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Borough of Harrogate.

REPORT

ON THE

Health and Sanitary Condition

OF THE

BOROUGH OF HARROGATE

FOR


1911

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 this, my second, ANNUAL REPORT upon the Health and Sanitary Circumstances of the Borough of Harrogate.

In doing so I have to express my thanks to my official colleagues for much valuable assistance, and to the members of my own staff for their willing help in carrying out the work of the department.

My thanks are also due to the Chairman and Members of the Health Committee for the courtesy they have invariably extended to me.

I am, Gentlemen,

Your obedient Servant,

JAMES MAIR.

Harrogate,

30th March, 1912.

Principal Figures, 1911.

| | | | | | | |
|--|--|-----|-----|-----|-----|-----------|
| Population estimated to middle of 1911 | ... | ... | ... | ... | ... | 33,840 |
| Area in Acres | .. | ... | ... | ... | ... | 3,276 |
| Census, 1911 | <div style="display: flex; align-items: center;"> { <div> 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 </div> </div> | | | | | |
| Rateable value | ... | ... | ... | ... | ... | £264,362 |
| Penny Rate produces | ... | ... | ... | ... | ... | £974 |
| Number of Births | <div style="display: flex; align-items: center;"> { <div> Male, 307 Female, 299 </div> </div> | | | | | 606 |
| Birth Rate | ... | ... | ... | ... | ... | 17·9 |
| Number of Deaths | <div style="display: flex; align-items: center;"> { <div> Male, 193 Female, 204 </div> </div> | | | | | 397 |
| Death Rate | ... | ... | ... | ... | ... | 11·7 |
| Infant Mortality | ... | ... | ... | ... | ... | 100·7 |
| Zymotic Death Rate... | ... | ... | ... | ... | ... | 0·77 |
| Death Rate from Phthisis | ... | ... | ... | ... | ... | 0·73 |
| Death Rate from other Tuberculous Diseases | ... | ... | ... | ... | ... | 0·24 |
| Mean Annual Temperature... | ... | ... | ... | ... | ... | 48·2°F. |
| Total Rainfall | ... | ... | ... | ... | ... | 27·92ins. |
| Hours of Bright Sunshine | ... | ... | ... | ... | ... | 1541·5 |

Physical Features.—Harrogate is a Municipal Borough in the West Riding of Yorkshire, about 18 miles north of Leeds. It is situated on the edge of the Yorkshire Moors, on a tableland which forms the Western boundary of the Plain of York, and almost midway between the Irish Sea and the German Ocean. Its mean altitude is about 400ft., the highest point being Harlow Hill some 450ft. above sea level.

The borough is divided into five wards; the names and populations of which are given underneath:—

| 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 |

Geologically, Harrogate is situate upon the Shales and Grits of the Carboniferous series. A remarkable feature of the geological formation is the number and variety of the mineral springs.

Harrogate is almost entirely a residential town, and there are no industries save such as are incidental to a health resort.

The rateable value of the Borough is £264,362 and a penny rate produces £974.

Population.—In my last Annual Report I pointed out the importance of an accurate estimate of the population, and as the census was taken in 1911 we are now in a position to obtain a reliable estimate.

The population at the date of the census (April, 1911) was found to be 33,706; of which 13,816 were males and 19,890

were females. At the previous census (1901) the population was 28,423; 12,023 being males and 16,400 females. During these ten years, therefore, the whole population has increased by 19 per cent.; males have increased by 15 per cent. and females by 21 per cent.

But as all our rates are calculated to the middle of the year, and the census is taken in the beginning of the year, it is necessary to estimate the population as at the 30th of June. In doing this I have assumed that the rate of increase between the date of the census and the middle of the year has been the same as it was between the census of 1901 and that of 1911. In this way I estimate the mid-year population at 33,840, and I have used this figure in calculating nearly all the rates in the report.

Density of Population.—By this term is meant the number of persons per acre.

The borough has an area of some 3,276 acres, and the number of persons per acre is, therefore, 10·3 as compared with 8·7 in 1901.

Average number of persons per house.—At the census it was found that there were 7,409 inhabited houses as compared with 5,691 in 1901; an increase of about 30 per cent. It will be noticed that the number of inhabited houses has increased in a greater proportion than the population, and the average number of persons per house has fallen from 4·99 in 1901 to 4·55 in 1911.

Natural Increase of Population.—By this term is meant the excess of births over deaths. In 1911 there were 606 births and 397 deaths, and the natural increase is therefore 209, or at the rate of 6·2 per 1000.

The following table shows the number of births and deaths, and the natural increase for each year since 1901.

NATURAL INCREASE.

| Year. | Population. | Births. | Deaths. | Nat. Inc. | Nat. Inc. per 1000. |
|-------|-------------|---------|---------|-----------|------------------------|
| 1901 | 29,000 | 760 | 383 | 377 | 13·0 |
| 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 |

It will be seen that with one exception (1908) the rate for 1911 is the lowest recorded since 1901.

Births.—At the beginning of 1911 the Registrar General adopted a system whereby the birth-rate is corrected in a similar manner to the death-rate; that is to say, children born in Harrogate to parents who are only temporarily resident here are to be deducted from, and conversely children born outside Harrogate to parents who are residents of Harrogate are to be added to the Harrogate figures.

There were 595 births—302 male and 293 female—registered during the year, and I have received information from the Registrar General that 11 births—5 male and 6 female—have to be added. The nett number of births upon which the birth-rate is calculated is therefore 606, and the rate is 17·9 per 1,000. This is 0·9 per 1,000 below the rate for 1910, and 3·0 below the average rate for the ten years, 1901 to 1910.

In the accompanying table is set out the birth-rate for Harrogate compared with that of England and Wales, and the table shows that with the exception of 1908, not only the rate, but the number of births is the lowest recorded since 1901.

BIRTH-RATE, 1900-1911.

| Year. | Harrogate. | | England and Wales. Rate per 1,000. |
|-------|----------------------|--------------------|--|
| | Number 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 |

The birth-rate of the 77 great towns was 25·6, of the 136 smaller towns 23·4, and of the rest of England and Wales 23·4.

ILLEGITIMATE BIRTHS.—An unsatisfactory feature is the increase in the number of illegitimate births, of which there were 41, or 6·8 per cent. of the total number. The percentage for 1910 was 4·3; for 1909, 5·9; for 1908, 5·2.

STILL-BIRTHS are not required to be registered, and as the Notification of Births Act has not yet come into force, I am without any definite information on this point. I have, however, been able to ascertain from the superintendents of the cemeteries that 31 still-born children belonging to Harrogate were interred during the year. In 1910 there were 29 burials of still-born children.

Deaths.—425 deaths—47 more than in 1910—were registered as having taken place during the year, and the gross death-rate is therefore 12·6 per 1,000, compared with 11·3 in 1910.

In last year's report I explained that while the deaths of those persons who were not residents of Harrogate, but who died in one or other of the public institutions in the town were

deducted from the number of deaths, no deduction was allowed to be made in the case of those non-residents who died in hotels, etc., and I pointed out that the death-rate calculated in this way was in reality somewhat over-stated. In the beginning of 1911 this system was altered, and the Local Government Board now allows the deaths of *all* non-residents, whether occurring in public institutions or elsewhere, to be deducted, and of course the deaths of those Harrogate residents who die elsewhere have to be added. Information regarding these "transferable deaths" is sent to me each quarter by the Registrar General through the County Medical Officer.

To obtain the correct number it is necessary to add the deaths of 30 residents of Harrogate who died in other districts, and to deduct the deaths of 58 non-residents who died in Harrogate. The nett number of deaths is therefore 397, of which 193 were male and 204 were female; and the nett death-rate is 11·7 per 1,000.

The next table shows the Harrogate death-rate compared with that of England and Wales.

| 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 |
| Average 1901-1910 | 11·8 | 15·3 |
| 1911 | 11·7* | 14·6 |

* The rate for 1911 is not quite comparable with that of previous years, as, owing to a difference in the method of excluding deaths, it is somewhat overstated as compared with these years.

| Annual Death-rate for 1911 | | | | Crude | Corrected |
|----------------------------|-----|-----|-----|-------|-----------|
| England and Wales | ... | ... | ... | 14·6 | 14·6 |
| 77 Great Towns | ... | ... | ... | 15·5 | 16·4 |
| 136 Smaller Towns | ... | ... | ... | 13·8 | 14·4 |
| Rural England and Wales | ... | ... | ... | 13·9 | 13·1 |
| HARROGATE | ... | ... | ... | 11·7 | 12·6 |

It will be seen that, in common with the rest of the country, the death-rate has risen, but though higher than it has been for the last four years it is still well below that of England and Wales, and is even lower than that of Rural England.

To correct the Harrogate death-rate for the age and sex constitution of the population it is necessary to multiply it by 1·08. This makes the corrected death-rate 12·6 per 1,000.

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

| | | | | | | |
|---------------------|-------------|-----|-------|-----|----------------------------|--------|
| Under 1 year of age | ... | 61 | = | 15 | per cent. of total number. | |
| 1 year and under 2 | ... | 8 | = | 2 | „ | „ |
| 2 years | „ | 5 | ... | 5 | = | 1 „ „ |
| 5 „ | „ | 15 | ... | 12 | = | 3 „ „ |
| 15 „ | „ | 25 | ... | 18 | = | 5 „ „ |
| 25 „ | „ | 45 | ... | 50 | = | 13 „ „ |
| 45 „ | „ | 65 | ... | 95 | = | 24 „ „ |
| 65 „ | and upwards | ... | 148 | = | 37 | „ „ |
| | | | <hr/> | 397 | <hr/> | 100 |

It will be noticed that more than one-third of the total number of deaths were those of persons 65 years and upwards.

Of the total number of deaths registered, 56 occurred in one or other of the institutions in the town.

Inquests.—During the year 29 inquests were held in Harrogate; 21 on residents, and 8 on non-residents.

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

RESIDENTS.

| | | | |
|-------------------------------|-----|-----|----|
| Natural Causes (disease) ... | ... | ... | 12 |
| Accidental injuries ... | ... | ... | 3 |
| Poisoning by misadventure ... | ... | ... | 1 |
| Suicide by hanging ... | ... | ... | 2 |
| „ coal gas poisoning ... | ... | ... | 1 |
| „ throwing before trains ... | ... | ... | 3 |

NON-RESIDENTS.

| | | | |
|------------------------------|-----|-----|---|
| Natural Causes (disease) ... | ... | ... | 1 |
| Accidental injuries ... | .. | ... | 4 |
| „ burning ... | ... | . | 1 |
| Suicide by poison ... | ... | ... | 1 |
| „ hanging ... | ... | ... | 1 |

Uncertified Deaths.—These are deaths which are registered without having been certified by a medical man or a coroner. There were none such during the year.

Infant Mortality.—This means the deaths of infants under one year of age, and it is expressed as the ratio of these deaths per thousand births. It has therefore a different significance to the other rates which are calculated on an estimated population.

There were 606 births during the year and 61 children under one year of age died during the same period. The infant mortality is therefore 100·7 per 1,000.

There were 51 deaths of legitimate, and 10 of illegitimate infants. Expressed as a rate this gives a mortality of legitimate infants of 90·3, and of illegitimate infants of 243·9 per 1,000.

I give here a table showing the infant mortality in Harrogate compared with England and Wales.

| Year. | Harrogate. | | England & Wales. |
|----------------------------------|-------------------|------------------------|------------------------|
| | Number of deaths. | Rate per 1,000 births. | Rate per 1,000 births. |
| 1900 | 61 | 144·0 | 154 |
| 1901 | 106 | 144·7 | 151 |
| 1902 | 77 | 113·0 | 133 |
| 1903 | 89 | 116·0 | 132 |
| 1904 | 85 | 115·0 | 146 |
| 1905 | 92 | 131·4 | 128 |
| 1906 | 86 | 130·0 | 133 |
| 1907 | 44 | 69·7 | 118 |
| 1908 | 63 | 113·0 | 121 |
| 1909 | 55 | 86·0 | 109 |
| 1910 | 57 | 90·6 | 106 |
| Average for ten years 1901-1910. | 75 | 110·9 | 128 |
| 1911 | 61 | 100·7 | 130 |

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

| | | | |
|-------------------|-----|-----|-------|
| England and Wales | ... | ... | 130 |
| 77 great towns | ... | ... | 140 |
| 136 smaller towns | ... | ... | 133 |
| Rural England | ... | ... | 118 |
| HARROGATE | ... | ... | 100·7 |

Table showing the number of infant deaths in each quarter of 1911 :—

| | Number. | Rate. | Rate, 1910 |
|---------------|---------|-------|------------|
| First Quarter | 10 | 66·2 | 89·7 |
| Second „ | 9 | 55·6 | 62·9 |
| Third „ | 23 | 173·0 | 90·9 |
| Fourth „ | 18 | 120·8 | 116·9 |

INFANT MORTALITY IN EACH WARD.

| Ward. | Number of Births. | Number of Infant Deaths. | Infant Mortality. | Rate, 1910. |
|--------------|-------------------|--------------------------|-------------------|-------------|
| Central ... | 69 | 8 | 115·9 | 82·4 |
| East ... | 165 | 20 | 121·2 | 59·1 |
| West .. | 99 | 4 | 40·4 | 107·8 |
| Bilton .. | 166 | 16 | 96·4 | 136·4 |
| Starbeck ... | 96 | 12 | 125·0 | 84·1 |

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.

