BOROUGH of HARROGATE.

REPORT

on the

HEALTH AND SANITARY CIRCUMSTANCES

of the

BOROUGH of HARROGATE.

for

1 9 1 9

by

JAMES MAIR.

Medical Officer of Health.

Public Health Office,
5, Haywra Crescent.,
Harrogate.

June 1920.

To :- The Mayor, Aldermen, & Councillors of the
Borough of Harrogate.

Gentlemen,

I have the honour to present to you for your information, and consideration, my Annual Report on the Health and Sanitary Circumstances of the Borough of Harrogate during the year 1919.

In doing so I have to thank the Chairman and Members of the Health Committee and the members of my Staff for their help in carrying on the work of the Department.

I am, Gentlemen,

Your obedient servant,

JAMES MAIR.

June 1920.

Principal Figures. 1919.

Population estimated by Registrar General	For Death rate.	36,231
	For Birth Rate.	37,742
Area in acres.		3,276
Census 1911.	Population.	33,706
	Density of Population. (persons per acre).	10.3
	Number of Inhabited houses.	7,409
	Average Number of persons per house.	4. 5
Rateable Value. October 1919.		£277650.
Estimated product of Penny rate 1919-1920	Poor rate purposes.	£1086
	General District Rate purposes.	£1040
Number of Births.	Male. 220	431
	Female. 211	
Birth rate.		11.4
Number of Deaths.	Male. 184	391
	Female. 207	
Death rate.		10. 8
Infant Mortality.		51.0
Zymotic Death rate.		0. 33
Death rate from Phthisis.		0.71
Death rate from other Tuberculous Diseases.		0.17
Mean Annual Temperature.		45.9
Total rainfall.		30.4 inches.
Hours of Bright Sunshine.		1428.4 hours.
Measles Death rate.		0.06
Whooping Cough.		0.00
Diarrhoea (per 1,000 births).		7.00
Enteric Fever.		0.03

Natural and Social Conditions of the District.

Physical Features.

Harrogate is a Municipal Borough in the West Riding of Yorkshire about 18 miles to the North of Leeds. It lies on the edge of the Yorkshire Moors on a tableland which forms the Western boundary of the Plain of York and is situated almost midway between the Irish Sea and the North Sea. Its mean altitude is about 400 feet, the highest point being Harlow Hill some 600 feet above sea level.

For the following short account of the Geology of Harrogate, which is reproduced from my Annual Report for 1913, I am indebted to Councillor J. H. Lofthouse who has made a special study of the subject.

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

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

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

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

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

Social Conditions.

Harrogate is almost entirely a residential town and Health Resort. There are no factories of any size in the town and there are no industries save those incidental to a health resort,

Rateable value.

The rateable value of the Borough is £277,650, and a penny rate produces in round figures for Poor rate purposes £1086, and for General District rate purposes £1040.

Population.

The Registrar General gives for 1919, as for the three previous years two estimates of the population, one of these - that used for calculating the death-rate, and known as the "Death Rate" population - excludes all non-civilian males whether serving at home or abroad and is based mainly upon the rationing returns placed at the Registrar General's disposal by the Ministry of Food.

The other - that used for calculating the birth and marriage rates and known as the "Birth rate population" - includes all the elements of the population contributing to these rates.

It consists therefore of the death-rate or civilian population plus all non-civilians whether serving at home or abroad.

The Registrar General estimated the "Birth Rate Population" for 1919 at 37,742 and the "Death Rate Population" at 36,231. These figures are used for estimating the birth and death rates respectively and as the "Death Rate Population" appears to afford the closest approximation to the number of persons actually resident in Harrogate it is used for calculating the various sickness rates.

The corresponding figures for 1918 were 37,250 and 33,245, so that as compared with that year there is an increase in the birth-rate population of 492 and in the Death Rate Population of 2,986. At the date of the last Census (April 1911) the population was 33,706 and it was distributed in the different Municipal Wards as shown in the following table.

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

Density of Population.

The area of the Borough is 3,276 acres, and at the Census of 1911 the number of persons per acre was 10.3. Taking the population for 1919 at 36231 the number of persons per acre is 11.1 The average number of persons per house at the Census was 4.5.

Vital Statistics.

Thenumber of births and deaths used in this report are those furnished to me by the Registrar General and are for the calendar year ending 31st December 1919.

The sickness figures are for the 53 weeks ended 3rd January 1920 and in calculating the sickness rates it is necessary to make a corresponding adjustment in estimating the population which has to be increased by one week.

The population on which these sickness rates are calculated is 36924.

Natural Increase of Population.

By this term is meant the excess of births over deaths. There were 431 births and 391 deaths and the natural increase of the population is therefore 40.

Table. 1.

Table shewing the natural increase for each year since 1904.

Year.	Births.	Deaths.	Natural increase of Population.
1904	734	384	350
1905	700	378	322
1906	659	381	278
1907	631	370	261
1908	555	358	197
1909	640	358	282
1910	629	348	281
1911	606	397	209
1912	500	320	180
1913	582	423	159
1914	513	371	142
1915	503	508	—5
1916	530	412	118
1917	415	397	18
1918	398	461	—63
1919	431	391	40

Births and Birth Rate.

