...	1	1
Total practising as midwives	12	19	31
Certified women not practising as midwives—			
On Roll before April, 1905, still in York ...	5	4	9
York women who have qualified since 1905 ...	5	...	5
Grand Totals, December 31st, 1913... ...	22	23	45

Status.	Practising Midwives.	Non-practising Midwives.	Totals.
Married and keeping house for their husbands	18	8	26
Widows	7	1	8
Spinsters	6	5	11
Total	31	14	45

Since April, 1905, 27 certified midwives have left York (24 of whom were Hospital-trained) and 9 have retired from the Roll—6 at the compulsory request of the Central Midwives Board, and 3 voluntarily.

Twenty-one certified midwives gave notice of intention to practise as midwives during the year 1913.

In July, 1913, the Central Midwives' Board removed from the Roll the name of Mrs. Mary Pearson, Certified Midwife, in that she did not send for medical help soon enough in a certain confinement case in which fatal hæmorrhage occurred within a few hours after birth, and that she did not send in writing and on the proper form. The case was reported to the Central Midwives Board by the City Coroner.

Administration during the year 1913.:—

Fifty-six stillbirths were notified by certified midwives to me (per Rule No. 20).

Forty-one notifications of certified midwives having had to send for medical help were received (per Rule No. 20).

One case was notified by a certified midwife where an infant had died before the services of a doctor could be obtained (per Rule No. 21),

No cases of Puerperal Fever were notified by midwives (per Rule No. 18), although two cases notified by doctors involved one midwife and one nurse, who were duly disinfected.

Two notifications of having laid out a dead body were notified under Rules 17 and 21.

During the year the apparatus and case books of each of the 31 certified midwives, who were practising as midwives in the City, were inspected under my supervision, on two occasions.

Warned re incomplete apparatus	5
Warned as to not carrying antiseptics....	3
Warned re incomplete case-registers	1

Our health visitors have assisted at this work of inspection and have tried to improve the untrained midwives in various ways, *e.g.*, teaching them how to use the clinical themometer, &c.

The importance of inspection of midwives is evident from the fact that 1,298 births were notified as having been attended by the registered City midwives during the year ; in 1,000 of these cases the midwives attended without a doctor being present.

METEOROLOGICAL OBSERVATIONS FOR THE YEAR 1913.

The chief features of the weather of the year 1913 may be summarised as follows :—

there was an excessive amount of rain in January,—on the 11th day a rainfall of 1.16 inches being recorded ;

a remarkably dry and fine February ;

a very fine and dry May, with a maximum temperature of 78° F. on the 30th of the month : there were three days on which the maximum temperature was over 70°F.;

we had a very fine June, with a maximum temperature of 79°F. on the 17th of the month, and a percentage of 35 of the total hours of possible sunshine ;

a remarkably dry July and August—the total rainfall for the two months being only 1.29 inches ; it is years since we had such a magnificent August : there were 12 days with a temperature of over 70°F.; the percentage of sunshine was 29, and the temperature attained a maximum of 82 on the 3rd of the month.

September had a percentage of 35 of the total hours of possible sunshine ; the rainfall for the month was only 1.27 inches ;

the rainfall still continued below the average during the Autumn, there being only 1.33 inches in December, and there was much nice, pleasant weather during the Autum ;

a minimum temperate of 19 was attained on December 31st.

Both air, earth, and sea continued remarkably warm right through the Autumn in consequence of the continued mild weather ; the temperature of the soil four feet below the ground level, and of the sea, being, in both cases, 5 or 6 degrees higher in November than was usual at that time of the year.

The total hours of sunshine in the year constituted 24% of the total possible hours of sunshine, as compared with 21 in 1912, and 32 in 1911.

The total rainfall for the year 1913 only amounted to 20.52 inches, as compared with 24.0, the average for the previous ten years.

During the early part of the summer a species of mosquito appeared to be prevalent for a time in the neighbourhood of Dringhouses, but after the cooler weather and rain set in, no more was heard about them. Some specimens were obtained, which did appear to be species of anopheles.

MISCELLANEOUS.

The Vice-Chairman (Mr. Councillor Inglis) of the Health Committee, and I, attended as your delegates the 28th Annual Congress of the Royal Sanitary Institute held at Exeter in July, and subsequently issued a printed report upon its proceedings to the Council.

As already mentioned, I also attended as your delegate the Third National Infant Mortality Conference, held at London in August.

A considerable amount of time was consumed during the latter part of the year by the preparation of the Sanitary Clauses in the York Corporation Bill, 1914, and in the compilation of evidence in connection therewith.

In conclusion, I have to regret that personal illness and the preparations in connection with the York Corporation Bill since the beginning of the year have greatly delayed the issue of this Annual Report, which I feel loses much of its local interest and possible stimulus by the lateness of its issue.

EDMUND M. SMITH,

Medical Officer of Health.

POSTCRIPT *re* NATIONAL CENSUS TABLES.

An Apology.

In my preface, written some weeks ago, I proposed to add an appendix to this Report comprising tabulated statements of results of the National Census of 1911 published since the printing of my last Annual Report. Several of such tables were published in the small red Municipal year book for 1913-14, but without annotations.

At the conclusion of the printing of this Report I regret to realize that pressure of other urgent work has absolutely prevented the preparation of further tables, the necessary study of the vast and complex Census volumes, and the compilation of such important annotations as it may be desirable to affiix to the tables. Therefore I am reluctantly compelled to postpone the publication of these tables and annotations until later on in the year, when they may be issued in the form of a supplement, or perhaps the whole of the results of the Census appertaining to York and district may be published in a separate report.

E.M.S.

RECORDS OF THE METEOROLOGICAL STATION, AT THE MUSEUM, YORK.

Longitude 1° 5′ W., Latitude 53° 57′ N. Height above Mean Sea Level 56 ft. Gravity Correction + ·024 in.

1913.	Barometer.		Air Temperature.									Humidity.			Earth Temperature.	
	Mean Pressure at 32° Fahrenheit.		9 a.m.	9 p.m	Mean.	Means of			Absolute Maximum & Minimum.				Percentage.			
	At Station Level.	At Mean Sea Level.				Max.	Min.	Min. & Max. combined	Max.	Day.	Min.	Day.	9 a.m.	9 p.m.	Mean.	At 1 foot.	At 4 feet.
	ins.	ins.	o	o	o	o	o	o	o		o		%	%	%	o	o
Jan.	29·703	29·762	37·4	38·1	37·75	42·8	34·3	38·6	52	7th	22	13th	93	93	93·0	39·4	43·1
Feb.	30·096	30·156	38·6	39·5	39·05	46·5	34·6	40·6	54	8th	28	20th	87	86	86·5	39·3	41·6
Mar.	29·714	29·773	42·0	41·9	41·95	48·9	36·9	42·9	57	4th	25	17, 18	81	85	83·0	41·0	41·9
April	29·792	29·849	47·4	44·9	46·15	53·6	39·7	46·7	65	23rd	30	11, 12	77	80	78·5	44·7	43·9
May	29·857	29·914	53·8	50·8	52·3	61·5	45·3	53·4	78	30th	38	6th	75	82	76·5	52·0	48·6
June	29·996	30·053	59·4	55·6	57·5	66·9	50·1	58·5	79	17th	43	9th	72	79	75·5	57·1	53·2
July	30·032	30·089	58·5	56·0	57·25	65·4	51·6	58·5	75	29th	45	8, 23	77	83	80·0	58·9	55·7
Aug.	30·016	30·073	59·0	57·4	58·2	68·5	50·5	59·5	82	3rd	40	5th	76	79	77·5	58·8	56·7
Sept.	29·957	30·014	57·8	56·1	56·95	66·4	50·2	58·3	79	27th	36	17th	81	82	81·5	57·6	56·7
Oct.	29·814	29·871	50·3	50·5	50·4	57·4	45·2	51·3	63	1, 17, 20	31	24th	85	88	86·5	52·6	54·4
Nov.	29·754	29·812	45·6	46·6	46·1	52·0	41·8	46·9	58	17th	31	6th	87	86	86·5	46·6	49·9
Dec.	29·980	30·040	39·4	40·1	39·75	45·2	36·2	40·7	55	9th	19	31st	87	88	87·5	42·9	46·6
Year	29·893	29·951	49·1	48·1	48·6	56·3	43·0	49·7	82	Aug. 3rd	19	Dec. 31st	82	84	83	49·2	49·4

Height above Ground:—Barometer, 3 feet; Thermometers, 4 feet; Rain-gauge, 1 foot.

1913.	Rainfall.			Weather—No. of Days of.										Wind—No. of Observations of							
	Total.	Max.	Day.	Rain.	Snow.	Hail.	Thunder Storm.	Clear Sky.	Overcast.	Fog.	Gale.	Calm.	Strong (Wind 4-7).	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
	ins.	ins.																			
Jan.	3·19	1·16	**11th**	22	4	0	0	4	18	6	0	3	3	12	0	8	19	36	7	6	2
Feb.	0·63	0·26	7th	15	0	0	0	5	8	5	0	3	2	6	12	6	2	22	12	19	2
Mar.	2·08	0·28	29th	24	2	0	0	2	11	1	0	0	18	5	2	4	3	24	22	27	6
April	2·83	0·48	11th	19	1	0	2	3	10	0	0	0	5	22	3	3	3	33	8	13	5
May	1·97	0·56	8th	15	0	2	2	2	9	0	0	0	0	8	11	13	8	22	6	18	7
June	1·48	0·39	17th	16	0	0	2	4	9	2	0	3	3	1	3	9	7	17	9	29	12
July	0·44	0·25	6th	6	0	0	0	1	17	1	0	0	2	31	3	11	3	8	1	21	15
Aug.	0·85	0·27	22nd	9	0	0	1	0	12	0	0	3	0	24	6	7	2	9	8	19	15
Sept.	1·27	0·65	17th	11	0	0	0	1	11	2	0	0	0	21	15	8	13	24	2	3	4
Oct.	2·36	0·52	3rd	15	0	0	1	5	10	3	0	0	0	13	11	16	6	40	3	2	2
Nov.	2·09	0·31	10, 15	22	0	0	0	3	9	4	0	0	5	0	0	0	4	25	11	42	8
Dec.	1·33	0·44	29th	11	4	0	0	2	11	0	0	0	5	23	4	1	0	8	11	42	4
Year	20·52	1·16	Jan. 1st	185	11	2	8	32	135	24	0	12	43	166	70	86	70	268	100	241	82

YORK—THE MUSEUM.
Barometer at 32° and Mean Sea Level.

1913.	Highest Barometer.		Lowest Barometer.	
January ...	30·38	26th, 9 a.m.	29·00	30th, 9 p.m.
February ..	30·71	12th, 9 a m.	29·45	7th, 9 p.m.
March ...	30·39	8th, 9 p.m.	28·66	19th, 9 a.m.
April ...	30·35	3rd, 9 p.m.	29·23	16th, 9 a.m.
May ...	30·35	14th, 9 p.m.	29·45	4th, 9 a.m.
June ...	30·40	29th, 9 p.m. 30th, 9 p.m.	29·53	10th, 9 a.m.
July ...	30·41	1st, 9 a.m.	29·75	6th, 9 a.m.
August ...	30·33	26th, 9 a.m.	29.71	30th, 9 a.m.
September...	30·46	7th, 9 a.m.	29·34	14th, 9 a.m.
October ...	30·43	13th, 9 a.m.	29·20	29th, 9 p.m.
November...	30·37	22nd, 9 p.m.	29 10	13th, 9 a.m.
December ...	30·69	20th, 9 p.m.	28·99	3rd, 9 p.m.
Year	30·71 Feb. 12th, 9 a.m.		28·66 Mar. 19th, 9. a.m.	

YORK (BOOTHAM)—SUNSHINE VALUES.

Month.	Total hours recorded.	Percentages of total possible hours of sunshine.	
	1913.	1913.	1912.
January ...	9	3	10
February ...	40	15	15
March ...	82	23	19
April	89	21	46
May	155	32	29
June	177	35	23
July	112	22	16
August	130	29	15
September ...	131	35	27
October ...	77	24	22
November ...	37	15	12
December ...	18	8	2
Year.	1057	24	21

ANNUAL REPORT OF THE CHIEF INSPECTOR OF NUISANCES FOR THE YEAR 1913.

(per the Medical Officer of Health).

To the Chairman and Members of the Health Committee

Gentlemen,

I have the honour to submit for your information a statement of Sanitary work, carried out under my supervision, for the abatement of Nuisances, etc., during the year 1913. This constitutes my eleventh Annual Report.

Three years ago the card-index system was adopted in order to meet the requirements of the Housing Act of 1909, and to record the details of inspection with respect to those premises where the sanitary condition required alteration or improvement. This has added a considerable amount of work to the Department, but as the work proceeds and the records accumulate it will be of inestimable value for future reference. We have now (March, 1914) 2460 recorded on the above-mentioned system. Each dwellinghouse or premises inspected has a separate card allotted to it, on which is recorded the sanitary condition, along with a small drainage plan; and when any new works are carried out they are shown on the card.

In the period named 8516 houses and other premises have been inspected, 1942 of which were found to require sanitary improvement.

2418 notices have been served on owners and occupiers to execute various sanitary works to remedy the defects found on the said premises.

It will be seen from the tabular statement:—

That a certain amount of work has again been carried out by owners without notice from this Department. The owners generally in these cases ask us to inspect their premises and advise the works necessary to put them into a sanitary condition. This procedure we encourage, as it shows that the public are realizing the importance of sanitation. All our recommendations under this heading are supervised in the same manner as the work carried out under notice.

That during the year, 492 privies and 509 ashpits have been abolished, and the privies converted into water-closets.

That we have, as in previous years, dealt with many cases of overcrowded houses. No less a number than 59 notices were complied with by our causing the occupiers to remove to houses with more bedroom accommodation. I have previously commented upon the difficulty experienced with respect to the abatement of such overcrowding, and this difficulty has been further increased by our dealing with many houses as being unfit for human habitation, and owners not letting houses to tenants with large families.

Common Lodging-Houses.

The powers for the re-registration of these houses, under Section 80 of the York Corporation Act, 1902, enable the Sanitary Authority to effect improvement before certifying the houses as fit *to be used* as Common Lodging-houses, and the provisions of the Act have been enforced. This Section requires that applications for the renewal must be received before the 31st of December each year.

There are 17 keepers of the 22 Common Lodging-houses in the City, The houses registered contain 115 rooms for sleeping purposes, and afford accommodation for 451 lodgers nightly, this number being slightly less than last year.

Twenty-two applications were received from the keepers for the re-registering of the houses in their occupation, and all the applications were acceded to.

One keeper was warned, by order of the Health Committee, for allowing a room in his house (which was registered for male lodgers only) to be used by persons of both sexes.

Three hundred and three inspections have been made, many of them at night. The lodging-houses have been kept in a satisfactory condition.

It was found that many mattresses, bed ticks, sheets, and counterpanes required renewing and repairing, and we took the opportunity when the applications for renewal of the registration were being considered, to request that the necessary renewals and repairs be carried out.

Large cards, calling attention to the possibility of spreading Consumption amongst the lodgers by spitting on the floors, were again provided and hung in the day-rooms and bedrooms at each of the houses.

Houses-let-in-Lodgings.

There are 40 houses on the Register and 11 landlords, and the houses are let in tenements to 66 separate families.

These houses are registered under the Bye-laws made under the Public Health Act, 1875, with respect to House-let-in-Lodgings, which gives power to the Local Authority for fixing the number of persons who may occupy a house, or part of a house, which is let in lodgings or occupied by members of more than one family, and for enforcing the sanitary condition of the said houses. The cleansing and limewashing of the same are carried out in January and July of each year, and it will thus be seen that we are able to exercise considerable control over this class of house, and experience has again shown that the yards and conveniences in connection therewith are kept in a more sanitary condition than when previously occupied by tenants who directly rent them from the owner, and by limiting the number of persons in the rooms, overcrowding is thus prevented.

One hundred and eighty-six visits of inspection have been made, and the premises and bedding were invariably found in a clean and satisfactory condition.

The rooms and passages have been regularly limewashed in accordance with the Bye-laws, and 114 notices intimating that lime-washing must be carried out were complied with.

The whole of the rooms are let furnished to married couples at rents of from 1/6 to 5/- per week.

Slaughter-houses.

There are 70 private Slaughter-houses in the City. 1457 visits of inspection have been made, and 252 notices to limewash were complied with.

Considering the situation and construction of most of them, they have, on the whole, been kept in a fairly satisfactory condition. One notice to repair premises was served.

Eight notifications were received of change of occupier.

One has been discontinued in the Walmgate district since January 1st, 1913.

There are 45 "registered" slaughter-houses and 25 "licensed" slaughter-houses in the City, making a total of 70. Six are at present temporarily unoccupied.

There are 106 butchers using the 70 slaughter-houses, *i.e.*, 42 butchers other than the registered occupiers are using them.

Thirty-five are used by the registered occupiers only.

By far the larger proportion of visits have been made at the time of slaughtering by the Meat Inspector (who is a qualified Veterinary Surgeon) and by myself, or my Assistant Inspectors, five of whom hold the Meat Inspector's Certificate of the Royal Sanitary Institute.

Knacker's Yards:—

Robert Bridge, Little Hallfield Road, made application for the renewal of the licence to use the premises in Little Hallfield Road, and this was granted at a fee of 10/- to be paid annually.

Twenty-two inspections of these premises were made during the year and I have pleasure in recording that fewer complaints were received, the premises having been kept in a very satisfactory condition, all the offal being removed from the premises every day.

A complaint was received that a person was using a field in in Green Lane, Acomb Road, for the purpose of dressing fallen stock, and was creating a nuisance thereby. This matter was reported to the Health Committee, and notice was ordered to be served upon the occupier to discontinue carrying on the business of a knacker on the premises, and that failing compliance with the notice legal proceedings be taken. As a result of the notice the business was immediately discontinued.

A licensed knacker's-yard properly kept and controlled is of great use to keepers and dealers in stock, for it provides ready means of disposing of dead or worn-out animals.

Offensive Trades:

Number on Register 15:—

Tripe Boilers	... ...	4	
Gut Scraper	... ...	2	
Fat Melters	... ...	2	
Fellmongers	... ...	3	
Tanner	... ...	1	
Leather Dressers	... ...	2	
Bone Boiler	... ...	1	
		—	
		15	
		—	

It is generally found that when we have complaints regarding nuisances from these trades that the apparatus for carrying off effluvia, which is generated whilst the trade processes are being carried on, is not working satisfactorily. With regard to these trades, it is necessary to keep close supervision over them,

so that materials such as bones, fat, &c., should not be allowed to be stored on the premises for any length of time and so become offensive before being used; also that waste matter is properly dealt with and frequently removed. On the whole, during the year, we have had very few complaints, except with regard to the Yorkshire Bone and Oil Company's works.

No less than 34 inspections have been made of the Yorkshire Bone and Oil Company's premises, Hull Road, and it was found on several occasions that the extraction-fan and apparatus were out of order; also there were large accumulations of offensive bones. The occupier was warned as to the manner in which the business should be conducted, and on subsequent inspections it was found that there was no nuisance.

During the year I reported that premises situated in a coal-yard behind No. 3 Layerthorpe were being used as a fat-extractor's premises, without the occupier having first obtained the consent of the Local Authority to establish such an offensive trade. The Health Committee ordered that notice be served upon the occupier to discontinue using the buildings for fat-melting or for any other offensive trade. This notice was complied with.

One hundred and forty-four inspections have been made in connection with the above premises.

Thirty-three notices to limewash were served upon the occupiers.

Improvements were carried out at 3 premises.

Fried Fish Shops.