PRINCIPAL CAUSES OF INFANT DEATHS.
1900 to 1911.

| | 1900 | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 |
|------------------------------------|------|-------|------|------|------|-------|------|------|------|------|------|-------|
| Marasmus, Debility and Atrophy | ? | 27 | ? | ? | ? | 10 | 8 | 7 | 5 | 5 | 6 | 9 |
| Convulsions | ? | ? | 21 | 14 | 8 | 16 | 9 | 9 | 10 | 10 | 4 | 4 |
| Bronchitis and Pneumonia ... | 9 | 12 | 11 | 13 | 15 | 12 | 11 | 7 | 11 | 9 | 7 | 9 |
| Whooping Cough .. | — | 5 | 7 | 3 | 4 | 7 | — | — | 2 | 2 | 2 | 4 |
| Measles | — | — | — | 1 | 1 | — | 2 | — | — | 3 | 1 | — |
| Premature Birth... | 8 | 16 | ? | 11 | 14 | 18 | 14 | 5 | 8 | 10 | 16 | 12 |
| Congenital Defects | ? | ? | ? | ? | ? | 5 | 4 | 4 | 5 | 9 | 7 | 4 |
| Diarrhoea, Enteritis & Gastritis . | 6 | 14 | 7 | 9 | 12 | 11 | 22 | 3 | 8 | 3 | 9 | 14 |
| All other Causes... | 38 | 32 | 31 | 38 | 31 | 13 | 16 | 9 | 14 | 4 | 5 | 5 |
| Total Deaths | 61 | 106 | 77 | 89 | 85 | 92 | 86 | 44 | 63 | 55 | 57 | 61 |
| Total Births | 421 | 760 | 695 | 712 | 734 | 700 | 659 | 631 | 555 | 640 | 629 | 606 |
| Infant Mortality... | 144 | 144.7 | 113 | 116 | 115 | 131.4 | 130 | 69.7 | 113 | 86. | 90.6 | 100.7 |

The tables on the preceding pages show that up to 1907 the Infant Mortality in Harrogate was unduly high. In that year there was a sudden fall, and though it has risen somewhat since it is still low compared with the years prior to 1907. It is perhaps disappointing to find that there is an increase this year, but it must be remembered that the climatic conditions during the year were very unfavourable to a low mortality. I quite expected a much larger increase and was agreeably surprised to find that it was not greater.

The mortality was greatest in the 3rd and 4th quarters, more than twice as many deaths occurred in these quarters than in the 1st and 2nd quarters.

There was an increase as compared with 1910 in the deaths caused by diarrhoea, whooping cough, marasmus, and lung diseases, and a decrease in these due to premature births and congenital defects.

From the Local Government Board Table IV., it will be seen that 20 children died in the first month of life, and that 18 of these deaths were due to premature birth or some developmental defect; 10 of these children were less than one week old at the time of death. Very little, if anything, can be done by a Sanitary Authority to prevent these deaths.

But it is otherwise with those children who had survived the first month of life. Of the 41 children who died between 1 and 12 months of age, nearly one-half (18) died from diarrhoea or whooping cough. Both these diseases are to a large extent, if not entirely, preventible, and it is all the more regrettable that they should bulk so largely as causes of infant mortality.

In my last report I gave expression to my belief that there was a large amount of ignorance among the poorer mothers, and that this ignorance was, at any rate partly, responsible for much

of the illness and mortality among young infants. With the object of combating this ignorance, the Board of Education have recently suggested that the "Care and Management of Infants" should be taught to the older girls in the elementary schools, and arrangements are now being made in Harrogate to adopt a scheme for the teaching of this subject in the schools; in one school a beginning has already been made. I have little doubt that this teaching will, in years to come, be found to have a beneficial effect upon the infant mortality.

Health Visitor.—In that report it was also suggested that the appointment of a Health Visitor would be of service in preserving infant life, and I am glad to say that arrangements have been made whereby the school nurse (Miss Alice Wardle) is to devote part of her time to this work.

Her duties as health visitor are briefly as follows :

1. To visit selected homes where a birth has taken place, and where necessary to advise the mother as to the feeding, etc., of the child.
2. To report any insanitary conditions found in the house or its surroundings.
3. To make inquiry into the deaths of children under one year of age.
4. She also visits cases of Phthisis.

Miss Wardle commenced her duties as health visitor in October, and between that date and the end of the year she visited 60 births and made enquiry into 13 infants' deaths, 5 of which had previously been visited as births; in all she paid 125 visits to births. Taking births and deaths together, enquiry was made into 68 cases. The number of cases investigated is too small to allow of any very reliable deductions being made, but it is perhaps worth while noting that at the time of the visit the child was

entirely breast-fed in 36 instances ; in 14 instances breast-feeding was supplemented by artificial feeding, and in 11 instances the child was entirely bottle fed. In the remaining 7 cases no information could be obtained.

The Health Visitor's work among the babies has been much handicapped by the fact that, as the Notification of Births Act is not in force, information of a birth having taken place is only obtained from the returns made weekly by the Registrar, so that in many instances the child was 6 weeks' old before a visit could be made. This disadvantage will, I hope, soon cease as the Corporation have decided to adopt the Notification of Births Act, and the sanction of the Local Government Board is now only required to put it into force.*

I may perhaps refer here to another disadvantage under which its work is carried on, viz : the want of suitable office accommodation. No accommodation is provided at the Public Health Office for the Health Visitor. A room in the Education Offices, which are in another part of the town, is set apart for her use as School Nurse, and in this room all her clerical work is done and the records of her visiting kept. As these records are frequently wanted in the Health Office, this arrangement is not only exceedingly inconvenient but leads to much loss of time. I hope it will be possible to make some arrangement which would enable accommodation to be found for her in the same building as the rest of the staff.

A copy of the leaflet which is left at the houses by the Health Visitor is appended.

* Since this was written the sanction of the Local Government Board has been obtained, and the Act came into force on the 11th March, 1912.

BOROUGH OF HARROGATE.

The Feeding and Care of Infants.

1. The natural and best food for a young infant is its mother's milk. **Every mother should therefore suckle her baby** unless she has medical advice to the contrary.

2. The baby should be suckled once every two hours during the day and once every four hours during the night until it is about two months old, when once every three hours will be often enough. After this age the interval should be gradually lengthened until it is being suckled once every three-and-a-half hours during the day, and only once during the night.

3. It is important for both mother and child that the **suckling should be at regular intervals.** The baby should not be suckled every time it cries. Crying is often a sign of pain from over-feeding.

4. If possible the baby should have no other food but its mother's milk till it is seven months old. No starchy foods should be given before this age. If the mother has not sufficient milk for the baby she should still suckle it, and give in addition one or more feeds prepared as in Rules 8—13.

There is no danger in mixing the milks.

5. While nursing the infant the mother should take plenty of good, plain, nourishing food, but she should not take any beer, stout, or other alcoholic stimulant.

The mother should wash her nipples both before and after suckling. She should also wash out the baby's mouth.

6. When nine or ten months old the baby should be gradually weaned. It is well not to commence weaning during the months of July, August, and September, when there is much risk of diarrhœa.

When the mother is unable to suckle the baby, the following instructions may be followed.

7. - **Bottles without tubes should be used.** They should be provided with a large india-rubber teat which can be turned inside out for cleansing. Two bottles should be provided, and each used alternately. Immediately after use the bottle should be thoroughly rinsed out and scalded, and placed neck downwards in a clean, cool place, to drain. The teat should also be thoroughly washed both inside and out. Each bottle and teat should be boiled at least once a day. This is best done by putting them in a large pan full of cold water and gradually bringing it to the boil. A piece of clean cloth should be placed under the bottle to prevent it touching the bottom of the pan. **Much of the sickness among infants is caused by dirty feeding bottles.**

8. Most infants will thrive upon a mixture of cow's milk and water if it is properly prepared, and if care is taken to use a suitable bottle and to keep it perfectly clean. **Only milk which is of good quality and perfectly fresh should be used.** The mixture of milk and water should be boiled, and after boiling sweetened with a small teaspoonful of sugar to every pint of the mixture. The mixture should be kept in a clean, covered vessel, and in a clean, cool place between meals. When given to the infant the food should be at a temperature of 98 degrees Fahrenheit, or about the heat of the hand.

9. Barley water may sometimes be used with advantage instead of plain water. It is prepared by boiling two teaspoonful of patent barley in a pint of water. It should be freshly prepared—at least once a day. This is added to the milk, and the mixture boiled and sweetened as above.

10. For the first six weeks after birth the baby's food should consist of one part of milk to two parts of water, prepared and sweetened as above. From three to four tablespoonsful of the food should be given every time the child is fed. It should be fed every two hours during the day, and every four hours during the night. As the baby gets older the quantity given should be gradually increased.

11. From six weeks to three months old the child should be fed with a mixture of equal quantities of milk and water, prepared and sweetened as before, but two teaspoonsful of cream may now be added to each bottle. It should now be fed about every two-and-a-half hours during the day, and each feed should consist of from eight to ten tablespoonsful.

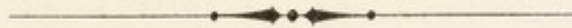
12. From three to seven months old the food should consist of two parts of cow's milk to one part of water, prepared and sweetened as before. Three to four teaspoonsful of cream should be added to each feed. It should now be fed about every three hours during the day, and each feed should consist of from ten to twelve tablespoonsful.

13. From seven to twelve months old the child should still be fed about every three hours during the day. No meals should now be given during the night. Each meal should consist at first of about ten to twelve tablespoonsful of undiluted cow's milk with the addition of cream as in Rule 12, but two of the meals may contain a teaspoonful or more of arrowroot or some infants' food well boiled and stirred up with the milk.

14. From twelve to eighteen months old the child should still be fed about every three hours. The amount of milk should be twice as great as under Rule 13, and a little porridge, bread and milk, bread and gravy, bread and butter, and a lightly boiled egg occasionally may be given with or in place of some of the milk as time goes on.

Tea, beer, cheese, bacon, soothing syrups, and teething powders should never be given to children; they are apt to cause indigestion. Wines or spirits should never be given except on medical advice.

The quantities of food given above are those generally suitable, but some children may require more and some less. The best test that an infant is being properly fed is that it continues to gain weight. The child should be weighed regularly, and if it ceases to gain, or loses weight, it is wise to seek medical advice. It must be remembered that indigestion may be caused by feeding too often, or by giving too much or too strong food.



A young child should be clad warmly but lightly. As few pins as possible should be used, and these should be safety pins.

It should be washed all over in warm water every day, and carefully dried. The folds of the skin may be dusted with a little good dusting powder.

The windows should be kept open throughout the year; the child will not take cold if it is properly clad. It should be taken out into the open air every fine day.

It is advisable that the baby should sleep in a cot by itself; many children are suffocated by being overlaid by their mothers.

A child should never be left alone near an unguarded fire or lamp. Children have no dread of the fire until they have actually been burnt.

JAMES MAIR,

Medical Officer of Health.

Zymotic Mortality.—By this term is meant the deaths from the seven principal zymotic diseases. There were 26 deaths registered from these diseases during the year, compared with 14 in 1910. The zymotic death-rate is therefore 0·77, and is 0·35 higher than the rate for 1910, which was one of the lowest since 1895. The next table shows that the increase is almost entirely in the deaths due to diarrhoea.

| | 1910 | | 1911 | |
|-------------------|------|------|------|------|
| | No. | Rate | No. | Rate |
| Smallpox ... | 0 | 0·00 | 0 | 0·00 |
| Scarlet Fever ... | 0 | 0·00 | 0 | 0·00 |
| Diphtheria ... | 0 | 0·00 | 1 | 0·03 |
| Enteric Fever ... | 0 | 0·00 | 2 | 0·06 |
| Measles ... | 3 | 0·09 | 1 | 0·03 |
| Whooping Cough | 4 | 0·12 | 5 | 0·15 |
| Diarrhoea ... | 7 | 0·21 | 17 | 0·50 |
| | 14 | 0·42 | 26 | 0·77 |

The zymotic death-rate for England and Wales in 1911 was 1·88; in the 77 great towns, 2·29; for the 136 smaller towns, 1·98; and in England and Wales, less the 213 towns, 1·40.

It will be noticed that the Harrogate rate is much below that of the rest of the country.

The following table shows the zymotic rate for each year since 1901.

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

Notification of Infectious Disease.—During the year 67 cases of infectious disease were notified, as compared with 62 in 1910. There were 18 cases of diphtheria, 12 of erysipelas, 32 of scarlet fever, 4 of enteric fever, and 1 of puerperal fever.