According to the Registrar General 431 births of which 220 were Males and 211 were Females were registered as having occurred within the Borough during the year.

This is equivalent to an annual rate of 11.4 per 1,000 of the Birth Rate Population (37,742). This is 0.7 per 1,000 above the rate for 1918 but is with that exception the lowest rate of which I have any record.

For the purposes of comparison the Birth Rate of various districts in England and Wales is given below, and it will be seen that the Harrogate rate is very much lower than the lowest of these.

	1919
England and Wales.....	18. 5
96 Great Towns.....	19. 0
148 Smaller Towns.....	18. 3
HARROGATE.....	11. 4

Table 2.

Table shewing the birth rate of Harrogate compared with that of England and Wales for each year since 1900.

Year.	Harrogate.		England & Wales Rate per 1,000.
	No. of Births.	Rate per 1,000	
1900	421	17.0	28.7
1901	760	19.7	28.5
1902	695	23.1	28.6
1903	712	23.7	28.4
1904	734	24.0	27.9
1905	700	22.6	27.2
1906	659	20.9	27.0
1907	631	19.7	26.3
1908	555	17.3	26.5
1909	640	19.4	25.6
1910	629	18.8	24.8
1911	606	17.9	24.4
1912	500	14.5	23.8
1913	582	16.3	23.9
1914	513	14.6	23.8
1915	503	14.3	21.9
1916	530	14.7	20.9
1917	415	11.5	17.8
1918	398	10.7	17.7
1919	431	11.4	18.5

Illegitimate Births.

There has been an increase in the number and proportion of illegitimate births. During the year 52 illegitimate children (26 males and 26 females) were born as compared with 45 during 1918. This represents 12 % of the total births and gives an illegitimate birth rate of 1.4 per 1,000 of the Birth Rate Population.

This is one of the highest illegitimate birth rates that has occurred in recent years.

Notification of Births.

The notification of Births Act (1907) was adopted by the Harrogate Borough Council and came into operation on the 11th March 1912.

The following table shews the number of births which actually occurred during the 53 weeks ended 3rd January 1920, the number registered, and the number notified, during the same period.

Number of Births which actually occurred..... 443

Number of Births registered..... 424

Number of Births notified..... 427

Number of live Births notified..... 405

The number of live births which actually occurred was 443 and of these 405 or 91 per cent were notified. This proportion is 3 per cent below that for 1918 but cannot be considered other than satisfactory.

Enquiry into the unnotified births showed that in every case the ommission to notify was due to ignorance.

The next table shows the source of the notifications and the number derived from each source.

Source of Notification.	Number.	Percentage.
Medical Men.....	105	24.6
Midwives.....	297	69.5
Parents and others....	25	5.9
All sources.....	427	100.0

Still Births.

The Notification of Births Act require still-births as well as live births to be notified provided the child has reached a viable age.

During 1919 there were 22 still births notified; 11 by Medical men, and 11 by midwives. As still births are not required to be registered I am unable to say definitely how many have not been notified but as I learn through the courtesy of the Superintendents of the Cemeteries that only 23 stillborn children were interred during the year it is evident that the number not notified is not large.

Death Rate.

According to the Registrar General 391 residents of Harrogate 184 Males and 207 females, died during the year and the death rate is therefore 10.8 per 1,000 of the death rate population. This is 3.1 per 1,000 below the rate for 1918 and 3.0 per 1,000 below the rate for England and Wales.

Table shewing Deathrate in Harrogate and England and Wales.

Year.	Harrogate.	England & Wales.
1900	15.6	18.2
1901	13.2	16.9
1902	11.8	16.2
1903	12.6	15.4
1904	12.5	16.2
1905	12.2	15.2
1906	12.1	15.4
1907	11.5	15.0
1908	11.2	14.7
1909	10.8	14.5
1910	10.3	13.4
1911	11.7	14.6
1912	9.3	13.3
1913	11.9	13.7
1914	10.6	14.0
1915.	14.5	15.5
1916	12.4	14.0
1917	11.9	14.4
1918	13.9	17.6
Average for 10 years 1909-1918	11.7	14.4
1919	10.8	13.8

From this Table it will be seen that the rate for 1919 is one of the lowest recorded. As compared with 1918 there has been a decrease in the number of deaths due to Influenza, Cancer, and Tuberculosis, - there being 101 fewer deaths from these three causes - on the other hand there has been an increase in the number of deaths from Heart Disease and from the group of diseases classed together as "Other defined Diseases" there being 37 more deaths from these two causes than in 1918. There were no uncertified deaths, every death being certified by a medical man or a Coroner.

For purposes of comparison the death rates in the different areas of England and Wales are given below.

England & Wales ø	13. 8
96 Great Towns...	13. 8
146 Smaller Towns.	12. 6
Harrogate.	10. 8

ø Non-civilians are included in the figures for England & Wales but not for other areas.

Inquests.

During the year 15 inquests were held in Harrogate; 14 related to deaths of residents and 1 to that of a non-resident. In 6 instances the Coroner certified death to be due to natural causes, in 7 to violence and in 1 to suicide.

