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Borough of Harrogate.

REPORT

ON THE

Health and Sanitary Condition

OF THE

BOROUGH OF HARROGATE

FOR

1912

BY

JAMES MAIR,

Medical Officer of Health.

S. B. LUPTON, Printer, Prospect Crescent, Harrogate.

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To the Mayor, Aldermen, and Councillors of the Borough of Harrogate.

GENTLEMEN,

I have the honour to present to you for your consideration this, my third, ANNUAL REPORT upon the Health and Sanitary Condition of the Borough of Harrogate.

In doing so I would direct your attention to the fact that the principal mortality rates for the year have been exceedingly low. The Death Rate, the Infant Mortality, and the Zymotic Rate are each the lowest of which I have any record. The Birth Rate also is the lowest recorded—though this is hardly a subject for congratulation.

I have again to thank my colleagues for the ready assistance they have always given me, and the members of my own staff for their loyal help in carrying out the work of the department.

I have to acknowledge also the courtesy which the Chairman and members of the Health Committee have always extended to me.

I am, Gentlemen,

Your obedient Servant,

JAMES MAIR.

Harrogate,
May 1913.

Principal Figures, 1912.

Population estimated at middle of 1912		34,400
Area in Acres		3,276
Census, 1911	Population...	33,706
	Density of Population (persons per acre)	10·3
	Number of Inhabited Houses	7,409
	Average number of persons per house...	4·6
Rateable Value		£269,202
Penny Rate produces		£1,000
Number of Births (Male, 294 / Female, 206)		500
Birth Rate		14·5
Number of Deaths (Male, 163 / Female, 157)		320
Death Rate		9·3
Infant Mortality		64
Zymotic Death Rate...		0·26
Death Rate from Phthisis		0·44
Death Rate from other Tuberculous Diseases		0·15
Mean Annual Temperature...		46·6°F.
Total Rainfall		41·80ins.
Hours of Bright Sunshine		1078·4

Physical Features.

Harrogate is a Municipal Borough in the West Riding of Yorkshire, about 18 miles to the north of Leeds.

It lies on the edge of the Yorkshire Moors, on a tableland which forms the western boundary of the Plain of York, and is situated almost midway between the Irish Sea and the German Ocean. Its mean altitude is about 400ft., the highest point being Harlow Hill some 600ft. above sea level.

Councillor J. H. Lofthouse, who has made a special study of the Geology of Harrogate, has been kind enough to write the following interesting account, for which I am much indebted to him.

"The rocks which occur in the immediate vicinity of Harrogate belong to the Carboniferous formation, and comprise the Harrogate Roadstone series, and the lower beds of the millstone grit.

"The millstone grit is, for the most part, a series of several beds of coarse massive grits, separated from each other by thick beds of shale.

"The Harrogate Roadstone series consist of shales, with a few bands of cherty limestone, and a fairly massive bed of sandstone near the base.

"Stretching from Harrogate in a south-westerly direction, an anticlinal throws up the roadstone strata, and dipping from it the millstone grit crops out on all sides. This is clearly seen at Pannal and Birk Crag, where the same bed of grit forms, as it were, walls on either side of the anticline. These rocks dip at Birk Crag about 43 degrees N.W., but on the south side they dip to the Crimple Valley, that is, in an opposite direction, or S.E., from 20 to 40 degrees. They bend round to the fault, and at Starbeck dip to the east only about 4 degrees. From this it appears that the anticlinal of Harrogate dies out to the east.

"The axis of this disturbance is well seen in Low Harrogate, where the roadstone dips respectively N.W. and S.E. at high angles, and the same thing occurs near Beckwithshaw to the S.W. of Harrogate. From these two positions the general run of the axis of disturbance may be easily gathered. The highest point in this area is Harlow Hill, 600ft. above sea level. The sandstone which caps this hill is one of the lowest beds of the district. About half-a-mile on either side of this hill occur some of the principal sulphur springs. The northern boundary of the roadstone measures is formed by a fault which runs from Shaw Green, through Harrogate, to Bilton, and throws the roadstone against the millstone grit."

For municipal purposes the Borough is divided into five wards. The census population of these wards is given in the next table.

TABLE I.

Name	Population		Increase or Decrease
	1901	1911	
Central	5,744	5,562	— 182
East	8,678	9,524	+ 846
West	7,835	8,836	+ 1,001
Bilton	2,850	5,805	+ 2,955
Starbeck	3,316	3,979	+ 663
Whole Borough ...	28,423	33,706	+ 5,283

Harrogate is almost wholly a residential town. It is a well-known health resort, famous for the number and variety of its mineral waters, and the number of invalids who resort to it in search of health is yearly increasing.

There are no manufactories in the town, and practically the only industries are those incidental to a health resort.

The rateable value of the Borough is £269,202, and a penny rate produces £1000.

Population.

The estimated population at the middle of 1911 was 33,840, and the natural increase of the population (excess of births over deaths) during 1912 was 180. This, added to the figure for 1911, gives an estimated population for 1912 of 34,020. This method, however, takes no account of the effect of migration, and as in Harrogate the loss from emigration is more than counterbalanced by the gain from immigration, it underestimates the population.

Another method, and one which I believe to be more accurate, is to use the number of inhabited houses as a basis for calculation. At the middle of the year there were approximately 7,490 inhabited houses in the town, and if we assume that the number of persons occupying each house is the same as at the census (4·6) this gives us an estimated population of 34,454. This figure agrees closely with that obtained by the Registrar General (34,402), who assumes that the population has increased at the same rate since the last census as it did during the previous intercensal period.

As I believe the Registrar General's estimate to be fairly accurate I have adopted it, and upon it are calculated the various mortality rates given in this Report.

Density of Population.

The area of Harrogate is 3,276 acres, and at the census of 1911 the number of persons per acre was 10·3. Estimating the population for 1912 at 34,400, the number of persons per acre is 10·5.

It has been shown that there is a relation between the density of the population and the mortality rate, the death rate being as a rule higher in the more densely populated districts. But of much greater importance is the overcrowding of houses, which if present to any extent cannot fail to influence adversely the mortality. The average number of persons per house at the

census in 1911 was 4·6. As Harrogate contains an unusually large proportion of houses with five or more rooms, this figure cannot be considered high.

Natural Increase of Population.

The following table shows the natural increase of the population—that is, the excess of births over deaths—in recent years.

TABLE II.

Year	Population	Births	Deaths	Nat. Inc.	Nat. Inc. per 1,000
1902	30,000	695	354	341	11·4
1903	30,000	712	377	335	11·2
1904	30,500	734	384	350	11·5
1905	31,000	700	378	322	10·4
1906	31,500	659	381	278	8·8
1907	32,000	631	370	261	8·2
1908	32,000	555	358	197	6·2
1909	33,000	640	358	282	8·6
1910	33,500	629	348	281	8·4
1911	33,840	606	397	209	6·2
1912	34,400	500	320	180	5·2

This table shows that the rate has been steadily falling, and that the rate for 1912 is the lowest recorded in recent years. It is also evident that the increase in the population of the Borough is due not so much to natural increase as to immigration.

Births and Birth-rate.

During 1912 there were 489 births—287 male and 202 female—registered as having occurred within the Borough. The births of 11 children—7 males and 4 females—whose parents though ordinarily resident in Harrogate were at the time of the birth living elsewhere, have to be added making the total number of births 500. The birth-rate for the year is therefore 14·5 per 1000 of the population, which is 3·4 per 1000 below the rate for 1911.

The birth-rate for England and Wales during 1912 was as follows :—

England and Wales	23·8*
95 Great Towns	24·9
146 Smaller Towns	23·8
England and Wales, less the 241 Towns ...	22·5

*Lowest on Record.

In the next table the birth-rate for Harrogate is compared with that for England and Wales.

Birth-rate for Harrogate compared with England and Wales, 1900-1912.

TABLE III.

Year	Harrogate		England and Wales Rate per 1,000
	Number of of Births	Rate per 1,000	
1900	421	17·0	28·7
1901	760	19·7	28·5
1902	695	23·1	28·6
1903	712	23·7	28·4
1904	734	24·0	27·9
1905	700	22·6	27·2
1906	659	20·9	27·0
1907	631	19·7	26·3
1908	555	17·3	26·5
1909	640	19·4	25·6
1910	629	18·8	24·8
1911	606	17·9	24·4
1912	500	14·5	23·8

This table shows the continuous decline of the local birth-rate which is apparantly falling more rapidly than in the rest of the country.

It is possible that this fall in the Harrogate birthrate may be due to some extent to the age and sex distribution of the population, but until the details of the census are available one cannot be certain of this.

Illegitimate Births.

It is unsatisfactory to have to record that the proportion of illegitimate births still remains high. 33 of the births—23 male and 10 female—were illegitimate. Included in this number are 8 births which have been transferred to Harrogate from other districts. The illegitimate births therefore form 6·6 per cent. of the whole number. The percentage for 1911 was 6·8; for 1910, 4·3; for 1909, 5·9; and for 1908, 5·2.

Birth-rates in Wards.

I have hesitated to prepare a table showing the birth-rates in the different wards, for the reason that it is very difficult to estimate with any degree of accuracy the ward populations. Any mistake in estimating the population of the whole Borough becomes greatly magnified in arriving at an estimate of the population of the different wards. Again, I have no information as to the wards to which the transferred births should be allocated, and I have therefore ignored these and used only births which were registered in the Borough in calculating the rates in the wards.

For these reasons, therefore, the rates must be taken with some reservation, but as I have thought that the ward statistics may be of some value in comparing one part of the town with another I give the table underneath.

Table showing the number of births and the birth-rates in the wards during 1912.

TABLE IV.

Ward	Estimated Population	Total No. of Births	Illegitimate Births	Percentage of Illegitimate Births	Birth-rate per 1,000 of Population
Central ...	5,540	63	5	7·9	11·4
East	9,630	128	3	2·3	13·2
West	8,975	62	4	6·4	6·9
Bilton . .	6,193	146	7	4·8	23·6
Starbeck ...	4,062	90	6	6·7	22·2

The birth-rate in the different wards varies considerably, being highest in the Bilton Ward (23·6) and lowest in the West Ward (6·9).

Notification of Births.

The Notification of Births Act, 1907, has been adopted by the Harrogate Town Council, and came into operation on the 11th March, 1912.

This Act requires all births to be reported to the Medical Officer of Health within 36 hours of their occurrence. The notification is to be made by the father of the child if he is residing in the house when the birth takes place, and by any person in attendance upon the mother at the time of or within six hours after the birth. The Act also provides a penalty upon conviction for failure to notify. Still-births have also to be notified, provided the child has reached the 28th week of pregnancy.

The object of this Act is to give the Sanitary Authority early information of the occurrence of births, so that early visits may be made by Health Visitors to births in poorer neighbourhoods and advice and instruction given to the mothers, with a view to reducing the great loss of infant life. All medical men and midwives practising in the town are provided with stamped letter-cards upon which to notify the births. No fee is payable for this notification, and I wish to acknowledge here the great assistance which has been rendered by medical men and midwives in carrying out this Act.

From the date of the adoption of the Act to the end of the year 354 births were notified; 129 by medical men, 169 by midwives, and 56 by parents or other persons. In 46 instances the birth was not notified as required by the Act. Each of these unnotified births was enquired into, and in each instance it was found that the omission was due to ignorance. In no case was there any wilful refusal. Homes where a birth has taken place are visited by Miss Wardle, Health Visitor, an account of whose work is given later.

Still-Births.

As has already been stated, the Notification of Births Act requires the notification of still-births, and 18 notifications related to still-born children; 10 were notified by medical men, 2 by midwives, and 6 by parents or other persons.

By the courtesy of the superintendents of the cemeteries I have been able to ascertain that 28 still-born children were interred during the year. In 26 of these the certificate was given by a medical man and in 2 by a midwife.

In 1911 there were 31 burials of still-born children in Harrogate.

Deaths.

353 deaths—72 less than 1911—were registered in Harrogate during the year. Included in this number are the deaths of 293

TABLE V.

Year	Harrogate	England and Wales
1900	15·6	18·2
1901	13·2	16·9
1902	11·8	16·2
1903	12·6	15·4
1904	12·5	16·2
1905	12·2	15·2
1906	12·1	15·4
1907	11·5	15·0
1908	11·2	14·7
1909	10·8	14·5
1910	10·3	13·4
1911	11·7	14·6
Average for ten years 1902-11	11·7	15·1
1912	9·3	13·3*

Lowest on Record*

persons belonging to the Borough (residents), and 60 persons not belonging to Harrogate, but dying in the Borough (non-

residents). 27 Harrogate residents died in other places, and these have to be added to the 293 resident deaths, making a total of 320 resident deaths.

Of these 320 deaths, 163 were males and 157 females. The death-rate is therefore 9·3 per 1,000. It is 2·4 per 1,000 below the rate for 1911 and is the lowest rate of which I have any record.

Table V. (on preceding page) gives the Harrogate death-rate compared with that of England and Wales.

It is satisfactory to note that the Harrogate rate is no less than 4 per 1000 below the rate for England and Wales, which is also the lowest on record.

Corrected Death-rate.

The reasons for correcting the death-rate for age and sex distribution have been explained in a former report, and the same method has been followed in this report. As the details of the 1911 census are not yet available, the factor for correction (1·08) has been calculated from the figures of the 1901 census, and may therefore not be quite accurate now.

The corrected rates are given below.