Thirty visits have been made to the fried fish shops in the City, and the premises were found in a clean and satisfactory condition.

There are 51 of these premises registered in the City.

As previously reported, many of the older premises have had the old-fashioned apparatus substituted by up-to-date cookers, which prevent nuisances arising from the process of frying, and this has diminished the number of complaints of nuisances on these premises. Also we continued to require that the fish and potatoes be wrapped up in clean white papers, and we invariably found that our instructions were being carried out.

No complaints of the effluvia from frying were received during the year.

Cowsheds.

There are 57 Cowsheds in the City and 36 Cowkeepers.

Four Cowsheds have been discontinued as such, and four premises have changed occupiers.

Two hundred and ninety-eight visits of inspection have been made.

The whole of the cowsheds have been limewashed twice during the year in accordance with the Dairies, Cowsheds, and Milk-hops Rugulations.

At one cowshed the yard adjoining thereto was improved, being laid with cement concrete and tar macadam.

There was kept in the 57 cowsheds about 326 cows.

I am glad to say that the greater number of the cowkeepers are endeavouring to produce a clean milk supply, and this is borne out by the City Analyst, who informs me that all samples submitted to him are examined for dirt, and that, on the whole, there is no cause for complaint on this score.

In company with Mr. Fawdington, our Veterinary Inspector, I have during the year, made many visits to the cowsheds, and it is satisfactory to report that no cow was found in sheds with a tuberculous udder, for a cow so affected is a danger to persons (especially children) using its milk. Three samples of milk were obtained from two cows suspected of having tubercular udders, and these were examined both microscopically and bacteriologically, with negative results in each case.

One cowkeeper, who keeps at least 95 cows within the City Boundary, was reported to the Health Committee as not complying with the Regulation No. 17, sub-regulation 5 (2) of the Regulations with respect to Dairies, Cowsheds, and Milk-shops in the City, that is to say, the udders and teats of several of the cows were in a filthy condition. In addition, I found one of his cowsheds overcrowded and one shed being used as a cow-shed without being registered as such.

Summary proceedings were instituted against the cowkeeper to recover the penalties incurred by him, and a conviction was recorded against him for the dirty condition of his cows, and he was fined 10/- and costs.

With regard to the overcrowding, he pleaded to the satisfaction of the Magistrates that his cows were turned out a portion of each day, throughout the year, and the Magistrates held that he had not contravened the Regulations, which require each cow to have at least 800 cubic feet of air space.

With regard to the unregistered cowshed, no conviction was recorded against him, as it was stated to the Magistrates that his attention had been called by me to the fact that he had two cows in milk at the time of my inspection, and these had been removed before summary proceedings were instituted.

Dairies and Milkshops.

During the year we continued to systematically inspect these premises, and in two of them the sanitary arrangements were improved, and in two instances the occupiers provided proper covered enamelled receptacles for storing milk.

Two premises were found to be unsuitable.

One hundred and thirty-four visits of inspection were made, and the attention of 22 unregistered purveyors was called to the provisions of the Dairies, Cowsheds and Milkshops Order, and they forthwith registered themselves as purveyors of milk.

At the end of the year there were 318 persons on the register as purveyors of milk in the City of York; 36 of these were cow-keepers as well as purveyors of milk residing in the City, and 161 were purveyors of milk also residing in the city; 91 purveyors supplying the City have their premises outside the boundary; 30 purveyors of milk registered themselves during the year, 23 belonged to the City and 7 outside the City.

Ice-Cream Dealers.

There are 43 premises registered in which ice-cream is manufactured, sold, or stored, being one less than last-year. During the year 7 premises were registered, and it was fouud that 1 person had discontinued selling ice-cream.

On the whole the premises were found in a satisfactory condition.

Smoke Nuisance.

In this City it is essential that the atmosphere should be kept as free as possible from smoke pollution, so that our ancient buildings should not suffer from this cause, for a smoke-laden

atmosphere has a very deleterious effect upon buildings. I am glad to report that we had no serious complaints about smoke nuisances during the past year. Whilst chimneys of factories constitute the greater nuisance with regard to the emission of black smoke, we have received many complaints of smoke nuisances from the chimneys of the "coppers" in sculleries of private dwellinghouses, and as these chimneys are exempt under the Public Health Acts we experience great difficulty in dealing with these matters. It is satisfactory to report that upon intimation to owners and occupiers we were generally successful in getting the chimneys raised so as to discharge the smoke at a higher level, or the occupiers to use coke, which abated the nuisance.

Thirty-two observations of 10 factory chimneys were taken, and only in two cases was black smoke emitted in such quantities as to be a nuisance. This was mainly due to an intermittent system of stoking, sufficient care not being taken to stoke regularly; when the latter was carried out—after cautioning the stokers—improvement was at once noticed, and has since been maintained.

The following were the chimneys of which observations were taken :—

Name and Address of Firm :—

York Glass Company, Ltd., Fishergate.
Messrs. Dewse & Son, Navigation Road.
Yorkshire Laundries, Ltd., Peasholme Green.
Messrs. Rowntree & Co., Ltd., Haxby Road.
N.E.R. Co's. Laundry, Heworth Green.
Messrs. J. J. Hunt, Aldwark.
North Eastern Railway Wagon Works.
North Eastern Railway Carriage Works.
Messrs. Bleasdale, Ltd., Colliergate.
Messrs. Raimes & Co., Micklegate.

Water Supply to Dwellinghouses:—

During the year, 13 houses were provided with a suffieient supply of water.

Wherever possible with regard to provision of a separate supply of water to dwellinghouses, we usually require the owner to fix a sink under the water-tap, the provision of which is much appreciated by the tenants, and contributes a greater degree of comfort.

General Notices in default.

If owners fail to comply with the notices served upon them to effect sanitary improvements, the works are carried out by the Corporation under the provisions of the Public Health Act, 1875, and the costs recovered from the owners.

The figures for previous years are given for purposes of comparison :—

	YEARS.					
	1908	1909	1910	1911	1912	1913
Number of houses provided with a sufficient drain	3	2	0	10	0	1
Number of houses provided with a sufficient water-closet	2	1	0	10	0	1
Number of houses provided with ashbins	2	1	0	10	0	1
Number of houses provided with a sufficient supply of water ...	0	0	0	0	0	0

The attention of the City Surveyor has been called to the following defects :—

The condition of back roads	8
Nuisances arising from sewers	10
Choked or foul street gullies	9
Offensive smells from sewer ventilators	7
Miscellaneous	12
Total ...	46

Sanitary Work carried out during the Year 1913.

Number of inspections made	8,516
Number of re-inspections made	10,505
Number of premises which required sanitary improvement	1,942
Number of notices served	2,418
Number of letters sent	856
Number of complaints received	663

Description of Work carried out.

PRIVIES:—	Under Notice.	Without Notice.
Converted into water-closets	474 ...	18
Abolished	12 ...	6
Lime-washed...	2 ...	0
ASHPITS:—		
Abolished	491 ...	18
Floors laid with cement concrete...	470 ...	19
Portable receptacle provided	692 ...	25

DRAINS:—

	Under Notice.	Without Notice.
New drains constructed	1047	47
Re-constructed	456	19
Disconnected from sewer	439	19
Ventilated	450	19
Waste pipes of sinks disconnected	8	0
Drains under house abolished	180	2
Stoneware syphon traps fixed	442	19
Waste pipes of sinks trapped or renewed	442	20
Bath and lavatory waste pipes ventilated	6	0
Cleansed or repaired	155	5
Urinals improved	1	0
Additional gullies fixed in yards	579	26
Cesspits abolished	3	1
Inspection chambers built	433	19
Drain openings removed from inside buildings	12	4
Smoke-tests		2,008

WATER-CLOSETS:—

Provided with a sufficient supply of water	477	21
Limewashed or cleansed	52	2
Additional provided	2	2
"Wash-down" water-closets provided in lieu of of "old pan" apparatus	1	0
"Wash-down" water-closets provided in lieu of "Waste-water" closets	2	2
Ordinary water-closets provided in lieu of "trough" water-closets	0	0
Repaired	89	2
Re-constructed	4	0
Soil pipes repaired or renewed	3	2
New flush pipes fixed	480	22
Light and ventilation provided or improved	14	1
New cisterns fixed	478	22

HOUSES:—

Cleansed and limewashed	177	1
Provided with damp-proof courses	46	3
Roofs, &c., repaired	119	13
Water spouts fixed or repaired	440	24
Down spouts disconnected from drain	359	27
Overcrowding abated	59	0
New sinks fixed	270	14
Accumulation of manure or refuse removed	52	0
Nuisances arising from the keeping of swine and other animals abated	47	2
Pavements of yards repaired	163	8
Yards repaved with asphalt	1	0
Yards repaved with cement concrete	142	11

HOUSES.—*Continued.*

	Under Notice.	Without Notice.
Supplied with a sufficient supply of water ...	13	0
Means of ventilation improved	103	2
New floors laid or repaired...	308	18
Miscellaneous works not classified above	108	7

COWSHEDS (57):—

	Under Notice.
Visits of Inspection made—298.	
Limewashed	114
Closed or discontinued as such since January 1st, 1913	4
Improved—yard adjoining laid with cement concrete and tar macadam	1
Overcrowding abated...	0
New sheds constructed	0

SLAUGHTER HOUSES (70):—

Visits of inspection made—1,457	
Limewashed, cleansed	252
Repaired	1
Closed or discontinued as such since January 1st, 1913	1
Number of notification as to change of occupier ...	8

OFFENSIVE TRADES:—

Visits of inspection—144.	
Number of notices to limewash	33
Improvements—provision of receptacles, &c.	2

COMMON LODGING HOUSES (22):—

Visits of inspection made—303.	
Limewashed	44
Improvements—bedding renewed, &c.	22
Closed or discontinued	1

HOUSES LET IN LODGINGS (40):—

Visits of inspection made—186.	
Number limewashed	44
Improvements—bedding renewed, &c.	0

INFECTIOUS DISEASES:—

Patients removed to Hospital in Ambulance	163
Rooms disinfected	698
Articles disinfected by steam disinfector	7,860
Library books disinfected, ...	76
Number of houses inspected, and reports made to the Medical Officer of Health, where cases of infectious disease have occurred (including all forms of Tuberculosis)	652
Notifications of infectious disease sent to Head Teachers of School...	540
Notifications sent to the Secretary of the Education Committee	469

Smoke Observations:—

Number of chimneys of which observations were taken	12
Number of observations	32
Number of observations in which black smoke was emitted in such quantity as to be a nuisance	2
Number of occupiers cautioned	5
Number of notices served to abate nuisance ...	2

Sale of Food and Drugs Acts:—

During the year 132 samples of Food and Drugs have been procured and submitted to the Public Analyst, who certified 119 samples genuine, and 13 samples adulterated (*i.e.*, 9·84 per cent. of adulteration).

TABLE 62.

Nature of Sample.	Adulterated	Genuine.	Informal.	Formal.	Totals.
Milk	13	52	6	59	65
Cream	...	2	2	...	2
Butter	...	30	30	...	30
Margarine	...	2	2	...	2
Cheese	...	5	5	...	5
Lard	...	8	8	...	8
Tea	...	1	1	...	1
Fine Oatmeal	...	1	1	...	1
Flour	...	1	1	...	1
Linseed Meal	...	3	3	...	3
White Pepper	...	3	3	...	3
Arrowroot	...	2	2	...	2
Compound Liquorice Powder	...	1	1	...	1
Friar's Balsam	...	1	1	...	1
Glycerine	...	1	1	...	1
Olive Oil	...	1	1	...	1
Camphorated Oil	...	2	2	...	2
Gregory's Powder	...	1	1	...	1
Ground Ginger	...	2	2	...	2
Totals	13	119	73	59	132

All the samples obtained for analysis were (with the exception of 59 samples of milk) procured by an agent.

CITY OF YORK.—**TABLE 63.**

ADMINISTRATIVE ACTION REGARDING SAMPLES NOT REPORTED TO BE GENUINE DURING THE YEAR 1913.

Nature of Sample.	Identification number given to sample in the quarterly report.	Result of Analysis.	If any legal proceedings were instituted under the Sale of Food and Drugs Acts, state result, showing fines and costs separately.	If any legal proceedings were taken under Acts other than the Sale of Food & Drugs Acts, state the results, showing fines and costs separately.	If no legal proceedings were instituted, state briefly the course adopted in regard to each sample.	Information if any, as to previous convictions.	Remarks on any point of special interest.
1	2	3	4	5	6	7	8
Milk ...	36	Milk-fat ... 2·75 Non-fatty solids 8·14 Water ... 89·11 100·00	Prosecuted and ordered to pay 15/- costs. No fine.	...	...	...	...
Milk ...	41	Milk-fat ... 2·90 Non-fatty solids 8·16 Water ... ... 88·94 100·00	...	...	Further sample obtained; see action taken re sample No. 60.	...	...
Milk ...	58	Milk-fat ... 2·88 Non-fatty solids 8·23 Water ... ... 88·89 100·00	...	...	Further samples were ordered to be taken and these proved to be genuine.	...	...

TABLE 63—*continued.*

Milk ...	60	Milk-fat ... 2·85 Non-fatty solids 8·61 Water... ... 88·54 100·00	Prosecuted and ordered to pay £1 11s. 6d. costs (including 10/6 Analyst's Fee, and Somerset House Fee 10/6)	...	...	...	The third sample was sent to Somerset House and their analysis agreed with that in Col. 3.
Milk ...	79	Milk-fat ... 2·89 Non-fatty solids 8·69 Water ... ... 88·42 100·00	...	...	Further samples were ordered to be taken and these proved to be genuine.	...	...
Milk ...	81	Milk-fat ... 2·93 Non-fatty solids 8·97 Water ... ... 88·10 100·00	...	...	Ditto.	...	...

TABLE 63—*continued.*

Milk	82	Milk-fat ... 2·75 Non-fatty solids 8·95 Water ... ... 88·30 100·00	Prosecuted and case dismissed. Defendant produced warranty from the farmers, and Magistrates held that the warranty was good.	...	Ditto.	...	...
Milk	84	Milk-fat ... 2·83 Non-fatty solids 9·05 Water ... ... 88·12 100·00	...	...	Further samples were ordered to be taken and these proved to be genuine.	...	...
Milk	87	Milk-fat ... 2·94 Non-fatty solids 8·69 Water ... ... 88·37 100·00	...	...	Ditto.	This vendor has twice been previously convicted.	...
Milk	88	Milk-fat ... 2·80 Non-fatty solids 8·95 Water ... ... 88·25 100·00	...	...	Ditto.	...	...

Milk	90	Milk-fat ... 2·86 Non-fatty solids 8·90 Water ... ... 88·24 100·00	Informal	sample	Further samples taken see notes re Samples Nos. 94 & 95 reported upon in next Quarterly Report.	...	...
Milk	94	Milk-fat ... 2·36 Non-fatty solids 9·28 Water ... ... 88·36 100·00	...	...	...	...	...
Milk	95	Deficient in Milk-fat to the extent of 12·3 per cent. Milk-fat ... 2·90 Non-fatty solids 9·04 Water ... ... 88·06 100·00 Deficient in Milk-fat to the extent of 3·3 per cent.	These were informal samples of milk which was being supplied under contract to the City Fever Hospitals which are situated outside the City. The results of analysis were reported to the Health Committee, and the Medical Officer of Health and the Chief Inspector of Nuisances were instructed to interview the Contractor as to his explanation of the deficiencies. He could not account for the deficiencies, as the larger portion of the milk he supplied was from his own cows, and the remaining portion was from a neighbouring farm, but he did not suspect the farmer of skimming or separating any milk which he supplied. He was warned as to the future of the contract, and to keep under close observation the sub-contractor.			No previous convictions, and whenever samples had been previously obtained, they had always been found to be well above 3·5 of milk fat.	The Health Committee after considering the Contractor's explanation decided to renew the Contract.

Offences other than adulteration:—

Obstructing Inspector	0
Attempting to bribe Inspector	0
Refusing to serve Inspector	0
No name on milk-can	1
(Warning letters sent to offenders, after which names were put on milk-cans).	
Condensed, separated or skimmed milk unlabelled	0
Breaches of Margarine Act, 1887	0
Breaches of Butter and Margarine Act, 1907	0

Preservatives:—All samples of cream, milk, and butter, and any articles likely to contain preservatives are examined for the same. (See Analyst's Report).

Informal or test samples:—It will be seen from the tabular statement that 73 informal samples and 57 formal samples were taken during the year, all of which were submitted to the Public Analyst for analysis. The whole of the milk samples, with six exceptions. were formal; all the other samples were informal. Informal samples are in all cases purchased by an agent, and if any are found adulterated further formal samples are obtained with a view to summary proceedings being taken. It has been found that the obtaining of informal samples is, on the whole, a very convenient and reliable method of estimating whether vendors are supplying genuine articles, and causes no inconvenience to the shopkeeper as when samples are taken formally, the latter method involving explanation why the sample has been purchased, the subsequent division of samples into three parts, and the sealing up of the same, all of which takes up a considerable amount of time.

Mr. Evans, our City Analyst, has kindly given me the percentage of milk-fat present in each sample of milk, as follows:—

TABLE 64a.

Number of Sample.	Percentage of milk-fat.	Purchased during the month of
10	3·4	
11	3·4	
12	3·6	
13	3·4	
14	3·6	JANUARY.
15	3·4	
16	3·1	Average = 3·4%.
17	3·3	
18	3·4	
19	3·4	
20	not stated.	
34	3·30	
35	3·20	MARCH.
36	2·75	
37	3·30	Average = 3·14%.
38	3·15	
39	3·45	
40	3·25	
41	2·90	
42	3·10	
43	3·20	
53	3·30	
54	3·25	
55	3·30	APRIL.
56	3·50	
57	3·60	Average = 3·24%.
58	2·88	
59	3·80	
60	2·85	
61	3·00	
62	3·30	
78	3·20	
79	2·89	
80	3·04	
81	2·93	
82	2·75	MAY.
83	3·08	
84	2·83	Average = 2·97%.
85	3·10	
86	3·20	
87	2·94	
88	2·80	
89	3·06	
90	2·86	JUNE.
91	2·96	
92	3·06	Average = 3·03%.
93	3·22	
94	2·36	JULY.
95	2·90	Average = 2·63%.
106	3·60	
107	4·00	SEPTEMBER.
108	3·70	
109	3·50	Average = 3·62%.
110	3·30	
119	4·15	
120	3·1	
121	3·03	
122	3·5	
123	4·0	NOVEMBER.
124	3·0	
125	3·5	Average = 3·43%.
126	2·95	
127	3·0	
128	3·3	
132	4·28	

Average percentage of milk-fat for above 64 samples = 3·45.

The above figures constitute a striking testimony to the fairness of the Board of Agriculture's minimum Standard of 3 per cent. of milk-fat.

(*b*) PERCENTAGE OF ADULTERATION IN ALL THE SAMPLES OBTAINED IN PREVIOUS YEARS, 1904—1913.

Years	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Total number of samples ...	137	127	117	131	85	138	133	140	131	132
Number adulterated ...	2	5	5	2	1	9	6	9	5	13
Percentage adulterated ...	1·45	3·93	4·27	1·52	0·85	6·5	4·5	6·4	3 8	9·84

(*c*) SAMPLES OF MILK PRODUCED BY THE INSPECTOR FOR ANALYSIS UNDER THE FOOD & DRUGS ACTS.