The ages of the patients and the numbers occurring in each ward, are given in the Local Government Table II

WEEKLY NOTIFICATIONS OF INFECTIOUS DISEASES.

| Week ended | Small Pox | Diphtheria | Erysipelas | Scarlet Fever | Enteric Fever | Puerperal Fever | Total |
|----------------|--------------|------------|------------|------------------|------------------|--------------------|-------|
| Jan. 7 | ... | ... | ... | 6 | ... | ... | 6 |
| " 14 | ... | ... | ... | ... | .. | ... | .. |
| " 21 | ... | .. | 1 | ... | ... | ... | 1 |
| " 28 | ... | ... | ... | ... | ... | ... | ... |
| Feb. 4 | ... | ... | ... | 1 | ... | ... | 1 |
| " 11 | ... | 1 | ... | 2 | ... | ... | 3 |
| " 18 | ... | ... | ... | ... | ... | ... | ... |
| " 25 | ... | 1 | 1 | 3 | ... | ... | 5 |
| Mar. 4 | ... | 1 | 1 | ... | ... | ... | 2 |
| " 11 | ... | ... | ... | ... | ... | ... | ... |
| " 18 | ... | ... | 1 | ... | ... | .. | 1 |
| " 25 | ... | .. | 2 | 2 | ... | ... | 4 |
| April 1 | ... | ... | ... | ... | 1 | ... | 1 |
| " 8 | ... | ... | ... | ... | ... | ... | ... |
| " 15 | ... | ... | 1 | ... | ... | ... | 1 |
| " 22 | ... | ... | ... | ... | ... | ... | ... |
| " 29 | ... | ... | ... | ... | ... | ... | ... |
| May 6 | ... | ... | ... | ... | ... | ... | ... |
| " 13 | ... | 2 | ... | ... | ... | ... | 2 |
| " 20 | ... | ... | ... | ... | ... | ... | ... |
| " 27 | ... | 1 | ... | 1 | ... | 1 | 3 |
| June 3 | ... | 1 | ... | ... | ... | ... | 1 |
| " 10 | ... | ... | ... | ... | ... | ... | ... |
| " 17 | ... | ... | ... | 2 | .. | ... | 2 |
| " 24 | ... | ... | ... | 2 | ... | ... | 2 |
| July 1 | ... | ... | ... | ... | ... | ... | ... |
| " 8 | ... | 1 | 1 | ... | ... | ... | 2 |
| " 15 | ... | 1 | ... | ... | ... | ... | 1 |
| " 22 | ... | ... | ... | ... | .. | ... | ... |
| " 29 | ... | ... | ... | 1 | ... | ... | 1 |
| Aug. 5 | ... | 1 | 1 | ... | ... | ... | 2 |
| " 12 | ... | 2 | 1 | ... | .. | ... | 3 |
| " 19 | ... | ... | ... | ... | ... | ... | ... |
| " 26 | ... | ... | ... | ... | ... | ... | ... |
| Sept. 2 | ... | ... | ... | ... | ... | ... | ... |
| " 9 | ... | 1 | ... | ... | ... | ... | 1 |
| " 16 | ... | 2 | ... | 2 | .. | ... | 4 |
| " 23 | ... | ... | ... | 1 | ... | ... | 1 |
| " 30 | ... | ... | 2 | ... | ... | ... | 2 |
| Oct. 7 | ... | ... | ... | 1 | ... | ... | 1 |
| " 14 | ... | ... | ... | ... | 1 | ... | 1 |
| " 21 | ... | ... | ... | ... | 1 | ... | 1 |
| " 28 | ... | 1 | ... | 3 | ... | ... | 4 |
| Nov. 4 | ... | ... | ... | 1 | ... | ... | 1 |
| " 11 | ... | ... | ... | 2 | ... | ... | 2 |
| " 18 | ... | ... | ... | 1 | 1 | ... | 2 |
| " 25 | ... | ... | ... | ... | ... | ... | ... |
| Dec. 2 | ... | ... | ... | ... | ... | ... | ... |
| " 9 | ... | ... | ... | 1 | ... | ... | 1 |
| " 16 | ... | ... | ... | ... | ... | ... | ... |
| " 23 | ... | ... | ... | ... | ... | ... | ... |
| " 30 | ... | 2 | ... | ... | ... | ... | 2 |
| Total for 1911 | ... | 18 | 12 | 32 | 4 | 1 | 67 |
| " 1910 | ... | 16 | 13 | 32 | ... | 1 | 62 |
| " 1909 | ... | 16 | 10 | 33 | 6 | 2 | 68 |

Steps taken to prevent the spread of Infectious diseases.—Immediately on receipt of a notification or as soon thereafter as possible, the infected house is visited by the Sanitary Inspector or myself. Full enquiries are made as to source of milk supply, school attended by the patient or other inmates etc., and every effort is made to discover the source of infection, and the particulars thus obtained are entered upon cards which are filed for future reference.

When it is found that the patient cannot be satisfactorily isolated at home, removal to the Isolation Hospital is advised, and it is very exceptionally that any difficulty is experienced in obtaining the consent of the patient or his relatives to this.

After removal to Hospital, or when nursed at home, upon recovery the clothing, bedding, etc., are removed to the disinfecting station at the Isolation Hospital and there disinfected in a Washington-Lyons disinfector. The infected rooms are disinfected by spraying with formalin, and where it is thought necessary the paper is stripped from the walls and the ceiling limewashed. This disinfecting is done by the staff and at the cost of the Health Committee.

When any children from an infected house are attending school, a notice is sent to the Head Teacher and to the Secretary of Education, advising them to exclude all children from that house until they receive notice that the house is free from infection.

At the same time, a notice is sent to the Librarian of the Free Library, requesting him not to allow any books to be lent to the infected house until he receives notice that it is free from infection. If any books from the Library are found in the house, they are taken possession of and destroyed, being replaced at the cost of the Health Committee.

As soon as possible after receipt of the notification, the drains are tested and if any defects are found the owner is required to repair them.

The Head Teachers of all the elementary schools are asked to send me every week, or more often if necessary, a list of the names and addresses of those children whom they know or suspect to be absent on account of any infectious disease. By this means valuable information is obtained as to the prevalence of the non-notifiable diseases, especially measles and whooping cough.

Isolation Hospitals.—The Isolation Hospital is a joint hospital and serves the three districts of Harrogate Borough, Knaresborough Urban, and Knaresborough Rural Districts. It is situated at Thistlehill, near Knaresborough. It contains 50 beds and three diseases, viz.—scarlet fever, diphtheria, and enteric fever can be treated concurrently.

The Smallpox Hospital, which is also under the control of the Joint Hospital Committee, is situated on the Corporation Farm 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 town has been free from this disease since 1905, when there was one case.

As has already been mentioned, the smallpox hospital is maintained in a constant state of readiness to receive patients.

Scarlet Fever. — During the year 33 cases of this disease were notified. One case was found on further observation not to be scarlet fever, and the notifying practitioner withdrew his certificate; the nett number of cases was, therefore, 32, and the attack rate was 0·95 per 1,000 of the estimated population.

This is slightly below the rate for 1910, and is the lowest recorded since 1897. The average rate for the 10 years, 1901 to 1910, was 2·65 per 1,000.

The cases were distributed among the different wards as under :—

| | | | | |
|---------|------|------|--------|----------|
| Central | East | West | Bilton | Starbeck |
| 8 | 6 | 6 | 8 | 4 |

13 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 | 45-65 |
| 0 | 6 | 17 | 5 | 4 | 0 |

In only 12 instances was the child affected attending an elementary school. The schools in which the cases occurred were :—

| | | | |
|-----------------------------|-----|-----|---------|
| Bilton Endowed, Infants | ... | ... | 2 cases |
| Western Council, Infants | ... | ... | 3 „ |
| „ „ Mixed | ... | .. | 1 case |
| Starbeck Council, Mixed | ... | ... | 1 „ |
| „ „ Infants | ... | ... | 1 „ |
| Bilton Council, Infants | ... | ... | 1 „ |
| Christ Church, Infants | ... | ... | 1 „ |
| Grove Road Council, Infants | ... | ... | 1 „ |
| „ „ Mixed | ... | ... | 1 „ |

One case occurred in each of 16 houses, two cases in each of 4 houses, and in one house (the Infirmary) there were 6 cases.

At the beginning of the year there was a small outbreak in the Infirmary. A child who was admitted to the Infirmary about the end of December, 1910 developed scarlet fever and in the first week of 1911 six other cases were notified. These were promptly removed to the Isolation Hospital ; the children's ward was closed for a short time and thoroughly disinfected, and no further cases occurred.

With this exception there was at no time during the year any suggestion of an epidemic.

Of the 32 cases notified 29 or 91 per cent. were removed to the Isolation Hospital.

The disease was apparently of a mild type; there were no fatal cases.

SCARLET FEVER.

| Year | No. | Attack rate per 1,000 | Deaths | Death rate | Case Mortality per cent | Removed to Hospital | Percentage removed |
|-------|-----|-----------------------|--------|------------|-------------------------|---------------------|--------------------|
| 1897 | 25 | 1.35 | 1 | 0.05 | 4.0 | 11 | 44.0 |
| 1898 | 17 | 0.87 | 0 | 0.00 | 0.0 | 2 | 11.8 |
| 1899 | 14 | 0.70 | 0 | 0.00 | 0.0 | 5 | 35.7 |
| †1900 | 39 | 1.90 | 1 | 0.05 | 2.6 | 22 | 56.4 |
| 1901 | 34 | 1.15 | 0 | 0.00 | 0.0 | 9 | 26.5 |
| 1902 | 75 | 2.50 | 0 | 0.00 | 0.0 | 52 | 69.3 |
| 1903 | 42 | 1.40 | 1 | 0.03 | 2.4 | 20 | 47.6 |
| 1904 | 114 | 3.74 | 2 | 0.07 | 1.8 | 67 | 58.8 |
| *1905 | 152 | 4.90 | 6 | 0.19 | 3.9 | 78 | 51.3 |
| 1906 | 114 | 3.62 | 1 | 0.03 | 0.9 | 72 | 63.2 |
| 1907 | 117 | 3.66 | 2 | 0.06 | 1.7 | 86 | 73.5 |
| 1908 | 114 | 3.56 | 1 | 0.03 | 0.9 | 76 | 66.7 |
| 1909 | 33 | 1.00 | 1 | 0.03 | 3.0 | 23 | 69.7 |
| 1910 | 32 | 0.96 | 0 | 0.00 | 0.0 | 26 | 81.2 |
| 1911 | 32 | 0.95 | 0 | 0.00 | 0.0 | 29 | 90.6 |

* Isolation Hospital opened. † Borough extended.

Diphtheria.—During 1911 18 cases of diphtheria were notified; 13 were females and 5 males. The attack rate was 0.53 per 1000, this is slightly above the rate for 1910 (0.48 per 1000) but considerably below the average rate for the ten years 1901 to 1910, which was 1.64.

In the following table is set out the incidence and mortality of diphtheria for each year since 1897.

DIPHtheria.

| Year | No. | Attack rate per 1,000 | Deaths | Death rate | Case Mortality per cent | Removed to Hospital | Percentage removed |
|-------|-----|-----------------------|--------|------------|-------------------------|---------------------|--------------------|
| 1897 | 3 | 0·16 | 1 | 0·05 | 33·3 | 0 | 0·0 |
| 1898 | 3 | 0·15 | 2 | 0·10 | 66·7 | 0 | 0·0 |
| 1899 | 42 | 2·10 | 11 | 0·55 | 25·2 | 0 | 0·0 |
| †1900 | 153 | 7·46 | 18 | 0·88 | 11·8 | 0 | 0·0 |
| 1901 | 59 | 2·00 | 9 | 0·31 | 15·3 | 1 | 1·7 |
| 1902 | 30 | 1·00 | 2 | 0·07 | 6·7 | 0 | 0·0 |
| 1903 | 27 | 0·90 | 2 | 0·07 | 7·4 | 3 | 11·1 |
| 1904 | 53 | 1·74 | 3 | 0·09 | 5·7 | 2 | 3·7 |
| *1905 | 71 | 2·29 | 9 | 0·29 | 12·7 | 30 | 42·3 |
| 1906 | 119 | 3·78 | 7 | 0·22 | 5·8 | 53 | 44·5 |
| 1907 | 64 | 2·00 | 9 | 0·28 | 14·1 | 36 | 56·3 |
| 1908 | 55 | 1·72 | 6 | 0·19 | 10·9 | 28 | 50·9 |
| 1909 | 16 | 0·48 | 0 | 0·00 | 0·0 | 12 | 75·0 |
| 1910 | 16 | 0·84 | 0 | 0·00 | 0·0 | 13 | 81·3 |
| 1911 | 18 | 0·53 | 1 | 0·03 | 5·6 | 13 | 72·2 |

* Isolation Hospital opened. † Borough extended.

The cases occurred in the various Wards as follows :—

| Central | East | West | Bilton | Starbeck |
|---------|------|------|--------|----------|
| 3 | 2 | 5 | 4 | 4 |

The age incidence was :—

| 1-5 year | 5-15 | 15-25 | 25-45 |
|----------|------|-------|-------|
| 4 | 10 | 2 | 2 |

The disease invaded 17 houses, in 16 houses there was one case each and in one house there were two cases.

In 8 instances the children attacked were attending an elementary school. The schools affected were :—

| | | |
|--------------------------|-----|---------|
| St. Peter's, Mixed .. | ... | 2 cases |
| Bilton Endowed, Mixed .. | ... | 2 „ |
| Western, Infants ... | ... | 2 „ |
| Starbeck, Infants .. | ... | 1 case |
| Oatlands, Infants ... | ... | 1 „ |

Only one case was found in an infective state in the schools. This was discovered in the course of medical inspection, and had probably been infected from a previous case in the same school. No other cases occurred in that school.

13 cases, or 72 per cent., were removed to the Isolation Hospital. In 11 of these, bacteriological examination of a "swab" gave a positive result; one case died immediately on admission; and in the remaining case a negative result was obtained.

3 cases were imported, the infection having been contracted in other districts, but as they were notified in Harrogate they are included in the figures given above.

The smoke test was applied to the drains of the houses invaded, with the result that in 5 houses the drains were found to be slightly defective; in 3 houses they were very defective; and in one house no defects were found, but the drains were blocked. These defects have since been remedied.

There was one fatal case—the first since 1908—giving a case mortality of 5·6 per cent. This case occurred in the Starbeck Ward, and was that of a girl aged 5, who was removed to the hospital on July 29th and died the same day, apparently about the eighth day of the disease.

Provision of Antitoxin. In August, 1910, the Local Government Board issued an Order empowering local authorities to provide diphtheria antitoxin free of charge for the use of the poorer people.