Infant Mortality.

During the year 431 children were born and 22 died before reaching one year of age.

The Infant mortality is therefore 51 per 1,000 births.

Table 4.

Infant Mortality in Harrogate compared with that in England and Wales for each year since 1900.

Year.	Harrogate.		England & Wales.
	No. of deaths.	Rate per 1000 Births.	Rate per 1000 births.
1900	61	144.9	154
1901	110	144.7	151
1902	79	113.7	133
1903	83	116.6	132
1904	85	115.8	146
1905	92	131.4	128
1906	86	130.5	133
1907	44	69.7	118
1908	63	113.5	121
1909	55	85.9	109
1910	57	90.6	106
1911	61	100.7	130
1912	32	64.0	95
1913	45	77.3	109
1914	36	70.2	105
1915	47	93.4	110
1916	42	77.1	91
1917	26	62.6	97
1918	37	93.0	97
Average for 10 years 1909-1918.	44	81.5	105
1919.	22	51.0	89

England and Wales.....	89
96 Great Towns.....	93
148 Smaller Towns.....	90
London.....	85
Harrogate.....	51

Infant mortality in each of the Municipal Wards during the year.

Ward.	Births.	Deaths.	Rate.
Central.	42	3	71. 4
East....	82	5	61. 0
West....	85	5	58. 8
Bilton..	127	4	31. 5
Starbeck.	88	5	56. 8
Whole Borough	424	22	51. 9

Infant Mortality in each quarter.

	Births.	Deaths.	Rate.
First quarter.	87	4	46. 0
Second quarter.	89	4	44. 9
Third quarter.	105	4	38. 1
Fourth quarter.	143	10	69. 9

Number of children dying in each of the first 12 months of life.

0 - 1 month	8
1 - 2 months	4
2 - 3 months	2
3 - 4 months	2
4 - 5 months	1
5 - 6 months	1
6 - 7 months	0
7 - 8 months	0
8 - 9 months	2
9 - 10 months	0
10 - 11 months	2
11 - 12 months	0
	22

Number of children dying in each of the first four weeks of life.

ø	0 - 1 week	7
	1 - 2 weeks	1
	2 - 3 weeks	0
	3 - 4 weeks	0
		8

ø 5 lived only one day or less.

The figures used in calculating the rates in the Table shewing the Infant Mortality in each of the Municipal Wards and also in the Table shewing the Infant Mortality in each quarter, are taken from the local returns and differ slightly from those supplied by the Registrar General.

Deaths of Illegitimate Infants.

	1915.	1916.	1917.	1918.	1919.
Illegitimate Births.	34	54	35	45	52
Deaths of Illegitimate Infants.....	7	8	5	7	7
Mortality of Illegitimates per 1,000 illegitimate births.	205.9	148.1	142.9	155.6	134.6
Mortality of legitimate infants per 1000 legitimate births	79.5	64.2	55.3	85.0	39.6

The principal causes of infant mortality in Harrogate during the year were as follows :-

Cause.	1913.	1914.	1915.	1916.	1917.	1918	1919.
Premature Birth.	10	9	6	13	4	7	9
Other developmental causes.	9	10	5	12	10	8	2
Diarrhoea & Enteritis	6	2	1	4	1	2	3
Bronchitis & Pneumonia.	5	5	11	4	6	5	5
Convulsions.	9	1	11	-	1	2	-
Whooping Cough.	-	2	-	-	-	-	-
All other causes.	6	7	13	9	4	13	3

The Infant mortality for the year is low, it is not much more than half the rate for 1918 (93.0) and is 30 per 1,000 below the average annual rate for the preceding 10 years. It is indeed the lowest rate of which I have any record.

Th saving in infant life which has been effected will perhaps be better appreciated when I say that had the rate for 1919 been the same as in 1918 there would have been 40 infant deaths instead of only 22, and in addition to the direct saving of life I think we are justified in assuming that the infant mortality figures is an index to the amount of sickness among infants and that therefore a low mortality means that there has been a corresponding diminution in the amount of non-fatal sickness.

From the tables on the preceding pages it will be seen that nearly half the deaths (8) occurred among infants under one month of age and that 7 of these survived their birth for less than one week - 5 indeed lived less than one day.

Seven of these deaths, all infants under one week old were due to premature birth, and it is obvious that measures taken after birth can have very little, if any effect, in preventing deaths from this cause. The only measures which can be of any value are those directed towards improving the health and surroundings of the expectant mother.

As is usually the case the mortality of illegitimate infants is higher than that of legitimate infants - 134 as compared with 39, per 1,000.

SANITARY CIRCUMSTANCES OF THE DISTRICT.

Water Supply.

For the following description of the water supply I am indebted to Mr. Arthur S. West, F.S.I. Assoc. M. Inst. C.E., Water Engineer and Manager.

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

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

"The total capacity of the four reservoirs in Haverah Park is 370,000,000 gallons, whilst the watershed covers an area of 2,770 acres, consisting of what is known as "uplands", being largely moorland with extremely rough pasturage, and a small area of arable land.

There are few farms on this watershed, the drainage of which receives particular attention so as to prevent any fear of contaminating the water used for supplying the town.