Year.	Total Samples obtained.	Total Samples genuine.	Total Samples adulterated.	Total persons warned.	Total persons prosecuted.
1904	73	73	...	...	...
1905	61	57	4	2	1
1906	60	58	2	1	1
1907	69	68	1	...	...
1908	41	41	...	...	...
1909	69	62	7	4	2
1910	58	63	5	2	1
1911	77	69	8	2	6
1912	51	49	2	1	1
1913	65	52	13	1	3
Totals for 10 years.	624	592	42	13	15

The Margarine Act, 1887, and The Sale of Food and Drugs Acts, 1899:—

Every manufactory of margarine or margarine cheese must be registered by the owner or occupier thereof, and any premises where the business of a wholesale dealer in margarine or margarine cheese is carried on are also required to be registered with the Local Authority.

There are no manufacturers of margarine or margarine cheese in this city. Eleven wholesale dealers in margarine or margarine cheese, and sixteen premises in their occupation, are registered. During the year, four applications were received from

four wholesale dealers in margarine or margarine cheese, and in each case the application was granted, and certificates were duly issued to the applicants.

Butter and Margarine Act, 1907.

There are no Butter-making Factories in the City.

Inspection of Meat.

During the year, 1457 visits of inspection have been made to the slaughter-houses, and a large proportion were made by the Meat Inspector (who is a Veterinary Surgeon) and myself.

The following Table gives the number of carcases, &c., dealt with, and shows the number of seizures and surrenders. The large number of surrenders is again accounted for in that, whenever the butchers find any unusual appearance in a carcase, they notify me of it, and ask that it be inspected. If upon inspection the carcase, or any part of it, is found to be unfit for human food, a surrender note is signed by the owner, and the meat is forthwith destroyed. This is mainly due to a system of insurance which obtains amongst the members of the York and District Butchers' Association, the rules of which require a certificate from the Inspector of Nuisances before compensation is paid. This has been in operation in the City for over five years, and has proved most helpful to the Health Department.

I have to record that the arrangement made five years ago with the above-mentioned Association, to permit the butchers to strip the fat from surrendered tuberculous carcases, still obtains, and the fat is dealt with at a tallow chandler's premises under the supervision of one of my assistants, who sees that it is deposited in a tank containing sulphuric acid, and is not to be used for the food of man.

The majority of the animals, to the carcases of which my attention was called, were sold by auction at the York Fat Stock Auction Mart, and the average price paid for such animals amounted to £16 5s. 0d.

During the year 1912, the York Butchers' Association petitioned the Markets' Committee that all animals exhibited in the York Cattle Market should be considered as exposed for sale, and intended for the food of man. As a result, the following notice has been posted up at the entrances to the market:—

"NOTICE.—This market is open on Tuesdays for the sale of fat stock only, and all animals exhibited will be treated as fat stock intended for the food of man, and all persons must take notice accordingly. (Signed) H. CRAVEN,
Guildhall, August, 1912. Town Clerk."

As Section 116 of the Public Health Act, 1875, gives power to inspect any animal, &c., exposed for sale, or deposited in any place for the purpose of sale, and intended for the food of man, and also power to seize any animal, &c., which is diseased or unsound or unfit for the food of man, it is obvious that the above notice will be of great service in dealing with any diseased or emaciated animals which are found exposed for sale at the above-mentioned Fat Stock Market, the owners of such animals rendering themselves liable to heavy penalties. In the past it has been difficult to institute proceedings against owners—chiefly farmers from outside the City—as they excused themselves on the grounds that the diseased animals were not intended for the food of man, and that they were not aware that the market was for fat stock only.

TABLE 65. CITY OF YORK.—RESULTS OF INSPECTION OF MEAT DURING 1913.

Carcases, &c.	Disease or condition.	Inspector's attention called by Owner.	Inspector called Owner's attention.	Surrendered by Owner.	Seized by Inspector.	Result of Action.
37 whole carcases, with all organs	Tuberculosis	Yes—in each case	...	Yes—in each case	...	Removed by Corporation, and destroyed at Corporation Destructor
17 part carcases ...	ditto	ditto	...	ditto	...	ditto
Internal organs (lungs, liver, &c.) from 13 carcases ...	ditto	ditto	...	ditto	...	ditto
Emaciated sheep bought at York Auction Mart ...	Flukes	Yes	...	Yes	...	ditto
Emaciated sheep deposited for sale at York Auction Mart	Parasitic	...	Yes	...	Yes	ditto (Owner summoned and fined 50/- and costs.)
Emaciated sheep deposited for sale at York Auction Mart	Dropsy	...	Yes	Yes	...	Removed by Corporation and destroyed at Corporation Destructor. (Owner cautioned by order of Health Committee.)
Beef, 2 buttocks (frozen) ...	Putrid	Yes	...	Yes	...	Removed by Corporation and destroyed at Corporation Destructor.

RESULTS OF INSPECTION OF MEAT DURING 1913—*continued.*

Carcases, &c.	Disease or condition.	Inspector's attention called by Owner.	Inspector called Owner's attention.	Surrendered by Owner.	Seized by Inspector.	Result of Action.
Carcase of bullock ...	Badly bruised	Yes	...	Yes	...	Removed by Corporation and destroyed at Corporation Destructor.
Carcase of a pig at York Auction Mart	Exhaustion	Yes	...	Yes	...	ditto
Carcase of a pig at York Auction Mart	ditto	Yes	...	...	Yes	ditto
2 shins of beef, lungs and kidney	Melanosis	Yes	...	Yes	...	ditto
Internal organs of pig ...	Cirrhosis	Yes	...	Yes	...	ditto
Pig (14 stones)	Swine-fever	Yes	...	Yes	...	ditto
Peas ($4\frac{3}{4}$ stones) ...	Affected with weevils	...	Yes	Yes	...	ditto
Tinned prawns 7 lbs. ...	Putrid	Yes	...	Yes	...	ditto
Tinned prawns 7 lbs. ...	ditto	Yes	...	Yes	...	ditto
24 Rabbits	ditto	Yes	...	Yes	...	ditto

The total weight of butchers' and other meat surrendered and seized during the year amounted to 2,294 stones as compared with 1,955 stones in 1912, 2,297 stones in 1911, and 1,806 stones in 1910.

TABLE 66.—CITY OF YORK.

PARTICULARS OF SURRENDERS AND SEIZURES OF UNSOUND ANIMALS AND MEAT (MOSTLY AFFECTED WITH TUBERCULOSIS), DURING THE YEARS 1909—1913.

Year.	SURRENDERS.				SEIZURES.		Number of carcases from which some of the internal organs were surrendered at Slaughter-houses.	Total Surrenders and Seizures.	NUMBER AND CLASS OF ANIMAL AFFECTED WITH TUBERCULOSIS.						
	At Slaughter-houses.		At York Auction Mart & on private premises.		Whole or part Carcases.										
	Whole Carcases.	Part Carcases.	Animals.	Carcases.	In Slaughter-houses.	In Shops.			Bulls.	Oxen.	Cows.	Heifers	Calves.	Sheep.	Pigs.
1909	10	....	....	....	1	....	10	21	....	3	7	2	....	....	9
1910	36	2	2	1	1	2 (both half carcases)	14	58	1	7	18	20	1	4	7
1911	38	5	4	7*	....	2 (both half carcases)	11	67	....	13	26	8	1	8	11
1912	34	3	4	2	....	2	12	57	....	17	20	14	....	3	3
1913	37	17	1	2	2 at Cattle Market.		13	72	1	13	31	13	2	....	2

* 6 were carcases of lambs, frozen.

TABLE 67.—CITY OF YORK.

Year.	Number of Voluntary SURRENDERS of diseased carcases, or half-carcases by butchers to Chief Sanitary Inspector.		Number of SEIZURES (with subsequent destruction of diseased carcases or half-carcases by the Chief Sanitary Inspector.	
	Tuberculosis.	All diseases including Tuberculosis.	Tuberculosis.	All diseases including Tuberculosis.
1902	...	...	1	1
1903	...	...	...	1
1904	2	3	1	2
1905	1	1	2	7
1906	3	6	2	24
1907	3	3	...	8
1908	6	9	...	1
1909	7	10	1	1
1910	34	40	2	3
1911	44	59	2	2
1912	34	56	0	2
1913	62	70	0	2
Total for 12 years.	196	257	11	54

Verminous Children:—

Complaints were received from the Assistant School Medical Officer that children from certain houses were attending school and were in a verminous condition, and, in consequence, 54 houses and the bedding therein were inspected: 22 were found in a filthy condition, and 32 were moderately clean. It was found necessary to steam-disinfect the bedding and fumigate the rooms at 27 of these houses, and notices were served upon 32 of the occupiers to cleanse and disinfect. The bedding at 27 was found in clean condition.

I have pleasure in recording that Assistant Inspectors E. Richardson, J. W. Beaumont and F. Fishburn were each successful in obtaining the qualifying certificate of the Royal Sanitary Institute as Inspectors of Meat and Other Foods.

In conclusion, I take the opportunity to express my thanks to the members of the Health Committee and to the Medical Officer of Health for their support, and to the Assistant Inspectors, who have discharged the oft-times difficult and dangerous duties imposed by the Public Health Acts, with tact and efficiency; particularly so does this apply to my Deputy Inspector, Mr. E. Ridsdale, who rendered ready and willing assistance at all times.

I am, Gentlemen,

Yours obediently,

A. E. DRUMMOND,

Chief Inspector of Nuisances.

REPORT OF THE CANAL BOATS INSPECTOR.

Ouse Navigation Offices,

Naburn Locks, York,

January 1st, 1914.

To the Health Committee, Guildhall, York.

Gentlemen,

I beg to submit to you my Annual Report:—

I am employed as Canal Boats Inspector for the City of York at a salary of £10 per annum. I am also Canal Boats Inspector for the Escrick Rural District Council at a salary of £2, and for Bishopthorpe Rural District Council at a salary of £1 1s. per annum.

During the year ended December 31st, 1913, I have inspected 229 Canal Boats, upon which I found 454 men, 25 women, and 9 children. The cabins were mainly in good condition and there has been no case of illness reported.

I have met with 4 boats whose papers did not identify the owners, 1 boat not numbered properly, 2 boats which had no certificates on board, 1 boat not sufficiently ventilated, and 3 boats whose cabins were in bad condition. These various infringements were remedied after notice was given to the owners

The total number of boats on my register at the end of 1913, was 255. Out of these, 132 have been broken up, withdrawn, or are not traceable, which leaves 123, which I believe are in use in this district.

During the year I have re-registered 4 boats which have changed ownership, and registered one new boat.

Mr. Llewellyn, H.M. Chief Inspector of Canal Boats, visited York on August 20th, 1913, and examined our books and found all in order.

I remain, Gentlemen,

Your obedient Servant,

JAS. B. MUMMERY.

REPORT OF THE CITY PUBLIC ANALYST for 1913.

MR. JOHN EVANS, F.I.C., F.C.S.

July 31st, 1914.

To the Lord Mayor and Citizens of the City of York.

Gentlemen,

I have the honour to present to you the following report of the work done by me during the year ending December 31st, 1913, in my capacity of Public Analyst for the City of York.

The general character of the work executed, and the number of samples submitted to, and analysed by me, during the year will be seen on reference to the following table:—

Milk	65	White Pepper	3
Butter	30	Linseed Meal	3
Margarine	2	Glycerine	1
Lard	8	Olive Oil	1
Cheese	5	Friars' Balsam	1
Cream	2	Gregory's Powder	1
Flour	1	Camphorated Oil	2
Tea	1	Compound Liquorice Powder	1
Fine Oatmeal	1		
Ground Ginger	2	Total	132
Arrowroot	2		

All the above samples proved genuine except 13 of the samples of Milk (20 per cent); 9·84 per cent of the total of 132 samples were adulterated.

The following Table shows the extent of adulteration during the past five years:—

Year.	Number of Samples.	Number adulterated.	Adulterated per cent.
1909	138	9	6·5
1910	133	6	4·5
1911	140	9	6·4
1912	131	5	3·8
1913	132	13	9·8

The rate of adulteration for England and Wales for the year 1911 (latest data available) was 8·7 per cent.

Comparisons of Samples to Population.

The following Table shows the number of samples taken under the Sale of Food and Drugs Acts per 1000 of the Population in York as compared with England and Wales and various Cities in Yorkshire :—

	Year.	Population (1911 Census).	Rate of samples analysed per 1,000 of population.
York	1912	82,282	1·6
York	1913	82,282	1·6
Halifax	1911	101,553	2·4
Rotherham	1911	63,483	2·1
Wakefield	1911	51,511	3·0
England & Wales ...	1911	...	2·8

Milk.

Sixty-five samples of milk were examined during the year. Of these, 13 were found to be adulterated, or in composition did not reach the standard of the Sale of Milk Regulations, 1901.

The following table shows the analytical figures obtained on these 13 samples :—

Sample Mark.	Analytical Data.		Remarks.
	Milk-fat.	Non-fatty Solids.	
36	2·75	8·14	8 3% deficient in milk-fat & low in non-fatty solids.
41	2·90	8 16	Contained 4% of added water.
58	2·88	8·23	4% deficient in milk-fat & low in non-fatty solids.
60	2 85	8·61	5% deficient in milk-fat.
79	2·89	8·69	Somewhat low in milk-fat.
81	2·93	8·97	Somewhat low in milk-fat.
82	2·75	8·95	8·3% deficient in milk-fat.
84	2·83	9·05	5·6% deficient in milk-fat.
87	2 94	8 69	Somewhat low in milk-fat.
88	2·80	8·95	6·6% deficient in milk-fat.
90	2·86	8 90	4·6% deficient in milk-fat.
94	2·36	9·28	21·3% deficient in milk-fat.
95	2 90	9·04	Somewhat low in milk-fat.

The average composition of the genuine milk samples was as follows:—

	York Milks. 1913.	Requirements of the Sale of Milk Regulations.
Milk-fat	3·45	3·0
Non-fatty Solids	9·12	8·5
Total Solids... ...	12·57	11·5

All the milk samples examined during the year were free from preservatives.

Butter.

All the butter samples examined during the year were genuine. The amount of water varied from 6·3 to 15·6 per cent. Three of the samples contained Boric Acid added as a preservative, but in no case did the amount exceed the limit of 0·5 per cent.

Cream.

The Milk and Cream Regulations, 1911 have divided "Cream" into two distinct substances, namely, "Cream" and "Preserved Cream." "Cream" in future is to be free from preservatives, whilst "Preserved Cream" is not permitted to contain less than 35 per cent of milk-fat. The two samples of Cream submitted during the year contained Boric Acid in the proportions of 0·33 and 0·23 per cent respectively. They contained the full proportion of milk-fat. No gelatine or other thickening substance was detected in the samples.

Cheese.

Five samples of Cheese were examined, none being condemned. They contained 14·5, 39·6, 37·9, 31·1 and 15·5 per cent of milk-fat respectively.

Cheese prepared from whole milk should contain at least 30 per cent of milk-fat. Two samples were evidently prepared from partly skimmed milk. Unfortunately, there is no standard as to amount of milk-fat cheese should contain.

Drugs.

The following drugs were submitted for analysis :—

Glycerine	1	Camphorated Oil	2
Olive Oil	1	Compound Liquorice Powder	1
Friars' Balsam	1	Linseed Meal	1
Gregory's Powder	1		

All these samples were in accordance with the requirements of the British Pharmacopœia.

None of the other samples call for comment.

I am, gentlemen,

Your obedient Servant,

JOHN EVANS, *City Analyst.*

ANNUAL HEALTH REPORT FOR 1913.

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CHARTS.

Chart Shewing the Decline of the Death-rate and Infant Mortality Rate since 1841.

Red line = General Death-rate. Green line = Infantile Mortality Rate per 1,000 Births. Black line = General Death-rate for England and Wales.

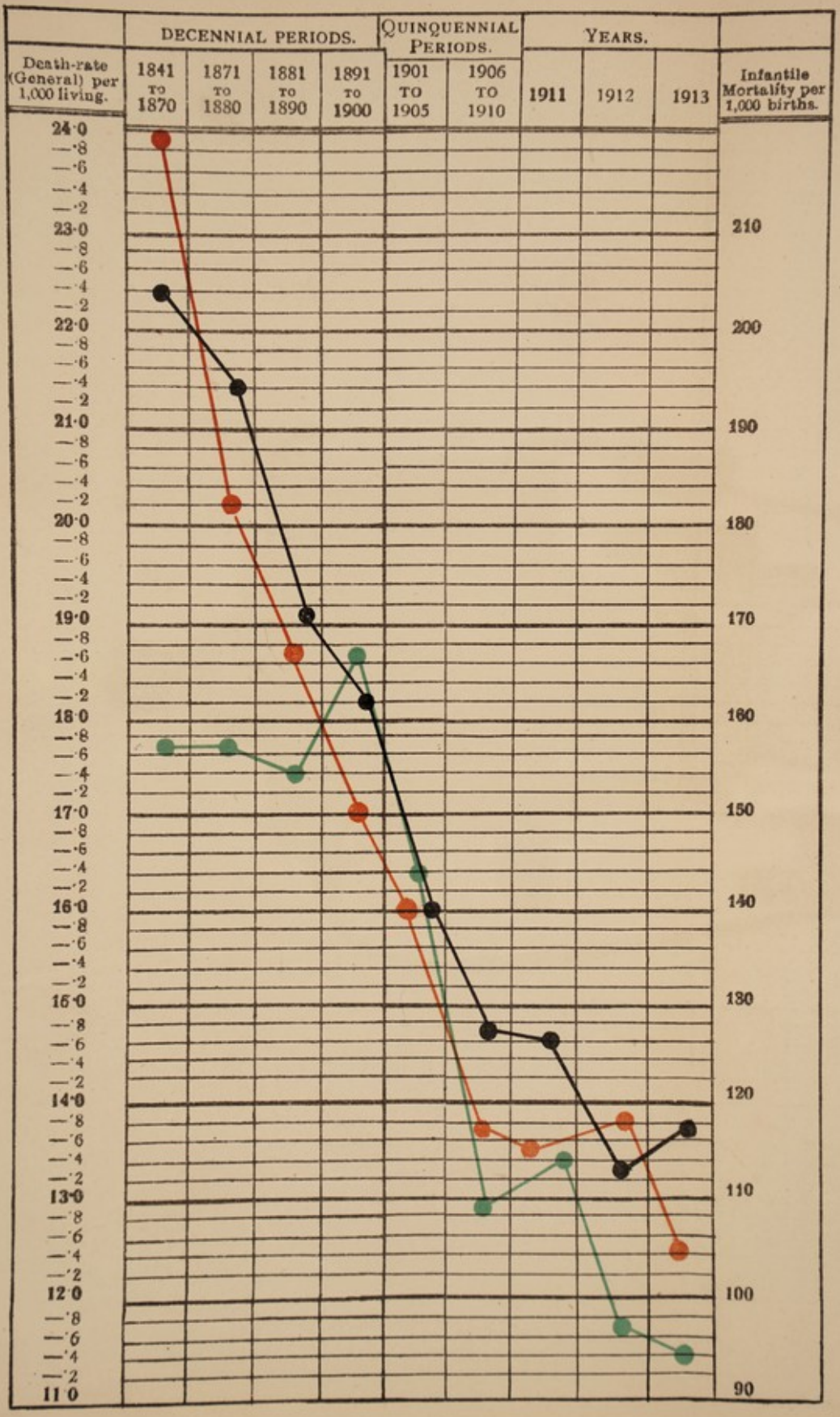


CHART B.

CITY OF YORK.

Area and Statistics of Sanitary Sub-districts.

1913.