The Council decided to take advantage of this Order, and in the beginning of 1911, arrangements were made with two local chemists to supply at the cost of the Council, antitoxin to any medical man who made application for it. At the same time a circular letter was sent to every practitioner in the town informing him of the arrangements which had been made.

This offer has not been very largely taken advantage of. 12,000 units of antitoxin have been supplied for use in 4 cases at a cost of 15/6. The small demand is, of course, explained by the fact that all the poorer cases are at once removed to the hospital.

ENTERIC FEVER.

| Year | No. | Attack rate per 1000 | Deaths | Death rate | Case Mortality per cent | Removed to Hospital | Percentage removed |
|-------|-----|----------------------|--------|------------|-------------------------|---------------------|--------------------|
| 1897 | 4 | 0·22 | 0 | 0·00 | 0·0 | 0 | 0·0 |
| 1898 | 9 | 0·46 | 2 | 0·10 | 22·2 | 0 | 0·0 |
| 1899 | 7 | 0·35 | 4 | 0·20 | 57·1 | 0 | 0·0 |
| †1900 | 13* | 0·63 | 5* | 0·24 | 38·4 | 6 | 46·1 |
| 1901 | 72 | 2·44 | 12 | 0·41 | 16·7 | 10 | 13·9 |
| 1902 | 12 | 0·40 | 4 | 0·13 | 33·3 | 0 | 0·0 |
| 1903 | 9* | 0·30 | 1 | 0·03 | 11·1 | 3 | 33·3 |
| 1904 | 3 | 0·09 | 0 | 0·00 | 0·0 | 0 | 0·0 |
| †1905 | 4 | 0·13 | 0 | 0·00 | 0·0 | 0 | 0·0 |
| 1906 | 5 | 0·16 | 1 | 0·03 | 20·0 | 1 | 20·0 |
| 1907 | 4 | 0·13 | 1 | 0·03 | 25·0 | 1 | 25·0 |
| 1908 | 5 | 0·16 | 1 | 0·03 | 20·0 | 2 | 40·0 |
| 1909 | 6 | 0·18 | 1 | 0·03 | 16·7 | 4 | 66·7 |
| 1910 | 0 | 0·00 | 0 | 0·00 | 0·0 | 0 | 0·0 |
| 1911 | 4 | 0·12 | 2 | 0·06 | 50·0 | 1 | 25·0 |

* Including Continued Fever. † Borough extended.

‡ New Isolation Hospital opened.

Last year I was able to record the fact that no cases of enteric fever had been notified.

This year we have not been so fortunate. 5 cases were notified, but as one of them was subsequently found to be a case of pneumonia and not of enteric fever, the notification was withdrawn. The actual number of cases was therefore 4, which gives an attack rate of 0·12 per 1,000, as compared with 0·39, the average rate for the preceding 10 years.

There were 2 deaths, giving a case mortality of 50 per cent. and a death-rate of 0·06 per 1,000.

Particulars of the 4 Cases follow :

CASE 1 (East Ward). Male aged 59. Employed as a wheelwright. Sickened about the 4th of March, but had been out of sorts for about two months previously. Was nursed at home, and died there on March 12th. This was not a typical case, and the practitioner in attendance had some doubts as to the correctness of the diagnosis. Vidal's test was not made use of. The house was a six-roomed through house. The drains were found to be defective, and have since been put in order.

CASE 2. (West Ward) Female 39 years of age. Arrived in this country from India on August 26th, and came to Harrogate on 4th September. She was ill on arrival here, and was removed to a nursing home where the case was eventually diagnosed as enteric fever.

CASE 3. (West Ward) Male aged 19. Employed as domestic servant at the establishment where case 2 stayed on her arrival in Harrogate. Sickened about September 20th. Removed to a nursing home, and died there on October 12th. In all probability this case was infected by case 2, although his employers denied the possibility of this.

CASE 4 (Central Ward) Male 30 years of age. Groom, been out of work for 6 or 7 weeks. Sickened about the 9th of November. Removed to hospital. The house was a three roomed back-to-back one. The water closet was found to be blocked.

Measles. Measles is not a notifiable disease, and my only information as to its prevalence is obtained from the head teachers of the elementary schools, who are instructed to send to the Medical Officer of Health, every week or oftener, the names and addresses of those children whom they know or suspect to be suffering from measles. These children are visited by the School Nurse, who gives the parents simple instructions as to isolation, etc., and when necessary advises that medical advice be obtained. A leaflet giving instructions on these points is also left.

The procedure adopted as regards exclusion from school is as follows:—

All children attacked are excluded from school for at least four weeks. Other children in the infected house are also excluded unless they are attending a mixed school and have previously had measles, in which case they are allowed to continue their attendance. This arrangement has now been in force for about 2 years and it has not so far been found that any appreciable extension of the disease was caused by allowing older contacts to attend the mixed schools.

The epidemic which prevailed during the latter part of 1910 appeared to have disappeared in the beginning of the year, but it recurred, though to a less extent, in May and continued throughout June and July. It gradually died down, and no cases were notified during November and December.

Altogether, 242 cases were notified from the schools; nearly half of these occurred in May. It was not found necessary to close any schools.

There was only one death, that of a child one year of age, and the death-rate was 0·03 per 1000.

TABLE SHOWING MEASLES DEATH-RATE.

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

Measles is very fatal to young children, and is responsible for a considerable proportion of the deaths of children under five years of age. Children suffering from measles are very liable to develop lung complications, and it is these complications which are so fatal. Nearly all the fatal cases occur among the poorer classes; children in good houses where they can be properly nursed seldom die.

Unfortunately, there is great difficulty in persuading many parents that it is a serious disease ; too often one is told : " Oh ! it is only measles," and few, if any, precautions are taken to guard against pulmonary complications.

Great difficulty is also experienced in obtaining any isolation at all. There is a widespread belief, among the poorer classes at any rate, that the sooner a child has measles the better, and I have even known parents to deliberately expose their children to infection. There could not be a greater mistake. The fatality of measles is greatest in children under five years, and diminishes rapidly with each year after this age, so that the older a child is when attacked, the less likely is the attack to terminate fatally.

Whooping Cough. — This is also a non-notifiable disease, and information as to its prevalence is obtained from the teachers. It is dealt with in exactly the same way as measles, with the exception that the period of exclusion is longer—at least six weeks, or till the cough has disappeared. Like measles, too, it is a disease of early childhood, and is the most fatal infectious disease to children under five years of age. The mortality is greatest in the first two years of life ; especially in the first year.

Whooping cough was prevalent throughout the greater part of the year. It apparently made its first appearance in March, and from then till the end of the year notifications kept coming in pretty regularly. Altogether, 183 cases were notified from the schools, and no doubt there were at least as many more among children under school age.

There were five deaths—two in the Bilton Ward, and three in the East Ward. Four of the fatal cases were children under one year of age, and one was a child aged five.

The death-rate is 0·15 per 1,000, and as the next table shows, is higher than the rate for the two preceding years.

WHOOPIING COUGH DEATH-RATE.

| | | | | | |
|------|-----|------|------|-----|------|
| 1901 | ... | 0·00 | 1906 | ... | 0·00 |
| 1902 | ... | 0·30 | 1907 | ... | 0·06 |
| 1903 | ... | 0·13 | 1908 | ... | 0·19 |
| 1904 | ... | 0·39 | 1909 | ... | 0·12 |
| 1905 | ... | 0·29 | 1910 | ... | 0·12 |
| | | 1911 | ... | | 0·15 |

Diarrhœa and Enteritis.—In accordance with the recent instructions of the Local Government Board these two diseases are now placed under one heading.

During 1911, 17 deaths were caused by these diseases, giving a death rate of 0·50 per 1,000. This is the highest rate recorded since 1906 (0·86), and is slightly above the average rate for the preceeding ten years (0·44).

DIARRHŒA AND ENTERITIS.

| 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 |

14 of the deaths occurred in infants under one year of age. The mortality from this group of diseases is always highest in warm dry seasons, and it is satisfactory that in a year in which the climatic conditions were eminently favourable to a high mortality, the death rate is not higher.

Puerperal Fever.—One case of Puerperal Fever was notified on May 22nd, and died on May 23rd. The patient was attended by a medical man, and death took place nine days after the confinement.

Four other deaths were registered as being due to causes associated with childbirth. There were, therefore, five deaths directly or indirectly due to childbirth, as against four in 1910. This is at the rate of one death to 121 live births.

Tuberculosis.—Table showing number of deaths and death-rate from Phthisis and other Tuberculous Diseases.

| Year | PHTHISIS | | OTHER TUBERCULOUS DISEASES | |
|----------------------|------------------|----------------|----------------------------|----------------|
| | Number of Deaths | Rate per 1,000 | Number of Deaths | 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 | 0.97 | 3 | 0.09 |
| 1908 | 31 | 0.97 | 7 | 0.22 |
| 1909 | 26 | 0.79 | 7 | 0.21 |
| 1910 | 12 | 0.36 | 5 | 0.15 |
| Average 1901 to 1910 | 25 | 0.80 | 11 | 0.35 |
| 1911 | 25 | 0.74 | 8 | 0.23 |

During 1911 there were 25 deaths caused by Phthisis, or Tuberculosis of the Lungs, giving a death-rate of 0.74 per 1,000. This is considerably higher than the rate for 1910 (0.36) which was the lowest on record, but is lower than the average rate for the preceding ten years (0.80).

Six of the deaths had been notified previously, either voluntarily or under the poor-law system of compulsory notification. The time between the date of notification and death varied from five days to eight months; in four instances death occurred in less than one month after notification.

The deaths were distributed in the different wards thus :

| Central | | East | | West | | Bilton | | Starbeck |
|---------|-----|------|-----|------|-----|--------|-----|----------|
| 0 | ... | 8 | ... | 9 | ... | 4 | ... | 4 |

15 of the deaths were males and 10 were females.

The age of the males at death varied from 16 to 68 years, the average being 40 years; and of the females, from 10 to 55 years, the average being 30 years.

Control of Phthisis.—The measures which are taken locally to control Phthisis are briefly as follow :

1—NOTIFICATION OF CASES.

Three systems of notification are in force, viz.:

(a)—VOLUNTARY NOTIFICATION. For some years a system of voluntary notification has been in force in Harrogate. Until October ¹⁹¹¹ no fee was payable for notification, but in that month the Corporation resolved to pay a fee of 2/6 for each case notified. During the year 13 cases, including one visitor, were notified under this system.

(b)—POOR LAW NOTIFICATION. Since 1909 all Poor Law Medical Officers have been required to notify all cases of Phthisis occurring in their poor law practice, whether in the workhouse or outside; the relieving officers are also required to notify any change of address in the case of a person, who has been notified as suffering from Phthisis.

Five cases were notified under this system during the year; four of them were notified by the

District Medical Officer, and one was notified from the workhouse.

(c)—HOSPITAL NOTIFICATION. In the beginning of the year compulsory notification was extended to the hospitals, and the Medical Officers of every hospital and dispensary are now required to notify every case of Phthisis occurring in a person attending the hospital or dispensary, whether as an out-patient or in-patient.

No cases have been notified from any of the hospitals in Harrogate.

It is evident that notification of Phthisis has not been very successful in Harrogate. There were 25 deaths during the year, and if it is assumed that there were three times as many cases, which is certainly not an over-estimate, there must be somewhere about 80 cases of Phthisis in the town, whereas only 18 cases were notified.

I am glad to say that, by an Order which comes into force on January 1st, 1912, the Local Government Board have made the notification of cases of Phthisis occurring in private practice compulsory, a fee of 2/6 being paid for each case notified. The regulations as to Hospital and Poor Law cases remain as before.

In the future, therefore, all cases of Phthisis must be notified and one hopes that these notifications will be made as early as possible, as it is obvious that the earlier the cases are notified the more likely are any measures taken to prevent the spread of the disease to be successful.

2—VISITS BY OFFICERS OF THE HEALTH DEPARTMENT.

The house of every case notified is visited by the Health Visitor or myself. An exception is made in these cases where the notifying practitioner has requested that no visit be paid, and has intimated that he, himself, will see that the necessary precautions are taken.

Enquiry is made into the history of the case and the sanitary surroundings, and advice given as to precautions to be taken. A printed leaflet giving similar advice is also left at the house. The particulars obtained are entered upon forms which are filed for future reference, and any sanitary defects are dealt with by the Sanitary Inspector. A similar proceeding is adopted in those fatal cases which have not been previously notified.

3—DISINFECTION is carried out by the Corporation wherever possible. The necessity for it is always urged upon the relatives, and during the year 15 houses, 14 after death and one after removal, were disinfected.

4—BACTERIOLOGICAL EXAMINATION OF SPUTUM.

Arrangements have been made with the County Council whereby sputum can be sent to their laboratory at Wakefield for bacteriological examination free of charge. Outfits for this purpose are kept at the Health Office, and can be obtained by any medical man on application.

This arrangement has not been largely taken advantage of. Only ten specimens were sent for examination ; this is, however, an increase compared with 1910 when only three were sent.

5—CONTROL OF FOOD SUPPLIES AND HOUSING.

The arrangements for supervising these are described under their respective headings, and need not be further mentioned here.

Treatment of Phthisis.—No arrangements have been made locally for the treatment of Phthisis. The Corporation had agreed to join the County Council's scheme for providing a sanatorium for the treatment of Phthisis, but in consequence of the sanatorium provisions in the Insurance Act this scheme was dropped and no further steps have yet been taken.

Other Tuberculous Diseases.—Eight deaths were registered as being caused by other forms of Tuberculosis, giving a death rate of 0·23 per 1,000. The average rate for the preceding ten years was 0·35.