"In 1901 powers were obtained to construct the Roundhill reservoir, situate about twenty miles in a northerly direction from Harrogate. The capacity of this reservoir is about 525,000,000 gallons, and consists of a masonry dam thrown across the valley, with a total depth of water of 109 feet to the overflow weir.

The gathering area consists almost wholly of moorlands and with one exception nearly a total absence of peat deposit. When the water in this reservoir is brought into use it will be carried through three miles of tunnel and seventeen miles of aqueduct, delivering into the filtration works at Irongate Bridge or Harlow Hill as the case may be.

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

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

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

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

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

The following reports of analysis made by Mr. T. Fairley of Leeds show that the Corporation supply of water maintains a high standard of purity.

No. 1. Report of a sample of water taken from Harlow Hill Clear Water Well, September 3rd 1919.

Source of supply. Scargill.

The sample contains in grains per gallon (parts per 70,000) :-

Chlorides (equal to Sodium Chloride 0.61)	=	0. 97
Nitrates and Nitrites.....	:	None.
Carbonates as Calcium Carbonates.....		2. 45
Sulphates as Calcium Sulphate.....		2.38
Free Ammonia.....		0.001
Organic Ammonia.....		0.002
Oxygen absorbed in 4 hours.....		0.04
Hardness (before boiling).....		3.3°
Hardness (after boiling).....		2.8°
Total dissolved solids.....		6.44
Lead or poisonous metals.....		None.
Action on a bright surface of lead after 24 hours exposure.....		None.

Sediment..... Very minute (a few algae).

Colour of Column..... 1.0 yellow.

Smell when warmed to 100° F ..... None.

Number of colonies per cubic centimetre..... = 7 none of which were of a pathogenic nature.

In its present state this water is of excellent quality and well suited for a public supply.

No. 2.

Report of a sample of water taken from Irongate Bridge Clear Water Well, September 3rd 1919.

Source of supply, Beaver Dyke, Tank Spring.

The sample contains in grains per gallon (parts per 70,000)

Chlorides equal to Sodium Chloride 1.61..... =	0. 97
Nitrates and Nitrites.....	None.
Carbonates as Calcium Carbonate.....	1. 05
Sulphates as Calcium Sulphate.....	2.94
Free Ammonia.....	0.002
Organic Ammonia.....	0.004
Oxygen absorbed in 4 hours.....	0.068
Hardness (before boiling).....	3.1°
Hardness (after boiling).....	3.0°
Total dissolved solids.....	6.44
Lead or poisonous metals.....	None.
Action on lead.....	None.
Sediment.....	Very minute (A few algae).
Colour of column.....	1.3 yellow.
Smell when warmed to 100° F	None.

Number of colonies per c.c. = 11 none of which were of a pathogenic nature.

In its present state this water is of excellent quality for a public supply. At present it has no action on lead but if possible the carbonates should be increased.

With the exception of one Farm and some 14 houses situated in an outlying part of the District and which obtain their water from shallow wells, the whole of the houses in the Borough are supplied with Corporation water. Samples taken from these wells have always shown the water to be of good quality.

Pollution of rivers and streams.

This is under the supervision of the West Riding County Council whose inspector pays regular visits to the District. I am not aware that any of the streams in the District are polluted to any extent.

Drainage and Sewerage.

House drainage.

The drains of all new houses are required to be laid upon concrete and imbedded for not less than half their diameter in concrete cement. An inspection chamber, intercepting trap, and efficient means of ventilation are provided and before being passed by the building inspector the drains must stand the smoke test.

With the exception of a few houses in outlying districts which cannot be connected to the sewers and are drained to cesspools all houses drains are connected to the sewers.

Sewerage and Sewage.

The sewerage of the Borough is entirely in the department of the Borough Surveyor who has kindly furnished me with the following brief account of the method of treatment :-

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

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

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

No complaints have been received during 1919 pf any nuisance arising from either of these works.

Sewers.

During the year no new sewers were laid. Ventilation of the sewers is effected by tall vertical shafts and a number of Webb's Lams are also in use. Where the gradient is flat the sewers are regularly flushed either automatically or by a special cart.

Closet Accommodation.

Excrement disposal is almost entirely by water carriage but there are still a few privies and earth closets in use. A considerable proportion of these are very little used, and practically all in regular use belong to houses which cannot be connected to the sewers.

At the end of the year there were 12,940 water closets 108 waste water closets, 30 privies, and 18 earth closets in use.

During the year one privy was abolished and a water closet substituted.

House refuse is collected and removed by the Corporation who employ a staff consisting of a Cleansing Inspector, one horse keeper and 25 men. For the greater part of the year the equivalent of 16.5 horses and waggons were in daily use but a motor waggon was acquired in September and since that date the number of horses and waggons employed daily has been reduced to 14. The estimated annual expenditure is about £6,500.

Refuse is removed from ordinary dwellinghouses weekly and from hotels and larger boarding houses two or three times weekly and in some instances daily.

Market and fishmongers refuse is removed daily and privies and earth closets are emptied weekly.