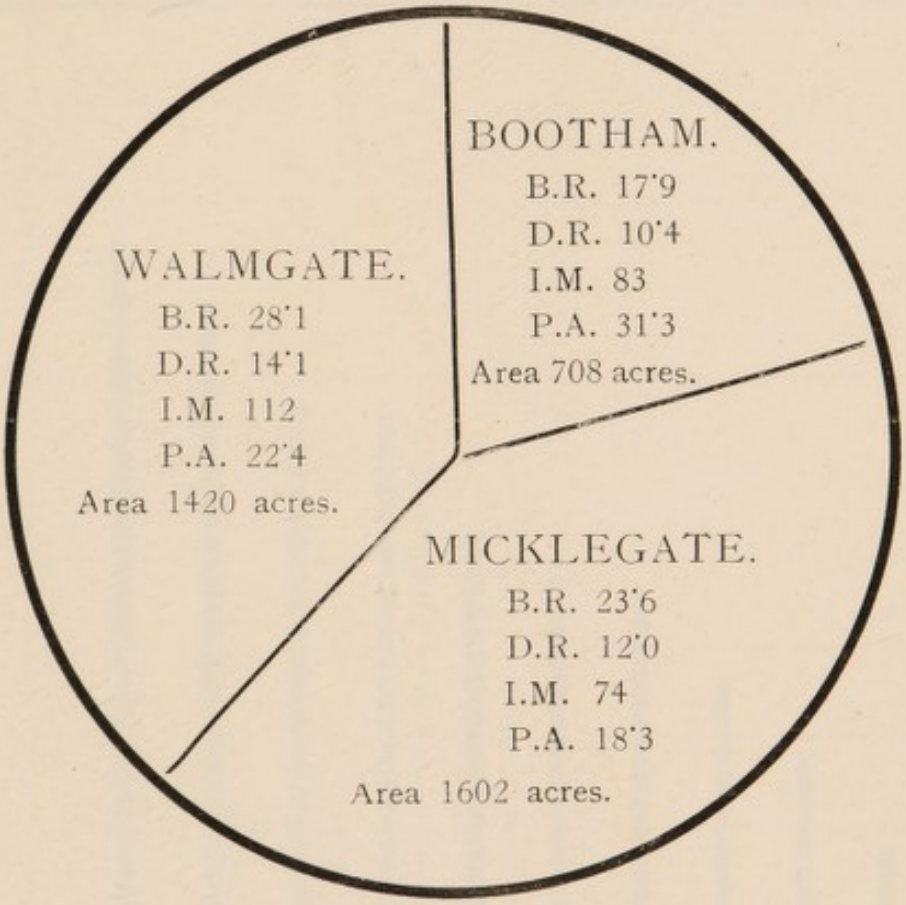


DIAGRAM SHOWING:—

B.R. = Birth-rate
D.R. = Death-rate
} Per 1,000 of Estimated Population.

I.M. = Infant Mortality = Deaths under one year per 1,000 births.

P.A. = Estimated Population Per Acre in 1913.

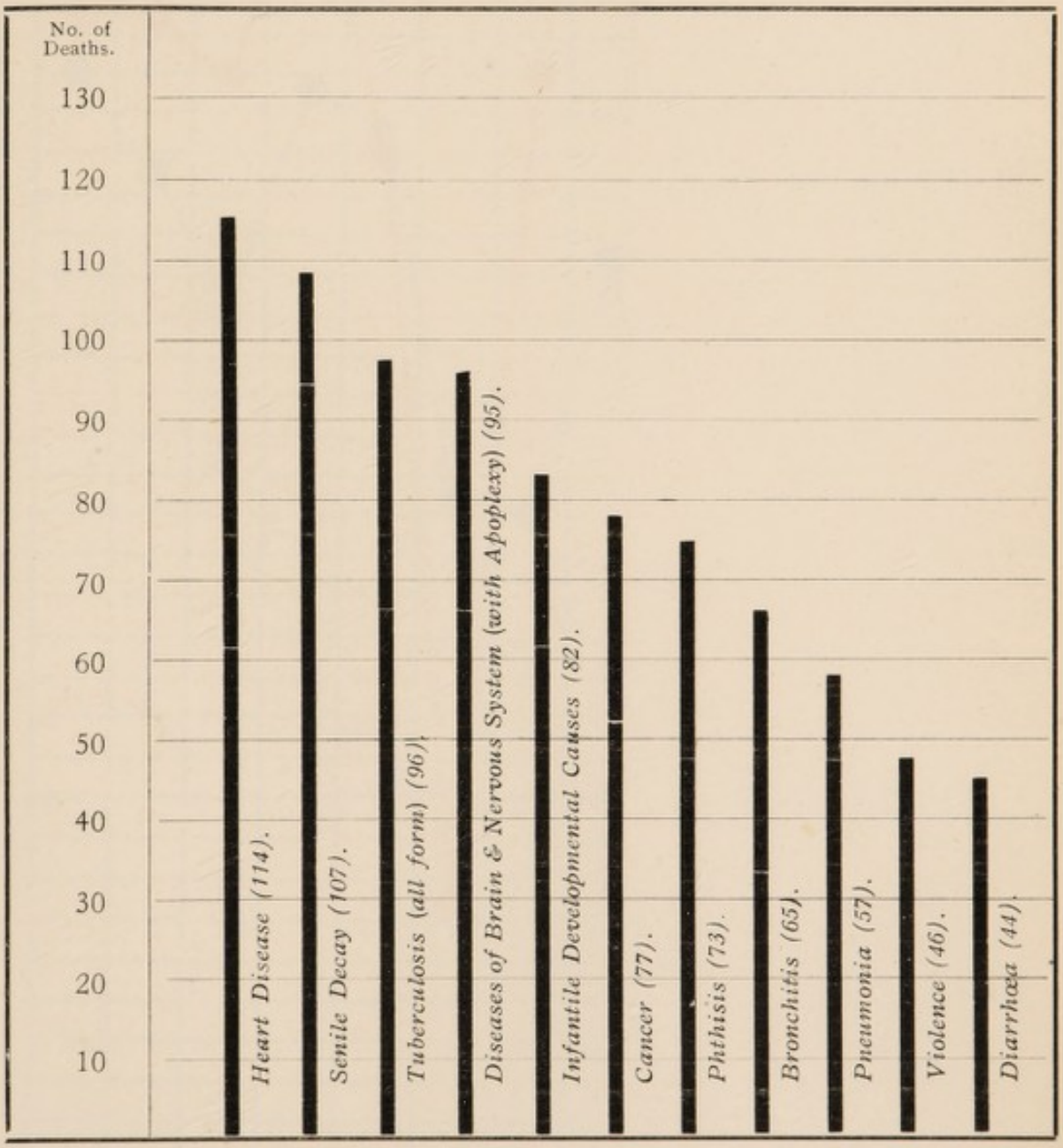
WHOLE CITY

Birth-rate 23·7.
Death-rate 12·4.
Infant Mortality Rate 94.
Estimated Population Per Acre 22·3.

CHART C.

CITY OF YORK.

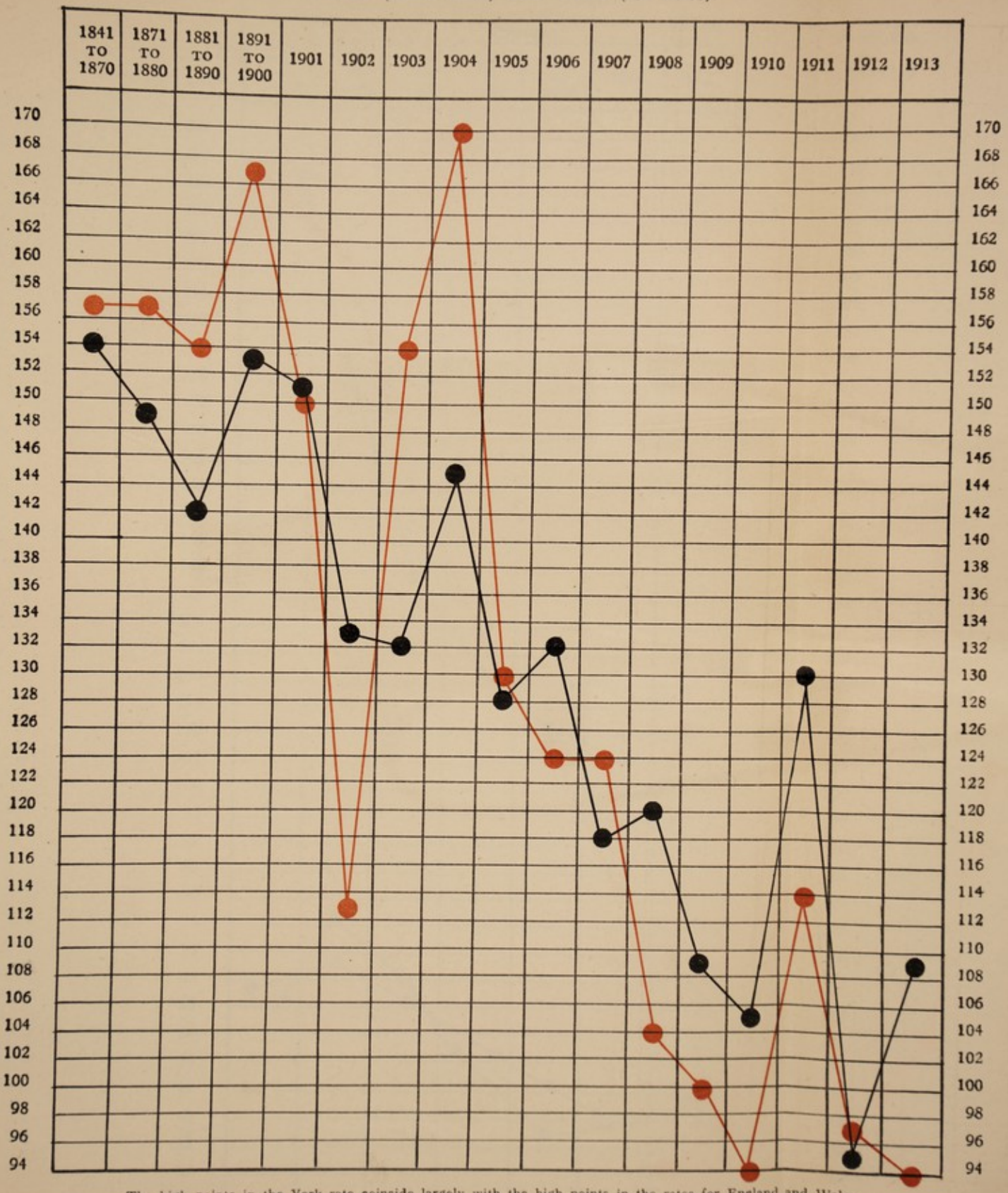
Comparative view of the principal causes of death during the year 1913.



It is interesting to notice that Tuberculosis has been displaced from the first place to the third in the above chart.

CHART D.

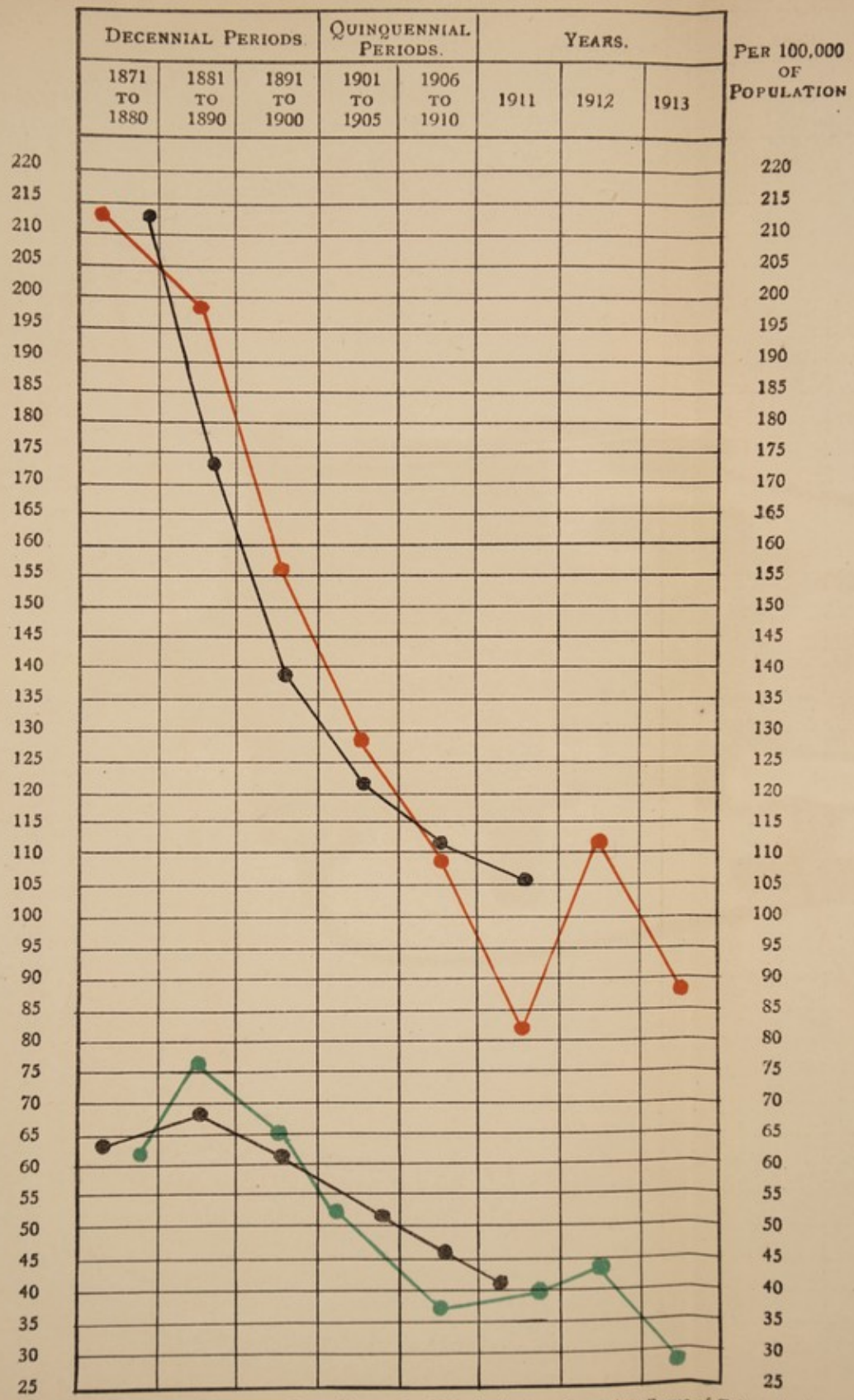
CHART SHOWING FLUCTUATIONS IN THE INFANT MORTALITY RATES FOR ENGLAND AND WALES (black lines) AND YORK (red lines).



The high points in the York rate coincide largely with the high points in the rates for England and Wales.

CHART E.

CHART SHEWING THE DECLINE IN TUBERCULAR MORTALITY IN THE CITY OF YORK, COMPARED WITH THE DECLINE IN ENGLAND AND WALES.



Red line = the York phthisis death-rates. Green line = the York death-rates from other Forms of Tuberculosis.
Black lines = the corresponding death-rates for England and Wales (the figures for 1912 & 1913 are not yet available).

CITY OF YORK.

THE FIRST

ANNUAL REPORT

OF THE

TUBERCULOSIS OFFICER,

For the Year 1913.

YORK:
THE YORKSHIRE PRINTING CO., LTD., HULL ROAD.
1914.

TUBERCULOSIS DISPENSARY,

11, CASTLEGATE, YORK.

July, 1914.

To the Right Hon. the Lord Mayor, the Aldermen, and Councillors of the City of York.

MY LORD MAYOR AND GENTLEMEN,

I have the honour to present to you my First Annual Report on the Anti-Tuberculosis work in York during the year 1913. With the beds already available at the Open-Air Ward at Yearsley Bridge, and with the provision of temporary beds for women and children, we have been able to treat promptly and effectively the patients applying. There is urgent need, however, of accommodation for the acute and advanced type of case, which at present continues to reside at home, and is a constant menace to other members of the household. It is also desirable that we should combine, in the provision of a Sanatorium on the hills, with some other Authority to secure more permanent accommodation for women and children, and to free some of the beds at Yearsley Bridge for purposes of observation of doubtful cases. I must express my appreciation of the way in which the Staff of the Dispensary have co-operated with me in the work, and thanks are also due to Miss Jalland for much valuable help as Honorary Assistant Secretary to the Tuberculosis Crusade (After-Care) Committee.

My special thanks are due to Dr. Edmund Smith and his Staff for much valuable advice and help in the initial organization of my department. Dr. Smith has given freely of his time and assistance on my behalf.

I am, my Lord Mayor and Gentlemen,

Your obedient Servant,

J. BELL FERGUSON,

Tuberculosis Officer.

CONTENTS.

STAFF OF THE TUBERCULOSIS DISPENSARY,

1913.

Tuberculosis Officer - - - **J. BELL FERGUSON,**
M.B., Ch.B. (Edin.)
D.P.H. (Manchester)

Secretary to Dispensary and to the Tuberculosis Crusade Committee (after care) **Miss ELIZABETH CONING.** (1)

Nurse - - - - - - **Miss B. MANGHAM.** (2)

Dental Surgeon - - - - **T. E. CONSTANT,**
M.R.C.S., L.D.S.

Tuberculosis Sub-Committee of the Health Committee:

Alderman CARTER *(Chairman).*
Alderman INGLIS *(Vice-Chairman).*
Alderman BIRCH.
Councillor DAVIES.
Councillor O. ROWNTREE.
Councillor WRIGHT.

(1.) Holds Certificate of Royal Sanitary Institute.
(2.) Holds Certificate of Central Midwives' Board and Inspector's Certificate of Royal Sanitary Institute.

PART I.

SCHEME FOR THE PREVENTION AND TREATMENT OF TUBERCULOSIS IN THE CITY OF YORK.

GENERAL OUTLINE.

Infectivity of Tuberculosis.

It may be well at the beginning to lay before members of the Corporation some of the chief factors in connection with the spread and dissemination of Tuberculosis, so that its infectivity may be neither over-rated nor under-estimated.

A recent report of the Royal College of Physicians of London summarises the facts in a most concise manner as follows:—

REPORT ON THE INFECTIVITY OF TUBERCULOSIS.

1. Tuberculosis is an acquired disease, but certain constitutional types may be inherited which render the patient specially susceptible to infection, and there is reason to think that such susceptibility is an inherited character.

2. The infective agent is the tubercle bacillus. This may be contained in the various discharges and excreta of the patient, and especially in the sputum of those suffering from Pulmonary Tuberculosis. No discharge is infective unless it contains the tubercle bacillus.

3. Cases of Tuberculosis of bones, glands, and internal organs from which there is no discharge or which do not furnish any excretion, and cases of arrested Pulmonary Tuberculosis, have never been proved to be infectious.

(By arrest is here meant that all the symptoms and physical signs of activity have disappeared, and the sputum has either ceased or no longer contains tubercle bacilli.)

4. The means by which tubercle bacilli may enter the body are:

(*a*) *By inoculation* through a wound or abrasion of the skin. This has occasionally occurred to workers in laboratories, *post-mortem* attendants, and others dealing with tuberculous material, and is presumably the way in which lupus is acquired.

(*b*) *By inhalation*. Susceptible animals are readily infected by the inhalation of air containing tubercle bacilli, whether in droplets or suspended as fine dust, but in the spread of the disease among human beings the latter appear to be the more important means of infection. The sputum or other discharges, whether on soiled handkerchiefs, linen, garments, or elsewhere, when dried, may become pulverised, and in this condition may be readily dispersed in the air of a room. That droplets of sputum are less important agents of infection is suggested by the fact that the incidence of consumption upon the staff, nurses, and others engaged in hospitals for the treatment of Tuberculous disease, where all discharges are carefully disposed of, is not above the average in the general population.