Cerebro-Spinal Fever.—This disease, sometimes known as “Spotted Fever,” is not notifiable. I have no reason to believe that any cases have occurred in this district. No deaths have been registered as due to it.

In November, 1911, the Local Government Board issued a memorandum, in which it is advised that Cerebro-Spinal Fever and Acute Poliomyelitis should be made notifiable, and the Council at their meeting in January, 1912, resolved that application should be made to the Board for permission to extend the Infectious Diseases (Notification) Act, 1889, to these two diseases.

Acute Poliomyelitis.—This disease has been known for many years as a disease of children, usually by the name of “Infantile Paralysis” and usually occurred as sporadic cases.

But in recent years it has appeared in epidemic form in different parts of the world, and in 1911 an epidemic occurred in the counties of Devon and Cornwall. This epidemic was investigated by an inspector of the Local Government Board, and a report was published early in this year, from which I have extracted the following brief description of the disease.

Acute or epidemic Poliomyelitis is almost entirely a disease of early childhood. The mortality in different epidemics has varied from 6 to 20 per cent, but over half the patients who survive suffer from some form of paralysis and are more or less crippled for life.

The disease is most prevalent in summer, and appears to bear no relation to sanitary conditions. It is somewhat more common in rural districts and small towns, than in populous

centres. It may be conveyed from the sick to the healthy by contact, but the degree of infectivity varies greatly. In some cases it has developed after slight contact, and in others, children who have been in close and prolonged contact with a patient, have escaped. There is some evidence that infection may be conveyed by healthy "carriers."

The measures most likely to prevent the spread of infection are briefly :—notification of all cases ; complete isolation of the patient, in an isolation hospital if necessary ; thorough disinfection of the sick room and its contents ; and exclusion of contacts from school attendance.

One death was registered as being due to Poliomyelitis. This occurred in the East Ward and the patient, a boy aged 12 years, died on the fifth day of the illness, the cause of death being certified as "Acute Anterior Polioencephalomyelitis." I made enquiry of the medical attendant, but was unable to discover any source of infection.

The infected room was thoroughly disinfected and the bedding destroyed. No other cases are known to have occurred.

Cancer.—Under this heading are included deaths from all varieties of malignant disease. There were 33 deaths during the year and the rate is therefore 0·97 per 1,000. This is slightly lower than the rate of 1910, which was the highest recorded in Harrogate in recent years. The variation in the death rate is shown in the next table.

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

Cancer, judging from the death rate, appears to be increasing, and while part of this increase may be due to improved diagnosis, this does not explain the whole of it and there is little doubt that the disease is becoming more prevalent.

Of the deaths 16 were females and 17 males, and they occurred in the following age groups :—

| | 25 to 45 | 45 to 65 | 65 and upwards |
|---------------|----------|----------|----------------|
| Male | 2 | 8 | 7 |
| Female | 1 | 6 | 9 |

The next table shows the situation of the disease :—

| | |
|--------------------------|---|
| Liver | 5 |
| Stomach | 6 |
| Intestines | 3 |
| Rectum | 2 |
| Breast | 2 |
| Uterus | 3 |
| Head and Face | 5 |
| Tongue and Throat | 5 |
| Mediastium | 1 |
| Brain | 1 |

Disinfection.—During the year 74 dwelling houses were disinfected by spraying with formalin.

The following list shows the number of articles of clothing, bedding, etc., which were disinfected in a Washington Lyons disinfectant at the Isolation Hospital :—

| | |
|-------------------|-----|
| Beds | 41 |
| Mattresses | 58 |
| Blankets | 133 |
| Sheets | 84 |
| Quilts | 85 |
| Pillows | 110 |
| Bolsters | 34 |
| Carpets | 70 |

Carried forward ... 615

| | | | | |
|------------------------|-----|-----|-----|-----|
| <i>Brought forward</i> | ... | ... | ... | 615 |
| Curtains | ... | ... | ... | 27 |
| Rugs | ... | ... | ... | 27 |
| Towels | ... | ... | ... | 42 |
| Articles of Clothing | ... | ... | ... | 102 |
| Miscellaneous | ... | ... | ... | 173 |
| Total | | | | 986 |

Bacteriological Examination.—By the kindness of Dr. Kaye, the County Medical Officer, I am able to give the following table, which shows the number of specimens sent to the County Bacteriological Laboratory at Wakefield by the medical men in Harrogate during 1911.

| | | | | |
|-----------------------------|-----|-----|-----|----|
| Swabs (Diphtheria) | ... | ... | ... | 27 |
| Sputum (Tuberculosis) | ... | ... | ... | 10 |
| Blood Serum (Enteric Fever) | ... | ... | ... | 3 |
| Milk (Tuberculosis) | ... | ... | ... | 8 |
| Other | ... | ... | ... | 35 |
| | | | | 83 |

These figures are considerably above those for 1910, and show that the laboratory is being taken greater advantage of.

Meteorology.—The accompanying table, which has been compiled by Mr. Rivers, Borough Meteorologist, shows the principal meteorological features of the year.

METEOROLOGICAL TABLE FOR 1911.

| MONTH | RAINFALL | | | TEMPERATURE | | | | | | DIRECTION OF WIND | | | | Bright Sunshine (Campbell Stokes Recorder) Hours | |
|--------------|-----------------|-------------------------|---------------|---|------|---------|-------------|---------|----------------|---|--|--|--|--|--|
| | Total inches | Greatest in 24 hours | | Days in which 0.01 in. or more fell | Mean | Maximum | | Minimum | | No. of nights at or below 30 deg. | 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 | | | D'grees | Date | D'grees | Date | | | | | | |
| | | | | | | | | | | | | | | | |
| January ... | 1.31 | 0.29 | 2nd | 16 | 38.1 | 50.3 | 28th | 22.1 | 31st | 9 | 17 | 6 | 1 | 7 | 51.9 |
| February ... | 2.59 | 0.51 | 21st | 14 | 39.0 | 53.8 | 18th | 20.9 | 1st | 4 | 14 | 5 | 1 | 8 | 65.2 |
| March ... | 1.57 | 0.20 | 1st & 13th | 18 | 39.1 | 53.4 | 3rd | 29.8 | 13th | 1 | 7 | 1 | 14 | 9 | 88.1 |
| April ... | 1.36 | 0.34 | 20th | 16 | 44.3 | 59.3 | 21st | 26.1 | 5th | 2 | 12 | 3 | 7 | 8 | 123.2 |
| May ... | 0.97 | 0.29 | 14th | 10 | 53.4 | 74.2 | 29th | 36.6 | 3rd | 0 | 10 | 4 | 8 | 9 | 179.7 |
| June ... | 2.80 | 1.20 | 24th | 12 | 55.9 | 78.7 | 8th | 36.9 | 15th | 0 | 13 | 3 | 7 | 7 | 196.9 |
| July ... | 0.47 | 0.16 | 2nd | 7 | 62.2 | 85.1 | 14th | 41.2 | 3rd & 10th | 0 | 15 | 5 | 4 | 7 | 275.0 |
| August ... | 2.97 | 0.80 | 20th | 11 | 62.2 | 86.8 | 9th | 44.9 | 17th | 0 | 13 | 6 | 6 | 6 | 182.2 |
| September | 2.82 | 0.87 | 12th | 11 | 54.8 | 77.9 | 7th | 38.1 | 22nd | 0 | 12 | 6 | 3 | 9 | 200.7 |
| October .. | 3.09 | 0.73 | 26th | 18 | 47.1 | 59.5 | 11th | 29.3 | 29th | 1 | 8 | 6 | 11 | 6 | 80.4 |
| November | 3.42 | 0.53 | 4th | 24 | 41.1 | 54.4 | 4th | 28.1 | 21st | 3 | 12 | 6 | 6 | 6 | 69.6 |
| December | 4.55 | 0.53 | 14th | 24 | 40.8 | 51.0 | 16th | 31.2 | 25th & 26th | 4 | 17 | 11 | 1 | 2 | 28.6 |
| Year ... | 27.92 | 1.20 | June 24th | 181 | 48.2 | 86.8 | Aug. 9th | 20.9 | Feb. 1st | 24 | 150 | 62 | 69 | 84 | 1541.5 |

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 work of medical inspection of school children has been carried out during 1911 on the same lines as formerly. As this subject is dealt with in a separate report it does not seem necessary to refer to it further here.

Water Supply.—For the following short account of the water supply I am mainly indebted to the Water Engineer, Mr. West.

The Water supply is now in the hands of the Corporation, having been purchased by them in 1898.

It is obtained from four impounding reservoirs which are fed from upland gathering grounds some four or five miles to the west of the town. The gathering grounds have an area of some 1,700 acres, and the storage reservoirs have a capacity of about 370 million gallons.

The watersheds consist of moor and exceedingly rough pasture; there is little arable land. There are some ten or twelve farmsteads on the gathering grounds, but every precaution has been taken to prevent any drainage from these farms reaching and polluting the reservoirs.

The water from the impounding reservoirs is passed through ordinary slow sand filters or through patent candy oxydising filters to the service reservoirs, which have a total capacity of about 27 million gallons.

That the supply is an ample one is shown by the fact that during last summer, which was a phenomenally dry one, it was never found necessary to curtail the supply, or even issue warning notices.

The quality of the water is also excellent. Samples are taken regularly—some nine times a year—and submitted to chemical and bacteriological analysis. Two of the analyst's reports are reproduced here and show that the quality of the water is beyond reproach.

The water is apparently quite without action on lead. The analyst has never discovered lead or other poisonous metal in any of the samples submitted to him.

In October, two samples were, at the request of the County Medical Officer, analysed for the specific purpose of determining whether lead was present. In neither sample was any lead detected. As one of the samples had been standing in a lead pipe some 30 yards in length for 15 hours, it is evident there can be no plumbo-solvent quality in the water.

The water supply is a constant one, and no storage cisterns are provided, the supply being taken in every case direct from the mains.

Private Water Supply.—With the exception of some 14 houses, situated in an outlying part of the Borough, all the houses in the town derive their water supply from the Corporation mains.

In the beginning of the year a sample was taken from an open well supplying two of these houses and analysed. The Analyst's report shows that it is of excellent quality.

No. 1.—Report on the analysis of water taken from Harlow Hill clear water well on 24th May, 1911.

The sample contains in grains per gallon :—

| | | |
|-------------------------------------|--------|------|
| Chlorides equivalent to common salt | ... | 1.85 |
| Nitrates and Nitrites | | none |
| Poisonous Metals | | none |

| | | | | |
|---|--|-----|--------------|-------------|
| Degrees of hardness | ... | ... | ... | 3.3 |
| Degrees of hardness after boiling | ... | ... | ... | 3.0 |
| Free Ammonia | ... | ... | ... | 0.001 |
| Albuminoid Ammonia | ... | ... | ... | 0.003 |
| Proteid Ammonia | ... | ... | ... | none |
| Oxygen absorbed in 4 hours | ... | ... | ... | 0.014 |
| Total dissolved solids | .. | ... | ... | 7.84 |
| Volatile and Organic Matter (lost by careful ignition) | ... | ... | ... | 1.52 |
| Sediment | ... | ... | .. | very minute |
| Colour of water, two feet in depth, in Lovibond's Units | ... | 1.4 | blue and 0.5 | yellow |
| Smell at 100° Fahrenheit | ... | ... | very faint | earthy |
| Microscopic examination | does not show the presence of animalculæ. | | | |
| Micro-organisms per one cubiccentimetre examined by plate culture gives 7 colonies, the pre- dominant form being the <i>Bacillus Subtilis</i> , a non-pathogenic organism. | | | | |

The analysis and bacteriological examination show this to be a water of excellent quality for drinking and domestic use.

No. 2—Water taken from Iron Gate Bridge top level clear water well derived from Beaver Dyke Reservoir, on May 24th, 1911.

The sample contains in grains per gallon :—

| | | |
|-------------------------------------|-----|-------|
| Chlorides equivalent to common Salt | ... | 1.85 |
| Nitrates and Nitrites | ... | none |
| Poisonous Metal | ... | none |
| Degree of Hardness | ... | 3.7 |
| Degree of Hardness after boiling | ... | 3.4 |
| Free Ammonia | ... | 0.002 |
| Albuminoid Ammonia | ... | 0.007 |
| Proteid Ammonia | ... | none |

| | | | |
|--|-----|-----|--------------|
| Oxygen absorbed in 4 hours | ... | ... | 0·134 |
| Total Dissolved Solids | ... | ... | 8·12 |
| Volatile and Organic Matter (lost by careful ignition) | ... | ... | 0·69 |
| Sediment | ... | ... | very minute |
| Colour of Water two feet deep, in Lovibond's Units | ... | ... | 1·7 yellow |
| Smell at 100° Fahrenheit | ... | ... | faint earthy |
| Microscopic Examination does not show the presence of animalculæ. | | | |
| Micro-organisms per one cubic centimetre examined by Plate Culture gives 15 colonies, the predominant forms being <i>Bacillus Subtilis</i> , and <i>Bacillus Fluoresceus Liquefaciens</i> , neither of which are pathogenic micro-organisms. | | | |

The analysis and bacteriological examination show this to be a water of excellent quality for drinking and domestic use. It is, however, not quite so pure as No. 1.

Sewerage and Drainage.—For the following particulars of sewerage and sewage treatment I am largely indebted to the Borough Surveyor, C. E. Rivers, Esq.

The sewerage is treated at two disposal works, situated outside the Borough, one near Bachelor Gardens and one near Spofforth.