The whole of the refuse is disposed of by tipping on land. Some trouble was caused during the year through nuisance arising from the tip on which fishmongers refuse was deposited. The introduction of motor transport has allowed of this refuse being taken to a tip at a much greater distance from the town and situated where no nuisance can possibly be caused. The great majority of dwellinghouses are provided with dustbins but there are still about 90 ashpits in use which are gradually being replaced by dustbins.

The number of ashpits abolished in recent years is as follows :-

1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
16	51	49	56	46	20	33	7	0	0	1

Sanitary Inspection of the District.

Two Sanitary Inspectors are employed by the Corporation and the following table which has been prepared by the Chief Sanitary Inspector sets out, so far as it is possible to do so in tabular form the routine work performed by them during the year.

Notices served.

During the year 535 Notices for the abatement of Nuisances were served. Of these 357 were preliminary and 178 were Statutory Notices. 290 have been complied with and much of the outstanding work would have been done ere this but for the difficulty of getting material.

Total number of visits and inspections made.....	6248
Total number of nuisances reported by Inspectors in 1919...	1027
Total number of nuisances left over at close of 1918.....	28
Total number of nuisances abated in 1919.....	782
Number of complaints made and investigated.....	201

The following list shows the varied nature of the nuisances dealt with, and remedied.

Animals kept so as to be a nuisance.....	2
Additional water closets provided.....	3
Blocked drains opened out, cleansed, & put into proper working order.....	21
Defective drains repaired.....	49
Defective spouting of eaves of buildings repaired.....	7
Defective closet cisterns repaired or removed...	30
Defective W.C. basins removed.....	8
Defective roofs repaired.....	2
Defective soil pipes or ventilation shafts repaired.....	4
Defective kitchen or scullery floors repaired...	2
Dampness dealt with.....	3

Dilapidated dustbins replaced with new ones.....	294
Dilapidated outbuildings repaired or taken down.....	1
Dilapidated W.C's repaired or reconstructed.....	2
Dirty or defective closets repaired, cleansed, or lime washed out.....	11
Drainage or sanitary arrangements of houses dealt with	51
Drainage systems ventilated.....	6
House drains disconnected from sewer.....	2
Insanitary ashpits removed and dustbins substituted...	1
Insanitary privy connected into W.C.....	1
Inspection chambers built on house drains.....	6
Manure Bins provided.....	1
Offensive accumulations removed.....	16
Fowls kept so as to be a nuisance.....	4
Pedestal closets fixed in place of boxed in ones.....	4
Rain water pipes disconnected and made to discharge over gullies.....	1
Rain water pipes repaired.....	2
Soil pipes ventilated with four inch shafts.....	2
Sink pipes trapped.....	10
Sanitary sinks provided.....	11
Houses re-drained.....	11
Defective fireplaces repaired or new ones provided....	1
Waste pipes from sink, bath or lavatory basins repaired	3
Yards paved whole surface.....	2
Yard paving repaired.....	4
Water supply of houses dealt with.....	9
Manure pits covered over, or bins provided.....	1
Miscellaneous.....	4
Dirty yards cleaned up.....	1
Waste water closets converted into ordinary ones.....	1
W.C's opening into workrooms, intervening space provided.....	2

In addition to the above, the two men engaged in making house to house visits (when not engaged in testing drains and disinfecting) to ascertain that the drains are in working order have let off 983 blocked gullies, 113 intercepting traps, 64 blocked W.C's and 75 manholes.

House drainage.

During the year 57 applications have been received from owners or occupiers for the smoke test to be applied to house drains and of these 31 were found to be defective. In addition the drains of 28 houses where infectious diseases existed have been tested and 20 were found defective making in all 83 drains tested of which 51 were found defective. Many of these defects were of a slight nature but in the following 11 instances the drains had to be entirely rel

7, Prospect Place.
35, Westcliffe Terrace.
25, York Place.
49, Grove Road.
51 Grove Road.
8, The Crescent, New Park.
34, Park Avenue.
22, Devonshire Place.
115 The Avenue Starbeck.
125, The Avenue, Starbeck.
13, Belmont Grove.

Premises controlled by Bye-laws.

(a) Houses let in Lodgings.

There are no houses let in lodgings or common lodging houses in the Borough.

(b) Offensive trades.

There are two offensive trades - one gut scraping and one tripe boiling - carried on in the Borough. Both are carried on at Messrs Hunter's slaughterhouse at Starbeck. The premises have been visited frequently during the year and have always been found in a satisfactory condition. No complaints respecting these trades have been made.

Schools.

The elementary schools are inspected regularly by the School Medical Officer who is also Medical Officer of Health. They are kept in good sanitary condition and all obtain their water supply from the Corporation mains.

The action taken to prevent the spread of infectious disease is described in that portion of the Report dealing with infectious disease.

Food.

(a) Milk.

Cowsheds.

At the end of the year there were 20 cowkeepers on the register and the approximate number of milch cows in the district was 170. The cowsheds are inspected regularly 60 visits having been made during the year by the sanitary inspectors. One cowshed has been re-constructed; three or four other sheds are in need of repair and it is hoped that these will be completed during next year. Every effort is made to raise the standard of cleanliness both as regards cowsheds and cows but there is still room for much improvement in this respect.