	Crude	Corrected
England and Wales	13·3	.. 13·3
95 Great Towns	13·8	.. 14·6
146 Smaller Towns	12·4	... 13·0
England and Wales, less the 241 Towns	12·9	... 12·1
HARROGATE	9·3	.. 10·0*

* Note—While this report is in the press I learn from the Registrar General that the factor for correction based on the 1911 census is 1·0029. This factor is so small that it has no appreciable effect upon the death-rate, and the corrected rate for 1912 is therefore 9·3 and not 10·0 as stated above.

The following table shows the number of deaths at the various age periods.

AGE AT DEATH.

Under 1 year of age	...	32	=	10·0	per cent. of total number.
1 year and under 2	...	9	=	2·8	,, ,,
2 years ,, 5	...	9	=	2·8	,, ,,
5 years ,, 15	...	6	=	1·9	,, ,,
15 years ,, 25	...	13	=	4·1	,, ,,
25 years ,, 45	...	30	=	9·4	,, ,,
45 years ,, 65	...	75	=	23·4	,, ,,
65 years and upwards	...	146	=	45·6	,, ,,
		320		100·0	

It will be noted that nearly one-half of the deaths occurred among people aged 65 years and upwards.

Of the total number of deaths registered, 46 occurred in one or other of the public institutions in the town.

Every death was certified by a medical man or coroner.

DEATH-RATES IN WARDS.

The next table shows the number of deaths and the death-rates in each of the Municipal Wards.

TABLE VI.

Ward	Population	Number of Deaths	Rate per 1,000
Central	5,540	64	11·6
East	9,630	84	8·7
West	8,975	87	9·7
Bilton	6,193	47	7·6
Starbeck	4,062	38	9·4
Whole Borough ..	34,400	320	9·3

Inquests.

During the year 28 inquests were held in Harrogate; 21 related to residents and 7 to non-residents.

The causes of death as certified by the Coroner were :—

RESIDENTS.

Natural Causes (Disease)	8
Accidental burns and scalds	4
Accidentally asphyxiated	2
Accidental injuries...	2
Suicide by poisoning	2
,, coal gas poisoning	1
,, shooting	1
,, wounding	1

NON-RESIDENTS.

Natural Causes (disease)..	1
Accidental injuries	5
,, burning	1

Infant Mortality.

This rate is not calculated upon the estimated population, but is expressed as the ratio of deaths of infants under one year of age per 1,000 births registered during the year. It is therefore not liable to the same errors as those rates whose accuracy depends upon the correctness of the estimation of the population.

During the year there were 500 births, and 32 children under one year of age died during the same period, giving an infant mortality of 64 per 1,000 births. 26 of the infants who died were males, and 6 were females.

There were 29 deaths of legitimate and 3 of illegitimate infants. The mortality among legitimate infants was therefore 62·1 per 1,000, and among illegitimate infants 90·9 per 1,000.

TABLE XII. PRINCIPAL CAUSES FOR INFANT DEATHS, 1901 TO 1912.

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Marasmus, Debility and Atrophy	27	?	?	?	10	8	7	5	5	6	9	2
Convulsions	?	21	14	8	16	9	9	10	10	4	4	5
Bronchitis and Pneumonia ..	12	11	13	15	12	11	7	11	9	7	9	6
Whooping Cough	5	7	3	4	7	—	—	2	2	2	4	1
Measles	—	—	1	1	—	2	—	—	3	1	—	1
Premature Birth	16	?	11	14	18	14	5	8	10	16	12	5
Congenital Defects	?	?	?	?	5	4	4	5	9	7	4	4
Diarrhœa, Enteritis, & Gastritis	14	7	9	12	11	22	3	8	3	9	14	3
All other Causes	32	31	38	31	13	16	9	14	4	5	5	5
Total Deaths	*106	*77	*89	85	92	86	44	63	55	57	61	32
Total Births	760	695	712	734	700	659	631	555	640	629	606	500
Infant Mortality.	144·7	113·7	116·6	115·8	131·4	130·5	69·7	113·5	85·9	90·6	100·7	64

*110 Deaths appeared to have been registered in 1901, 79 in 1902, and 83 in 1903—vide preceding table.

This rate is very low; it is indeed the lowest of which I have any record. It is 5·7 per 1,000 below the rate for 1907, the previous lowest rate, and no less than 42 per 1,000 below the average rate for the preceding ten years. The mortality for the different districts of England and Wales is given in Table VII., and it will be seen that Harrogate compares very favourably with them.

The significance of this fall will perhaps be better appreciated when I state that, had the mortality during 1912 been the same as the average mortality during the preceding ten years, there would have been 53 infant deaths instead of only 32. There has thus been a saving as compared with these years of 21 lives. And this is not the whole benefit. A low infant mortality means that not only do fewer children die, but that there has been a smaller amount of non-fatal illness during the year. So that not only have fewer lives been lost, but a less number of children have suffered from illnesses which may, and no doubt frequently do, permanently impair their constitutions.

Needless to say it is very satisfactory to be able to report such a low mortality, and it is gratifying that this record low mortality should coincide with the adoption of the Notification of Births Act and the institution of Health Visiting. It would be very pleasant if one could ascribe this fall in the rate to these measures, but while they have undoubtedly had some effect, a considerable part of the credit is due to the fact that the summer of 1912 was cold and wet, and therefore favourable to infant life. Infant Mortality is much influenced by climatic conditions, and while hoping that the present low level will be maintained, too much disappointment must not be felt should the rate again show a tendency to rise.

Table VII. (page 18) shows the Infant Mortality in Harrogate and in England and Wales, 1900 to 1912.

TABLE VII.

Year	Harrogate		England and Wales
	Number of Deaths	Rate per 1,000 Births	Rate per 1,000 Births
1900	61	144·9	154
1901	110	144·7	151
1902	79	113·7	133
1903	83	116·6	132
1904	85	115·8	146
1905	92	131·4	128
1906	86	130·5	133
1907	44	69·7	118
1908	63	113·5	121
1909	55	85·9	109
1910	57	90·6	106
1911	61	100·7	130
Average for ten years 1902-1911	71	106·8	126
1912	32	64·0	95

The next table shows the mortality in the different districts of England and Wales compared with Harrogate.

England and Wales	95*
95 Great Towns	101
146 Smaller Towns	98
England and Wales, less the 241 Towns ..	86
HARROGATE	64

*Lowest on Record.

Table showing the Infant Mortality in each of the four quarters of 1910 to 1912.

TABLE VIII.

	1910	1911	1912
First Quarter	89·7	66·2	111·9
Second ,,	62·9	55·6	55·6
Third ,,	90·9	173·0	26·1
Fourth ,,	116·9	120·8	61·9

Table showing the Infant Mortality in each Ward during the years 1910 to 1912.

TABLE IX.

Ward	1910	1911	1912
Central ...	82·4	115·9	127·0
East	59·1	121·2	39·0
West	107·8	40·4	95·2
Bilton	136·4	96·4	61·6
Starbeck ...	84·1	125·0	44·4

NOTE—In preparing these two tables, only those births and deaths which occurred in the Borough have been used. No correction has been made for transferable births and deaths.

Table showing the number of children dying in each of the first twelve months of life.

TABLE X.

	Number of Deaths
1st month	16
2nd ,, ...	1
3rd ,, ...	5
4th ,, ...	0
5th ,, ...	1
6th ,, ...	2
7th ,, ...	2
8th ,, ...	3
9th ,, ...	1
10th ,, ...	0
11th ,, ...	0
12th ,, ...	1

Table showing the number of children dying in each of the first four weeks of life during 1912.

TABLE XI.

	Number of Deaths
1st week ...	9
2nd ,, ...	0
3rd ,, ..	5
4th ,, ...	2

The mortality was highest in the first quarter of the year, and lowest in the third, in which quarter it is, as a rule, highest.

I have prepared a table (Table IX.) showing the infant mortality in each of the Wards, which shows that the Central Ward heads the list with a mortality of 127, while the East Ward occupies the place of honour with a mortality of only 39. It should be borne in mind that the figures from which these rates are calculated are too small to allow this table to be anything more than a rough means of comparison.

Of the 32 children who died during the year, 16 (or exactly one-half) died before they were four weeks' old; 9 (or 28 per cent. of the whole number) had lived for less than one week; and 6 (or 18 per cent.) survived their birth for less than 24 hours.

Table XII. shows that while there has been a decrease in the number of deaths from nearly every cause, this decrease has been most marked in the deaths from diarrhœal diseases.

Ten deaths were due to premature birth or some developmental defect, and with one exception these all occurred in the first month of life. It is evident that little can be done after birth has taken place to prevent these deaths. Measures which are to have any effect in reducing the mortality from these causes must be directed to improving the health and surroundings of the expectant mother, and it does not as yet seem possible to do much in this direction.

There can be no doubt, however, that improper feeding and lack of proper care in looking after the infant are responsible for much sickness and not a few deaths among young children. As I have stated in former reports, I believe that this is almost entirely due to ignorance, and it is with a view to combatting this ignorance that health visiting has been instituted.

I am glad to say also that the Education Committee have commenced the teaching of infant care and management to the older girls attending the elementary schools. I feel sure that

this is a step in the right direction, and one which in years to come will assist, and assist largely in the reduction of the infant mortality. Unfortunately, the exigencies of the Code only allow of one half-hour per week being devoted to this subject. I should like to see more time given to the teaching of subjects such as this and cookery and domestic management. I feel that some of the subjects at present taught might quite well be given up for these, to my mind, far more useful subjects.

Health Visiting.

As this is the first complete year which has elapsed since the institution of Health Visiting, it seems appropriate that I should give here a short account of the lines upon which it is carried out. Miss Wardle, who was appointed Health Visitor towards the end of 1911, carried on this work throughout the year. In addition to her work among the babies Miss Wardle visits cases of phthisis, and she is also School Nurse. The only objection to this combination of duties is that, as much the greater portion of her time is taken up by school work, it is not possible to devote so much time to health visiting as one could wish. The work was also handicapped in the beginning of the year by the fact that the Notification of Births Act was not then in force, and it was not possible to visit the births until the returns had been received from the Registrar, so that in most cases the child was six weeks old before a visit could be paid. Since this Act came into force on March 11th, 1912, it has been possible to visit the births much earlier, and the value of the work has been correspondingly enhanced.

Notifications of birth are received daily by the Medical Officer of Health, and the particulars contained in them are entered in a register. The Medical Officer goes through this register every day with the Health Visitor, and decides which births are to be visited. Not every birth is visited. Many births occur in houses where it is quite unnecessary that a visit

be paid, and of these no further notice is taken. Attention is concentrated upon those births where a visit is most likely to be of benefit, that is, upon births occurring in working-class, and especially in poorer working-class, homes. Births notified by medical men are not visited until a fortnight after the birth has taken place, by which time the doctor has as a rule ceased attending. Those notified by midwives are visited at once.

A visit is never pressed upon unwilling parents; the instructions to the visitor are strict upon this point. If the parents raise any objections to her visit she must at once depart, and make no effort to force her services upon them. I am glad to say, however, that very rarely, if ever, is any objection raised; on the contrary the visits are almost invariably welcomed and looked forward to. Indeed, the visitor is not unfrequently asked to visit more often than she can possibly find time to do.

At the first visit it is, of course, frequently found that the home surroundings and the conditions generally are such that no further visit is necessary, but in a proportion of cases it is considered advisable, in the interests of the child, to keep the home under supervision. These cases are visited again as frequently as possible, but as I have already said the other duties of the health visitor do not permit her to visit them so often as could be wished.

The visit is made as informal as possible, the intention being that the visitor shall be looked upon as a friend and not as an official. She has a friendly chat with the mother, suggests any necessary alterations in the baby's diet, etc., and, on departing, leaves a leaflet giving simple directions as to the feeding, etc., of infants.

Records, of course, have to be kept, but the taking of notes is relegated to a strictly subordinate position. As few notes as possible are made in the house and the doing of anything which can give the visit an official appearance is, so far as is possible, avoided. The information obtained is entered upon cards which

are kept at the office, and when the infant has passed from observation these cards are filed in such a manner as to be available for reference at any time. Once a week the Medical Officer goes through these cards with the Health Visitor, and deals with any points that may arise. Any sanitary defects which have been discovered in the houses are handed to the Sanitary Inspector to be remedied, and other matters are dealt with as seems appropriate.

Work of the Health Visitor.

During the year 350 births (including 9 still-births) were visited; of these 155 had been attended by medical men; 194 by midwives, and in 1 case no qualified person had been in attendance.

In 100 cases it was not thought necessary to pay more than one visit; the remaining 250 cases were re-visited at varying intervals, a total number of 510 subsequent visits being made. Enquiry was made in each case as to the method of feeding adopted, and the following information was obtained :—

Of the 341 living infants visited, 243 were wholly breast-fed; 64 were entirely hand-fed, and in 23 instances breast-feeding was supplemented by hand-feeding. The reasons given for resorting to hand-feeding in these 64 cases were: illhealth in 9 cases; by medical advice in 20; mother at work in 13; and in 22 cases indifference appeared to be the only reason.

It is satisfactory to know that when a subsequent visit was made, three months after birth, it was found that of 174 infants, who at the first visit were entirely breast-fed, 116 were still at the breast. In 23 cases the breast was supplemented by hand feeding; 19 were being wholly hand fed; the remaining 16 had left the town, and no information could be obtained.

The following extracts from Miss Wardle's report are of interest, and show some of the difficulties met with.