(*c*) *By swallowing*. Dust infected by the tubercle bacillus may be conveyed to food and so enter the alimentary canal; or infection may occur more directly in the act of kissing, or by consumptive and healthy persons using the same food utensils. As about 10 per cent. of the milk supplied to large cities contains tubercle bacilli derived from infected cows, this avenue of infection is particularly important in the case of children. The bovine tubercle bacillus is more commonly responsible for Tuberculosis in young children than in adults, but the proportion of cases due to it varies very much in different localities.

(*d*) There is no evidence that Tuberculosis can be conveyed to others either by the breath alone, or by emanations from patients, or by their garments, unless soiled by dried sputum or discharges.

5. The spread of Tuberculosis is favoured by uncleanliness, overcrowding, and imperfect ventilation, and is hindered by the opposite conditions. Experience in hospitals and other institutions where the following precautionary measures have been thoroughly carried out indicates that by such measures the risk of infection is reduced to a minimum, namely:

(*a*) The careful disposal and disinfection of the sputum and other discharges.

(*b*) The disinfection or destruction of soiled handkerchiefs, clothes, and linen.

(*c*) The removal of dust by frequent moist cleansing of the floors, walls, &c., of the rooms.

(*d*) The supply of abundant air space and free ventilation with fresh air.

No risk is incurred by living in the immediate neighbourhood of institutions for the treatment of Tuberculosis which are properly conducted.

Present Position of Anti-Tuberculosis Scheme in York.

A draft scheme was presented to the Health Committee by the Medical Officer of Health and the Tuberculosis Officer on October 17, 1912, and approved by the Council in November, 1912. The recommendations of this scheme were rapidly put into action, and before the end of the year the major part of the scheme was in working order. I will describe the scheme under the chief headings, together with details of the working.

Notification.

By successive steps notification of all forms of Tuberculosis has been at last achieved. It is now possible for the Local Authority to know of the majority of cases of Tuberculosis in their area. Each week a list of notified cases is forwarded to the Dispensary by the Medical Officer of Health, and these cases are visited by the Dispensary Nurse and particulars collected. In times of pressure of work additional help in visiting notified cases is given by the Health Visitors of the Health Department. Each case is thus visited, and the nurse endeavours to educate the patient and his family in preventive measures by means of literature and personal instruction. Sputum mugs are provided for indoor use, and pocket flasks for out of doors, and the patient is, in addition, provided with paper handkerchiefs and disinfectants. Any defects in the house are further investigated by the Inspectors of the Health Department, and proper measures taken.

With the concurrence of the notifying practitioner, the patient is put in touch with the Health Department, the Tuberculosis Dispensary, the School Doctor and Guardians; and various philanthropic agencies are enlisted to combat factors in the home tending to lessen the patient's resistance—insufficient nourishment or clothing, &c.

The Tuberculosis Dispensary.

Rooms were obtained in a suitable dwelling-house, No. 11, Castle gate, and rented from the Education Committee at £25 per annum.

The accommodation comprises consulting-room, men's waiting-room, women's waiting-room, two dressing-rooms, doctor's room, and nurse's and secretary's room, and suitable cupboard accommodation.

The rooms were suitably decorated, and provided with the necessary furniture and stationery, including a vertical filing cabinet and card-index drawers for the storing of records. The cost amounted to £163.

Staff.

Miss Elizabeth Coning was appointed Secretary, and in April, 1913, Miss Mangham was appointed nurse to the Dispensary.

The Dispensary acts as:—

1. Receiving house and centre of diagnosis.
2. Clearing house and centre of observation.
3. Centre for curative treatment.
4. Centre for the examination and subsequent treatment and supervision of "contacts."
5. Information bureau and centre of educational methods and dissemination of information regarding Tuberculosis.
6. Centre for the guidance of "after-care" and philanthropic work in connection with Tuberculous cases.

Careful and complete records are kept of every case taken under treatment. These are shortly as follows:—

Form A.—Giving full details of history of illness and previous treatment, condition on admission, symptoms of present illness, previous health, family history, possible source of infection, and, lastly, summary of main clinical details (whether disease is active or quiescent, pulmonary or non-pulmonary, complicated or otherwise, and the classification of the stage of the disease).

Form B.—Providing a record of the physical condition of the patient on admission. The obverse side contains details as to height, weight, sputum, urine, carious teeth, oral sepsis, &c., and has also a clear front and back diagram of the chest. There is also a diagram of the larynx. The reverse side of this provides room for two more back and front diagrams of the chest, on which signs found on re-examination may be entered.

Forms C and D provide respectively for a record of special treatment, such as Tuberculin injections, &c.; and for a summary of the progress of the case from time to time.

Form E consists of a record of home conditions, and is filled in for every notified case. It deals exhaustively with the patient's everyday life, family, environment, nutrition, personal habits,

health of other members of household, &c. The reverse side contains a record of the sanitary state of the house itself, with space for details found on re-visits. To avoid duplicating work, this form, when filled in, is taken to the Medical Officer of Health, and any information he requires having been extracted, it is then forwarded to the Dispensary to be filed.

A street index of cases is also kept, and an occupation index, which will, in time, show at a glance any particularly unhealthy occupation or neighbourhood. Patients on treatment are provided with a clinical thermometer, for which cost price is charged.

Dental Treatment (*see also Page* 45.)

An arrangement has been made with Mr. Constant, the Dental Surgeon to the School Clinic. The Dental Surgeon attends at the Dispensary on Saturday forenoon from 10 to 11 a.m. Extractions only are done. Adults requiring fillings are directed to their own dentist, and children attending school are referred to the School Dental Clinic for this purpose.

Institutional Treatment.

a. Sanatorium and observation beds.

b. Hospital beds.

c. Beds for advanced cases.

(*a*) Sanatorium Accommodation.

Two additional beds were placed in the Open-Air Wards at Yearsley Bridge, making a total of 12 beds for men.

Accommodation for women was provided by utilising the balcony in front of the empty Enteric Block, and in addition four shelters were erected in front of this block, giving 10 beds for women and children. This latter arrangement, while suitable for temporary use, will not be continued. It is proposed to erect a sanitary annexe to the Enteric Block, and to move the shelters to the open ground behind the administrative block. Additional shelters will be required to receive the beds removed from the enteric balcony.

A small side-ward in the Enteric Block will be used as a dining-room for the women and children, and thus the arrangements for female patients will be compact and self-contained.

(*b*) Hospital Beds.

About six or eight beds as a rule can be obtained on the balconies of the County Hospital for the reception of complicated cases, surgical cases, and in emergencies.

A payment of 33s. per week is made to the Hospital authorities for such cases by the Corporation. The Insurance Committee defray the expenses of Insured cases of non-pulmonary Tuberculosis sent to the County Hospital.

Splints and Surgical Apparatus.

In certain cases of surgical Tuberculosis, apparatus is required in the after treatment, and the cost of this is met by the Corporation, when the patients themselves are proved to be unable to afford the necessary expense.

(*c*) Beds for Advanced Cases.

No provision has as yet been made for this very necessary part of our scheme, but it is expected that this will be provided for in the near future. (*See Page* 18.)

In connection with these cases, with their too often attendant poverty and destitution, the Guardians have rendered good service to the City. Such cases, when willing to be removed, have been immediately admitted to the City Infirmary on Huntington Road. However, in future it is desirable that the supervision of *all* cases of advanced Tuberculosis should be undertaken by the Corporation, including Poor-law cases. The maintenance grant of one-half the cost of treatment of the non-Insured Tuberculous has been provided with a view to encouraging development in this direction. (See Local Government Board circular dated November 7, 1913, page 5.)

Disinfection of Infected Houses and Clothing.

Whenever a case is removed to an institution, free disinfection of the house and bedding and clothing of the patient is carried out by the Health Department. In addition, the Dispensary Nurse visits advanced cases in their homes frequently, and once a month sprays the room with formalin.

Apart from any germicidal action, this procedure helps to remind the patient of his invisible foe, and urges him to greater care as regards cough spray and disposal of sputum.

Bacteriological Diagnosis.

Free facilities for the examination of urine, sputum, fæces, &c., from suspected Tuberculous patients are offered to general practitioners, and small tins, containing corked bottles for the collection of specimens are provided on request. The Tuberculosis Officer carries out these examinations personally at the Health Office Laboratory, at 50, Bootham. Practitioners are requested, as far as possible, to send specimens on Fridays. When necessary, the Dispensary Nurse assists in the laboratory.

Provision of Shelters.

(*See Page* 43.)

After Care of Patients.

(Extract from the "Astor" Report.)

"The effectiveness of the work of the Dispensary can be greatly increased by the organisation of Voluntary Care Committees, formed of representatives from the Local Authorities, Boards of Guardians, Insurance Committees, and from all charitable and social work organisations in the district.

In this way all available agencies can be linked up, and any extra assistance—such as additional food, change of air, clothing, better home conditions, more suitable occupation, &c., that may be needed to enable patients to benefit to the fullest extent from the treatment provided—may often be readily secured."

The formation of a Voluntary After Care Committee was discussed by the Health Committee in June, 1913, and it was resolved to invite the York Health and Housing Reform Association, which for some time past had concentrated its efforts in the direction of the benevolent care and help of Tuberculous citizens, to constitute this Committee. The Association accepted this offer, and in October, 1913, the "Tuberculosis Crusade Committee" was formed, to work under the auspices of the York Health and Housing Reform Association.

With their members are co-opted representatives of the City Council Health Committee, the Board of Guardians, the York Insurance Committee, the York Labour Exchange and Juvenile Advisory Committee, the York Trades and Labour Council, the Charity Organisation Society, the County Hospital, the York Dispensary, the Women's Co-operative Guild, the Co-operative Social Department, the Social Staff of Rowntree & Co., Ltd., and the York and District Nursing Association.

Councillor Inglis was elected Chairman, Miss Coning Secretary, Miss Jalland Hon. Secretary, and Dr. Evelyn Hon. Treasurer.

The special duties of the Tuberculosis Crusade Committee consist of:

(1) Dealing with provisional help for patients who are in need of immediate assistance.

(2) Provision of extra nourishment.

(3) Friendly visiting and advice.

(4) Maintenance of patients while under treatment till able to work.

(5) Provision of separate bed and bedding, so that patients may sleep alone.

(6) Assistance with housework or washing while a housewife patient is in a sanatorium.

(7) Provision of deck chairs.

(8) The payment of removal expenses.

(9) Payment of small sum weekly towards the rent of a larger house, so as to effect the isolation of the patient.

(10) Provision of warm clothing.

(11) Payment of expenses, or part expenses, of boarding out in the country.

(12) Letters for Convalescent Homes.

(13) Provision of Shelters for use in yard or garden at home.

(14) Assistance towards cost of training for more suitable work.

Flower Crusade.

The funds for carrying out this practical work are raised by a two days' "Flower Crusade," held during the annual Gala Week.

A willing band of lady helpers sells flowers in the streets for two days. The buyer may give whatever he or she wishes, and by wearing a flower in the button-hole escapes further attention. Placards and handbills are distributed throughout the City setting forth the objects of the Crusade.

The collection last year realised £175; the administrative expenses were generously defrayed by Mr. Joseph Rowntree.

Mr. Arthur Anderson again acted as Hon. Secretary and General Director of the undertaking, and to his energy and ability its success is largely due.

A fuller report of the details of this work will in future be published in the Health and Housing Reform Association's Annual Report.

Open-Air School.

The Education Committee have secured a house and site in Fulford district for the purposes of an Open-Air School. This site will provide accommodation for the reception of about 100 physically defective children, including cases of Tuberculosis, and 120 mentally defective children. *A temporary Open-Air Class* was commenced in August, 1913. This class held 22 children. Details of the progress made will be found on Page 45.

NATIONAL INSURANCE ACT.

The Sanatorium Benefit Clauses of the Insurance Act help considerably the financial considerations of any Anti-Tuberculosis scheme.

Sums Available for Insurance Committee.

(*a*) One shilling and threepence in respect of each insured person resident in the City.

(*b*) One penny in respect of each such person, payable out of the moneys provided by Parliament.

Sanatorium benefit is administered by Insurance Committee, but such Committees are not empowered to provide institutions. An arrangement has been made between the York Insurance Committee and the York Sanitary Authority whereby insured persons may obtain treatment in respect of Tuberculous disease. The Insurance Committee contribute 40 per cent. of the total cost of the Tuberculosis Dispensary. Estimating the cost at £945 per annum, the Insurance Committee pays £372.

This covers the observation, diagnosis, and treatment of insured persons at the Dispensary, special treatment with Tuberculin, including cod-liver oil, malt, and drugs, and the after-care of the patients. The services of the nurse and secretary are also available for insured persons.

Insured persons sent to the City of York Open-Air Wards by the Insurance Committee are paid for at the rate of 25s. per week. The Insurance Committee reserve six beds for insured persons, male or female, as required. Any additional beds required are paid for at the same rate. Two additional beds are reserved by the Insurance Committee at Withernsea Sanatorium. The Insurance Committee pays 33s. per week to the managers of the York County Hospital for cases of surgical Tuberculosis sent there by them. From the 1s. 3d. available for the treatment of each Tuberculous insured person 6d. is given to the panel doctor in respect of Domiciliary Treatment. All cases of Tuberculosis coming before the Insurance Committee are seen and examined by the Tuberculosis Officer, who in this respect acts as Medical Adviser to the Insurance Committee.

Dependants of insured persons and non-insured persons are treated at the expense of the City.

It has been our aim to make the scheme applicable to all classes of patient, insured and non-insured alike, and the class and extent of treatment in either case is the same.

The City receives 50 per cent. of the cost of maintenance of non-insured persons from the Local Government Board.

CHANNELS BY WHICH THE PATIENTS GET IN TOUCH WITH THE CORPORATION MEASURES AGAINST TUBERCULOSIS.

1. Notification.

Each week the Medical Officer of Health forwards to the Dispensary a list of the cases of Tuberculosis notified. Each case is visited by the Dispensary nurse, and particulars of house and patient, &c., obtained on Form E. The nurse ascertains if the doctor attending desires his patient to receive municipal treatment, and, if so, the patient is requested to call at the Dispensary. If no desire for such treatment is expressed by either patient or doctor the nurse simply gives advice and literature, &c., regarding the prevention of spread of the disease, and, if so desired, visits again from time to time, the treatment of the case being continued by the attending practitioner.

2. "Contacts."

When the nurse visits a notified case she inquires carefully as to the health, past and present, of each member of the family, and, if necessary, advises the family doctor to be seen. In the poorer class of case the whole of the family, whether apparently well or not, are examined if possible by the Tuberculosis Officer. Some come to the Dispensary for this purpose, while others are examined at home. Particular attention is paid to the "contacts" in cases where the tubercle bacillus has actually been demonstrated in the sputum of the notified patient.

3. Insurance Committee.

When an insured person applies to the Insurance Committee for Sanatorium Benefit his name is forwarded to the Dispensary. He is seen by appointment, and examined by the Tuberculosis Officer, who is also Medical Adviser to the Insurance Committee.

After examination and, if necessary, observation, Form Med. 2 of the Commissioners is filled up, and sent to the Clerk to the Insurance Committee, with recommendation as to the particular form of treatment suitable, whether Sanatorium, Hospital, or Domiciliary treatment. These applications are considered by the Sanatorium Sub-Committee of the Insurance Committee, which is attended by the Tuberculosis Officer.

4. School Cases.

The Assistant School Medical Officer refers to the Dispensary such cases of Tuberculosis as come under his notice during school inspection. In addition, suspect cases are sent for more careful and detailed examination.

5. General Practitioners.

Many cases, presenting doubtful signs and symptoms, are referred by the general practitioner for more prolonged observation at the Dispensary. If the diagnosis be positive, as a rule these cases come under the municipal scheme.

6. Patients' Friends.

Old patients often bring a friend or relative with a request for examination.

Early cases of cervical adenitis (tubercle of neck glands) sometimes come to the Dispensary through this channel.

7. Other Institutions.

Cases are frequently referred to the Dispensary from the out-patient departments of other institutions, such as the General Dispensary and the County Hospital. In addition, the Poor-law Medical Officers and Relieving Officers direct patients to the Dispensary.

PART II.

WHAT REQUIRES TO BE DONE IN YORK TO COMPLETE OUR SCHEME.

PROVISION OF

I. **Beds for Acute and Advanced Cases.**

II. **Further Sanatorium Accommodation.**

III. **X-Ray Apparatus at the Tuberculosis Dispensary.**

IV. **Attention to the Housing Problem.**

1. Beds for Acute and Advanced Cases.

Bearing in mind the highly infective nature of Pulmonary Tuberculosis in advanced cases and in those in whom an acute process is going on, involving much destruction of lung tissue, it is a necessity to secure the isolation and segregation of these cases as far as possible.

It is necessary to avoid the stigma of a "Home for Incurables," by providing cheerful and attractive accommodation, fully equipped on modern lines, and attached to some existing institution, and preferably near or within the area from which the cases are drawn.

It has been suggested that this accommodation could most conveniently and economically be provided in conjunction with the Isolation Hospital. With the approaching extension of the Isolation Hospital, either a new ward for such cases could be built or we could utilise one of the old ward pavilions, which could be altered at very little expense.

2. Further Sanatorium Accommodation.

While the 22 beds at Yearsley Bridge Open-Air Wards (at the Isolation Hospital) have done much good work, they are to be looked upon as temporary sanatorium beds. When the provision of sanatorium beds on a more suitable site on more elevated ground has been secured, these beds at Yearsley Bridge can be used as *Observation Beds* in connection with the Dispensary.

In accordance with a resolution of the Health Committee passed at a meeting on October 6, 1913, the Tuberculosis Officer submitted a tentative scheme for the provision of a joint sanatorium, in which it was suggested that the City of York might combine with Middlesborough and the East Riding County Council.

It was understood that the North Riding County Council had decided at their meeting on October 29, 1913, not to combine with any other Authority in the provision of a sanatorium.

The East Riding County Council forwarded a resolution: "That the York City Council be invited to co-operate with the East Riding in the provision of a sanatorium, and that in the event of an arrangement with the City of York being found impracticable, the Sub-Committee already appointed be requested to submit for the consideration of this Committee a scheme for the establishment of a sanatorium for the East Riding only." (November 7, 1913.)

Accordingly, on November 25, 1913, a *Conference* was held between representatives of the East Riding C.C. and the City of York, at which a delegate from the County Borough of Middlesbrough also was present. Unfortunately no definite understanding was arrived at. Middlesbrough withdrew, and it was agreed that York and the East Riding authorities should each prospect for a suitable site, when another meeting might be arranged. Thus the matter stands at present.

It is to be hoped that in the very near future the East Riding County Council and the City of York may proceed with the matter.

3. **Provision of X-Ray Apparatus.**

The provision of an efficient X-Ray Apparatus would greatly expedite the diagnostic work of the Tuberculosis Dispensary. It is not suggested that this apparatus would replace any of the older clinical methods of diagnosis, but it would ensure much useful information in addition. In the case of adults it gives a much more accurate idea of the extent of disease in the chest, and in the case of young children it is a necessity in the light of modern knowledge. In childhood the glands situated deeply at the roots of the lungs are usually the earliest points of attack, with generally some slight spread to the lung tissue. The diagnosis is exceedingly difficult, and often problematical, without the use of X-Rays. The estimated cost of the apparatus required is about £150.

4. **Attention to the Housing of the People.**

There is no doubt that the house plays a large part in the spread of Consumption, and it is a foolish policy to spend money on the cure and treatment of these cases in sanatoria when too often they have to return to squalid alleys and back-to-back houses, with their attendant

overcrowding and moral degradation. It is impossible for a patient in such surroundings to carry out the ideals of the sanatorium. In addition, the poor ventilation and absence of sunlight increases the liability of other members of the household to infection from other diseases, and incidentally lowers the resistance of "contacts," so that they fall an easy prey to the tubercle bacillus.