Veterinary Inspection of Milch Cows.

Mr. A. Ellison M.R.C.V.S. who had been serving with H.M. Forces resumed duty as Veterinary Inspector in September 1919 Between that time and the end of the year he paid two visits to each cowshed and examined all milch cows.

His reports show that the cows were all in very favourable condition and that all were free from disease of the udder.

Purveyors of Milk.

The register at the end of the year contained the names of 108 purveyors of milk. Included in this number are 74, milk dealers who reside outside the Borough and over whose premises we have no control.

The premises of 34 purveyors in Harrogate have been regularly inspected, 242 visits were made during the year - and on the whole they have been found to be clean and well kept.

Milk (Mothers & Children) Order 1918.

This order made by the Food Controller on the 8th February 1918 empowers any Local Authority within the meaning of the Notification of Births Act 1907 to arrange for the supply of food and milk for expectant and nursing mothers and of milk for children under 5 years of age, subject to such conditions as may from time to time be prescribed by the Food Controller. In necessitous cases food and milk may be supplied free or at less than cost price.

All Medical men and Midwives practising in the area were acquainted with this order, and informed that the Corporation had made arrangements for the supply of milk to suitable cases. There has not been any great demand for free milk, only 15 families having been supplied during the year, nearly all of whom were brought forward by the Health Visitors. The cost to the Corporation was £25/2/4d.

Other Foods.

Bakehouses.

There are 50 Bakehouses in the Borough of which 10 are underground bakehouses. These latter were all in use prior to 1901 and were certified by the Council to be suitable for use.

All Bakehouses are inspected regularly - 774 visits having been made during the year - and generally speaking they are found to be clean and well kept. On 25 occasions however it was found necessary to draw the attention of the occupier to the need for lime-washing.

Slaughterhouses.

There is no public abattoir in the Borough but there are four private slaughterhouses. During the year two of these have not been in use at all, one (Goodricks) has been used as a clearing house by the local Retail Butchers Association, and a small amount of slaughtering was done while Foot and Mouth Disease was prevalent. Practically the whole of the slaughtering has been done at Hunter's Slaughterhouse, Starbeck, which is under Government control. Although this slaughter-house is in some respects not up to modern standards it is on the whole fairly satisfactory. During the year however it has been worked far beyond its capacity. Slaughtering has been carried on during five and sometimes six days per week and a weekly average of something like 72 cattle and 600 sheep have been slaughtered. In these circumstances it is not surprising that in spite of the best efforts of the occupier the slaughterhouse has not always been kept quite so clean as one could wish.

The large amount of slaughtering done here is due to the fact that slaughtering is done here for many other areas - quite 50 per cent of the meat killed here is distributed to other towns. I understand however that this congestion will shortly cease and that by the middle of 1920 no more meat will be slaughtered here than in the pre-war years.

Meat Inspection.

Inspection of meat is carried out by the Assistant Sanitary Inspector who holds the Certificate of Inspector of Meat and other Foods, and in cases of doubt the opinion of the Medical Officer of Health or of the Veterinary Inspector is also obtained.

The abnormal amount of slaughtering done in Harrogate has thrown a considerable strain upon the Department but as I have already said I understand that more normal conditions will soon prevail when the strain will be relaxed.

It has been impossible for the inspector to be present during the whole time that slaughtering is going on but he has visited the slaughterhouse daily, as a rule spending several hours there, and has in addition visited butchers shops etc. As a result of his activities the following articles of food were found to be unfit for human consumption and were condemned and destroyed.

Food.	Amount.
Beef.....	24887 lbs.
Offals.....	6852 :
Pork.....	2021 :
Veal.....	1266 :
Mutton.....	1088 :
Fish.....	697 :
Fruit.....	82 :
Yeast.....	56 :
Tinned Meat.....	50 :
Other Tinned Foods.....	40 :
Bacon.....	10 :
Butter.....	4 :
	37,053 lbs or 16 tons 10 cwt 93 lbs.

In addition to the above 3,500 eggs and 34 sets of tripe were found unfit for use and destroyed.

41 carcases of beef, 12 of pork, and 3 of veal, were condemned on account of Tuberculosis and the remainder for various other reasons.

The amount of meat condemned during the year (16½tons) is more than double the amount condemned in 1918 (7½ tons). This is of course mainly, if not entirely due to the fact, already mentioned, that a very much larger number of animals have been slaughtered in Harrogate during the year.

All condemned food stuffs are collected by the Bradford Corporation and used by them for salvage purposes.

Sale of Foods and Drugs Act.

During the year 82 samples, 77 formal and 5 informal, of food were obtained and submitted to the County Analyst for analyses.

In four instances, all samples of new milk, the sample were found to be adulterated.

The number and nature of samples taken is shown in the following Table.