"The chief work has, of course, been amongst the infants; and this, I am glad to say, has been well received by the parents of the infants visited.

"There was, quite naturally, perhaps, a little prejudice to overcome at the outset, but when the mothers realised that my visit was not merely one of inspection but was meant to be both friendly and helpful, this disappeared.

"I also made a point of seeing personally those midwives whose practice is largely amongst the mothers coming under my notice, with the result that my visit was expected, and its object understood.

"The chief aim has been to encourage the mothers to breast-feed their babies whenever possible, and where this is not possible to suggest a suitable substitute.

"The most common substitutes resorted to are "pobs" and the cheaper varieties of patent foods, and of the latter it is not uncommon to find a different kind used each week.

"The value of properly diluted cows' milk is seldom understood, the mothers believing that this is not "satisfying enough."

"Where the breast-milk alone is really insufficient in quantity, it is most difficult to persuade the mothers to persevere. There appears to be a deeply-rooted idea that a child should not be given any other kind of milk if it is being breast-fed at all.

"The consequence of this is that the infant is either weaned entirely or is given quite unsuitable food in addition to the breast.

"Many of these ideas are very firmly fixed in the maternal mind, and impressively reiterated by the grandmothers along with other superstitions, such as the necessity for every baby to have thrush, and the firm belief that if a baby is weighed it will die before its first birthday.

"It is impossible to overcome these ideas all at once, especially as the grandmothers have far greater opportunities than an occasional visitor, but the fact that many infants have been saved from having thrush by a little cleanliness, and have also celebrated their first birthday in spite of being weighed, causes the mothers to feel quite proud of their own efforts, and also somewhat heroic, considering the risk they ran."

Zymotic Mortality.

By this term is meant the mortality from the seven principal zymotic diseases which are set out below.

This rate is largely affected by the prevalence of infectious disease and fluctuates according as infectious diseases are prevalent or not. There were 9 deaths registered from these diseases during the year, compared with 26 in 1911. The zymotic death-rate is therefore 0·26 per 1000, and is the lowest rate of which I have any record. It is 0·51 per 1000 below the rate for 1911.

It will be seen from the following table that the decrease is almost entirely in the deaths due to diarrhœa.

	1911		1912	
	Number	Rate	Number	Rate
Smallpox	0	0·00	0	0·00
Scarlet Fever ...	0	0·00	0	0·00
Diphtheria ...	1	0·03	1	0·03
Enteric Fever ...	2	0·06	0	0·00
Measles	1	0·03	1	0·03
Whooping Cough	5	0·15	4	0·12
Diarrhœa	17	0·50	3	0·09
Total	26	0·77	9	0·26

The zymotic rate for England and Wales was 0·99, or nearly four times as high as the Harrogate rate.

In the next table is shown the zymotic rate for each year since 1901.

Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Rate	1·59	0·53	0·63	0·82	0·93	1·21	0·47	0·63	0·42	0·42	0·77	0·26

Notification of Infectious Diseases.

During the year 62 cases of infectious disease were notified, as compared with 67 in 1911. There were 12 cases of diphtheria ; 10 of erysipelas ; 38 of scarlet fever ; 1 of enteric fever ; and 1 of acute poliomyelitis.

The ages of the patients and the numbers occurring in each ward are given in the Local Government Board Table II., at the end of the report.

WEEKLY NOTIFICATIONS OF INFECTIOUS DISEASE

	Small pox	Scarlet Fever	Diph-theria	Enteric Fever	Erysi-pelas	Puerperal Fever	Acute Poliomyelitis	Total
To Jan. 6	...	...	..	...	...	...	...	...
Week ended.								
Jan. 13	...	...	...	...	...	...	...	...
,, 20	...	...	..	...	...	...	...	...
,, 27	...	...	...	...	...	...	...	...
Feb. 3	...	2	...	...	1	...	...	3
,, 10	...	2	1	...	1	...	..	4
,, 17	...	1	...	...	...	...	...	1
,, 24	...	2	...	...	...	...	...	2
Mar. 2	...	2	...	...	...	...	...	2
,, 9	...	1	...	...	1	...	...	2
,, 16	...	...	1	1	...	...	...	2
,, 23	...	1	...	..	...	...	...	1
,, 30	...	...	...	...	...	...	...	...
April 6	...	1	...	...	...	...	...	1
,, 13	...	...	...	...	...	...	...	...
,, 20	...	3	...	...	1	...	...	4
,, 27	..	1	...	...	...	...	...	1
May 4	...	1	...	...	..	...	...	1
,, 11	...	...	...	...	1	...	...	1
,, 18	...	1	...	..	...	...	...	1
,, 25	...	...	1	...	1	..	...	2
June 1	...	...	...	...	...	...	...	...
,, 8	...	...	...	...	...	...	...	...
,, 15	...	1	...	...	...	...	...	1
,, 22	...	...	...	...	...	...	...	...
,, 29	...	...	...	...	1	...	...	1
July 6	...	...	...	...	...	...	...	...
,, 13	...	1	...	...	1	...	...	2
,, 20	...	3	...	...	...	...	...	3
,, 27	...	...	...	...	...	...	...	...
Aug. 3	...	...	...	...	...	...	...	...
,, 10	...	...	...	...	...	...	...	...
,, 17	...	1	1	...	...	...	...	2
,, 24	...	2	1	...	...	...	...	3
,, 31	...	...	1	...	...	...	...	1
Sept. 7	...	...	...	...	...	...	...	...
,, 14	...	...	...	...	...	...	1	1
,, 21	...	1	...	...	...	...	...	1
,, 28	...	...	2	...	...	...	...	2
Oct. 5	...	1	1	...	...	...	...	2
,, 12	...	...	1	...	...	...	...	1
,, 19	...	1	1	...	...	...	...	2
,, 26	...	...	...	...	...	...	...	...
Nov. 2	...	2	...	...	...	...	...	2
,, 9	...	...	...	...	1	...	...	1
,, 16	...	...	...	...	1	...	...	1
,, 23	...	...	1	...	...	...	...	1
,, 30	...	...	...	...	...	...	...	...
Dec. 7	...	...	...	...	...	...	...	...
,, 14	...	...	...	...	...	...	...	...
,, 21	...	...	...	...	...	...	...	...
,, 28	...	1	...	...	...	...	...	1
To Dec. 31	...	6	...	...	...	...	...	6
Total for 1912	...	38	12	1	10	...	1	62
,, 1911	...	32	18	4	12	1	...	67
,, 1910	...	32	16	0	13	1	...	62
,, 1909	...	33	16	6	10	2	...	68

Isolation Hospitals.

The Isolation Hospital, situated at Thistle Hill, near Knaresborough, is a joint hospital, and serves the three districts of Harrogate Borough, Knaresborough Urban, and Knaresborough Rural Districts. It is controlled by a Joint Committee, composed of members of each of the Councils of these three districts. It contains 50 beds and three diseases, viz :—scarlet fever, diphtheria, and enteric fever can be treated concurrently. The accommodation appears to be amply sufficient for the needs of the district.

The Smallpox Hospital, which is also under the control of the Joint Hospital Committee, and which serves the same three districts, is situated on the Corporation Farm, Ripon Road, just outside the Borough boundary. It contains 28 beds, and is kept in a constant state of readiness to receive patients.

Smallpox.

No case of smallpox occurred during the year. The Borough has been free from this disease since 1905, when there was one case.

In England and Wales 111 cases of smallpox were notified during 1912, and there were 10 deaths.

As has already been stated, the Smallpox Hospital is maintained in a constant state of readiness to receive patients. It is all the more important that this should be so, because, in these days of decreasing vaccination, prompt isolation is becoming our main line of defence against smallpox.

Scarlet Fever.

Dnring the year, 38 cases of scarlet fever were notified—6 more than in 1911. The attack rate is therefore 1·10 per 1,000 of the estimated population. This is slightly above the rate for 1911 (0·95), which was one of the lowest recorded. The average rate for the ten years, 1902 to 1911, was 2·63.

The attack rate for England and Wales during 1912 was 2·98 per 1000.

In two instances the infection was definitely known to have been contracted outside the Borough. In both cases the patients came from infected houses and developed scarlet fever within 24 hours of their arrival in Harrogate.

The cases occurred in the different wards as under :—

Central	East	West	Bilton	Starbeck
7	9	8	7	7

19 of the cases were males and 19 were females, and the age incidence was :—

Under 1 year	1-5	5-15	15-25	25-45	45 and upwards
0	8	21	6	3	0

In 19 instances the child affected was attending an elementary school. The schools affected and the number of cases occurring in each are given under :—

Western Council, Mixed ...	...	5 cases
Grove Road Council, Mixed	...	5 ,,
,, ,, Infants	...	2 ,,
Western Council, Infants ...	...	1 case
Starbeck Council, Mixed ...	...	1 ,,
,, ,, Infants ...	...	1 ,,
Bilton Council, Infants ...	...	1 ,,
Bilton Endowed, Infants ...	...	1 ,,
St. Peter's C. of E., Infants	...	1 ,,
St. Robert's R.C., Infants...	...	1 ,,

One case occured in each of 22 houses ; in 5 houses there were 2 cases, and in 2 houses there were 3 cases each.

Of the 38 cases notified, 32 (or 84 per cent.) were removed to the Isolation Hospital.

The disease was apparently of a mild type, and for the third year in succession there were no fatal cases, and the death-rate was therefore nil. In England and Wales the death-rate was 0·05, and in 146 smaller towns (including Harrogate) the rate was the same (0·05).

TABLE XIV.

SCARLET FEVER STATISTICS.

Year	Population	Notifications	Attack Rate per 1,000	Deaths	Death Rate	Case Mortality per cent.	Removed to Hospital	Percentage Removed
1897	18,500	25	1·35	1	0·05	4·0	11	44·0
1898	19,500	17	0·87	0	0·00	0·0	2	11·8
1899	20,000	14	0·70	0	0·00	0·0	5	35·7
*1900	30,000	39	1·30	1	0·03	2·6	22	56·4
1901	29,000	34	1·17	0	0·00	0·0	9	26·5
1902	30,000	75	2·50	0	0·00	0·0	52	69·3
1903	30,000	42	1·40	1	0·03	2·4	20	47·6
1904	30,500	114	3·74	2	0·07	1·8	67	58·8
†1905	31,000	152	4·90	6	0·19	3·9	78	51·3
1906	31,500	114	3·62	1	0·03	0·9	72	63·2
1907	32,000	117	3·66	2	0·06	1·7	86	73·5
1908	32,000	114	3·56	1	0·03	0·9	76	66·7
1909	33,000	33	1·00	1	0·03	3·0	23	69·7
1910	33,500	32	0·96	0	0·00	0·0	26	81·2
1911	33,840	32	0·95	0	0·00	0·0	29	90·6
1912	34,400	38	1·10	0	0·00	0·0	32	84·2

* Borough extended. † New Isolation Hospital opened.

Diphtheria.

I have again to report a year—the fourth in succession—of comparative freedom from this disease.

During 1912 only 12 cases were notified, as compared with 18 in 1911. The attack rate therefore is 0·35 per 1,000. This is 0·18 per 1,000 below the rate for 1911, and is the lowest rate recorded since 1898. The rate for England and Wales during 1912 was 1·24, so it will be seen that Harrogate compares very favourably with the rest of the country.

This continued low rate is all the more satisfactory, as in former years the incidence of diphtheria in Harrogate has been unduly high.

The accompanying table shows that the disease first became prevalent in 1899, reaching epidemic proportions in 1900,

During the following years there was a gradual decline in the number of cases until 1904, when it again began to increase, reaching its maximum in 1906 when 119 cases were notified. During the next two years the incidence gradually fell, and in 1909 only 16 cases were notified. Since that time the disease has not, I am glad to say, shown any tendency to increase.

The attack rate is, as has been said low, but an examination of the cases notified affords some evidence that several of the cases were not cases of true diphtheria, and that the rate is therefore somewhat overstated. "Swabs" are taken from each case immediately upon admission to the hospital, and submitted to bacteriological examination. In three instances this examination gave negative results, and these cases were all discharged from the hosipital within one week of admission, as the hospital authorities were satisfied that they were not cases of true diphtheria. Support is given to the view that they were correct in this opinion by the fact that no secondary cases developed in the households of any of these cases, although there were susceptible children in each of the three houses.

If these cases be excluded as not being cases of true diphtheria, the number of cases is reduced to 9, and the attack rate to 0·26 per 1,000.

The cases occurred in the different wards as follows :—

Central	East	West	Bilton	Starbeck
4	1	2	1	4

The age and sex distribution is shown in the next table.

	Under 1 year	1-5	5-15	15-25	25-45	45-65
Male... ...	0	2	1	0	0	1
Female ...	0	0	7	0	1	0
Total	0	2	8	0	1	1

Ten houses were invaded, there being eight houses with one case each, and two houses with two cases.

In six instances the child affected was attending an elementary school. The schools in which the cases occurred were

Starbeck Council, Infants ...	...	2 cases
,, ,, Mixed ..	...	1 case
Grove Road Council, Mixed	...	1 ,,
St. Peter's C. of E. Mixed...	...	1 ,,
,, ,, Infants	...	1 ,,

Six cases (50 per cent.) were removed to the Isolation Hospital. The percentage of removals is lower than for several years, but this is due to the fact that a larger proportion of the cases occourred in houses where the patient could be satisfactorily isolated.