The method of treatment adopted is the same at each of these works. The sewage is delivered into open septic or sedimentation tanks; the fluid from these tanks is treated on intermittent percolating beds, and afterwards passes over land, and is finally discharged into watercourses.

The Inspectors of the West Riding Rivers Board inspect the works regularly, and apparently have no fault to find with the effluent.

Complaints have, on one or two occasions, been made to me of stench arising from the Bachelor Gardens works, and on enquiry it was found that this was due to the mode in which sludge was being carted away, and the nuisance was easily remedied.

Sewers.—No new sewers have been laid during this year. The existing sewers are, on the whole, well laid and constructed. Ventilation is mainly effected by tall vertical shafts, 30 to 40 feet high; Webb's destructor lamps are also in use. One or two lengths of sewer, where the gradient is flat, are regularly flushed.

House Drainage.—Since the adoption of Building Bye-laws in 1907, the drains of all new houses are 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. Before they are passed by the Building Inspector they must stand the smoke test.

It is satisfactory to know that it is exceptional to find defects in the drains of houses built since 1907, and where any are found they are, as a rule, very 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.—Excrement disposal is almost entirely by water carriage, but there are still a few privies and earth-closets in use. A considerable number of these are very little used, and practically all which are in regular use are situated in the added area. As opportunity arises they are abolished and water-closets substituted. In the beginning of the present year enquiry was made into the number of privies and earth-closets, and it was found that there were ~~24~~ privies

and 27 earth-closets. These privies and earth-closets are emptied weekly by the Corporation staff. During the year 6 waste-water-closets were converted into sanitary closets, and 7 additional water-closets were erected. At the end of the year there were approximately 131 waste-water-closets in use.

There are still some cesspools in the town. These are situated in places which cannot be connected to the sewers, and are all emptied regularly by the Corporation.

Removal and Disposal of House Refuse.—

House refuse is removed by the Corporation. The majority of the houses are provided with sanitary dust-bins, but at the end of the year there were still some 271 ash-pits in use. These are being gradually abolished and replaced by the more sanitary bin; 49 were abolished during the year and dust-bins provided instead.

Here, I may perhaps, refer to the difficulty which is frequently experienced in getting householders to keep their dust-bins covered.

An uncovered dust-bin is not much better than an ashpit, indeed, it is in some respects worse, because it is, as a rule, much nearer the house than an ashpit would be, and I hope that this practice, which is no doubt largely due to thoughtlessness will be discontinued.

All dust-bins are emptied once a week, and ashpits as frequently as possible, at least once a fortnight, and in many instances once a week. During the summer, the refuse from the larger hotels and boarding-houses is removed more frequently; in some cases a daily collection is made.

I should like to be in a position to have house refuse removed more frequently, at least twice a week, but the difficulty in doing so is the increased expenditure which would be incurred thereby. With the present staff there is frequently some difficulty in com-

pleting the weekly collection, and a more frequent collection would require a much increased staff and would greatly increase the cost. In the present state of the finances of the town, I have hesitated before suggesting a more frequent removal.

The refuse is deposited upon two tips, one on the Corporation Farm just outside the Borough boundary, and the other on Norfolk's Farm between Knaresborough and Starbeck.

During the first part of the year the Diamond Brickyard at Starbeck was used as a tip, but in August negotiations were completed whereby a tip at Norfolk's Farm was obtained, and the use of the Diamond Brickyard discontinued.

The tips at present in use, are fairly well situated, inasmuch as there are few houses near them and no complaints have been made of any nuisance being caused. Nevertheless, the disposal of refuse by tipping upon land is not altogether satisfactory and cannot be considered to be free from objection.

The best method of disposing of refuse is burn it in a destructor, but here again the difficulty of cost and increased rates stands in the way.

Factory and Workshops' Act.—At the end of the year there were 171 workshops on the register. These have been inspected regularly and the defects discovered are set out in the accompanying table.

**Annual Report of the Medical Officer of Health
for the year 1911, 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 |
| Factories (Including Factory Laundries). | 24 | ... | ... |
| Workshops (Including Workshop Laundries). | 1720 | 4 | ... |
| Workplaces (Other than Outworker's premises included in Part 3 of this Report) | ... | ... | ... |
| Total | 1744 | 4 | Nil |

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS,
AND WORKPLACES.

| PARTICULARS | Number of Defects | | | Number of Prosecutions |
|---|-------------------|----------|----------------------------|------------------------|
| | Found | Remedied | Referred to H.M. Inspector | |
| <i>Nuisances under the Public Health Acts :—*</i> | | | | |
| Want of cleanliness | 4 | 4 | ... | ... |
| Want of ventilation | ... | ... | ... | ... |
| Overcrowding | ... | ... | ... | ... |
| Want of drainage of floors | ... | ... | ... | ... |
| Other nuisances | ... | ... | ... | ... |
| Sanitary accommodation { insufficient | 2 | 1 | ... | ... |
| { unsuitable or defective . | 3 | 2 | ... | ... |
| { not separate for sexes... | 2 | 2 | ... | ... |
| <i>Offences under the Factory and Workshop Act:</i> | | | | |
| Illegal occupation of underground bake-house (s. 101) | 1 | ... | ... | ... |
| Breach of Special sanitary requirements for bakehouses (ss. 97 to 100) | 20 | 20 | ... | ... |
| Other offences (Excluding offences relating to outwork which are included in Part 3 of this Report) | ... | ... | ... | ... |
| Total | 32 | 29 | Nil | Nil |

* Including those specified in section 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 UN- WHOLESALE PREMISES, SECTION 108 | | | OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110 | | |
|---|-------------------------------|------------------------|-------------------------------------|------------------------|--------------|------------------------|--|---|---|----------------------------------|--|------------------------|----------------------|---|---------------------------------|---------------------------------------|
| | Lists received from Employers | | | | | | Prosecutions | | | | Instances (11) | Notices served (12) | Prosecutions (13) | Instances (14) | Orders made (S. 110) (15) | Prosecutions (S. 109, 110) (16) |
| | Sending Twice in a year | | Sending Once in a year | | Lists (5) | Con- tract's (6) | Outworkers † Work- men (4) (7) | Occupiers as to keeping or sending lists (8) | Failing to keep or per- mit inspection of lists (9) | Failing to send lists (10) | | | | | | |
| | Lists † (2) | Con- tract's (3) | Outworkers † Work- men (4) | Con- tract's (6) | | | | | | | | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| Wearing Apparel— Making, etc. ... | 4 | | 6 | 1 | | 2 | | | | | | | | | | |
| Tents | | | | 1 | | 1 | | | | | | | | | | |
| No Outworkers' Lists received for any of the other trades enumerated in the Home Office Table | | | | | | | | | | | | | | | | |
| Total | 4 | | 6 | 2 | | 3 | | | | | | | | | | |

* 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 and 4 (or 6 and 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 |
|---|----------------------------|--------|
| Important classes of workshops, such as workshop bakehouses may be enumerated here. | Bakehouses, including two | |
| | Factory Bakehouses ... | 46 |
| | Tailors and Bootmakers ... | 35 |
| | Milliners and Dressmakers | 55 |
| | Miscellaneous | 35 |
| Total number of Workshops on Register | | 171 |

5.—OTHER MATTERS.

| Class. | Number |
|--|--------|
| 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 | 6 |
| Reports (of action taken) sent to H.M. Inspector | 5 |
| Underground Bakehouses (s. 101) :— | |
| Certificates granted during the year | 0 |
| In use at the end of the year | 13 |

Date, 30th March, 1912.

(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.

Five references were received from H.M. Inspector of Factories. The action taken in each case has been reported to him. These references were as follows :—

May 11th. Both sexes employed. No separate sanitary accommodation provided.

Action taken.—Additional water-closet provided.

Sept. 14th. Sanitary convenience opens direct into work-room.

Action.—Water-closet with intervening ventilated space provided in beginning of 1912.

Oct. 31st. Both sexes employed. Only one sanitary convenience.

Action.—Additional water-closet provided.

Oct. 31st. Insufficient means of escape in case of fire.

Action.—Referred to Borough Surveyor.

Nov. 7th. Workshop dirty.

Action.—Workshop cleansed and limewashed.

Housing.—As has already been stated Harrogate is almost entirely a residential town, and the majority of the houses are better-class dwellings. There are a few working-class dwellings in the centre of the town, but the bulk of these dwellings are situated on the outskirts. Though on the whole they may be said to be fairly comfortable dwellings, there are a considerable number which require supervision. Up to the present time work in this direction has been considerably handicapped by the shortness of staff.

There was only one sanitary inspector, and as he had numerous other important duties to perform, it has not been possible to devote so much time as one could have wished to the

purely housing work. At the end of the year, however, the Council decided to appoint an additional inspector, and Mr. Harry Walls, Cert.R.S.I., who had been employed in the Sanitary Department as a drain tester for three or four years, received the appointment. He commenced his duties at the beginning of the present year, and it will now be possible for the Chief Sanitary Inspector, who is the officer designated under the Housing, etc., Regulations, 1910, to devote more time to this work.

In addition to the general inspection of houses, a special house-to-house inspection was made of 90 houses situated mainly in the Central and East Wards.

In 12 instances no defects were found; the remaining 78 houses were found to be more or less defective. The principal defects were as follows:—

| | |
|---|----|
| Dampness | 23 |
| Insufficient Ventilation | 30 |
| Defective or dilapidated walls, floors, roofs, etc. | 78 |
| Insufficient or unventilated food stores ... | 12 |

In nearly every case these defects have been repaired. 33 houses had been repaired at the end of the year, and in 45 houses the works were in progress.

Four houses were represented as being unfit for human habitation, and a closing order was made in each case. Three of these houses, situated in Primrose Hill are being repaired by the owner, and in the remaining case, a house in Westmoreland Passage, the closing order only became operative in the beginning of 1912.

Two houses in Regent Parade, which had been closed in 1910, were demolished by the owner in the beginning of the year.

There does not appear to be any insufficiency of working class dwellings in the town. According to the ratebooks there were at the end of March, 1911 (which are the latest figures available) 167 houses, let at rentals of £15 and less, unoccupied.

Nor does there seem to be much overcrowding of persons in dwellings. Very few complaints are received, and in only two instances was any overcrowding found.

New Houses.—The Borough Surveyor informs me that 74 new houses were erected during 1911 as compared with 116 in 1910. The next table shows the number of new houses erected in each ward :—

| Central | East | West | Bilton | Starbeck |
|---------|------|------|--------|----------|
| 0 | 21 | 23 | 24 | 6 |

The bye-laws referring to new houses are rigorously enforced, and no new house is allowed to be inhabited until it has been inspected by the building inspector and a certificate of habitation given.

Common Lodging Houses.—There are no common lodging houses registered in the town. There are, however, several houses in which persons of the poorer working class lodge, and there is reason to believe that some of these houses are, occasionally at any rate, used as common lodging houses. At present we can exercise very little supervision over these houses, and I think the Council would be well advised to consider whether bye-laws regulating these houses should not be adopted.

Slaughter Houses.—There are only four slaughter houses in the Borough, all of which are registered. These have been inspected as frequently as possible, and as a rule are satisfactorily kept. In one slaughter house new concrete floors have been provided for the lairs.

Inspection of Meat.—On account of the shortness of staff, it has been impossible to make any attempt at supervising the meat supply.

As has already been stated, however, an additional inspector, who holds the certificate qualifying for meat inspection, was appointed at the end of the year, and the duty of supervising the meat supply has been placed in his hands so that it will now be possible to pay more attention to this important branch of public health work.

Milk Supply, Cowsheds.—At the end of the year there were 17 cowkeepers on the register, as against 20 at the end of 1910. Three cowkeepers gave up business during the year.

The Regulations under the Dairies, Cowsheds, and Milkshops Orders, which were made in 1907, require that cowsheds constructed and used before that date shall not have less than 600 feet of air space for each cow, and that cowsheds constructed or re-erected since that date shall have not less than 800 feet for each cow. Of the 23 sheds in Harrogate 22 belong to the former category and only one to the latter.

Calculated on these figures these sheds have accommodation for a total number of 198 cows, and at the end of the year they were occupied by approximately 171 cows.

The structural condition of the cowsheds has been much improved of late years, but several are still dark and ill ventilated. Unfortunately, many of the cowkeepers do not approve of ventilation, and when efficient means of ventilation are provided, refuse to make use of them. I need hardly say that this is a mistaken policy, and that cows, like human beings, thrive much better in a well ventilated building.

The cowsheds have been regularly inspected, and no effort has been spared in endeavouring to obtain a higher standard of cleanliness, both of cows and cowsheds, but I am afraid there has been very little improvement in this direction. These efforts will not be relaxed, and we can only hope that in time cow-keepers will be roused to a sense of their responsibility in this respect.

Milk and Tuberculosis.—The following extracts are taken from the final report of the Royal Commission on Tuberculosis.

“There can be no doubt that a considerable proportion
 “of the tuberculosis affecting children is of bovine origin,
 “more particularly that which affects primarily the abdominal
 “organs and the cervical glands. And further, there can be
 “no doubt that primary abdominal tuberculosis, as well as
 “tuberculosis of the cervical glands, is commonly due to
 “ingestion of tuberculous infective material.”

“The evidence which we have accumulated, goes to
 “demonstrate that a considerable amount of the tuberculosis
 “of childhood is to be ascribed to infection with bacilli of the
 “bovine type transmitted to children in meals consisting
 “largely of the milk of the cow.”