The Medical Officer of Health remarks in a recent report on Housing in York that there is almost "something of a house famine." In dispossessing occupiers of condemned houses it is necessary to find other dwellings for them at a somewhat similar rent.

In cases with Lung Tuberculosis the Corporation might provide some cheap form of house, with rounded corners to the rooms, &c., and ample window space to secure the maximum of sunshine. Consumption brings poverty, and the Dispensary records show that too often Consumptive families succeed one another in the insanitary and dark alleys where the cheap rent obtains.

Explanation of Diagram facing Page 20.

The well-known diagram devised by Sir Robert Philip (somewhat amplified) shows at a glance all the factors in a complete Anti-Tuberculosis scheme, and their relation one to another.

It will be seen that in York we have already working every link except those shown in dotted lines—namely, in the first place the Hospital for Advanced Cases and an X-Ray Apparatus.

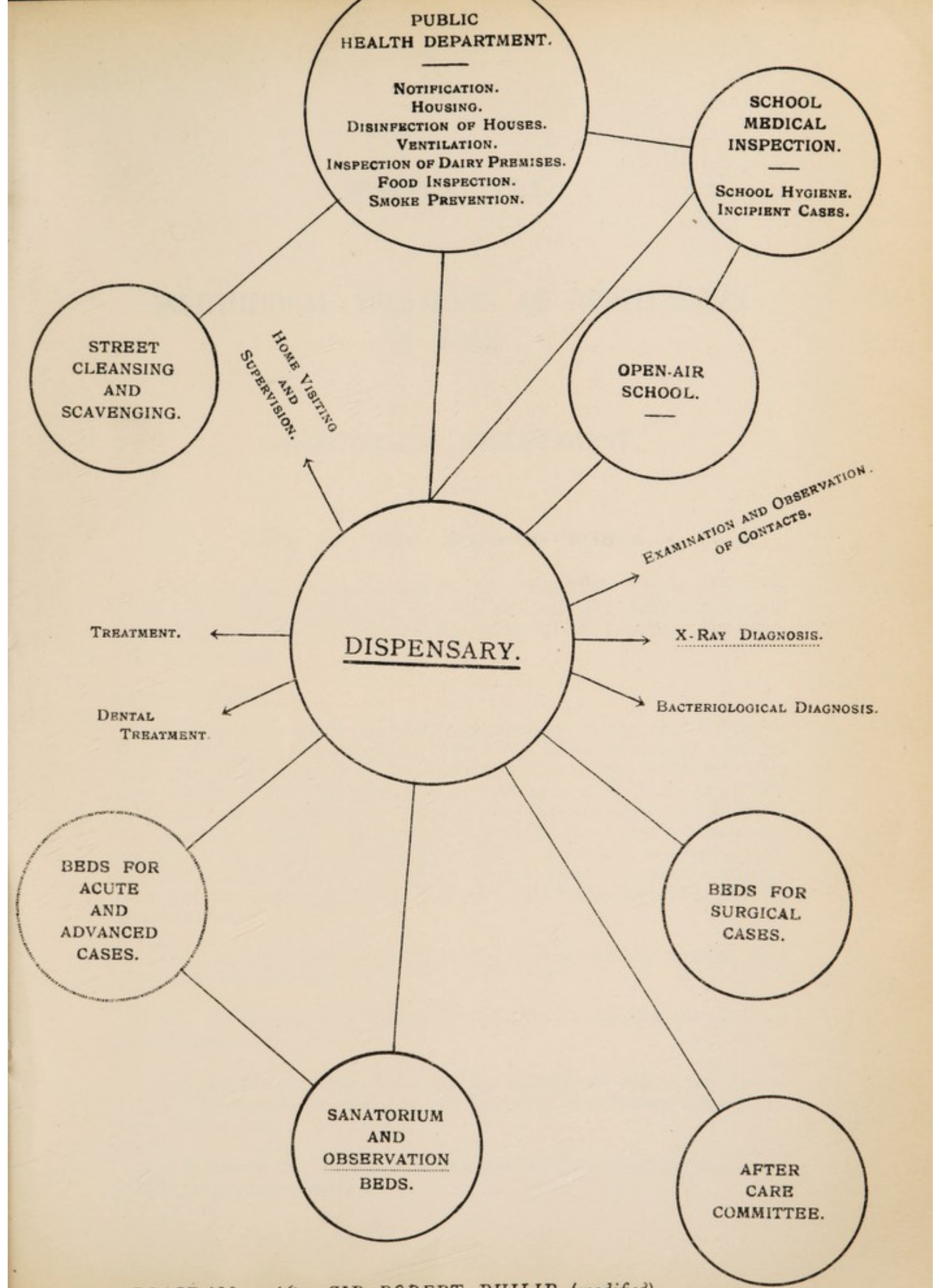


DIAGRAM. After SIR ROBERT PHILIP (modified).

PART III.

INSTITUTIONAL TREATMENT OF TUBERCULOSIS IN YORK.

SANATORIUM TREATMENT.

CITY OF YORK OPEN-AIR WARDS.

The Medical Superintendent (Dr. Edmund Smith) and the Tuberculosis Officer arranged that the latter should undertake clinical charge of the beds for Tuberculosis cases at the Isolation Hospital, Yearsley Bridge.

ACCOMMODATION :—

Early in 1912 there were 10 beds available in the new Open-Air Ward adjacent to the Hospital. These had to be alternately used for male and female patients. In November, 1912, two additional beds were placed in the Open-Air Ward, making a total of 12 beds, and these were assigned to males. For the reception of women and children four wooden shelters were erected in front of the Enteric Block, and six beds were placed on the Enteric Block verandah, making a total of 10 beds. One empty wing of the Enteric Block provided a dining-room for the female patients, together with bath-room and lavatory accommodation.

The balcony was provided with wind-screens of canvas, and electric lights were fitted.

We are indebted to Messrs. Rowntree for the loan of three of the shelters.

Patients are examined for admission to these Wards at the Tuberculosis Dispensary on Monday, Wednesday, and Friday afternoons, from 3 to 5 p.m.

If a patient is "passed" as suitable for admission the following leaflet is given to him :—

"CITY OF YORK ISOLATION HOSPITALS.

OPEN-AIR WARDS, YEARSLEY BRIDGE.

INFORMATION REGARDING ADMISSION.

Patients suffering from early Tubercular Disease of the Lungs are admitted to these Wards for a few weeks' sanatorium treatment, and with the object also of training them in the precautions necessary to prevent them from infecting their friends and re-infecting themselves. Upon the following conditions:—

Residents of the City of York are eligible for admission, and as a rule they must have been previously notified to the Medical Officer of Health by a qualified Medical Practitioner.

Very advanced cases are not admitted.

Cases must present themselves at the Tuberculosis Dispensary, 11, Castlegate (on Mondays, Wednesdays, or Fridays, at 3 to 5 p.m.), to be examined by the Tuberculosis Officer, and if found suitable, to be "passed" by him.

Patients after selection are placed upon a Waiting List, and they will be notified when to come to the Open-Air Wards, as soon as a vacancy occurs. Usually, patients will have to wait for three weeks. If, at the end of that time, they have received no intimation, they are at liberty to call again at the Dispensary to inquire when a vacancy is likely to occur.

Before admission to the Wards, patients will be required to sign an undertaking to conform strictly to the Rules and Regulations, and, as far as possible, to make themselves useful to the Matron and Sister-in-Charge, to carry out their instructions and those of the Doctor, to wait upon themselves, to do such light employment as the Doctor shall in his discretion order, and to absolve the Corporation from blame in the event of their contracting any other disease.

Decayed teeth retard recovery, and should be attended to by a good Dentist before admission. A dental ticket may be obtained at the Dispensary.

The length of time patients remain in the Open-Air Wards rests with the Medical Officer of Health or the Tuberculosis Officer, and depends upon the number of cases waiting admission, the beds available, and how far the patient is deriving benefit. Patients may usually expect to stay six weeks.

Clothing required at the Wards:—

Patients should bring their warmest clothing:—dayclothes, hat or cap, warm overcoat or cloak, at least one change of under-clothing, flannel night-dress, slippers, brush and comb, and *toothbrush;* if possible, also a second strong pair of boots and an umbrella. A rug, and goloshes (or snow boots) will also be found useful. Clothes should be brought in parcels, not in boxes. Old, warm loose-fitting day clothes are best. *In winter and spring* warm under-clothing is essential. Paper handkerchiefs will be supplied.

Patients are requested to do their best, individually and collectively, to make the Wards bright and cheerful.

Any patient guilty of using bad language, of improper conduct, or breach of rules, will be liable to be requested to leave immediately.

Patients are allowed to receive visitors (except when declared unfit to do so by Doctor, or Matron, or Sister-in-Charge) on *Saturdays* only, from 2 to 3.30 p.m. Not more than two persons shall be allowed to visit the same patient at one time without the Matron's special permission. No children should be brought through the grounds. Any article of food brought by visitors must first be handed over to the Matron or Sister-in-Charge; no drink is allowed to be sent or brought in.

EDMUND M. SMITH, M.D., D.P.H.,
Medical Officer of Health;

J. BELL FERGUSON, M.B., D.P.H.,
Tuberculosis Officer.

N.B.—The Open-Air Wards are situated at the Isolation Hospital at Yearsley Bridge, five minutes from the Haxby Road Terminus."

Routine on Admission.

Patients on admission are kept in bed for a week's observation, and the pulse, respiration, and temperature carefully recorded. If the evening temperature is below 99.4 deg. Fahrenheit, at the end of a week the patient is allowed to get up for a specified time. Subject to the condition of temperature and pulse, progress is made with graduated exercise, and work or tuberculin is commenced according to the suitability of the case. The patient begins with half-an-hour's sharp walk, gradually working up to a walk of six or eight miles, when men and women alike are given, first, light, then more arduous work in the garden. A rise of the temperature is the signal to reduce the amount of exercise, while fever over 99.4 deg. F. sends the patient back to bed. Patients commencing Tuberculin are not allowed to take as much exercise as those put on graduated work. The patients do breathing exercises night and morning, and keep the Wards and Shelters clean and tidy. Under this system of treatment the condition

of the patient rapidly improves; fever is abolished, and the appetite and sense of well-being return.

Inhalations of volatile antiseptics are useful in reducing the amount of expectoration in certain cases.

Each patient is provided with soup plate, dinner plate, tea plate and cup, knife, fork, and spoon, a mop, and a towel. All these receive a number, and each patient does his or her own washing-up immediately after meals, returning the dishes, &c., to a corresponding number in a rack.

Patients who are up and about help to wash up and attend generally to those who are on rest or in bed. Patients must conform to the following time-table as far as possible:—

CITY OF YORK—OPEN-AIR WARDS.

TIME-TABLE FOR PATIENTS.

6.45— 7. 0 a.m.	*Temperature and Pulse observed and charted.*
7. 0— 7.45 a.m.	Rise: Cold sponge or bath, as ordered; brisk rub down; brush teeth.
7.45— 8.15 a.m.	*Breakfast served;* wash up.
8.15— 8.30 a.m.	Rest on lounge; Matron's visit.
8.30— 9. 0 a.m.	Breathing exercises, 10 minutes; Ward work.
9. 0—10. 0 a.m.	REST ON LOUNGE.
10. 0—10.15 a.m.	Lunch served (hot or cold milk ½-pint, with bread and butter, or jam).
10.15—11.45 a.m.	Rest, exercise, or work, as ordered. Finish Ward work.
11.45—12. 0 a.m.	*OBSERVE TEMPERATURE.* Prepare for dinner.
12. 0— 1.15 p.m.	*Dinner served;* wash up.
1.15— 2. 0 p.m.	ABSOLUTE REST ON LOUNGE (Reading only).
2. 0— 4. 0 p.m.	Rest, exercise, or work, as ordered.
4. 0— 4.15 p.m.	Prepare for tea.
4.15— 5. 0 p.m.	*Tea served;* wash up.
5. 0— 5.15 p.m.	REST ON LOUNGE.
5.15— 7.15 p.m.	Leisure.
7.15— 7.30 p.m.	*Temperature and Pulse observed and charted.*
7.30— 8. 0 p.m.	*Supper served* (hot bath, as ordered by Sister).
8. 0— 9. 0 p.m.	Prepare for bed; brush teeth.
9.15 p.m.	Lights out.

* *Smoking allowed.*

Only in front of the Ward (not inside) or in the grounds:—

(1) After Lunch, 10.0 to 10.30 a.m.
(2) After Dinner, 1.15 to 1.45 p.m.
(3) After Supper, 7.30 to 8.0 p.m.

A pipe is less harmful than cigarettes.

Patients are required:—

(1) To take the temperature at stated times by each one placing his own thermometer *under* the tongue for ten minutes.

(Thermometers are sold, with tin cases, at 10d. each; a broken one will be renewed for 9d.)

(2) Immediately after each meal a patient must wash his own dishes under the tap with the mop provided, dry thoroughly with towel, and put away at once in the delf rack. Towels, mops, plates, and mugs will each be found to bear a number, which corresponds to a number in the delf rack.

(3) Should a patient be ordered to bed, a fellow-patient will be requested by the Sister-in-Charge to do double washing-up.

The patients are carefully educated in the hygiene of the consumptive, and are taught thoroughly how to prevent the dissemination of cough spray, and how to disinfect and dispose of sputum. Each patient is provided with an aluminium sputum mug for bedside use, and a glass flask for pocket use. Paper handkerchiefs are also given, and the patients use a linen pocket "liner," which is changed frequently.

Types of Case admitted.

While we are anxious to reserve these beds for cases in which the disease is early, and the constitutional disturbance slight, it has been found necessary to admit many cases not coming under this category. It is to be hoped that in future, when people realise more thoroughly the great importance of undergoing treatment *early*, a larger number of more suitable cases will be admitted.

Co-ordination between the Open-Air Wards and the Tuberculosis Dispensary.

The cases, as a rule, stay from two to three months in the Open-Air Wards, and the more suitable cases, who have shown signs of improvement on Tuberculin, are transferred to the Tuberculosis Dis-

*Men patients *will* smoke, and it is considered best to have this done openly and subject to supervision.

pensary to continue their "course," which usually lasts for nine or twelve months, and in some cases even longer. It will readily be seen that a greater number of patients can thus be admitted to a limited number of beds in a year than if each patient resided for four to six months—the minimum period of residence required in a Sanatorium under hygienic measures alone.

Should any patient show signs of relapse while being treated at the Dispensary, he is at once re-admitted to the Sanatorium.

To quote the words of Dr. Newsholme:—

> "*The Sanatorium treatment of the consumptive may be directed towards the cure of the consumptive, or towards such amelioration of the patient and incidental training as may be practicable in a shorter stay than is required for his cure."
>
> "In actual experience a large proportion of poor patients cannot be cured at the stage at which their disease is first recognised, without treatment which is so protracted and so large in amount when attempted for a large number of patients, as to be outside the range of present practical administration."

Each patient on discharge is given a copy of the following leaflet, and is visited at home periodically by the Dispensary Secretary, Nurse, or Tuberculosis Officer:—

OPEN-AIR WARDS, YEARSLEY BRIDGE.

NOTES TO BE OBSERVED BY DISCHARGED PATIENTS.

(1) Take temperatures morning and evening, and any time during the day or night if not feeling well.

(2) Cough into handkerchiefs, and keep the same in special pockets provided for the handkerchief. Boil these pockets and handkerchiefs frequently.

(3) Do not spit about the floor or streets, but spit into flask or bottle.

(4) When at home, keep dishes and utensils separate from those used by other people or other members of the family.

(5) Always sleep with the windows open, and plenty of warm clothes on the bed.

(6) Visit Tuberculosis Dispensary once or twice a week—Tuesdays or Fridays—as ordered.

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*Memorandum by Medical Officer of L.G.B. on Administrative Measures against Tuberculosis.

TABLE 1.—SHOWING ADMISSIONS and DISCHARGES to the above Wards during the twelve months ending December 31st, 1913.

No. of Cases in Open-Air Wards on Dec. 31st, 1912.			No. of Cases admitted during 1913.				Cases discharged or transferred to Tuberculosis Dispensary during 1913.				No of Cases in Wards on Dec. 31st, 1913.			
M.	F.	Total.	M.	F.	Children under 14.	Total.	M.	F.	Children under 14.	Total.	M.	F.	Children under 14.	Total.
1	1	2	44	39	26	109	38	36	21	95	7	4	5	16

During the year 109 cases were admitted to the Open-Air Wards for treatment. *These include six re-admissions,* 3 males and 3 females.

Altogether 44 men, 39 women, and 26 children of both sexes under the age of 14, were admitted, and with the two patients who were in the Wards at the end of 1912, this makes a *total of* 111 *cases treated during* 1913.

Of these 58 *were Insured Persons,* 35 *males and* 23 *females.* Twenty-seven were non-insured, and there were 26 children under fourteen (13 boys and 13 girls).

Ninety-five cases were discharged during the year, and 16 remained under treatment on December 31, 1913.

Of the cases discharged 68 were transferred to the Tuberculosis Dispensary at 11, Castlegate, for further active treatment by Tuberculin or otherwise, and 27 cases were referred to their own doctors, or to the Panel doctor for domiciliary supervision.

These 27 cases include 3 cases who had been admitted for observation, and were found to be free from active Tuberculosis. One was suffering from Diabetes. For the most part, the remainder were more or less advanced cases, who had been admitted for purposes of education; cases transferred to other Sanatoria (4); cases in which it was found that Tuberculin was centra-indicated, or cases who either refused further treatment or discharged themselves from the Wards (4).

The average length of stay in the Wards was 11 weeks, the longest stay being 26 weeks and the shortest 5 days (this case was transferred to Withernsea Sanatorium).

Since the stay in the Open-Air Wards is looked upon as a part of the treatment only, and since the majority of the cases were transferred to the Dispensary for further treatment, I shall not minutely

analyse the cases at this point. Details and analysis of the cases which have completed the "course" of treatment will be found on Pages 38 to 41, under the work of the Dispensary.

Of the 68 *cases transferred* from the Open-Air Wards to the Dispensary for further treatment, it may be said that practically every one of them derived an immense amount of good from their short experience in improved hygiene and sanatorium methods.

I believe that many of these persons will honestly endeavour to carry out the *régime* which they have been taught to the best of their ability, and as far as their home conditions will admit.

Of the 27 cases who were discharged direct,

8 were in the earlier stages of the disease, and included 7 children;

8 were intermediate;

8 were advanced;

3 were admitted for purposes of observation, and found to be non-tuberculous.

These 7 children were markedly improved, 8 of the other cases showed some improvement, 7 remained stationary, and 2 cases were worse.

Since discharge, these 2 latter cases have died.

Remarks.

Although orthodox opinion holds that a Sanatorium should be situated on the slopes of elevated ground, and that the maximum amount of benefit can be derived in the shortest time from bracing hill air, yet much good can be gained in the Open-Air Treatment of Tubercular Disease in the plain. It may be stated that the majority of our 111 cases treated last year at Yearsley Bridge showed very definite improvement, and many of them improved in general health and physical condition to quite a marked degree.

The Tuberculosis Officer visits the Wards on Monday and Thursday forenoons, and when any special emergency arises.

Great credit is due to the Matron and Sister-in-Charge for the way in which they have coped with this extra work of the Phthisis beds, and maintained discipline in the absence of a resident medical officer.

With the extension of the Fever Hospital and the provision of 16 beds for advanced and acute cases of Tuberculosis, a Resident will become a necessity.

I am indebted to Dr. Angove for his kindness in looking after these Sanatorium beds on several occasions when I was absent during the year.