In two of the cases the infection was contracted in other districts, but as they were notified in Harrogate they are included in the figures given above.

There was one death, giving a death-rate of 0·03 per 1000.

The death-rate for England and Wales was 0·11 and for the 146 smaller Towns (of which Harrogate is one) it was the same (0·11).

The fatal case occurred in the Central Ward, and was that of a girl, aged nine, who became ill while staying with some relatives in another town. She was not seen by any medical man until three days after her return home, when a doctor was called in. He discovered the case to be one of diphtheria, and, although antitoxin was adminstered, it was too late, and death took place a few days afterwards.

This case illustrates, if illustration be needed, the danger of neglecting cases of sore throat, and the importance of the early use of antitoxin in diphtheria.

There can be no doubt that this girl's relatives thought she was suffering from an ordinary sore throat, and therefore neglected to obtain medical assistance, and it is very probable that had

resource been had to antitoxin at the commencement of her illness, instead of some ten days afterwards, her life would have been saved.

TABLE XV.

DIPHTHERIA STATISTICS.

Year	Population	Notifications	Attack Rate per 1,000	Deaths	Death Rate per 1,000	Case Mortality per cent.	Removed to Hospital	Percentage removed
1897	18,500	3	0·16	1	0·05	33·3	0	0·0
1898	19,500	3	0·15	2	0·10	66·7	0	0·0
1899	20,000	42	2·10	11	0·55	26·2	0	0·0
*1900	30,000	153	5·10	18	0·60	11·8	0	0·0
1901	29,000	59	2·03	9	0·31	15·3	1	1·7
1902	30,000	30	1·00	2	0·07	6·7	0	0·0
1903	30,000	27	0·90	2	0·07	7·4	3	11·1
1904	30,500	53	1·74	3	0·09	5·7	2	3·7
†1905	31,000	71	2·29	9	0·29	12·7	30	42·3
1906	31,500	119	3·78	7	0·22	5·8	53	44·5
1907	32,000	64	2·00	9	0·28	14·1	36	56·3
1908	32,000	55	1·72	6	0·19	10·9	28	50·9
1909	33,000	16	0·48	0	0·00	0·0	12	75·0
1910	33,500	16	0·48	0	0·00	0·0	13	81·3
1911	33,840	18	0·53	1	0·03	5·6	13	72·2
1912	34,400	12	0·35	1	0·03	8·3	6	50·0

* Borough extended. † New Isolation Hospital opened.

Provision of Diphtheria Antitoxin.

In 1911 the Council made arrangements with two local chemists to supply, at the cost of the Council, antitoxin to any medical man who made application for it.

During the year 12,000 units were so supplied for use in four cases, at a cost of 16/3.

The small demand is, no doubt, due to the fact that the poorer patients are promptly removed to the Isolation Hospital.

Enteric Fever.

TABLE XVI.

Year	Population	Notification	Attack Rate per 1,000	Deaths	Death Rate per 1,000	Case Mortality per cent.	Removed to Hospital	Percentage removed
1897	18,500	4	0·22	0	0·00	0·0	0	0·0
1898	19,500	9	0·46	2	0·10	22·2	0	0·0
1899	20,000	7	0·35	4	0·20	57·1	0	0·0
†1900	30,000	13*	0·43	5*	0·17	38·4	6	46·1
1901	29,000	72	2·48	12	0·41	16·7	10	13·9
1902	30,000	15	0·50	4	0·13	26·7	0	0·0
1903	30,000	9*	0·30	1	0·03	11·1	3	33·3
1904	30,500	3	0·09	0	0·00	0·0	0	0·0
‡1905	31,000	5	0·16	0	0·00	0·0	0	0·0
1906	31,500	5	0·16	1	0·03	20·0	1	20·0
1907	32,000	4	0·13	1	0·03	25·0	1	25·0
1908	32,000	5	0·16	1	0·03	20·0	2	40·0
1909	33,000	6	0·18	1	0·03	16·7	4	66·7
1910	33,500	0	0·00	0	0·00	0·0	0	0·0
1911	33,840	4	0·12	2	0·06	50·0	1	25·0
1912	34,400	1	0·03	0	0·00	0·0	0	0·0

* Including Continued Fever. † Borough extended.
‡ New Isolation Hospital opened.

I have again the satisfaction of reporting that during the year the town was almost entirely free from enteric fever. Only one case was notified, as against 4 in 1911, and the attack rate is 0·03 as compared with 0·12 in 1911.

The rate for England and Wales was 0·23 per 1,000.

The mortality in Harrogate was nil, compared with a death-rate of 0·04 in England and Wales, and 0·05 in 146 smaller towns.

This case, which occurred in the Bilton Ward, was that of a girl aged 16; a boarder at a private school. She sickened about the 4th of March, was well isolated and nursed at home. Widal's test gave a positive reaction. The most careful enquiry failed to reveal the source of infection. It could not be discovered that the patient had eaten anything that had not been partaken of by

the other inmates, none of whom were at all affected, and the house was in good sanitary condition throughout.

Erysipelas.

There were ten cases of erysipelas notified during 1912, as compared with 12 in 1911. No deaths were registered as being due to this disease. Two cases were notified from the Central, one from the East, two from the West, two from the Bilton, and three from the Starbeck Wards.

Measles.

The Borough was almost entirely free from measles during the year. As this is not a notifiable disease, my information regarding its prevalence is almost entirely derived from the notifications sent by the Head Teachers of the elementary schools. These notifications of course do not include the whole of the cases, but they are the only source of information available and they form a fairly reliable index to the prevalence of the disease. Only six cases were thus notified during the year, as compared with 242 cases in 1911, and 400 in 1910.

There was one death, that of a child aged six months, and the death-rate was therefore 0·03 per 1,000 which is the same as the rate for 1911. The average rate for the preceding ten years was 0·11 per 1000.

The Registrar-General states that the rate for England and Wales during 1912 was 0·35 per 1000, and for 146 smaller Towns including Harrogate, the figure is the same (0·35).

MEASLES DEATH-RATE IN HARROGATE.

1901	...	0·00	1907	...	0·03
1902	...	0·00	1908	...	0·00
1903	...	0·27	1909	...	0·18
1904	...	0·03	1910	...	0·09
1905	...	0·00	1911	..	0·03
1906	...	0·44	1912	...	0·03

Whooping Cough.

This is also a non-notifiable disease, and the information as to its prevalence is derived from the school notifications. It was more prevalent than measles, but there does not appear to have been a great number of cases, only 39 being notified from the schools, as against 183 in 1911. Although the incidence was less than in the previous year, the mortality appears to have been greater.

Four deaths were registered as being caused by whooping cough. Two occurred in the Bilton, and two in the Central Wards. All were children under 5 years of age; one was less than twelve months old.

The death-rate is 0·12 per 1,000, which is lower than the average rate for the preceding ten years (0·18).

The rate for England and Wales during 1912 was 0·23, and for 146 smaller towns—of which Harrogate is one—0·24 per 1,000.

DEATH-RATE FROM WHOOPING COUGH IN HARROGATE.

1901	...	0·00	1907	...	0·06
1902	...	0·03	1908	...	0·19
1903	...	0·13	1909	...	0·12
1904	...	0·39	1910	...	0·12
1905	...	0·29	1911	...	0·15
1906	...	0·00	1912	...	0·12

Acute Poliomyelitis.

By an Order of the Local Government Board, acute poliomyelitis was on September 1st, 1912, added to the list of diseases which are compulsorily notifiable.

Only one case of this disease was notified during the year. This case occurred in the Starbeck Ward, and was that of a girl aged 3 years who showed symptoms of the disease a few days after her arrival in Harrogate. The patient was isolated at home as efficiently as possible, and after her recovery the house, clothing, etc., were thoroughly disinfected. No contact could be traced with any previous case, nor are any further cases known to have occurred.

Cerebro-Spinal Fever.

This disease was also made notifiable at the same time as acute poliomyelitis. No cases have been notified during the year.

Diarrhœa and Enteritis.

During 1912 only 3 deaths were registered as being due to these diseases, compared with 17 in the previous year. The death-rate is 0·09 per 1,000, and is the lowest rate of which I have any record.

TABLE XVII.

Year	Number of Deaths	Rate per 1,000
1901	22	0·76
1902	9	0·30
1903	13	0·43
1904	17	0·56
1905	13	0·42
1906	27	0·86
1907	5	0·16
1908	10	0·31
1909	7	0·21
1910	13	0·39
1911	17	0·50
1912	3	0·09

All 3 deaths were children under one year of age, and it is interesting to note that all three were bottle-fed babies.

The group of diseases comprised under this heading is due to a micro-organism, and the incidence is greatest in warm, dry weather. There seems little doubt that they are mainly caused by the contamination of milk and other foods by the specific germ, which obtains access to them by the medium of dust, or is carried to them by flies. In other words, they are filth diseases, and are preventable and should be prevented. Pure, clean milk, clean feeding-bottles and utensils, and clean houses and surroundings will do much to prevent them.

The low mortality is no doubt largely due to the fact that the summer of 1912 was cold and wet, but I venture to think that some of the credit is due to the work of the Health Visitor among the babies, and to the increased attention which has been given to the prompt removal of all vegetable matter, manure, etc., from the neighbourhood of dwelling-houses.

Puerperal Fever.

No case of puerperal fever was notified during the year. There was, however, one death from this disease. This occurred in another district, but as the death was that of a Harrogate resident, it is included in the Harrogate statistics.

One other death was registered as being due to other causes associated with child-birth.

There were, therefore, two deaths directly or indirectly due to child-birth, giving a proportion of 1 death to 250 live births, against 1 death to 121 births in 1911.

It should be noted that this proportion is somewhat overstated, as no account is taken of still-births.

Tuberculosis.

During the year 20 deaths—13 fewer than in 1911—were registered as being caused by some form of tuberculosis, giving a death-rate of 0·58 per 1,000. This is lower than the rate for 1911 (0·97), and much below the average rate for the preceding ten years (1·13).

Non-Pulmonary Tuberculosis.

Tuberculous diseases other than phthisis were responsible for 5 deaths—3 less than in 1911—giving a death-rate of 0·14 per 1,000. With the exception of 1907 when the rate was 0·09, this is the lowest rate of which I have any record. The rate for 1911 was 0·23, and for the preceding ten years 0·32.

Three of the deaths were females and one was a male.

Three deaths were due to tuberculous meningitis; two of these were children between 1 and 5 years of age, and one was a child aged 12 years.

The other two deaths were caused by tuberculous disease of the abdominal organs; one, a child aged 2, and the other a female aged 21.

Phthisis.

During 1912, phthisis, or tuberculous disease of the lungs, caused 15 deaths—10 less than in 1911. The death-rate is 0·44 per 1,000, and with the exception of 1910, when the rate was only 0·36, this is the lowest rate of which I have any record.

In the following table is shown the number of deaths and the death-rate for tuberculous diseases for each year since 1896.

TABLE

TUBERCULOSIS DEATH-RATE, 1896-1912.

Year	Phthisis		Other Tuberculous Diseases	
	Number of Deaths	Death Rate per 1,000	Number of Deaths	Death Rate per 1,000
1896	20	1·14	11	0·63
1897	19	1·03	7	0·38
1898	17	0·87	14	0·72
1899	18	0·90	6	0·30
1900	17	0·57	6	0·20
1901	17	0·59	18	0·62
1902	27	0·90	12	0·40
1903	35	1·16	23	0·77
1904	22	0·72	10	0·33
1905	28	0·90	13	0·42
1906	21	0·67	11	0·35
1907	30	0·94	3	0·09
1908	31	0·97	7	0·22
1909	26	0·79	7	0·21
1910	12	0·36	5	0·15
1911	25	0·74	8	0·23
Average for ten years 1902-1911	26	0·82	10	0·32
1912	15	0·44	5	0·14

The next table, in which are set out the average annual death-rates for each period of five years since 1896, shows better the steady fall which has taken place during this period.

Quinquennial Period	Phthisis Death Rate per 1,000	Other Tuberculous Diseases, Death-Rate per 1,000
1896 to 1900	0·90	0·45
1901 to 1905	0·85	0·51
1906 to 1910	0·75	0·20
1911	0·74	0·23
1912	0·44	0·14

Of the 15 deaths, 7 were males and 8 were females, and they occurred in the following age groups :—

Age	5-15	15-25	25-45	45-65
Male	1	1	3	2
Female... ...	1	1	3	3
Total ...	2	2	6	5

The ages of the males varied from 12 to 57 years, the average age being 36 ; and of the females from 13 to 62, the average age being 40 years.

The deaths were distributed in the various wards, thus :--

Central		East		West		Bilton		Starbeck
4	...	2	...	2	...	3	...	4

In five instances no notification had been received. In one of these no medical man had been in attendance, and the cause of death was certified by the coroner ; in two cases the medical attendant inadvertently omitted to notify, and in the two remaining cases death took place in institutions outside the Borough.

In the ten cases which had been previously notified, the interval between notification and death varied from 1 day to 21 months.

4	died	within	1	month	of notification
1	,,	,,	1-2	months	of notification
2	,,	,,	2-3	,,	,,
1	,,	,,	4-5	,,	,,
1	,,	,,	6-7	,,	,,
1	,,	,,	21-22	,,	,,

Notification of Phthisis.

During the year 44 cases of phthisis were notified under one or other of the three systems of notification.