In view of these findings of the Royal Commission, it behoves a Sanitary Authority to take every precaution in its power to prevent the production and sale of tuberculous milk, and I am glad to say that the Harrogate Corporation have shown themselves alive to their responsibility in this respect. They resolved to appoint a Veterinary Inspector, whose duty it would be to examine every milk cow in the Borough at least three times a year, with a view to discovering any cow affected with tuberculosis of the udder.

Mr. Ellison, M.R.C.V.S., received this appointment, and commenced his duties in September, 1911.

Between that date and the end of the year, Mr. Ellison, accompanied by the Medical Officer of Health, paid two visits to each cowshed and examined every milk cow therein.

Samples of milk were taken from eight cows suffering from some affection of the udder, and sent to the County Laboratory at Wakefield for bacteriological examination. In one instance only was the milk found to contain the tubercle bacillus. I at once communicated with the cowkeeper, and found that the diseased animal had previously been slaughtered and the carcase buried.

In order to strengthen our hands in dealing with this subject, I recommended that Part VII. of the Harrogate Corporation Act, 1901 should be put into force, and towards the end of the year this was done. This part of the Act gives us considerably increased powers in dealing with tuberculous milk.

It makes every person who knowingly sells tuberculous milk liable to a penalty.

It requires every dairyman who has reason to believe that any cow in his premises is suffering from tuberculous udder, to notify the fact at once to the Medical Officer of Health.

A cow suffering from tuberculous udder must not be left in the same field, shed, or premises as milk cows, under a penalty.

When the Medical Officer of Health has reason to believe that milk from any dairy outside the Borough, ^{he} may, if accompanied by a Veterinary Surgeon, and after having obtained an order from a Justice inspect the cows in that dairy and take samples of milk from any of them.

is likely to cause tuberculosis to any person residing in the Borough.

If the Medical Officer of Health is of opinion that milk from any dairy in or outside the Borough has caused or is likely to cause tuberculosis to any person residing in the Borough, the Corporation may call upon the dairyman to show cause why they should not make an order prohibiting milk from that dairy from being sold in the Borough, and, if he fail to show cause, may make such order.

It further provides for withdrawal of an order where there is no longer reason to believe that the milk is likely to cause tuberculosis. The dairyman may appeal against an order being made, and may claim compensation if an order has been wrongfully made.

Purveyors of Milk.—At the end of 1911 there were 107 purveyors of milk on the register. 71 of these lived outside the Borough, and over their premises we can exercise very little supervision. The premises of the 36 purveyors who live within the Borough have been inspected regularly, and as a rule have been found clean and well kept.

Bakehouses.—There are 46 bakehouses on the register, as against 51 in 1910. These have been frequently inspected, and have generally been found satisfactory. Where any defects have been found, they have as a rule been speedily remedied.

In one direction there has been a very considerable improvement. In former years many of the bakehouses were used for the purpose of washing clothes, as was evidenced by the presence of wringing machines, etc., but I am glad to say that this does not now appear to be the case. It is very exceptionally indeed, that any evidence of it is found.

Included in the above number are 12 underground bakehouses, all of which have been certified by the Corporation as fit

for use. — In two of these considerable improvements have been effected during the year; new concrete floors have been laid, defective plastering repaired, etc.

Towards the end of the year it was discovered that a certain baker was using an underground bakehouse which had not been certified. This was reported to the Sanitary Committee, and in the beginning of 1912, notice was served upon the occupier to cease using this bakehouse.

Food and Drugs Acts.—87 samples of foods were purchased for analysis. These samples comprised 73 of new milk, 1 of skimmed milk, and 13 of butter. 12 samples of butter were purchased informally; in the remaining instances the purchase was made formally. In 12 instances the sample was found to be adulterated, and in one case (new milk) the analyst reported that it was on the border line as regards fat.

In no case was the presence of any preservative detected. Details of the adulterated samples, and of the action taken, are given in the next table.

ADULTERATED SAMPLES.

| Number of Sample | Article Analysed | Nature and Extent of Adulteration | OBSERVATIONS |
|------------------|------------------|--|--|
| 37 | New Milk | Added Water 14·8% ... | Owing to informality in purchasing sample no action was taken |
| 38 | New Milk | Added Water 9·1% ... | |
| 45 | New Milk | Added Water 2·1% ... | These samples were procured from the cowkeeper who supplied vendors of samples Nos. 37 and 38 with their milk |
| 46 | New Milk | Added Water 5·8% ... | |
| 47 | New Milk | Added Water 15·7% ... | Samples Nos. 47 and 48 were purchased from the cowkeeper who supplied the vendors of samples Nos. 49 and 50 with their milk. All four samples were purchased on the same day, and the Town Clerk advised that in view of the difference in the analyses it was unlikely that a prosecution would be successful |
| 48 | New Milk | Added Water 7·0% ... Deficient in fat 30% ... | |
| 49 | New Milk | Added Water 5·8% ... | |
| 50 | New Milk | Added Water 8·4% ... Deficient in fat 8·0% ... | |
| 57 | New Milk | Deficient in fat 9·0% ... | Vendor Warned |
| 62 | New Milk | Added Water 0·4% ... Deficient in fat 10% ... | Vendor Warned |
| 65 | New Milk | On the border line in regard to fat ... | Vendor Warned |
| 73 | Butter ... | Sample consisted of margarine, made almost solely of cocoanut oil. | Informal sample Formal sample taken subsequently proved to be genuine butter |
| 77 | New Milk | Added Water 12·7% Contained milk fat 4·3% | From the same cowkeeper* as samples Nos. 45, 46, 47 and 48. Prosecuted, fined £2 10s. and costs £1 0s. 6d. |

*This cowkeeper gave up business shortly after being prosecuted.

Offensive Trades.—There are two offensive trades—one tripeboiling and one gutscraping business—in the Borough. These are carried on in connection with one of the slaughterhouses; they have been regularly inspected during the year, and no cause for complaint has arisen.

At the time these trades were established, the district in which they are carried on was part of a Rural District, and I am advised that as Section 51 of the Public Health Acts (Amendment) Act, 1907 has not been adopted, the Council have no power to make byelaws regulating them. The question of adopting this Act is at present under consideration, and I hope that this section at least will be adopted, and that byelaws for the regulation of these trades will then be made.

During the summer it was discovered that a certain rag-merchant was storing considerable quantities of green bones upon his premises and thus causing a serious nuisance. As he continued the practice in spite of warnings, he was prosecuted for carrying on an offensive trade without the consent of the Local Authority, and fined. He immediately afterwards gave up this part of his business.

About the same time it was discovered that another rag-merchant was carrying on the same practice, but as he at once ceased upon being warned of the consequences, it was not necessary to take any further steps.

Prosecutions.—The legal proceedings taken under the Food and Drugs Acts, and in connection with the carrying on an offensive trade without permission, have already been referred to. With these exceptions, no other proceedings were found necessary.

Drain Testing.—During the year the smoke test was applied to the drainage systems of 176 houses, and in 155 instances the drains were found to be more or less defective. In

many cases the defects were slight, but in 29 instances it was found necessary to entirely reconstruct the drains.

Reconstruction of Drains.—The next table gives a list of 106 houses (including the 29 above mentioned) in which the drainage was entirely reconstructed. This was carried out in all cases under the supervision of the Department.

Albert Street, 14.
 Belmont Road, 13.
 Belmont Avenue, 8, 33.
 Chatsworth Place, 22, 24, 26, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48.
 Cheltenham Mount, 6.
 Clarence Drive, 22.
 Crescent Road, 10.
 Denmark Street, 5.
 East Park Road, 24.
 Franklin Mount, 4.
 Franklin Road, 35, 37.
 Grove Road, 25, 27, 29.
 Harlow Moor Drive, Crookrise.
 Lancaster Road, 1.
 Langcliffe Avenue, 9.
 Leeds Road, St. Moritz.
 Mayfield Grove, 24.
 Montpellier Parade, 5, 6, 32, 33, 34.
 Montpellier Street, 2, 4, 6.
 Mount Street, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38.
 Myrtle Square, 4.
 Otley Road, 13.
 Park Street, 31, 33, 35, 37.
 Princes Square, 11.
 Queen Parade, 6.
 Queen's Road, 23.
 Robert Street, 1, 5.

Russell Street, 3, 5, 7, 9, 11, 13, 15, 17, 19, 25, 27.
 St. Mary's Walk, 35.
 South Park Road, 1.
 Station Parade, 22, 24.
 Studley Road, 14, 26, 28, 30, 32, 34, 36, 40.
 Swan Road, 8, 9, 11.
 The Avenue, 20.
 The Oval, 12.
 Trafalgar Road, 1, 2.
 Valley Drive, 35.
 Valley Road, 13, 15, 17, 19, 25, 27.
 Walker Road, 2, 4, 17, 64, 66, 68.
 West Park, 7.

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

This table, which has been compiled by the Sanitary Inspector, shows, so far as it is possible to do so in tabular form, the routine work carried out by the department.

| | | | | | |
|---|-----|-----|-----|-----|--------------------|
| Informal notices served... | ... | ... | ... | ... | 51 |
| Statutory notices served | ... | ... | ... | ... | 116 115 |
| Notices complied with | ... | ... | ... | ... | 132 |
| Total number of visits and Inspections | ... | ... | ... | ... | 4,861 |
| Nuisances reported by Sanitary Inspector | ... | ... | ... | ... | 1,271 |
| Nuisances reported by residents | ... | ... | ... | ... | 206 |
| Nuisances abated | ... | ... | ... | ... | 1,263 |
| Inspection of houses after complaint of nuisances | ... | ... | ... | ... | 177 |
| Drains tested | ... | ... | ... | ... | 176 |
| Drains found defective after testing | ... | ... | ... | ... | 155 |
| Animals kept so as to be a nuisance, removed | ... | ... | ... | ... | 5 |
| Additional Water Closets provided | ... | ... | ... | ... | 7 |
| Basements subsoiled drained on to gullies | ... | ... | ... | ... | 6 |
| Blocked drains opened out, cleansed, and put into proper working order | ... | ... | ... | ... | 41 |
| Sink pipes repaired | ... | ... | ... | ... | 50 |

| | | | | |
|---|-----|-----|-----|-----|
| Defective house drains repaired | ... | ... | ... | 285 |
| Defective spouting of eaves of buildings repaired | ... | | | 9 |
| Defective closet cisterns repaired or renewed | ... | | | 38 |
| Dilapidated dust-bins replaced with new ones | ... | | | 127 |
| Defective closet basins renewed | ... | ... | ... | 4 |
| Dilapidated water closets repaired or reconstructed... | | | | 19 |
| Dirty houses cleaned out and purified... | ... | ... | ... | 3 |
| Dirty or defective water closets repaired, cleaned, or lime-washed out | ... | ... | ... | 67 |
| Dirty or defective waste water closets cleaned or repaired | ... | ... | ... | 30 |
| Drainage or sanitary arrangements of houses dealt with... | ... | ... | ... | 625 |
| Drainage systems ventilated | ... | ... | ... | 73 |
| Drains through houses taken up and cast iron pipes substituted... | ... | ... | ... | 3 |
| House drains disconnected from sewer | ... | ... | | 89 |
| Insanitary ashpits removed and dust-bins provided... | | | | 49 |
| Insanitary closets removed and sanitary ones substituted | ... | ... | ... | 2 |
| Insanitary sinks removed and sanitary ones substituted | ... | ... | ... | 28 |
| Inspection chambers built on house drains | ... | ... | | 48 |
| Offensive accumulations removed | ... | ... | ... | 24 |
| Rainwater pipes disconnected from drain and made to discharge over gully traps | ... | ... | | 80 |
| Rainwater pipes repaired | ... | ... | ... | 12 |
| Soil pipes ventilated with 4in. shafts... | ... | ... | | 19 |
| Sink pipes disconnected from drains | ... | ... | ... | 4 |
| Sink pipes trapped | ... | ... | ... | 43 |
| Urinals dirty or without water cleansed | ... | ... | | 4 |
| Dampness remedied | ... | ... | ... | 7 |
| Defective plastering repaired | ... | ... | ... | 13 |
| Defective roofs repaired... | .. | ... | ... | 6 |
| Manure bins provided | ... | ... | ... | 3 |

| | | | | | |
|---|-----|-----|-----|-----|----|
| Defective stairs repaired | ... | ... | ... | ... | 3 |
| Waste water closets converted into ordinary ones | ... | | | | 6 |
| Defective house walls repaired | ... | ... | ... | ... | 2 |
| Overcrowding remedied | ... | ... | ... | ... | 2 |
| Keeping fowls so as to be a nuisance | ... | ... | ... | ... | 2 |
| Yard paving repaired | ... | ... | ... | ... | 37 |
| Defective soil pipes or ventilation shafts repaired | ... | | | | 8 |
| Outside water taps removed inside over sinks | ... | | | | 1 |
| Defective kitchen and scullery floors repaired | ... | | | | 37 |
| Defective bedroom floors repaired | ... | ... | ... | ... | 5 |
| Pedestal closets fixed in place of boxed-in ones | ... | | | | 38 |
| Workshops provided with sanitary convenience | ... | | | | 1 |
| Windows repaired or made to open | ... | ... | ... | ... | 21 |
| Bedrooms specially ventilated | .. | ... | ... | ... | 4 |
| Defective floors repaired | ... | ... | ... | ... | 2 |
| Defective fire grates repaired or new ones provided | ... | | | | 3 |

In addition to the above, 262 blocked drains, gullies, and closets have been cleared by the men, who make periodical inspections of house drainage.