HOSPITAL TREATMENT.

Cases Sent to the "Hospital Beds" at the County Hospital.

Four Insured Persons and six Uninsured were sent to the County Hospital, including 4 men, 3 women, and 3 children under fourteen. The diagnosis was as follows:—

Tuberculosis of

Lungs	... ...	3 cases.
Pleura	.. ..	1 case.
Hip	... ...	3 cases.
Knee	... ...	1 case.
Ankle	... ...	1 case.
Tonsils	... ...	1 case.

The average duration of stay was 10½ weeks. Difficulty is sometimes met with in securing a bed for these cases in the County Hospital, but this will tend to be obviated when we secure further Sanatorium accommodation. These Non-Pulmonary cases can then be transferred to the Sanatorium to pursue their somewhat prolonged convalescence, thus freeing the Hospital beds.

PART IV.

Work of the Tuberculosis Dispensary, 11, Castlegate.

Summary of work done from the opening of the Dispensary on December 12, 1912, to December 31, 1913.

	Adults over 14.		Children under 14.	Total.
	Males.	Females.		
No. of New Cases Applying	120	133	150	403
Re-attendances	...	...	...	4,225
No. of Insured Persons commencing treatment at Dispensary	29	20	...	49
No. of Insured Persons commencing treatment at O.A.W.	35	23	...	58
New Cases taken on at the Dispensary for treatment ...	44	50	40	134
Cases passed for Open Air Wards	44	39	26	109
Referred to other Institutions	...	...	...	20
New Patients Examined (Round No.)	...	...	...	403
Old Patients Re-examined	...	...	...	300
O.A.W. Cases transferred to Dispensary	29	26	13	68
Dispensary Cases transferred to O.A.W.	3	8	4	15
Patients who have ceased attending of their own accord	2	3	...	5
,, ,, ,, on advice of T.O ...	1	1	...	2
Special Visits to Factories and Workshops	...	...	...	2
Home Visits:— Tuberculosis Officer — First Visit	...	...	...	181
Tuberculosis Officer — Re-visits ...	...	...	...	77
*Nurse ... ... — First Visit	...	...	...	316
*Nurse ... ... — Re-visits ...	...	...	...	952
Special Visits in connection with After Care (paid by Dispensary Secretary)	...	...	...	662
Patients Discharged after Injection Treatment.				
Markedly Improved	...	...	...	33
Improved	...	...	...	33
In Statu Quo	...	...	...	11
Worse	...	...	...	1
Contacts.				
No. of Infecting Cases	37	26	12	75
No. of Contacts Examined	9	42	120	171
No. of Contacts found Tuberculous	2	14	35	51
No. of Contacts under suspicion of Tuberculosis ...	1	9	19	29

Total Attendances at Dispensary, Old and New Cases ... 4,628.
Average Weekly Attendance ... ... 89.

* The Dispensary Nurse began work in April, 1913.

Attendances at the Dispensary.

Since its opening, on December 12, 1912, the Dispensary has been open three afternoons a week and two forenoons, with the exception of Public Holidays. New cases are seen on Mondays, Wednesdays, and Fridays, from 3 to 5 p.m., and old cases are seen by appointment for treatment on Tuesdays and Fridays, from 9.30 a.m. to 1 p.m.

403 persons have applied to the Dispensary for advice or treatment. Of these, 160 were insured under the National Insurance Act.

Sex and Age Constitution.

The sex and age constitution of the 403 persons who applied at the Dispensary for advice or treatment is shown in the following table:—

TABLE 2—Sex and Age Constitution of Persons who applied at the Dispensary for Treatment or Advice, during the year 1913.

Ages.	1—5	5—10	10—15	15—25	25—35	35—45	45 and upwards.	Total No. of all Ages.
Males	8	35	28	42	30	38	8	189
Females ...	14	34	42	60	41	19	4	214
Total No of Both Sexes ...	22	69	70	102	71	57	12	403

It will be seen that out of 403 persons examined 161, or 39.9 per cent., were children under the age of 15. It is probable that as the Dispensary gets better known, and when further Open-air school accommodation is available, an even greater percentage of children will come up for examination.

TABLE 3.—SEX AND AGE, CONSTITUTION AND DIAGNOSIS OF 403 PERSONS WHO APPLIED AT DISPENSARY, FROM DEC. 12, 1912, TO DEC. 31, 1913.

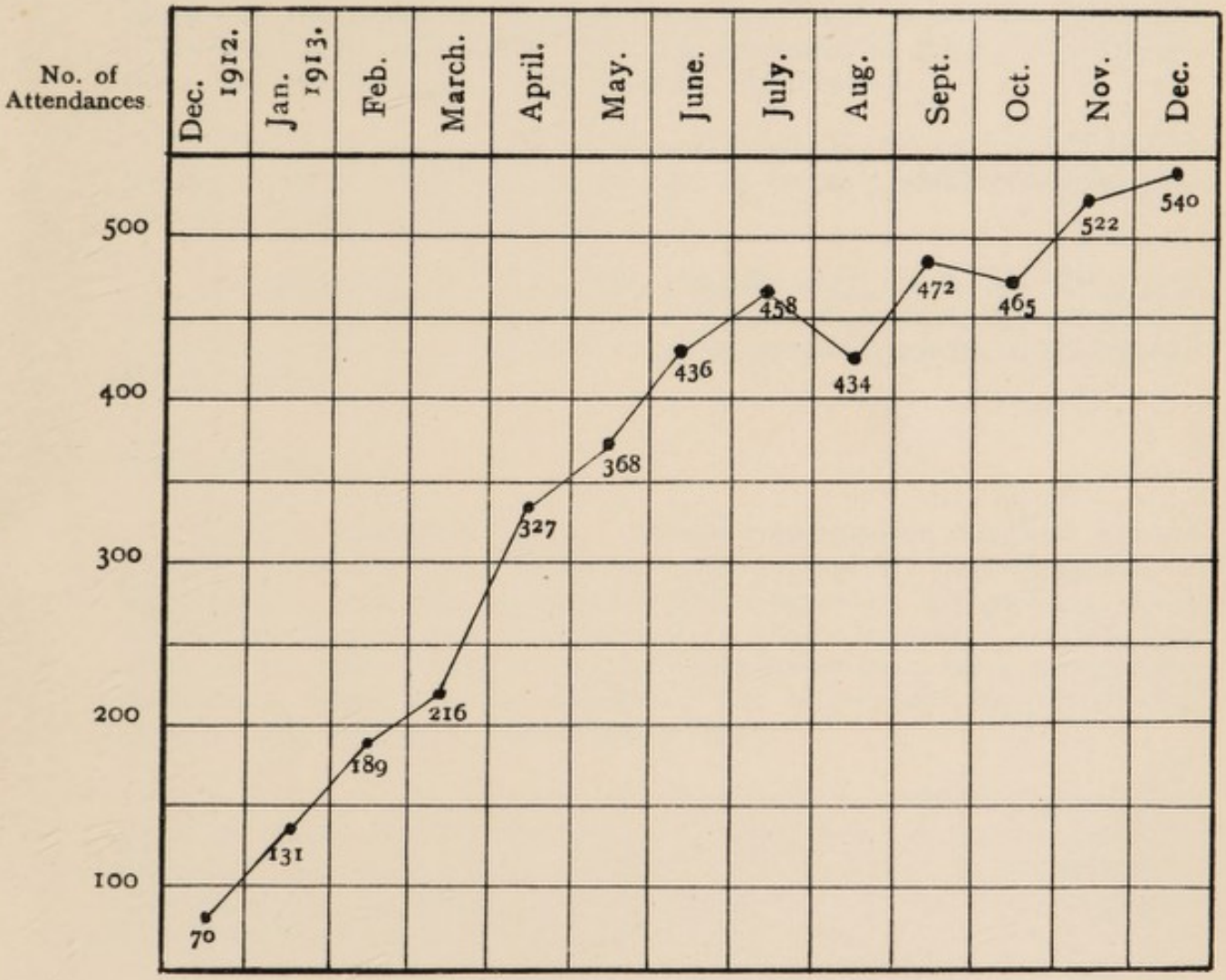
	AGES.	1 ... 5	5 ... 10	10 ... 15	15 ... 25	25 ... 35	35 ... 45	45 & upwards	Totals.
	SEX.	M. & F.	M. & F.	M. & F.	M. & F.	M. & F.	M. & F.	M. & F.	
Pulmonary Tuberculosis	Definite...	1 ... 2	5 ... 9	12 ... 15	30 ... 37	22 ... 28	26 ... 6	6 ... 2	201
	Suspected	2 ... 3	14 ... 15	6 ... 12	6 ... 9	4 ... 5	6 ... 4	1 ... —	87
Other Forms of Tuberculosis		2 ... 4	5 ... 2	4 ... 7	1 ... 4	— ... 2	3 ... 2	— ... —	36
Non-Tubercular		3 ... 5	10 ... 9	6 ... 8	5 ... 10	4 ... 6	3 ... 7	1 ... 2	79
Total Number of Both Sexes		22	69	70	102	71	57	12	403

The total number of attendances of old and new patients throughout the year was 4,628.

The results of examination as to the presence or absence of Tuberculosis are shown in the following table:—

The following diagram gives an idea of the increase in attendances :—

DIAGRAM SHOWING INCREASE IN ATTENDANCES AT DISPENSARY (OLD AND NEW) DURING EACH MONTH.



Average Monthly Attendance at Dispensary ... 385.
Average Weekly Attendance at Dispensary ... 89.

Visits.

During the year the Tuberculosis Officer paid 181 first visits to patients in their own homes, and 77 re-visits. The Nurse* paid 316 first visits and 952 re-visits. The Secretary paid 662 visits, chiefly in connection with the After-Care of patients who had undergone treatment, or who were attending the Dispensary. These visits paid to patients in their own homes are of the greatest importance, for it is an undoubted fact that the chief sources of infection exist in the dwelling-houses of the patients. Persons who have been exposed to infection ("contact") are thus sought out, and persuaded to submit to examination, and can thereafter be kept under observation.

It has been the aim of the York Dispensary to ensure a friendly feeling in these visits, and to obviate, as far as possible, any suggestion of officialism or inspection.

The efficiency of this work depends very much upon the personality and tact of the Physician or Nurse. It is necessary to educate the other members of the family to secure proper hygienic surroundings for the patient.

"Contacts."

Where a severe or "open" case of consumption has been known to exist, an endeavour is made to examine carefully every member of the family. Any case showing doubtful signs or symptoms is kept under observation, and re-examined in three months. In this way some of our earliest and most promising cases have been secured for treatment. Cases who are "suspect" are kept under supervision for long periods, and seen from time to time.

171 persons living in infected houses and in intimate contact with patients suffering from Pulmonary Tuberculosis have been carefully examined and dealt with. Of these, 51 were found to be definitely suffering from the disease, 91 were regarded as being free from active Tuberculosis, and 29 are still under observation.

TABLE 4.—TABLE OF "CONTACTS."

No. of Infecting Cases.			No. of Contacts Examined.			No. found Tuberculous.			No. Suspected			No. of Non-Tuberculous.		
M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
37	26	12	9	42	120	2	14	35	1	9	19	7	18	66
75			171			51			29			91		

(*Nurse Mangham commenced work on April 1st, 1913.)

Notifications.

308 notifications of Tuberculosis were received through the Medical Officer of Health.

203 were cases of Pulmonary Tuberculosis, and 105 of other forms of the disease.

These cases were visited, and full particulars of disease and home conditions entered on a form, and filed at the Dispensary. An analysis of the home conditions of 203 cases, in which defects were found, will be seen in the following tables:—

Table 5 gives particulars of the general aspect and cleanliness of the homes, and Table 6 gives details of the sleeping arrangements.

TABLE 5.—HOME CONDITIONS *RE* 203 NOTIFICATIONS OF ALL FORMS OF TUBERCULOSIS DURING THE YEAR 1913.

CLEANLINESS AND GENERAL ASPECT OF HOUSES.

Dirty.	Fairly Clean.	Clean.	Good Light.	Moderate Light.	Damp.	Close.	Through Ventilation.	**Back to Back**	Defective Windows.	Windows, open day only.	Windows, open night and day.
30	23	150	155	48	43	20	150	53	30	131	72

TABLE 6.—SLEEPING ARRANGEMENTS.

Separate Bedroom.	Separate Bed, but others in Room.				Others in Bed.				In Kitchen.		In Front Sitting Room.	Over-crowding.
	No. in Room.								Alone.	With others.		
	1	2	3	4	1	2	3	4				
34	11	18	7	2	61	29	10	9	9	2	11	27

Total No. 203.

The form on which these particulars are noted is forwarded to the Medical Officer of Health, and any sanitary or structural defects are *further* inquired into by one of the Sanitary Inspectors, and the fault remedied, if possible.

It will be seen that definite overcrowding was found in 27 of the notified cases. In every case an attempt was made to remedy this, but owing to the shortage of houses of low rental in the city efforts in this direction are impeded.

TABLE 7.—ANALYSIS OF TRADE OR OCCUPATION IN 308 NOTIFIED CASES INVESTIGATED.

Tuberculosis.—All Forms.

No Occupation	11	Groom	1
Children at or under School Age	102	Glassworkers	3
Factory Workers	28	Housework	40
Domestic Servants ...	8	Hawkers	2
Painters	6	Joiners	2
Soldiers	10	Laundry Workers... ...	7
Shop Assistants	7	Mattress Maker	1
Sailor	1	Postman	1
Box-maker	1	Porter	1
Bricklayers	3	Platelayers	2
Blacksmiths	2	Pattern Maker	1
Carters	2	Plane Maker	1
Carriage Cleaners ...	2	Machinist	1
Cab Driver	1	Rescue Worker	1
Cotton Winder	1	Stonemasons	2
Coach Builders	2	School Teachers	2
Cork Cutter	1	Furnacemen	4
Clerks	10	Tailor	1
Labourers	19	Messengers	3
Charwomen	6	Insurance Agent	1
Engine Cleaners	2	Tripe Dresser	1
Fitters	2	Traveller	1
Gas Fitter	1	Hotel-keeper	1

TABLE 8.—SHOWING OCCUPATIONS OF 96 PERSONS DYING FROM TUBERCULOSIS DURING 1913.

Occupation.	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.
Children at or under School Age ...	6	13
No Occupation	1	—
Housework	29	3
Factory Workers	4	1
Labourers	10	0
Clerks	3	0
Domestic Servants	4	0
Shop Assistants	5	2
Publican	1	0
Hairdresser	1	0
Platelayer	1	0
Carriage Trimmer	1	0
Dressmaker	1	0
Blacksmith	1	0
Hawker	1	0
Painters	1	1
Piano Tuner	1	0
Machinists	1	1
Tripe Dresser	1	0
Joiners...	3	0
Glassworkers	1	1
Engineers	1	0
Horse Drivers	2	0
Tailor	1	0
Printer...	1	
Insurance Agent	0	1

Dispensary Treatment.

It is not necessary to enter into any detailed description of methods of treatment, but a few facts may prove useful. If possible, cases are sent to the Open-Air Wards at Yearsley Bridge for a preliminary six, eight, or ten weeks' Sanatorium treatment. During this period they are educated in the special hygiene of the Tuberculous; they learn the value of rest and sufficient exercise, the whole tone of the body is increased by the outdoor life, and the patient becomes familiar with the keeping of his temperature chart. Further, Tuberculin may be commenced, and the suitability or otherwise of the drug determined. Dispensary treatment has been employed in the earlier ambulant type of case, which has been able to continue at work during the treatment, but chiefly as a continuation of the treatment begun in the Open-Air Wards. Dispensary treatment embraces inoculation of Tuberculin,

Spengler's Immune Substance (I.K.), vaccines, inhalations of volatile antiseptics, administration of malt, malt and oil, cod liver oil, etc., and Virol in the case of children.

The Tuberculins used have included Perlsucht Tuberculin Original (P.T.O.), Perlsucht Tuberculin (P.T.), Tuberculin Albumose Free (T.A.F.), Bacillary Emulsion (B.E.), and Old Tuberculin (O.T.) Carl Spengler's Immune Körper (I.K.) was used in three cases. As a rule patients commence with P.T.O. .00005cc, and proceed through gradually increasing doses to 0.5cc P.T.O.; then from 0.005cc P.T. to 0.5cc P.T., and finally from .1 O.T. to .5cc O.T. Sometimes B.E. is substituted for O.T. A course of Tuberculin such as this *cannot be given to every patient, and often the very greatest patience is required on the part of both patient and doctor.* As a rule a full course extends from nine months to over a year.

It is necessary to avoid severe "reactions" after any dose, and the treatment demands a fair amount of intelligence and active co-operation on the part of the patient. A considerable amount of controversy still rages around Tuberculin, but there is no doubt that when properly and carefully used it is one of our most valuable weapons in treating Tubercle. It is not, however, as Dr. Bandelier remarks, "a universal panacea for all Tuberculous ills." The presence of other catarrhal organisms in addition to the *Tubercle Bacillus*, complications, and the presence of fever may entirely prevent the use of Tuberculin.

During the year 134 patients were treated at the Dispensary; of these 44 were males, 50 females, and 40 were children under fourteen. *Forty-nine were Insured Persons.*

Seventy-eight cases were discharged after treatment, including 10 cases of Non-Pulmonary Tubercle.

Seven cases left off treatment.

Forty-nine cases remained under treatment on December 31, 1913.

TABLE 9.—GIVING DIAGNOSIS, SEX, AND AGES OF PATIENTS TREATED AND DISCHARGED DURING THE YEAR ENDING DECEMBER 31st, 1913.

Ages.	5—10		10—15		15—25		25—35	
Sex.	M—F	Both	M—F	Both	M—F	Both	M—F	Both
Pulmonary Tuberculosis	1 5	6	6 9	15	14 12	26	3 9	12
Other Forms ...	1 3	4	4 1	5	— 1	1	— —	—
Totals ...	— —	10	— —	20	— —	27	— —	12

TABLE 9—*continued.*

Ages.	35—45			45 and upwards			All Ages.		
Sex.	M	F	Both	M	F	Both	M	F	Both
Pulmonary Tuberculosis ...	6	2	8	1	—	1	31	37	68
Other Forms ...	—	—	—	—	—	—	5	5	10
Totals	—	—	8	—	—	1	36	42	78

Note—37 were Insured Persons and 44 had previous treatment in the Open-Air Wards.

Classification of Cases on Admission.

The Turban-Gerhardt classification of Pulmonary Tubercle has been adopted. This embraces three main stages, roughly as follows:—

Stage I. implies slight disease of one lobe of a lung, or at most half of two lobes.

Stage II. means definite infiltration of one whole lobe, or moderate disease of only half of two lobes.

Stage III. implies any condition more advanced than Stage II., or considerable cavities in the lung.

Turban's classification merely states the anatomical extent of the disease, and gives no indication of the amount of constitutional disturbance. I have, therefore, attempted to amplify it by adding the letters "s.s." and "m.s." to each of Turban's stages, the former implying "systemic disturbance slight," and the latter "systemic disturbance marked." This will be seen in the table underneath.

TABLE 10.—SHOWING EXTENT AND SEVERITY OF DISEASE ON ADMISSION IN 68 CASES OF **PULMONARY** TUBERCULOSIS WHO HAVE COMPLETED TREATMENT.

	Males.	Females.	Both.
Stage I. S.S.	10	9	19
Stage I. M.S.	1	1	2
Stage I.—II. S.S.	5	7	12
Stage I.—II. M.S.	0	0	0
Stage II. S.S.	5	7	12
Stage II. M.S.	6	9	15
Stage II.—III. S.S.	2	2	4
Stage II.—III. M.S.	0	1	1
Stage III. S.S.	1	0	1
Stage III. M.S.	1	1	2
TOTALS	31	37	68

Classification on Discharge.