Nature of Sample.	Formal.		Informal.	
	No. taken.	Number Adulterated.	Number taken.	Number Adulterated.
New Milk.	77	4	0	0
Butter.	0	0	2	0
Flour.	0	0	1	0
Lard.	0	0	1	0
Coffee.	0	0	1	0
Total.....	77	4	5	0

Details of the adulterated sample and of the action taken :-

No. of Sample	Nature of Sample	Analyst's Report.	Action taken.
21	New Milk.	Sample deprived of 3 % of its natural fat.	Vendor written to by the Town Clerk to explain deficit.
38	New Milk.	Sample contained 2.6 % of added water.	Vendor written to by the Town Clerk & asked for an explanation.
40	New Milk.	Sample deprived of 7 % of its natural fat.	Vendor written to by Town Clerk & asked for an explanation.
60	New Milk.	Sample contained 1.2 % of added water.	Vendor written to by the Town Clerk & asked for an explanation.

The proportion of milk samples found to be adulterated 5 per cent, is considerably less than in 1918 when 12 per cent were found to be adulterated.

Prevalence of, and Control over, Infectious Diseases.

Infectious Diseases generally.

Generally speaking the year under review was characterised by increased prevalence of both Scarlet Fever and Diphtheria but more especially of the latter; on the other hand there was a marked decrease in the prevalence of Measles, 112 cases having been notified as against 639 in 1918.

Zymotic Mortality.

The total number of deaths during the year from the seven principal zymotic diseases was 12 as compared with 17 in 1918, and the rate per 1,000 living was 0.33 as compared with 0.51 for the previous year.

Table showing Zymotic Death Rate.

Disease.	1918.		1919	
	Number.	Rate.	Number.	Rate.
Smallpox	0	0.00	0	0.00
Scarlet Fever.	0	0.00	1	0.03
Diphtheria.	4	0.12	5	0.14
Enteric Fever.	0	0.00	1	0.03
Measles.	7	0.21	2	0.06
Whooping Cough.	4	0.12	0	0.00
Diarrhoea.	2	0.06	3	0.08
Total.	17	0.51	12	0.33

Smallpox.

No case of Smallpox occurred during the year. The last year in which there was any smallpox in Harrogate was 1914 in which year there was one case.

During the year notifications were received from various Port Sanitary Authorities that four persons who had been in contact with cases of smallpox were proceeding to Harrogate. These contacts were visited and kept under observation till all risk of their developing smallpox had passed.

No vaccinations were performed by the Medical Officer of Health during the year.

In view of the possibility of cases of smallpox occurring at any moment the Smallpox Hospital is kept in a constant state of readiness to receive patients. This is all the more necessary because as will be seen from the subjoined table for which I am indebted to the Vaccination Officer the number of persons unprotected by vaccination is large.

Year.	Number of Births.	Number of vaccinations.	Number of exemptions.
1917	491	203	219
1918	456	198	184
1919	486	253	214

Scarlet Fever.

Year.	Notifications.	Attack rate per 1,000.	Deaths.	Death Rate.	Case Mortality per cent.	Rmvd. to Hsptl.	Percentage removed.
∅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
1912	38	1.10	0	0.00	0.0	32	84.2
1913	58	1.66	0	0.00	0.0	46	79.0
1914	66	1.88	1	0.63	1.5	60	90.9
1915	70	1.99	1	0.02	1.4	54	77.1
1916	37	1.11	2	0.06	5.4	28	75.9
1917	62	1.82	0	0.00	0.0	56	90.3
1918	35	1.09	0	0.00	0.0	27	77.0
1919	81	2.19	1	0.03	1.2	71	87.7

‡ Isolation Hospital opened ∅ Borough extended.

78 cases were notified as Scarlet Fever, in addition 2 cases originally notified as Diphtheria proved on further observation to be cases of Scarlet Fever as did one case originally notified as Enteric Fever.

The total nett number of cases notified during the 53 weeks ended 3rd January 1920 is therefore 81 and is the largest number notified since 1908 when there were 114 cases.

The attack rate is 2.19 per 1,000.

One case proved fatal giving a case mortality of 1.2 per cent and a deathrate of 0.03 per 1,000 of the population. 71 were removed to the Isolation Hospital and two were removed to a Nursing Home.

Table showing distribution of the cases in the various Wards for each quarter of the year.

Ward.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total.
Central.	-	-	1	3	4
East....	-	1	2	7	10
West....	-	-	10	6	16
Bilton..	2	-	-	6	8
Starbeck	-	15	23	5	43
Total.	2	16	36	27	81

The age and sex distribution was as follows :-

Sex.	Under 1 year.	From 1-5 yrs.	From 5-15 yrs.	From 15-25 yrs.	From 25-45 yrs.	45 yrs upwds.	Total.
Males.	..	2	35	3	1	..	41
Females.	..	2	25	10	3	..	40
Total...	..	44	60	13	4	..	81

Forty four cases occurred among children attending one or other of the elementary schools, of these 26 were in attendance at Starbeck Council School. No other School had more than 4 cases.

It will be seen from these Tables that Scarlet Fever was most prevalent during the third and fourth quarters of the year and that the Starbeck Ward was by far the greatest sufferer, more than half the total number of cases occurring in this Ward. Fortunately the disease did not appear to be of more than moderate severity, there being only one fatal case.

Diphtheria.

Diphtheria in Harrogate since 1900.