(*a*) Under the Public Health (Tuberculosis) Regulations, 1911, there were 35 cases notified. These Regulations, which came into force on January 1st, 1912, require that every medical practitioner attending on or called in to visit any person, shall within forty-eight hours after first becoming aware that such person is suffering from pulmonary tuberculosis, send a notification of the case to the Medical Officer of Health for the area within which the residence of the person is situate. A School Medical Inspector is likewise required to notify every case of pulmonary tuberculosis of which he becomes aware during the course of inspection, to the Medical Officer of Health for the area within which the public elementary school is situate.

(*b*) Under the Poor Law Regulations, which have been in force since January 1st, 1909, 7 cases were notified, all by the District Medical Officer.

(*c*) Under the Public Health (Tuberculosis in Hospitals) Regulations, which came into force on January 1st, 1911, there were 2 cases notified.

22 of the cases were males and 22 were females, and they occurred in the following age groups :—

	1-5	5-15	15-25	25-35	35-45	45-65	65 and upwards
Male ...	2	3	3	2	5	6	1
Female	0	5	3	4	7	3	0
Total ...	2	8	6	6	12	9	1

In six of the notified cases no visit was made, at the request of the medical attendant. These six cases all occurred among well-to-do people living in good houses, where all necessary precautions against the spread of infection were being taken. Two of them were visitors who were only temporarily resident in the town.

In the remaining 38 cases the home was visited by the Health Visitor, and enquiry made into the family history, surroundings, etc. Enquiry was also made in two fatal cases which had not been previously notified. The following information relates, therefore, to 40 cases.

Duration of Illness.—In every case an attempt was made to ascertain the duration of the disease. In the great majority of cases of phthisis the onset is very gradual, and it is not possible to fix any definite date as that on which the disease actually commenced : but in 33 cases fairly reliable information upon this point was obtained, and the figures are given underneath.

Under 6 months	3 cases
Over 6 months and under 1 year ..	9 ,,
,, 1 year ,, 2 years ...	5 ,,
,, 2 years ,, 3 ,, ...	5 ,,
,, 3 ,, ,, 4 ,, ...	1 case
,, 4 ,, ...	10 cases
	33

It will be seen that in half the cases the disease had been present for at least two years before notification, and it is evident that preventive measures can have little effect upon the spread of the disease in these circumstances.

FAMILY HISTORY.—Fairly reliable information upon this point was obtained in 39 cases, and it was found that in 16 cases, or 41 per cent., there was no history of any tuberculous disease in the family. In 23 cases, or 58 per cent., there was a tuberculous family history.

PRECAUTIONS TAKEN AGAINST INFECTION.—In 20 instances it was ascertained that the patient occupied a separate bedroom; in 3 cases a separate bed was occupied, and in 15 cases there was no attempt at isolation. In 2 cases no information was obtained upon this point.

OCCUPATIONS.—The occupations of the males were as follows:

No occupation	4	Plasterer	1
Schoolboys	2	Photographer	1
Joiners	2	Carter	1
Shop Assistants	2	Coachman	1
Labourers	2	Railway Employe	1
Page	1	House Painter	1
Stonemason	1	Hotel Manager	1

The occupations of the females were:

Housewives	8	Shop Assistant	1
Schoolgirls	3	Laundress	1
Domestic Servants	3	Hairdresser	1
Charwoman	1	No occupation	1

HOUSING CONDITIONS.—The houses in which these cases occurred were all through houses. Five were 3-roomed houses, 9 had 4 rooms, and in the remaining houses there were 5 or more rooms. Dampness was noticed in three houses, and one house was very dirty.

Control of Phthisis.

The measures taken to control phthisis and prevent its spread during the year have been on the same lines as in former years. The home of every case notified is visited by the Health Visitor, who makes enquiry into the home conditions and surroundings, and advises as to the precautions against infection. A leaflet giving similar advice is also left at the house. Where the notifying practitioner requests that no visit be made, his wish is respected, but, as has already been indicated, these cases are all those of well-to-do people living in good houses, where a visit is unnecessary.

Any insanitary conditions found to exist are remedied. Every effort is made to get the patient to occupy a separate room, or if this is not possible, a separate bed. It is, however, in many cases impossible to obtain this. In many homes there is no spare room available for the patient, and not infrequently where there is room, the purchase of an additional bed is beyond his means.

Instructions are also given as to the proper method of disposing of the sputum. Disinfectants are provided free of all cost, and houses are disinfected after the death or removal of the patient. The disinfection of 24 houses in which consumptives had been living was carried out during the year. The advantage of fresh air and sunlight are dwelt upon, and the people urged to keep their windows open as much as possible.

No arrangements have as yet been made locally for the treatment of tuberculosis. The County Council are responsible for carrying out the sanatorium provisions of the National Insurance Act, and they have under consideration a scheme for the establishment of a Tuberculosis Dispensary in Harrogate. Their arrangements have not yet been completed.

Cancer.

Under this heading are included deaths from all forms of malignant disease. During 1912 there were 29 deaths—four less than in 1911—giving a death-rate of 0·84 per 1,000 of the

estimated population. This is slightly below the average rate for the preceding ten years (0·93).

CANCER DEATH-RATE.

1901	...	0·59	1907	...	0·81
1902	...	0·63	1908	...	0·75
1903	...	0·93	1909	...	0·85
1904	...	1·41	1910	...	1·04
1905	...	0·97	1911	...	0·97
1906	...	0·98	1912	...	0·84

Although this table shows that the death-rate has fallen slightly since 1910, there appears to be little doubt that on the whole cancer is increasing.

Before we can adopt measures for the prevention of any disease, it is necessary that the cause of that disease be known: and as we are without that knowledge in the case of cancer, it must for the present be considered to be outside the province of preventive medicine. For several years many investigators have been making researches in this direction, but so far without any result. One can only hope that their efforts will soon meet with success, but, until that time, it seems that any diminution in the death-rate from this fatal disease can only be brought about by the cure of a larger proportion of cases through improved clinical methods, leading to an earlier diagnosis, and consequently to earlier surgical treatment.

The age and sex incidence of the disease are shown in the following table. It will be noted that 62 per cent. of the deaths occurred in females.

AGE AND SEX INCIDENCE OF CANCER.

Age	35-45	45-55	55-65	65-75	75 and upwards
Male ...	0	2	4	4	1
Female	1	3	4	7	3
Total . .	1	5	8	11	4

The next table shows the organs affected :

Organ	Male	Female	Total
Stomach	2	4	6
Intestines	1	4	5
Breast	0	4	4
Kidney	2	0	2
Oesophagus	2	0	2
Female Genital Organs	0	1	1
Larynx	1	0	1
Jaw	0	1	1
Neck	0	1	1
Liver	0	1	1
Gallbladder	0	1	1
Pancreas...	1	0	1
Throat	1	0	1
Unspecified	1	1	2

Disinfection.

Disinfection of houses is carried out by spraying with formalin. During the year 78 dwelling-houses were so disinfected.

The Corporation does not possess a disinfecting station, and all articles of bedding, clothing, etc., are removed to the Joint Isolation Hospital and there disinfected in a Washington-Lyons Disinfector. The following articles were disinfected during the year :—

Beds	37
Mattresses	64
Blankets	160
Sheets	104
Quilts	82
Pillows	125
Bolsters	57
Pillow slips	90
Carpets	75
Rugs	27
Curtains	59
Articles of clothing ...	168
Miscellaneous	182
Total ...	1,250

Bacteriological Examination.

The bacteriological examination of material from suspected cases of diphtheria, enteric fever, tuberculosis, etc., is carried out by the County Council at their laboratory at Wakefield at the public expense. Outfits for sending the material are kept at the Public Health Office, and can be obtained by any medical practitioner upon application.

I learn from Dr. Kaye, County Medical Officer of Health, that the number of specimens sent by medical men in Harrogate during 1912, was :—

Throat Swabs (Diphtheria)	27
Blood Serum (Enteric Fever)	5
Sputum (Tuberculosis)	19
Milk (Tuberculosis)	9
Ringworm	69
	120

These figures are considerably above those for 1911 (in which year 83 specimens were sent) and tend to show that the valuable aid afforded by the laboratory is being taken advantage of to an increasing extent.

Meteorology.

As in former years, I give a table showing the principal meteorological features of the year, which has been prepared by the Borough Meteorologist, C. E. Rivers, Esq.

METEOROLOGICAL TABLE FOR 1912.

MONTH	RAINFALL				TEMPERATURE					Bright Sunshine (Campbell Stokes Recorder) Hours	DIRECTION OF WIND			
	Total inches	Greatest in 24 hours		Days in which 0·01 in. or more fell	Mean	Maximum		Minimum			S.W. Quadrant including W. days	S.E. Quadrant including S. days	N.E. Quadrant including E. days	N.W. Quadrant including N. days
		Inches	Date			Degrees	Date	Degrees	Date					
January ...	4·64	1·09	16th	20	36·1	51·0	1st	19·9	29th	39·0	7	8	4	12
February ...	2·35	0·50	1st	21	38·5	55·8	28th	11·0	5th	56·4	7	9	8	5
March ...	3·77	0·59	4th	24	42·5	55·8	26th	29·0	21st	89·9	17	9	2	3
April ...	0·31	0·14	9th	5	45·9	67·8	21st	27·9	12th	198·8	8	6	8	8
May	3·33	1·32	22nd	17	51·1	70·7	11th	29·7	1st	140·3	11	5	8	7
June	6·90	1·38	5th	21	55·0	73·4	22nd	42·8	7th	129·0	11	5	7	7
July	5·02	1·28	31st	15	57·9	78·6	15th	46·8	9th & 19th	90·2	6	3	14	8
August ...	5·64	1·17	26th	20	53·3	64·8	8th	39·3	3rd	82·6	17	3	5	6
September	1·91	0·80	29th	8	50·3	64·8	13th	36·8	27th	107·4	6	2	13	9
October ...	3·27	1·21	26th	12	45·9	61·0	11th	29·7	26th	82·6	15	7	4	5
November	1·82	0·35	25th	17	42·0	54·3	6th	20·2	30th	43·3	14	3	2	11
December	2·84	0·41	17th	19	41·1	54·7	13th	21·0	1st	18·9	16	12	1	2
Year	41·80	1·38	June 5th	199	46·6	78·6	July 15th	11·0	Feb. 5th	1078·4	135	72	76	83

C. E. RIVERS, A.M.I.C.E., F.R. Met. Soc., *Borough Meteorologist.*

Medical Inspection of School Children.

The Medical Officer of Health is also School Medical Officer. The medical inspection of school children has been carried out during the year on the same lines as formerly, and is dealt with in a separate report.

Water Supply.

For the following description of the water supply I am indebted to Mr. West, Water Engineer.

"In 1846 an Act was obtained by a private Company to supply water to High and Low Harrogate, and various districts surrounding same. This Company constructed the Ten Acre and Beaver Dyke reservoirs, and impounded certain springs into what is now termed the "tank spring." The water thus gathered was delivered to filtration works at Harlow Hill and Irongate Bridge. In addition to these supplies, water was gathered from Harlow Moor, and a small reservoir built in Cold Bath Road. These latter are now discontinued.

"In 1897 the Harrogate Corporation obtained an Act to purchase the water undertaking, and in the same year powers were granted to construct Scargill reservoir.

"The total capacity of the four reservoirs in Haverah Park is 370,000,000 gallons, whilst the watershed covers an area of 2,770 acres, consisting of what is known as "uplands," being largely moorland with extremely rough pasturage, and a small area of arable land. There are few farms on this watershed, the drainage of which receives particular attention so as to prevent any fear of contaminating the water used for supplying the town.

"In 1901 powers were obtained to construct the Roundhill reservoir, situate about twenty miles in a northerly direction from Harrogate. The capacity of this reservoir is about 525,000,000 gallons, and consists of a masonry dam thrown across the valley, with a total depth of water of 109 feet to the overflow weir. The gathering area consists almost wholly of moorlands, and with one exception nearly a total absence of peat deposit. When the water in this reservoir is brought into use it will be

carried through three miles of tunnel and seventeen miles of aqueduct, delivering into the filtration works at Irongate Bridge or Harlow Hill, as the case may be.

"The filtration works at Irongate Bridge and Harlow Hill consist of 11 sand-beds, having a total area of about 1½ acres, and 6 patent Candy oxidizing filters, having a working capacity of 30,000 gallons per hour. The water from the filtration works passes into 4 service reservoirs, having a capacity of 27,000,000 gallons—which are cleaned out annually—and thence direct to the consumer.

"There are about 38 miles of trunk mains, with 100 miles of service and subsidiary mains, which are washed out monthly.

"It is an uncommon occurence to have a complaint of dirty water, samples of which are taken regularly nine times per annum and submitted for chemical and bacteriological examination; two of the analyst's reports are reproduced, and show that the quality of the water is beyond reproach. Several samples have been taken for the specific purpose of seeing if the water had plumbo-solvent properties, but the analyst has not discovered lead or other poisonous metals in the samples submitted to him. The permanent hardness of the water is about 3°, and taken altogether it is unquestionably an excellent water for drinking and domestic use.

"The Corporation is moving in the direction of substituting valve hydrants for those of the existing ball type, used for fire purposes, and which when carried out will be a distinct advantage, and prevent polluted matter reaching the filtered water.

"There are no storage cisterns, as the water supply is constant and taken direct from the town's mains.

"I imagine it would be difficult to find another town in England with a more abundant supply of high quality water at its command, and from which it will be seen that for years to come the inhabitants will have a never-failing supply of pure water."