It is an exceedingly difficult thing to classify cases of Pulmonary Tuberculosis after treatment, as the disease is so protean in its character, and subject to quiescent periods and periods of exacerbation. Further, after a long and tedious course of treatment, extending over months, the personal bias of the physician must be avoided as far as possible. Considering the nature of the disease, therefore, the word "cure" must be excluded. Tubercle Bacilli have been found alive and virulent in apparently healed and cured foci in the lung.

So much depends upon the future conduct of the individual—his home surroundings, nutrition, environment in the place of work, and the incidence or otherwise of factors tending to promote the arrest or progress of the disease.

The cases treated have, therefore, been designated "*Markedly Improved,*" where they have practically lost all symptoms and signs, and are well able to overtake their full everyday work.

In those marked "*Improved*" the systemic disturbance caused by the disease has been minimised or abolished, and a state of "compensation" has resulted.

In many of these the physical signs in the lungs have become modified for the better, and the progress of the disease retarded.

The patients in this category are well able to perform their work.

Those labelled "*In Statu Quo,*" may have improved subjectively, but the lung condition does not share in the improvement.

Several cases who did not undergo a full course of treatment are included under this heading.

The term "worse" explains itself.

64 cases were treated with Tuberculin, and have been discharged. An analysis of the results obtained will be seen in table.

TABLE 11.—64 CASES OF **PULMONARY** TUBERCULOSIS TREATED WITH TUBERCULIN

(Showing immediate clinical results on discharge in relation to stage of disease on admission).

	STAGE I.					STAGE II.					STAGE III.							
STAGE.	Systemic Disturbance, Slight.		Systemic Disturbance, Marked.			Systemic Disturbance, Slight.		Systemic Disturbance, Marked.			Systemic Disturbance, Slight.		Systemic Disturbance, Marked.			Totals.		
SEX.	M.	F.	M.	F.	Both.	M.	F.	M.	F.	Both.	M.	F.	M.	F.	Both.	M.	F.	Both.
Markedly Improved ...	7	2	0	0	9	5	4	2	2	13	2	1	0	1	4	15	10	26
Improved	2	5	1	0	8	3	6	2	5	16	1	1	0	0	2	9	17	26
In Statu Quo	1	2	0	1	4	2	2	2	1	7	0	0	0	0	0	5	6	11
Worse	0	0	0	0		0	1	0	0		0	0	0	0		0	1	1
Totals	10	9	1	1	21	10	13	6	8	37	3	2	0	1	6	30	34	64
Since Died														1				

Taking the two headings "Markedly Improved" and "Improved" together, it will be seen that 52 cases, or 80 per cent., have benefited definitely by the treatment.

In addition to these 64 cases, three cases had a course of Carl Spengler's I.K., and seemed to show some improvement. One case, with severe mixed infection, had an autogenous vaccine.

Duration of Illness.

In the 78 cases discharged the duration of illness from the onset of first definite symptoms was:—

3 to 6 months	22
6 months to 1 year	14
1 year to 2 years	11
2 years to 3 years	18
3 years to 5 years	4
5 years to 7 years	3
7 years and upwards	6
	78

Methods of Diagnosis.

The methods of diagnosis adopted in the work of the Dispensary have included the following, in order of importance:—

a. Examination of sputum.

b. History of symptoms, together with definite physical signs.

c. Indefinite but suggestive physical signs associated with disturbances in the temperature curve.

d. Indefinite but suggestive physical signs, without febrile disturbance but with distinct evidence of sensitiveness when tested with Tuberculin.

It will be seen, therefore, that Tuberculin is used as a help to diagnosis when the other three methods have been insufficient to lead the Medical Officer to form an opinion.

In the 68 cases of lung Tuberculosis discharged after treatment, 16 had Tubercle Bacilli present in the sputum on coming to the Dispensary, and two had lost Bacilli after treatment.

Of the 105 cases admitted to the Open-Air Wards 45 had Tubercle Bacilli in the sputum (42.8 per cent.).

Non-Pulmonary Cases.

Ten cases of Non-Pulmonary Tuberculosis have been treated and discharged, as follows:—

Tuberculous Keratitis, 1—Improved.

Cervical Adenitis, 9—3 Improved, 6 apparently cured.

Very encouraging results are obtained in cases of Cervical Adenitis, and prompt treatment with Tuberculin in these cases should do much to lessen the number of individuals seen with scarred necks and discharging sores.

When a gland softens, and Pus forms during treatment, an attempt is made to aspirate the Pus with a needle introduced through healthy skin.

Fibrous matted glands, with thick capsules, are best excised, and such cases are referred to the County Hospital.

Working Capacity.

In the 78 cases discharged the restoration of working capacity was as follows:—

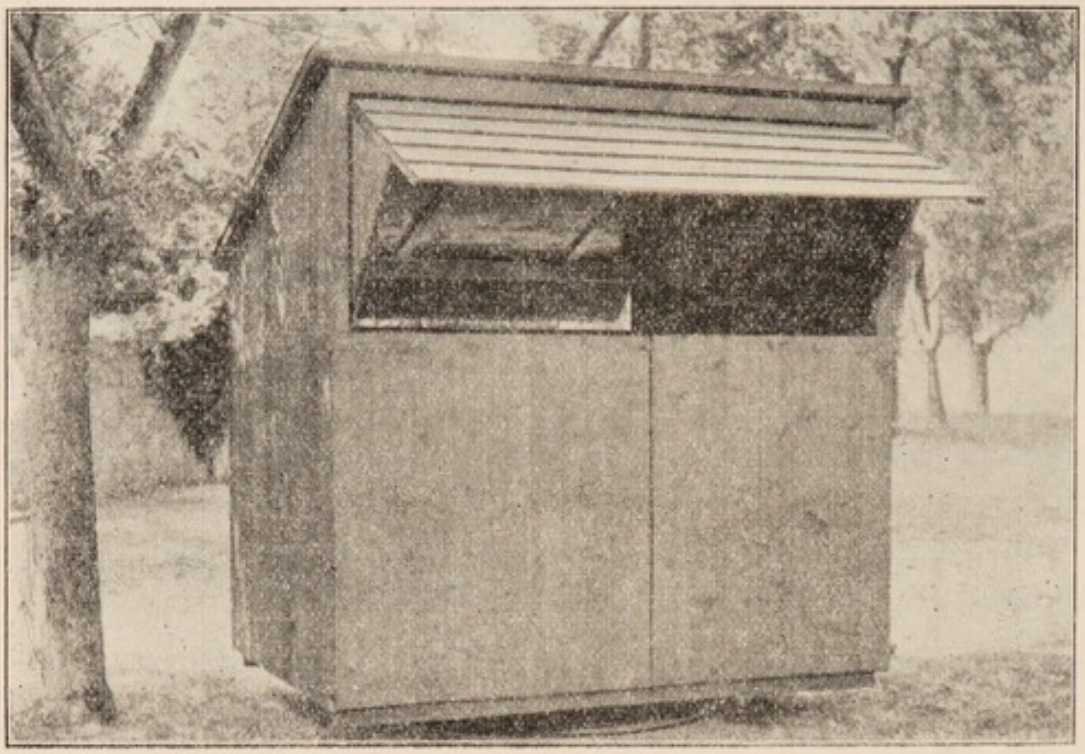
TABLE 12.

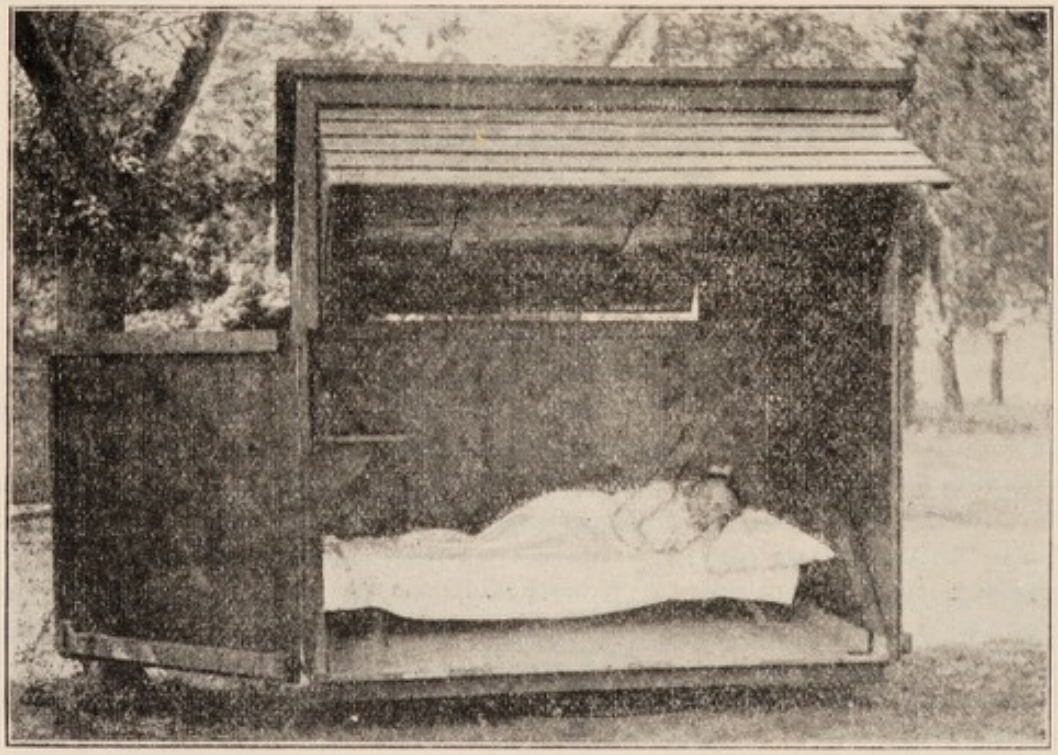
Working during treatment.	Working Capacity.		
	Fully Restored.	Partly Restored (*i.e.* may have to break off again).	Not Restored.
7	55	15	1

Shelters.

During the year eight shelters have been lent to patients. Six of these belong to the Tuberculosis Crusade Committee and two belong to the Corporation. The shelters have been lent without any fee, and are erected in the patient's back yard by men of the Corporation Depôt on Foss Islands. Two difficulties are met with in the use of Open-Air shelters, namely, the shyness of the patient owing to the publicity of the shelter in the somewhat exposed back yards of the usual workman's cottage; and, secondly, the small area of these yards in many instances demanding a small shelter. We have been fortunate in finding a type of shelter made by Mr. Godfrey, of Street, Somerset, after the design of Dr. Hilda Clark. A picture of this shelter will be seen on Page 44.

The length is 7 feet, width 5 feet, and height at back 5 feet, and height in front 7 feet. This can be erected in almost any yard, and secures for the patient a greater supply of moving air than if he were indoors even in a large bedroom. At the same time he is efficiently protected from the elements.





ILLUSTRATIONS OF OPEN-AIR SHELTERS USED IN YORK.

The use of shelters enables one to cut down the length of stay in the Sanatorium; it enables the patient to continue his Open-Air existence, and isolates him effectively from other members of the household, and it acts as a practical source of education in Open-Air principles to the neighbours.

In the future it is to be hoped that many more of our patients will be housed in shelters.

Dental Treatment.

The Dental Surgeon commenced visiting the Dispensary in May, 1913. Patients who show evidence of carious teeth, with oral sepsis sufficient to interfere with the proper assimilation of food, are instructed to attend on Saturday mornings at 10 a.m.

Teeth are extracted under Novocaine, and if the condition of the mouth demands a clearance, a general anæsthetic is administered in the patient's home.

Thirty-three patients attended, and 177 extractions were made. An enormous amount of dental caries exists amongst Tuberculous patients, and in those cases with oral sepsis at all marked it is useless to attempt treatment while the patient's gastro-intestinal tract is being constantly dosed with Pus from the septic mouth.

Patients often are found to wear dental plates under which septic stumps are hidden. Too often these plates are worn day and night, and are seldom properly cleaned.

It is little wonder then that such oral sepsis spreads to the lungs, and seriously complicates the Tuberculous process by the addition of a mixed infection.

Patients under treatment at the Dispensary are cross-questioned on these matters, and are provided with an antiseptic mouth wash.

Of the 78 cases discharged after treatment we find that on admission to the Dispensary 65 per cent. of the cases showed very definite signs of dental caries. Of these 13 had marked oral sepsis, with its attendant constitutional disturbance. Four of the cases showed the condition of Pyorrhœa Alveolaris (inflammation of the tooth sockets with Pus formation).

Open-Air Class, 11, Castlegate.

Shortly after the Tuberculosis Dispensary had been in operation, it became evident that there was need of some class to which Tuberculous children who were under the care of the Dispensary could go. These children were mostly excluded from the ordinary school, or attended very irregularly. Accordingly, in August, 1913, a temporary class was started in a disused room on the ground floor of the Dispen-

sary premises at 11, Castlegate, York, as an annexe to the Dispensary. The Education Committee lent their support by providing a teacher, and after a few months they erected an Open-Air shed of simple construction in the garden behind the Dispensary. Twenty-two children (boys and girls) between the ages of eight and twelve, were enrolled, including cases of "closed" lung Tuberculosis, Cervical Adenitis, and hip-joint disease. The improvement in physical signs, energy, and general appearance of the children has been most marked.

The Education Committee obtained a grant from the Board of Education in respect of this temporary Open-Air class, and in future therefore the class as a whole will be under the supervision of the School Medical Officers.

The children are given frequent intervals for exercise, and breathing and Swedish exercises are carefully carried out under the supervision of the teacher. Definite periods of rest after meals are enforced, the children lying on canvas reclining chairs warmly wrapped up in rugs. Temperatures are taken in the mouth before breakfast and before tea. Even on the coldest days in winter the children did not complain, the intervals for work being shortened, and the periods of exercise or organized games increased. Clogs, rugs, and guernseys are provided. The children are taught raffia work and the girls are instructed in sewing both by hand and by machine. The class has proved most popular with children and parents alike, and the Medical Officer has to keep a vigilant eye on the *bona fides* of some of the applicants.

The Education Committee intend providing three good meals a day to these children in the near future. The estimated cost of the meals is about £150.

There is no doubt that by dealing effectively with the Tuberculous "seedling," or "prophylactic," a step in the right direction is being made towards a considerable reduction in the mortality from Tuberculosis in the city. The Open-Air School is a very powerful weapon in this direction, for not only can the children actually Tuberculous continue, as it were, their Sanatorium existence, but those children who come from infected houses, and who undoubtedly harbour the infection, can be placed under the best possible conditions for prevention of the disease.

TABLE 13.

Number.	Age and Sex.	Height on Admission to Open-Air Class.	Increase in Inches.	Weight on Admission to Open-Air Class.	+ or − at last weighing.	Chest or Inspiration at last Measurement in Inches.	Increase or Decrease of Respiratory Excursion of the Chest in Inches.	Calf + or − (in inches).	Biceps + or − (in inches).	Time at Open-Air Class in weeks.	*Total Attendances out of Possible 169.	Diagnosis, Tuberculosis of :—	Treatment.
		ins.		st. lb.	lbs.	ins.	ins.			wks.			
1	F 8½	52¾	+2¼	4 0½	+ 2½	23	+ ¼	+ ¾	+ ¼	13	75	Lungs	Tuberculin
2	F 12	56½	+1¾	5 7¾	+ 9¾	26½	− ¾	+1¾	+ ½	7	74	Lungs	,,
3	F 10	54	±0	3 13¼	+ 3¼	25	± 0	+ ¼	+ ¼	7	50	Cervical Glands	General
4	F 9	52½	+2¼	4 8¼	+ 2¾	24½	− ½	±0	±0	17	138	Lungs (Suppurating Adenoids)	,, (Operation)
5	F 6 10/12	48½	+ ½	2 7	− 2½	20½	− ½	±0	+ ½	17	144	Lungs	Tuberculin
6	F 12	57	+2¼	5 11	+ 7	26¾	+1¾	±0	+ ¼	17	125	Lungs	General
7	F 9	46½	+2¾	3 7½	+11¼	23½	+1½	− ¼	+ ¼	17	145	Tonsils... ...	,, (Operation)
8	F 8	50	+ ½	3 11½	+ 1¾	24	+1½	+ ¼	+ ½	5	28	Lungs	General
9	M 9	49	+2	3 12	+ 4½	25¼	+1¾	+ ¼	+ ¼	17	126	Lungs	,,
10	M 11	53	+3½	5 1	+19¼	27¼	+2	− ¼	+ ¼	10	89	(Suspect) ...	,,
11	M 7	47½	+ ¾	3 1½	+ 6	23½	+2	±0	+ ½	16	137	Abdominal Glands	,,
12	M 9	45½	+2	3 7	+ 4¼	23½	+1¼	− ½	+ ¾	17	167	(Suspect) ...	,,
13	M 13	54	+ ½	4 13	+ 4	27½	+2	− ¼	+ ¼	14	131	Cervical Glands	Tuberculin
14	M 7	48½	+ ½	3 3½	+ 4¼	23½	+1½	+ ½	+ ½	14	141	Lungs	,,
15	M 8 6/12	47½	+2	4 0	+ 5½	26½	+2¾	+1	− ¼	17	166	Cervical Glands and Scrophuloderma	,,
16	M 7	44	+1	2 13¼	+ 1¼	22	+1	±0	±0	17	101	Lungs and Cervical Glands	General
17	M 9	48¾	+1	3 10½	+ 3	24	+1¾	+ ¾	+ ¼	17	134	Cervical Glands	,,
18	M 7	44½	+1	2 13¼	+ 5¾	23¼	+1¼	+ ¾	+ ¼	17	144	Lungs	,,
19	M 12	50½	+2	4 8	+ 1	26¾	+2¼	+1½	± 0	13	102	Lungs	,,
20	M 12 6/12	53½	+1½	5 7¼	+ 3¾	28	+2	+ ½	+ ¼	16	33	Lungs	Tuberculin
21	M 11	49	±0	4 5¼	− 1¾	24½	+ ½	±0	+ ¼	4	24	Hip Joint ...	General

*The Forenoon and Afternoon Sessions are counted as separate Sessions for School Attendance.

It will be readily seen from the above table that in almost every direction the children gained.

The column giving calf measurements shows least improvement, but probably this is due to the fact that the children were not running about so much as when away from school. In Column Eight there was an increase in the respiratory excursion of the chest in 17 out of the 21 cases. This increase is important, as movements of the chest largely determine the circulation of the blood in the upper parts or apices of the lungs. The circulation is often sluggish at this point in shallow breathers, and the apex is the site at which very often the disease shows itself in after years.

The "respiratory excursion of the chest" figure denotes the difference between the measurements of inspiration and expiration taken on admission to the school, subtracted from the difference between the measurements of inspiration and expiration when last examined.

Our best thanks are due to Dr. Macdonald and Dr. Ferguson, of the County Hospital, for operative help in cases of throat and nose disease.

Bacteriological Work.

The Tuberculosis Officer uses the Laboratory at the Health Department in 50, Bootham, and during the year carried out the following examinations:—

		Positive.	Negative.
Sputa	290	64	226
Urines	4	1	3
Faeces	3	—	3
Milk	2	—	2
Gland from Cow	1	1	—
Pus	1	1	—

In addition, in 10 cases autogenous vaccines were prepared for patients under treatment either at the Open-Air Wards or the Dispensary, in an endeavour to combat the invasion of the lung by organisms other than the Tubercle Bacillus.

In several of the cases encouraging results were obtained, but the preparation of a vaccine absorbs much time, and the chances of isolating the offending organism are obscured by technical difficulties.