TABLE I.
VITAL STATISTICS OF WHOLE DISTRICT DURING 1911 AND PREVIOUS YEARS.

| Year | Population estimated to middle of each year | Births | | | Total Deaths Registered in the District | | Transferable Deaths † | | Nett Deaths belonging to the District | | | |
|------|---|---------------------|----------|------|---|------|---|---|---------------------------------------|-------------------------|-------------|------|
| | | Un-corrected Number | Nett | | Number * | Rate | of Non-residents registered in the District † | of Residents registered in the District ‡ | Under 1 Year of Age | | At all Ages | |
| | | | Number † | Rate | | | | | Number * | Rate per 1,000 Births † | Number * | Rate |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1906 | 31,500 | 659 | | 20.9 | 429 | 13.8 | 60 | 12 | 86 | 130.0 | 381 | 12.1 |
| 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 |

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 1,000 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 70

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, 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 (exclusive of area covered by water), 3,276 acres; Total population at all ages, 33,706; Number of inhabited houses, 7,409; Average number of persons per house, 4.55. At census of 1911.

TABLE II.
CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1911.

| Notifiable Disease | Cases notified in whole district | | | | | | | | 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 to 5 | 6 to 15 | 15 to 25 | 25 to 45 | 45 to 65 | 65 and upwards | | | | | | |
| Small-pox ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cholera ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Diphtheria (including Membranous croup) | 18 | 4 | 10 | 2 | 2 | 2 | ... | ... | ... | 5 | 4 | 4 | 13 | |
| Erysipelas ... | 12 | ... | 1 | 2 | 3 | ... | ... | ... | ... | 1 | 1 | 2 | 29 | |
| Scarlet Fever ... | 32 | 6 | 17 | 5 | 4 | ... | ... | ... | ... | 6 | 8 | 4 | ... | |
| Typhus Fever ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Enteric Fever ... | 4 | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | |
| Relapsing Fever ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Continued Fever ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Puerperal Fever ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Plague ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Phthisis— | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Under Tuberculosis Regulations, 1908 | 5 | ... | 1 | ... | 2 | 2 | ... | ... | ... | 1 | 1 | 1 | ... | |
| Under Tuberculosis Regulations, 1911 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Others * | 13 | ... | 2 | 2 | 5 | 2 | 1 | ... | ... | 3 | 2 | ... | ... | |
| Totals ... | 85 | 1 | 10 | 31 | 13 | 18 | 8 | 3 | 14 | 25 | 16 | 11 | 43 | |

Harrogate and Knaresborough Joint Isolation Hospital, Thistle Hill, Knaresborough. Total available beds, 50
Diseases that can be treated concurrently, 3

* In one instance the age was not ascertained.

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 (<i>a</i>) | | | |
|--|------------------------|-----|-----|-----|--|---------|-------------------------------|------------------|
| | | | | | All Ages | Under 1 | 1 and under 2 ¹ | 2 and under 5 |
| 1 | | | | | 2 | 3 | 4 | 5 |
| All Causes | Certified (<i>c</i>) | ... | ... | ... | 397 | 61 | 8 | 5 |
| | Uncertified | ... | ... | ... | ... | ... | ... | ... |
| Enteric Fever | ... | ... | ... | ... | 2 | ... | ... | ... |
| Small Pox | ... | ... | ... | ... | ... | ... | ... | ... |
| Measles | ... | ... | ... | ... | 1 | ... | 1 | ... |
| Scarlet Fever | ... | ... | ... | ... | ... | ... | ... | ... |
| Whooping Cough | ... | ... | ... | ... | 5 | 4 | ... | 1 |
| Diphtheria and Croup. (See note (<i>d</i>)) | ... | ... | ... | ... | 1 | ... | ... | ... |
| Influenza | ... | ... | ... | ... | 1 | ... | ... | ... |
| Erysipelas | ... | ... | ... | ... | ... | ... | ... | ... |
| Cerebro-Spinal Fever... | ... | ... | ... | ... | ... | ... | ... | ... |
| Acute Anterior Poliomyelitis | ... | ... | ... | ... | 1 | ... | ... | ... |
| Phthisis (Pulmonary Tuberculosis) | ... | ... | ... | ... | 25 | ... | ... | ... |
| Tuberculous Meningitis. (See note (<i>e</i>)) | ... | ... | ... | ... | 3 | ... | ... | 1 |
| Other Tuberculous Diseases | ... | ... | ... | ... | 5 | ... | ... | ... |
| Rheumatic Fever | ... | ... | ... | ... | ... | ... | ... | ... |
| Cancer, malignant disease. (See note (<i>f</i>)) | ... | ... | ... | ... | 33 | ... | ... | ... |
| Bronchitis | ... | ... | ... | ... | 19 | 4 | ... | ... |
| Broncho-Pneumonia | ... | ... | ... | ... | 9 | 4 | 2 | ... |
| Pneumonia (all other forms) | ... | ... | ... | ... | 14 | 1 | ... | ... |
| Other diseases of Respiratory organs | ... | ... | ... | ... | 8 | ... | ... | 2 |
| Diarrhoea and Enteritis. (See note (<i>g</i>)) | ... | ... | ... | ... | 17 | 14 | 1 | 1 |
| Appendicitis and Typhlitis | ... | ... | ... | ... | 3 | ... | ... | ... |
| Alcoholism. (See note (<i>h</i>)) | ... | ... | ... | ... | ... | ... | ... | ... |
| Cirrhosis of Liver | ... | ... | ... | ... | 7 | ... | ... | ... |
| Nephritis and Bright's Disease | ... | ... | ... | ... | 15 | ... | ... | ... |
| Puerperal Fever. (See note (<i>i</i>)) | ... | ... | ... | ... | 1 | ... | ... | ... |
| Other accidents and diseases of Pregnancy and Parturition | ... | ... | ... | ... | 4 | ... | ... | ... |
| Congenital Debility and Malformation, including Premature Birth. (See note (<i>j</i>)) | ... | ... | ... | ... | 24 | 24 | ... | ... |
| Violent Deaths, excluding Suicide | ... | ... | ... | ... | 9 | ... | ... | ... |
| Suicides | ... | ... | ... | ... | 6 | ... | ... | ... |
| Other Defined Diseases | ... | ... | ... | ... | 182 | 10 | 4 | ... |
| Diseases ill-defined or unknown | ... | ... | ... | ... | 2 | ... | ... | ... |
| ALL CAUSES | ... | ... | ... | ... | 397 | 61 | 8 | 5 |

See Notes

DURING THE YEAR 1911.

| 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 |
| 12 | 18 | 50 | 95 | 148 | 56 |
| ... | ... | ... | ... | ... | ... |
| ... | 1 | ... | 1 | ... | 1 |
| ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... |
| ... | ... | ... | ... | ... | ... |
| 1 | ... | ... | ... | ... | ... |
| ... | ... | ... | 1 | ... | ... |
| ... | ... | ... | ... | ... | ... |
| 1 | ... | ... | ... | ... | ... |
| 1 | 6 | 10 | 7 | 1 | ... |
| 2 | ... | ... | ... | ... | 1 |
| 2 | ... | 2 | 1 | ... | 2 |
| ... | ... | ... | ... | ... | 1 |
| ... | ... | 3 | 14 | 16 | 9 |
| ... | ... | ... | 3 | 12 | 1 |
| 1 | ... | ... | 2 | ... | 1 |
| ... | 2 | 4 | 3 | 4 | 4 |
| ... | 1 | 3 | 1 | 1 | 1 |
| ... | ... | ... | ... | 1 | ... |
| ... | 1 | 2 | ... | ... | 2 |
| ... | ... | ... | ... | ... | ... |
| ... | ... | 1 | 6 | ... | ... |
| ... | ... | 4 | 7 | 4 | 1 |
| ... | 1 | ... | ... | ... | ... |
| ... | ... | 4 | ... | ... | 1 |
| ... | ... | ... | ... | ... | ... |
| 1 | 2 | 1 | 4 | 1 | 4 |
| ... | ... | 3 | 1 | 2 | 1 |
| 3 | 4 | 12 | 44 | 105 | 25 |
| ... | ... | 1 | ... | 1 | 1 |
| 12 | 18 | 50 | 95 | 148 | 56 |

TABLE IV.

INFANT MORTALITY DURING THE YEAR 1911.

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

| CAUSE OF DEATH | | | | Under 1 Week | 1-2 Weeks | 2-3 Weeks | 3-4 Weeks | Total under 1 Month | 1-3 Months | 3-6 Months | 6-9 Months | 9-12 Months | Total Deaths under 1 year |
|---------------------------------------|-------------|-----|-----|--------------|-----------|-----------|-----------|---------------------|------------|------------|------------|-------------|---------------------------|
| All causes | Certified | ... | ... | 10 | 4 | 3 | 3 | 20 | 14 | 16 | 7 | 4 | 61 |
| | Uncertified | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Small-pox | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Chicken-pox | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Measles | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Scarlet Fever | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Diphtheria and Croup | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Whooping-cough | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 4 |
| Diarrhœa | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 5 | 2 | 2 | 12 |
| Enteritis | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 2 |
| Tuberculous Meningitis | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Abdominal Tuberculosis (<i>b</i>) | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other Tuberculous Diseases | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Congenital Malformations (<i>c</i>) | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | 2 | ... | 3 |
| Premature Birth | ... | ... | ... | 6 | 1 | 3 | 2 | 12 | ... | ... | ... | ... | 12 |
| Atrophy, Debility and Marasmus | ... | ... | ... | 1 | 2 | ... | ... | 3 | 4 | 2 | ... | ... | 9 |
| Atelectasis | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Injury at Birth | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Erysipelas | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Syphilis | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 |
| Rickets | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Meningitis (<i>not Tuberculous</i>) | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 |
| Convulsions | ... | ... | ... | 1 | ... | ... | ... | 1 | 1 | 2 | ... | ... | 4 |
| Gastritis | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Laryngitis | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bronchitis | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 | ... | ... | 4 |
| Pneumonia (<i>all forms</i>) | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 | 1 | 5 |
| Suffocation, overlying | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Other causes | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| | | | | 10 | 4 | 3 | 3 | 20 | 14 | 16 | 7 | 4 | 61 |

See Notes, pages 75, 76, and 77,

Nett Births in the Year.

Legitimate 565
 Illegitimate 41

Nett Deaths in the Year.

Legitimate Infants ... 51
 Illegitimate Infants ... 10

NOTES TO TABLE III.

- (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 foot-note 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) This heading includes all deaths from croup, except those certified as due to "spasmodic," "stridulous," "catarrhal," or "false" croup.
- (e) Under "Tuberculous Meningitis" are to be included deaths from Acute Hydrocephalus.
- (f) Under "Cancer" should be included deaths under such headings as Carcinoma, Scirrhus, Epithelioma, Rodent ulcer, Sarcoma, Cancer, and Malignant Disease.
- (g) Under this heading are to be included deaths registered as due to Epidemic diarrhœa, Epidemic enteritis, Infective enteritis, Zymotic enteritis, Summer diarrhœa, Choleraic diarrhœa, Cholera (other than Asiatic), Gastro-Enteritis, Gastro-Intestinal Catarrh, Muce-Enteritis, Colitis, &c.

Deaths from Diarrhœa secondary to some other well-defined disease should be included under the latter.

For "Dysentery" see note at foot of Table III.

- (h) Under this heading are to be included deaths from Delirium Tremens, acute and chronic alcoholism, &c., but *not* those certified as due to organic disease attributed to alcoholism. The number of the latter may with advantage be stated separately, though this statement cannot be included in Table III.
- (i) Under "Puerperal Fever" are to be included deaths under such headings as Pyæmia, Septicæmia, Sapræmia, Pelvic Peritonitis, Peri- and Endo-Metritis occurring in the Puerperium.
- (j) Under this heading are to be included also deaths from Atrophy and Marasmus of Infants, and want of Breast-Milk, but not from Atelectasis.

In any case of doubtful classification of deaths, the Manual to be issued shortly by the Registrar-General should be followed.

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.

30th March, 1912.

and the other two are the same as the first.

The first is the same as the second.

The second is the same as the third.

The third is the same as the fourth.

The fourth is the same as the fifth.

The fifth is the same as the sixth.

The sixth is the same as the seventh.

The seventh is the same as the eighth.

The eighth is the same as the ninth.

The ninth is the same as the tenth.

The tenth is the same as the eleventh.

The eleventh is the same as the twelfth.

The twelfth is the same as the thirteenth.

The thirteenth is the same as the fourteenth.

The fourteenth is the same as the fifteenth.

The fifteenth is the same as the sixteenth.

The sixteenth is the same as the seventeenth.

The seventeenth is the same as the eighteenth.

The eighteenth is the same as the nineteenth.

The nineteenth is the same as the twentieth.

The twentieth is the same as the twenty-first.

The twenty-first is the same as the twenty-second.

The twenty-second is the same as the twenty-third.

The twenty-third is the same as the twenty-fourth.

The twenty-fourth is the same as the twenty-fifth.

The twenty-fifth is the same as the twenty-sixth.

The twenty-sixth is the same as the twenty-seventh.

The twenty-seventh is the same as the twenty-eighth.

The twenty-eighth is the same as the twenty-ninth.

The twenty-ninth is the same as the thirtieth.

The thirtieth is the same as the thirty-first.

The thirty-first is the same as the thirty-second.

The thirty-second is the same as the thirty-third.

The thirty-third is the same as the thirty-fourth.

The thirty-fourth is the same as the thirty-fifth.

The thirty-fifth is the same as the thirty-sixth.

The thirty-sixth is the same as the thirty-seventh.

The thirty-seventh is the same as the thirty-eighth.

The thirty-eighth is the same as the thirty-ninth.