The following reports of analyses made by Mr. T. Fairley, of Leeds, show that the Harrogate water is of a high standard of purity.

No. 1.—Report on the Analysis of Water taken from Irongate Bridge clear water well on May 23rd, 1912.

Source of sample :—Beaver Dyke and Ten Acres.

The sample contains in grains per gallon :—

Calcium Magnesium Carbonates	1·40
Calcium Sulphate	3·97
Total Solids	8·10
Volatile and Organic Matter	0·65
Chlorides equivalent to Common Salt ...	2·08
Chlorine	1·26
Nitrates and Nitrites	none
Poisonous Metals	none
Free Ammonia	0·001
Albuminoid Ammonia...	0·006
Proteid Ammonia	none
Oxygen required to oxidise Organic Matter in four hours	0·130
Hardness	4·0
Hardness after boiling...	3·7
Sediment	very minute
Microscopic examination shows presence of few Algae.	
Colour	1·2 units yellow
Smell at 100° Fahrenheit	none

Micro-organisms. 10 per cubic centimetre by plate culture, the predominant form being Bacillus Fluorescens Liquefaciens, a non-pathogenic organism.

The chemical analysis and bacteriological examination show this water to be of excellent quality for drinking and domestic purposes. The water is much less coloured than in February last.

No. 2.—Report on the Analysis of Water taken from Harlow Hill clear water well on May 23rd, 1912.

Source of sample :—Scargill.

The sample contains in grains per gallon :—

Calcium Magnesium Carbonates	1·40
Calcium Sulphate	4·47
Total Solids	9·18
Volatile and Organic Matter	1·46
Chlorides equivalent to Common Salt ...	1·85
Chlorine	1·12
Nitrates and Nitrites	none
Poisonous Metals	none
Free Ammonia	0·004
Albuminoid Ammonia	0·007
Proteid Ammonia	none
Oxygen required to oxidise Organic Matter in four hours	0·025
Hardness	4·1
Hardness after boiling	3·8
Sediment	minute
Microscopic examination shows a few Algae.	
Colour	0·5 units yellow
Smell at 100° Fahrenheit	none

Micro-organisms. 7 per cubic centimetre by plate culture, the predominant form being Bacillus Fluorescens Liquefaciens, a non-pathogenic organism.

The chemical analysis and bacteriological examination show this water to be of excellent quality for drinking and domestic purposes. The water is much less coloured than in February last.

Private Water Supply.

With the exception of some 14 houses in Knox Lane, which draw their water from two wells, all the houses in the Borough are supplied with water from the Corporation mains.

Sewage Disposal.

For the following particulars I am indebted to Mr. C. E Rivers, the Borough Surveyor :

"Sewage is treated at two disposal works, one about two miles north of Harrogate, near Bachelor Gardens, and the other about five miles south of the town, near Spofforth.

" At each of these works the sewage is delivered into open septic or sedimentation tanks. The effluent from these tanks is afterwards treated on intermittent percolating beds. It then passes over land, and is finally discharged into watercourses.

" The Inspectors of the West Riding Rivers Board inspect these works regularly, and appear to be satisfied with the purity of the effluent."

No complaints have been received during the year of any stench nuisance from either of these works.

Sewers.

During 1912 one short length of sewer was laid in Back Elmwood Street.

Ventilation of sewers is effected principally by tall vertical shafts. Several Webbs destructor lamps are also in use. One or two lengths of sewer where the gradient is flat are regularly flushed, either by a special cart or by automatic flushing chambers.

House Drainage.

The drains of all new houses are now laid upon concrete, and imbedded for not less than half their diameter in cement concrete. An inspection chamber, intercepting trap, and efficient means of ventilation are also provided. They are not passed by the Building Inspector until the smoke test has been applied, and they have been proved to be smoke tight.

Prior to the adoption of new Building Bye-laws in 1907, the requirements with regard to drains were much less stringent. They were allowed to be laid upon the soil, and the smoke test was not made use of—mere inspection was considered to be sufficient.

It is satisfactory to know that it is seldom that any defects are found in the drainage systems of houses built since 1907, and where any are found they are, as a rule, slight.

Pollution of Rivers and Streams.

This is under the control of the West Riding Rivers Board. I am not aware that any of the streams in the district are polluted.

Excrement Disposal.

As has been stated in former reports, Harrogate is almost entirely a water closet town. The great majority of the houses are provided with water closets, there being at the end of the year about 14,274 water closets in use.

There are, however, still about 50 privies and earth closets in use. Many of these are only occasionally used. Those in regular use are emptied weekly by the Corporation staff. As occasion serves these are abolished and replaced by water closets.

There are also about 120 waste-water closets still in use—all in the added areas. These also are being gradually abolished; 8 were converted into sanitary water closets during the year.

There are also a few cesspools in the Borough. Some of these belong to out-lying farms, and these are, as a rule, emptied by the farmers. There are, however, three or four receiving the drainage from houses which cannot be connected to the sewers, and these are emptied weekly by the Corporation.

Removal and Disposal of House Refuse.

House refuse is deposited in sanitary dustbins, which are provided by the owner of the house. These bins are kept in fairly good condition. The Cleansing Superintendent reports any found to be delapidated or leaking, and the landlord is then called upon to provide a new bin. As a rule this is done at once.

In my last report I drew attention to the fact that many dustbins were kept uncovered, and pointed out that an uncovered dustbin was calculated to be a nuisance and a menace to health. There has, I think, been some improvement in this respect, but too many bins are still kept uncovered.

At the end of the year there were 215 ashpits still in use. As occasion arises these are abolished, and replaced by dustbins.

The following table shows the number of ashpits which have been abolished in recent years.

1909	1910	1911	1912
16	51	49	56

The refuse is removed by the Council, who employ for the purpose a staff consisting of a Cleansing Inspector, one horse-feeder, and 26 men. All dustbins and ashpits are emptied once a week. During the Season the refuse from the larger hotels and boarding-houses is removed more frequently ; in several instances a daily collection is made.

Refuse from the market and from fishmongers' shops is removed daily and twice on Saturdays.

The whole of the refuse is disposed of by tipping upon the land. The fish refuse is tipped upon Killinghall Moor ; the other refuse is deposited upon two tips, one on the Corporation farm on Skipton Road, and the other upon Norfolk's farm between Knaresborough and Starbeck.

These tips are probably as satisfactory as tips can be, inasmuch as there are very few houses near them ; but as was stated in my last Annual Report, this method of disposing of refuse cannot be considered at all satisfactory.

The only rational method of dealing with this material is by burning it in a suitable destructor, and I think the time has now come when the Council should seriously consider the advisability of providing a modern destructor plant to deal with the refuse.

Factories and Workshops.

At the end of the year there were 184 workshops on the register. These have been inspected regularly, and on only few occasions were any defects found. The nature of these defects is shown in the accompanying table.

Annual Report of the Medical Officer of Health

for the year 1912, for the Borough of Harrogate,

on the Administration of the Factory and Workshop Act, 1901, in connection with

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

1.—Inspection of Factories, Workshops, and Workplaces.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

PREMISES	Number of		
	Inspections	Written Notices	Prosecutions
1	2	3	4
Factories ... ... (including Factory Laundries).	20	...	...
Workshops ... ... (including Workshop Laundries).	2191	5	...
Workplaces ... ... (other than Outworkers' premises included in Part 3 of this Report)	...	...	...
Total	2211	5	Nil

2.—Defects found in Factories, Workshops, and Workplaces.

PARTICULARS.	Number of Defects			Number of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
1	2	3	4	5
*Nuisances under the Public Health Acts:—**				
Want of cleanliness	7	7	...	...
Want of ventilation	...	...	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	...	...	...	...
Other nuisances	...	...	...	...
Sanitary accommodation { insufficient	...	...	...	...
Sanitary accommodation { unsuitable or defective				
Sanitary accommodation { not separate for sexes...	2	2	...	...
Offences under the Factory and Workshop Act:				
Illegal occupation of underground bakehouse (s. 101)	...	1	...	...
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	12	12	...	...
Other offences .. .. (excluding offences relating to outwork which are included in Part 3 of this Report)	...	...	...	...
Total	21	22	...	...

* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

3.—Home Work.

NATURE OF WORK *	Outworkers' List, Section 107									Outwork in Unwholesome premises, Section 108			Outwork in Infected Premises, Sections 109, 110		
	Lists received from Employers						Notices served on Occupiers as to keeping or sending lists	Prosecutions							
	Sending twice in a year			Sending once in a year				Failing to keep or permit inspection of lists	Failing to send lists	Instances	Notices served	Prosecutions	Instances	Orders made (S. 110)	Prosecutions (S. 109, 110)
	Lists †	Outworkers †		Lists	Outworkers †										
		Contractors	Workmen		Contractors	Workmen									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Wearing Apparel—Making, etc. ...	6		7												
Electro-plate ...				1		1									
Tents	2		2												
No Outworkers' Lists received for any of the other trades enumerated in the Home Office Table															
Total	8		9	1		1									

* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class *only*, but the outworkers should be assigned in columns 3 & 4 (or 6 & 7) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3, and 4 are the *total* number of lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year, and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be *even* numbers, as there will be two lists for each employer—in some previous returns odd numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—Registered Workshops.

Workshops on the Register (S. 131) at the end of the year		Number
1		2
Important classes of workshops, such as workshop bakehouses, may be enumerated here	Bakehouses	47
	Milliners and Dressmakers	62
	Tailors and Bootmakers ...	37
	Miscellaneous	38
Total number of Workshops on Register		184

5.—Other Matters.

Class		Number
1		2
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		...
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5)	Notified by H.M. Inspector	1
	Reports (of action taken) sent to H.M. Inspector	1
Underground Bakehouses (S. 101)		12
Certificates granted during the year		...
In use at the end of the year		12

14th May, 1913.

(Signature) JAMES MAIR, *Medical Officer of Health.*

Note.—The Factory and Workshop Act, 1901 (S. 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, workplaces, or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

One reference was received from H.M. Inspector of Factories. This reference was as follows :—

"August 27th. Defective roof ; evidence of percolation of rain in many places in the ceiling of workshop."

"Action taken :--Roof repaired, and made weather-proof."

Housing.

The chief Sanitary Inspector is the officer appointed to act as Inspector under the Housing and Town Planning Act.

During the year a house-to-house inspection was made of 124 houses, situated mainly in the New Park district. The results of the inspection are summarised in the following table :—

Number of houses inspected	... ...	124
,,	not in all respects fit for habitation .	113
,,	found unfit for habitation	7
,,	represented as unfit for habitation ...	3
,,	of Closing Orders made	1
,,	voluntarily closed by owners	4
,,	made fit without being closed... ...	44
,,	where works are in progress	35

In will be noticed that in 36 houses no improvements had been commenced at the end of the year. This is accounted for by the fact that 29 houses were only inspected towards the end of the year, and there had not been time to serve the necessary notices. In the remaining 7 houses the owner had a reasonable excuse for delay. At the time of writing practically the whole of these houses have been repaired.

Two houses which were represented as unfit for habitation were repaired without a Closing Order being made. The condition of these houses has been much improved, but they are still damp.

No houses were demolished during the year, but the question of making a demolition order with respect to a house which had been closed in the beginning of the year was under consideration at the close of the year.

The general character of the defects discovered is shown in the following summary :—

Houses with general dilapidations	83
,, in which dampness was found	66
,, with insufficient lighting	6
,, ,, insufficient ventilation	78
,, ,, insanitary sinks	10
,, ,, defective drainage...	36
,, ,, insufficient food-stores	36
,, ,, defective or dirty water closets ...	4
,, ,, defective or dirty waste water closets	20
,, ,, insanitary ashpits	7

I had hoped that the appointment of an additional Sanitary Inspector would have enabled us to inspect a larger number of houses, but it has not been found possible to do more, and to do what has been done has meant working at high pressure. The Inspector has, of course, many other and important duties to attend to, and cannot devote the whole of his time to this branch of his work. The inspection of houses also is a lengthy business. The houses have to be inspected, records made and reported to the Committee, and notices served upon the owners, and all this takes a good deal of time. After the notices have been served there are interviews with the owners and contractors to arrange details, and when the works are in progress it is necessary to inspect the houses again and again to make certain that things are being done properly. It will readily be seen that a great deal of time is taken up in this way.

It would be an easy matter to inspect a large number of houses, but this would inevitably mean that a great part of the improvement works would be in arrear. It seems to me preferable to inspect one lot of houses and get the improvements to these houses completed, or at least well on the way to completion, before inspecting another batch, and this is the method I have adopted.

There does not appear to be any insufficiency of working-class dwellings. According to the rate books there were in April, 1912 (the latest figures available), 157 houses let at rentals of £16 or less, unoccupied. Nor does there appear to be much, if any, overcrowding. No cases came to the knowledge of the department during the year.

Town Planning.

The Council have for some time been considering the advisability of adopting a Town Planning scheme, but no decision has yet been arrived at.

There seems to be an idea in many quarters that there is no necessity for such a scheme in Harrogate, but I feel sure that this is a mistaken impression. Harrogate is a health resort, and as such the adoption of any scheme which will preserve and improve the amenities of the town should be very favourably considered, and I cannot think of anything better adapted to do this than the adoption of a carefully-considered town planning scheme.

If it had been possible to have adopted such a scheme in the past there can be no doubt that the town would have been laid out to even better advantage than it has been.

New Houses.

The Borough Surveyor informs me that 71 new houses have been erected during the year, as against 74 in 1911, and 116 in 1910. The following table shows the number erected in each ward :—

Central	East	West	Bilton	Starbeck
0	30	17	17	7

Supervision of the building of houses is maintained, and no house is allowed to be occupied till a certificate has been given by the Surveyor.

Common Lodging Houses.

There are no registered common lodging houses in the Borough. As has been stated in former reports, however, there are good reasons for believing that several houses, although not registered are occasionally, at any rate, used as common lodging houses. These houses are kept under supervision as much as possible, but we have never been able to obtain sufficient evidence of their use as common lodging houses to justify proceedings being taken.

Slaughter Houses.

There are four slaughter houses in the Borough; one is used by fifteen butchers; one by two; and two by one butcher each. Two of the slaughter houses are situated close to dwelling houses; the other two are a considerable distance away.

204 visits were paid to these slaughter houses during the year, and as a rule they have always been found clean and well kept.

Considerable structural improvements have been carried out at all four slaughter houses during the year; yards have been paved, floors concreted, etc., and the general condition of the premises has been much improved.

New bye-laws relating to slaughter houses are in course of preparation, and it is to be hoped that they will soon be adopted, as those at present in force are quite obsolete.

Inspection of Food.

Prior to 1912 it had not been possible, on account of insufficiency of staff, to make any attempt at the systematic inspection of the food supply. In the beginning of the year, however, an additional Sanitary Inspector, who holds the Meat Certificate of the Royal Sanitary Institute, entered upon his duties, and this branch of the work has been entrusted to him.

During the year he made 192 visits to slaughter houses and 553 visits to shops and other premises where food is manufactured or sold.

The following table shows the quantity of unsound meat destroyed during the year :—

Beef	18½ pounds
Mutton..	50 ,,
Lamb	27 ,,
Pork	48 ,,
Offal	91 ,,
	234½ pounds

In each instance the meat was discovered in the course of a routine visit to a slaughter house, and had not been exposed for sale. In each case, also, the owner voluntarily surrendered the meat, and it was not necessary to have it formally condemned by a magistrate.

In addition to the above, 6 ducks and 4 gallons of ice cream were destroyed.

We are fortunate in having only four slaughter houses in Harrogate, and as one of these is used by 15 butchers, it serves to some extent the purposes of a public abattoir. This enables us to more thoroughly supervise the meat supply than would be possible if there were a larger number of slaughter houses, but even so it is impossible for one inspector to inspect the whole, or anything approaching the whole, of the meat slaughtered in the town. If slaughtering always took place at stated times it would not be so difficult, but as animals are slaughtered at all hours, and not infrequently at night, it is obviously impossible for one inspector, who has also the sanitary supervision of a large district, to be always present when slaughtering is going on. Again, a considerable proportion of our meat supply comes from outside districts, and while no doubt some of this is adequately inspected at the place of slaughter, a great deal of it is not inspected at all. The inspection of meat in butchers' shops gets over this difficulty

to some extent, but not entirely, for while it is comparatively easy to detect disease when the whole carcase and organs can be examined, it is often very difficult, and sometimes impossible, to do so when the carcase has been dressed and cut up for sale.

When the inspection at the slaughter houses first commenced there was a tendency upon the part of some of the butchers to resent it, and some stated that if they were to be troubled in this way they would make arrangements to slaughter elsewhere, and I believe one or two have actually done so. I am glad to say, however, that this feeling seems to be disappearing and the butchers as a whole are beginning to appreciate the advantages of inspection.

Milk Supply, Cowsheds.

There were on the register at the end of the year the names of 18 cowkeepers, occupying 24 cowsheds. The corresponding figures at the end of 1911 were 17 and 23 respectively.

These sheds have been inspected frequently during the year ; 125 visits were made by the Sanitary Inspector, and they were also inspected regularly by the Medical Officer of Health and Veterinary Inspector.

The occupier of one insanitary shed was called upon to cease using it, and he at once gave up keeping milk cows there. Improvements were effected at several other sheds, but the conditions are still far from ideal, and the remarks which have been made in former reports are equally applicable now.

It is discouraging to have to report that the efforts which have been made to secure a higher standard of cleanliness have not been more successful. There has been some improvement in this respect, but the standard reached is still far from satisfactory.

Veterinary Inspection of Milk Cows.

As was stated in last year's report, Mr. Ellison, M.R.C.V.S., was appointed to act as Veterinary Inspector of Milk Cows, his

duty being to visit each cowshed in the Borough at least 3 times a year, and examine every milk cow therein, with a view to discovering any cow suffering from tuberculous disease of the udder.

Mr. Ellison continued his duties during the year, and accompanied by the Medical Officer of Health paid three visits to each cowshed, and examined each milk cow therein. He discovered eight cows whom he suspected to be probably suffering from tuberculous disease of the udder. Samples of milk were taken from each of these cows and sent to the County Laboratory at Wakefield for bacteriological examination. Seven samples gave negative results; one was found to contain the tubercle bacillus. Immediately upon receipt of the laboratory report, the owner of this cow was communicated with and warned both verbally and by letter that he must cease using the milk of this cow for human food, and also that, as required by the Harrogate Corporation Act, 1901, he must keep the diseased animal isolated from other cows. He ceased using this milk, but refused to isolate the animal until legal proceedings were on the point of being taken. Close observation was kept upon the farm, but in spite of this the diseased animal was removed to a neighbouring town before knowledge of this fact was obtained by the department. The authorities of that town were at once communicated with, but entirely failed to trace the animal.

The Tuberculosis Order of the Board of Agriculture, which comes into force on May 1st, 1913, provides that any cow giving tuberculous milk is to be slaughtered, and compensation paid to the owner. It will, therefore, I am glad to say, be impossible for a similar occurrence to that related above to happen in future.

During the year, a complaint was received that milk from a certain farm outside the Borough was causing tuberculosis. Acting under the powers conferred by the Harrogate Corporation Act, 1901, the Medical Officer of Health accompanied by the Veterinary Inspector visited this farm, and examined all milk

cows there. One suspicious cow was discovered, and a sample of her milk was taken. Bacteriological examination, however, failed to discover the presence of any tubercle bacilli.

Purveyors of Milk.

At the end of the year the register contained the names of 105 purveyors of milk, including 74 whose premises are situated outside the Borough. The premises of 31 purveyors in the Borough have been regularly visited by the Inspectors; 350 visits having been made during the year. These premises have generally been found in a satisfactory condition, and only seldom has any cause for complaint been found. Where it has been necessary to find fault, it has nearly always been in small shops where the selling of milk forms a part, and often a small part only, of the business. The larger dairies, where milk and other dairy produce alone are sold, are almost invariably found in a very satisfactory condition.

Ice Cream.

The premises where ice cream is manufactured have been regularly inspected, and as a rule found to be well kept. As has already been stated, four gallons of ice cream which had become sour were surrendered and destroyed.

Bakehouses.

There are 47 bakehouses on the register, including 12 underground bakehouses. These have been inspected regularly throughout the year, and on 12 occasions various sanitary defects were discovered. These were, as a rule, promptly remedied after being pointed out.

Food and Drugs Acts.

During the year, 104 samples of foods were purchased and submitted to Mr. Richardson, the County Analyst. In 11

instances the sample was found to be be adulterated, and two samples of new milk were reported by the Analyst to be "on the border line in regard to fat." The proportion of adulterated samples is therefore 10·5 per cent., or if the two border-line samples be included, it is 12·5 per cent.

SAMPLES TAKEN.

Nature of Sample	FORMAL SAMPLES			INFORMAL SAMPLES		
	Number genuine	Number adulterated	Percentage adulterated	Number genuine	Number adulterated	Percentage adulterated
New Milk ...	62	11	15	...	...	..
Cream	1	...	...	...	...	...
Butter	5	..	...	9	...	...
Lard	...	...	...	4	...	...
Potted Meat ...	...	...	...	2	1	33
Sausages... ...	1	...	...	2	1	33
Beer	...	...	...	2	...	...
Coffee	...	...	...	1	...	...
Baking Powder	...	...	...	1	...	...
Jam	...	...	...	1	...	...
Total	69	11	13·7	22	2	8·3

I would direct attention to the fact that no less than 15 per cent. of the samples of new milk were found to be more or less adulterated.

The next table gives details of the adulterated samples, and of the action taken in each instance.

ADULTERATED SAMPLES.

Number of Sample	Nature of Sample	Natnre and extent of Adulteration	Action taken
3	New Milk	Deprived of 6% of natural fat, and contains 1·4% of added water	Warned by Town Clerk
15	,, ,,	On border line in regard to fat	,, ,,
25	,, ,,	Contains 2·58% of added water	,, ,,
28	,, ,,	Deprived of 1·4% of fat	,, ,,
38	,, ,,	On border line in regard to fat	,, ,,
41	,, ,,	Deprived of 10% of fat	Summoned, case withdrawn on payment of costs, 4s.
46	,, ,,	,, 6·7% ,,	Warned by Town Clerk
50	,, ,,	,, 3% ,,	,, ,,
62	,, ,,	,, 1·7% ,,	,, ,,
64	,, ,,	,, 5% ,,	,, ,,
74	,, ,,	,, 4% ,,	,, ,,
55	Sausage ...	Contains 31·5 grains of boric acid per pound	Informal sample. Warned by Town Clerk Formal sample subsequently purchased was genuine
56	Potted Meat	Contains 26·6 grains of boric acid per pound	Informal sample. Warned by Town Clerk Vendor ceased selling potted meat

Complaint is occasionally made by milk dealers that the standard for the Board of Agriculture is unduly high.

The next table, which has been prepared from the Analyst's reports, shows the average composition of the genuine samples analysed during the year.

Number of Samples	Average Percentage of Fat	Average Percentage of Non-Fatty Solids
62	3·78	9·09

The standard of the Board of Agriculture is:—fat, 3 per cent., and non-fatty solids, 8·5 per cent., and it will be seen that the average composition of the genuine samples of milk is well above this standard.

Offensive Trades.

There are two offensive trades—one tripe-boiling and one gut-scraping business—in the Borough, which are carried on in connection with one of the slaughter houses. The premises have been frequently inspected during the year, and have always been found in a satisfactory condition.

Prosecutions.

The legal proceedings taken under the Food and Drugs Acts have already been referred to. No other proceedings were taken during the year.

Drain Testing.

The drainage systems of 129 houses have been tested during the year, and of these 98 were found to be more or less defective. In many instances the defects discovered were slight, but in 30 cases it was found necessary to redrain the houses.

Reconstruction of Drains.

The next table gives a list of 100 houses (including 30 mentioned above) in which the drainage was entirely reconstructed. In all cases this was done under the supervision of the department.

Houses Re-drained during 1912.

Belmont Avenue, 28, 34.
Bower Road, Starbeck, 34, 36.
Chatsworth Place, 70, 72, 74.
Cheltenham Mount, 4.
Cold Bath Road, 12.
Cornwall Road, 16.
Cromwell Road, 14, 16, 18, 20, 22, 24.
East Park Road, 2.
East Parade, 23, 77.
Eastville Terrace, 69, 77, 83, 85.
Franklin Mount, 6.
Franklin Road, 45, 59.
Grey Street, 33, 35.
Grove Road, 18, 20, 22.
Harlow Cottages, 1, 2.
Harlow Oval, Catterthun.
High Street, Castle Villa.
Hookstone Road, 21.
King's Road, 10, 62, 79.
Leadhams Terrace (Ripon Road), 1, 2, 3, 4.
Mayfield Grove, 7.
Montpellier Parade, 3, 4, 30.
Myrtle Square, 6, 8, 10.
Otley Road, Wilmar Lodge.
Park Parade, Park House.
Park Street, 3, 7, 8, 9, 10, 12, 28, 30, 32, 34, 40, 42.
Parliament Street, 29, 31.
Plantation Avenue, 2, 3, 4, 5, 6, 7, 8.
Regent Place, 2, 13, 38.
Russell Street, 32, 34.
Rutland Road, 15.
St. James' Park, Grey Gables.
St. Mary's Avenue, 20.
South Park Road, 23.

South Beech Avenue, 37.
Station Parade, 3, Cottage at 107.
Valley Drive, 126.
Valley Road, 8, 10.
Westcliffe Grove, 10.
Wetherby Road, Woodgarth.
West End Avenue, 2, 4, 6, 8, 10, 12, 14, 16.
York Place, 62.
York Road, Dunain.

Summary of Routine Work carried out by the Sanitary Inspectors during the year.

I give, as in former years, a table showing so far as it is possible to do so in tabular form, the routine work carried out by the Sanitary Inspectors.

Informal notices served...	387
Statutory notices served	225
Notices complied with	444
Total number of visits and inspections	7,267
Total number of nuisances reported by Inspectors ...	2,224
Total number of nuisances reported by residents ...	190
Total number of nuisances abated	1,824
Inspection of houses after complaints	214
Drains tested	129
Drains tested and found defective	98
Animals kept so as to be a nuisance	8
Additional water closets provided	2
Basements subsoiled, drained on to gullies	2
Blocked drains opened and cleansed and put into proper working order	51
Sink pipes repaired	23
Defective house drains repaired	164
Defective spouting of eaves of buildings repaired ...	40
Defective closet cisterns repaired or renewed ...	17
Defective water closet basins renewed	9

Dilapidated water closets repaired or reconstructed	12
Dirty houses cleaned out and purified	6
Dirty or defective closets repaired, cleansed, or limewashed out	29
Dirty or defective waste-water closets cleansed or repaired	8
Drainage or sanitary arrangements of houses dealt with	473
Drainage systems ventilated	60
Drains through houses taken up and cast iron pipes substituted	1
House drains disconnected from sewer	22
Insanitary ashpits removed and dust bins provided	56
Insanitary sinks removed and sanitary ones substituted	18
Inspecting chambers built on house drains	43
Offensive accumulations removed	24
Rainwater pipes disconnected and made to discharge over gullies	29
Rainwater pipes repaired	13
Soil pipes ventilated with 4in. shafts	14
Sink pipes disconnected from drains	6
Sink pipes trapped	29
Dampness remedied	55
Defective roofs repaired	20
Defective plastering repaired	45
Manure bins provided	5
Waste-water closets converted into ordinary ones	8
Defective house walls repaired	44
Keeping fowls so as to be a nuisance	2
Yard paving repaired	24
Defective soil pipes or ventilating shafts repaired	4
Outside water taps removed inside over sink	2
Defective kitchen and scullery floors repaired	122
Defective bedroom floors repaired	11
Pedestal closets fixed in place of boxed-in ones	45

Workshops provided with sanitary conveniences ...	2
Windows repaired and made to open	201
Manure pits removed	3
Bedrooms without fireplaces ventilated	72
Defective fire grates repaired or new ones provided...	14
Defective hand rails and stairs repaired	16
Defective doors repaired	14
Dangerous ceilings made safe	4
Ceilings underdrawn	12
Ventilated food stores provided	24
Yards paved whole surface	60
Insanitary pail closets converted into water closets...	2
Insanitary and undrained stables made sanitary ...	3
Sanitary sinks provided	11
Dangerous chimney stacks made safe...	3
Dilapidated outbuildings repaired	3
Dilapidated dust bins renewed	185
Miscellaneous works	9

General Sanitary Administration.

An additional Sanitary Inspector commenced his duties in the beginning of the year, and the Workshops Inspector has been appointed Inspector under the Shops Act, 1912, and now devotes about half his time to work under that Act.

With these exceptions there have been no changes in the personnel of the staff, which now consists of two Sanitary Inspectors, a Workshops Inspector, a Cleansing Superintendent, Health Visitor, and one Clerk.

The routine work of the department has been carried on on the same lines as in former years. There has been no diminution in the amount of work ; on the contrary it increases year by year. The carrying out of the provisions of the Housing and Town Planning Act, the Inspection of Meat, the Notification of Tuberculosis, etc., have all added materially to the work, and while the appointment of an additional Inspector has just enabled the

department to keep pace with the demands made upon it, there has as yet been no increase in the clerical staff. Each new Order means increased clerical work, and it will soon be necessary to augment the present staff.

The Local Acts in force within the Borough are :—

The Harrogate Improvement Act, 1841.
The Harrogate Corporation Act, 1891.
The Harrogate Corporation Act, 1901.

The Acts adopted are :—

The Infectious Disease (Notification) Act, 1889.
The Infectious Disease (Prevention) Act, 1890.
The Public Health Acts Amendment Act, 1890.
The Notification of Births Act, 1907.

Of the Local Acts, most frequent use is made of those sections which give power to pave back yards and abolish ashpits.

TABLE I.

Vital Statistics of Whole District during 1912 and Previous Years.

Year	Population estimated to middle of each year	Births			Total Deaths Registered in the District		Transferable Deaths ‡		Nett Deaths belonging to the District			
		Uncorrected Number	Nett		Number *	Rate	of Non-residents registered in the District †	of Residents not registered in the District †	Under 1 year of age		At all ages	
			Number †	Rate					Number *	Rate per 1,000 Nett Births	Number *	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1907	32,000	631		19·7	402	13·6	49	17	44	69·7	370	11·5
1908	32,000	555		17·3	397	12·4	47	8	63	113·0	358	11·2
1909	33,000	640		19·4	411	12·4	63	10	55	86·0	358	10·8
1910	33,500	620		18·8	378	11·3	16	20	57	90·6	382	11·4
1911	33,840	595	606	17·9	425	12·6	58	30	61	100·7	397	11·7
1912	34,400	489	500	14·5	353	10·3	60	27	32	64·0	320	9·3

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 probably will not be available. The rates should be calculated per 1000 of the estimated gross population. In a district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

*In Column 6 are to be included the whole of the deaths registered during the year as having actually occurred within the district.

For continuation of Notes see page 76.

NOTES TO TABLE 1 (continued).

In Column 12 is to be entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in Column 9. Deaths in Column 10 are to be similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

†The Medical Officer of Health will be able from the returns made to him by the local Registrar of Deaths, as well as from the quarterly lists furnished by the Registrar-General, to fill in Column 8 in accordance with the rule in the next paragraph below. The Registrar-General, either directly or through the County Medical Officer of Health, will supply the Medical Officer of Health with the particulars of deaths to be entered in Column 9; and all such deaths must be included in this Column, unless an error is detected, and its correction has been accepted by the Registrar-General. For Column 4 the Registrar-General will furnish to the Medical Officer of Health a Statement of the number of births needing to be added to or subtracted from the total supplied by the local Registrar.

‡"Transferable Deaths" are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, *e.g.*, casuals, must not be included in Columns 8 or 9, except in certain instances under 3 (*b*) below. The Medical Officer of Health will state in Column 8 the number of transferable deaths of "non-residents" which are to be deducted, and will state in Column 9 the number of deaths of "residents" registered outside the district which are to be added in calculating the nett death-rate of his district.

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) must be 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 should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from Violence are to be 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; and (*d*) failing this, to the district where the body was found.

Area of District in acres (land and inland water), 3,276; Total population at all ages, 33,706; Number of inhabited houses, 7,409; Average number of persons per house, 4·6 at census of 1911.

TABLE II.

Cases of Infectious Disease notified during the Year, 1912.

Notifiable Disease	Number of cases notified								Total cases notified in each locality					Total cases removed to hospital
	At all Ages	At Ages—Years							Central	East	West	Bilton	Starbeck	
		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	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	12	...	2	8	...	1	1	...	4	2	1	1	4	6
Erysipelas	10	...	...	...	...	4	3	3	2	1	2	2	3	...
Scarlet Fever	38	...	8	21	6	3	...	...	5	8	11	6	8	32
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	1	...	...	...	1	...	...	...	...	...	...	1	...	...
Relapsing Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	44	...	2	8	6	17	10	1	11	7	5	13	8	...
Totals	106	...	13	37	13	25	14	4	22	18	19	23	23	38

Joint Isolation Hospital, Thistle Hill, Knaresborough. Joint Smallpox Hospital, Harrogate.

TABLE III.

CAUSES OF, AND AGES AT DEATH

CAUSES OF DEATH	Nett Deaths at the subjoined ages of Residents, whether occurring within or without the District (*a*)			
	All Ages	Under 1	1 and under 2	2 and under 5
1	3	3	4	5
All causes { Certified (*c*)	320	32	9	9
All causes { Uncertified	...	...	...	...
Enteric Fever	...	...	...	...
Small Pox	...	...	...	...
Measles	1	1	...	...
Scarlet Fever	...	...	...	...
Whooping Cough	4	1	1	2
Diphtheria and Croup	1	...	...	...
Influenza	2	...	...	...
Erysipelas	...	...	...	...
Phthisis (Pulmonary Tuberculosis) ...	15	...	...	...
Tuberculous Meningitis	2	...	1	..
Other Tuberculous Diseases	3	...	...	2
Cancer, malignant disease	29	...	...	...
Rheumatic Fever	1	...	...	...
Meningitis (see note *d*)	3	...	2	...
Organic Heart Disease	40	...	...	...
Bronchitis	22	2	1	...
Pneumonia (all forms)	18	4	1	3
Other diseases of Respiratory Organs ...	6	1	...	1
Diarrhœa and Enteritis (see note *e*) ...	3	3	...	...
Appendicitis and Typhlitis	4	...	...	...
Cirrhosis of Liver	6	...	...	...
Alcoholism	...	...	...	...
Nephritis and Bright's Disease	11	...	...	...
Puerperal Fever	1	...	...	...
Other accidents and diseases of Pregnancy and Parturition	1	...	...	...
Congenital Debility and Malformation, including Premature Birth	8	8	...	...
Violent Deaths, excluding Suicide	8	1	3	1
Suicide	6	..	...	...
Other Defined Diseases	125	11	...	...
Diseases ill-defined or unknown	...	...	...	...
	320	32	9	9
SUB-ENTRIES, included in above figures— Pneumonia (other than Broncho-Pneumonia)	10	...	..	1

See Notes,

DURING THE YEAR 1912.

Nett Deaths at the subjoined ages of Residents whether occurring within or without the District (*a*)					Total Deaths whether of Residents or Non-residents in Institutions in the District (*b*)
5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	
6	7	8	9	10	11
6	13	30	75	146	46
...	...	...	..	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
...	...	...	...	...	...
1	...	...	...	...	...
...	...	1	...	1	...
...	...	...	...	...	...
2	2	6	5	...	1
1	...	...	...	...	...
...	1	...	...	...	3
...	...	1	13	15	6
...	...	...	...	1	...
...	1	...	...	...	1
...	1	2	10	27	3
...	...	...	1	18	2
1	2	1	3	3	2
...	...	2	1	1	2
...	...	...	...	...	...
...	...	2	1	1	1
...	...	1	2	3	...
...	...	...	...	...	...
...	1	2	5	3	2
...	1	...	...	...	...
...	...	1	...	...	...
...	...	...	...	...	...
1	...	1	...	1	9
...	...	2	4	...	1
...	4	8	30	72	13
...	...	...	...	...	...
6	13	30	75	146	46
1	2	1	2	3	2

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TABLE IV.

Infant Mortality during the Year, 1912.

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

CAUSE OF DEATH	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	4 wks. and under 3 mnths	3 and under 6 months	6 and under 9 months	9 and under 12 months	Total Deaths under 1 yr.
All causes { Certified	9	0	5	2	16	6	3	6	1	32
All causes { Uncertified	...	...	...	...	...	...	...	...	...	...
Small-pox	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	1	...	...	1
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	...	...	1	...	1
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis (*b*)	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...
Meningitis (*not Tuberculous*)	...	...	...	...	...	...	...	...	...	...
Convulsions	3	...	...	1	4	...	...	1	...	5
Laryngitis	...	...	...	...	...	...	...	1	...	1
Bronchitis	...	...	...	...	...	...	...	1	1	2
Pneumonia (all forms)	...	...	...	...	...	2	2	...	...	4
Diarrhœa	...	...	...	...	...	...	...	1	...	1
Enteritis	...	...	1	...	1	1	...	...	...	2
Gastritis	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	1	...	...	...	1
Rickets	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying	...	...	...	...	...	1	...	...	...	1
Injury at birth	1	...	...	...	1	...	...	...	...	1
Atelectasis	1	...	...	1	2	...	...	...	...	2
Congenital Malformations (*c*)	...	...	...	...	...	...	...	...	...	...
Premature Birth	2	...	2	...	4	1	...	...	...	5
Atrophy, Debility, and Marasmus	2	...	...	...	2	...	...	1	...	3
Other causes	...	...	2	...	2	...	...	...	...	2
	9	...	5	2	16	6	3	6	1	32

See Notes page 82

Nett Births in the Year.		Nett Deaths in the Year.	
Legitimate	467	Legitimate Infants ...	29
Illegitimate	33	Illegitimate Infants ...	3

NOTES TO TABLE III.

The classification and numbering of causes of death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death, which should be consulted and followed in all cases of doubt.

Copies of this Manual were distributed to Medical Officers of Health in 1912 by the Registrar-General, and may be purchased either directly or through any bookseller from Wyman & Sons, Fetter Lane, E.C., price 1/-.

(*a*) All "Transferable Deaths" of residents, *i.e.*, of persons resident in the district who have died outside it, are to be *included* with the other deaths in columns 2-10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who have died in the district, are in like manner to be *excluded* from these columns. For the precise meaning of the term "transferable deaths" *see* footnote to Table I.

The total deaths in column 2 of Table III. should equal the figures for the year in column 12 of Table I.

(*b*) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or of non-residents, are to be entered in the last column of Table III.

(*c*) All deaths certified by registered Medical Practitioners and all Inquest cases are to be classed as "Certified;" all other deaths are to be regarded as "Uncertified."

(*d*) Exclusive of "Tuberculous Meningitis" (10), but inclusive of Cerebro-Spinal Meningitis.

(*e*) Title 19 should be used for deaths from Diarrhœa and Enteritis at all ages. (In the "Short List" deaths from Diarrhœa and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28.)

NOTES TO TABLE IV.

(*a*) The total in the last column of Table IV. should equal the total in column 10 of Table I., and in column 3 of Table III.

(*b*) Under Abdominal Tuberculosis are to be included deaths from Tuberculous Peritonitis and Enteritis, and from Tabes Mesenterica.

(*c*) The total deaths from Congenital Malformations, Premature Birth, Atrophy, Debility, and Marasmus, should equal the total in Table III. under the heading Congenital Debility, and Malformation including Premature Birth.

Want of Breast Milk should be included under Atrophy and Debility.

(*d*) For references to the meaning of any other headings, see notes attached to Table III.

In recording the facts under the various headings of Tables I., II., III., and IV., attention has been given to the notes on the Tables.

JAMES MAIR,

Medical Officer of Health.

14th May, 1913.

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