Year.	Notifications	Attack rate per 1,000.	Deaths.	Death rate	Case Mortality per cent.	Rmvd. to Hsptl.	Percentage removed.
ø 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
1912	12	0.35	1	0.03	8.3	6	50.0
1913	55	1.57	2	0.06	3.6	41	74.5
1914	46	1.31	1	0.03	0.0	35	76.1
1915	29	0.82	2	0.05	6.9	23	79.3
1916	27	0.81	1	0.03	3.7	18	66.6
1917	51	1.53	7	0.21	13.7	41	80.4
1918	32	0.96	4	0.12	12.5	27	84.4
1919	115	3.11	5	0.14	4.3	96	83.5

@ Isolation Hospital opened ø Borough extended.

Number of Cases notified from each Ward during each quarter.

Ward.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total.
Central.	..	1	2	2	5
East....	2	2	4	8	16
West....	..	1	3	12	16
Bilton..	5	1	3	0	9
Starbeck	7	13	32	17	69
Total.	14	18	44	39	115

Diphtheria.

The Age and sex distribution was as follows :-

	Under 1 yr.	From 1-5 yrs.	From 5-15 yrs.	From 15-25 yrs.	From 25-35 yrs.	From 35-45 yrs.	45 yrs upwds.	Total.
Males.	..	8	31	11	..	1	..	51
Females.	..	4	51	6	1	..	2	64
Total.	..	12	82	17	1	1	2	115

119 notifications of diphtheria were received but on further observation two cases proved to be Scarlet Fever; one to be Erysipelas; and one to be definitely not Diphtheria. The total nett number of cases was therefore 115 and the attack rate was 3.11 per 1,000 of the population which are the highest figures recorded since 1906 when there were 119 cases with an attack rate of 3.78 per 1,000.

There were 5 deaths giving a case mortality of 4.4 per cent and a deathrate of 0.14. The deathrate in England and Wales was 0.13, in the 96 Great Towns it was 0.14, and in the 148 smaller towns it was 0.12. Four of the deaths occurred at the Isolation Hospital, one on the sixth day after admission and three in less than two days after admission. One case died at home on the eleventh day of illness.
The number of houses invaded was 98, there being 87 houses with one case each; 6 houses with 2 cases; 4 houses with 3 cases; and one house with 4 cases.
In 59 cases the diagnosis was confirmed by bacteriological examination. In 71 instances the child affected was attending one or other of the elementary schools. By far the largest number - 54 - were in attendance at Starbeck Council School; the school nearest approaching this was Grove Road School with 6 cases.
34 of the cases were discovered by the School Nursing Staff.
96 or 83.5 per cent of the cases were removed to the Isolation Hospital.

From the foregoing tables it is apparent that diphtheria was distinctly prevalent during the year. It was most prevalent in the last two quarters of the year, and as was the case with Scarlet Fever, Starbeck was the Ward which suffered most severely - more than half the number of cases occurring in this Ward. In no other Ward did the disease give rise to anxiety although in the last quarter there was an increase in the East and West Wards. In the East Ward however four of the cases in the last quarter occurred in one house and the 12 cases in the West Ward were with the exception of 3 which occurred in an Institution, scattered throughout the Ward and had no traceable connection with each other.
In Starbeck however the disease gave rise to considerable anxiety, 6 cases were notified in February and one was notified in March. From this time till about the middle of May the Ward was free from the disease. From this date however till the end of October 57 cases were notified. At the end of October there was a sudden drop in the numbers and during the last two months of the year only 5 cases were notified. Altogether 69 cases were notified in Starbeck during the year.
Careful enquiry was made into every case and every likely and several unlikely causes considered. The question of the possibility of the infection being milk borne was carefully gone into but at no time was any evidence obtained pointing to the milk supply being responsible.

Diphtheria.

As the greater number of the cases - 54 out of 69 occurred among School Children special attention was paid to the Schools. Starbeck School was visited regularly, almost daily, by the Medical Officer of Health or School Nurse, and all suspicious cases examined and swabbed. All children absent from School for unknown reasons were visited by the School Nurse and if they presented any suspicious sumptoms at all "swabs" were taken. As a result of these enquiries 31 cases were discovered, 1 in the first, 9 in the second, 16 in the third, and 5 in the last quarter. A few of these children were definitely ill but by far the greater number complained of nothing more than a slight sore throat and some asserted that they had no complaint to make. Where the children were definitely ill a swab was taken and the parents urged to secure medical advice at once. In other cases a swab was taken and if this proved to be positive the patients were at once informed and urged to obtain medical advice - if as sometimes happened they were unwilling to do so the case was dealt with by the Medical Officer of Health.
It will be seen that the majority of the cases were very mild, so mild indeed that in many instances the diagnosis could only be made after bacteriological examination. As evidence of the anomalous character of many of the cases it may be mentioned that of 5 cases of post diphtheritic paralysis in school children which came under observation during the year only one had been previously diagnosed as diphtheria. In 2 cases the original illness was so slight that no doctor was called in and in the other 2 instances the doctor in attendance did not consider the cases to be diphtheria, this opinion being strengthened by the fact that swabs taken from these cases gave negative results. It is not surprising in these circumstances that the disease proved so difficult to control.

Diphtheria Carriers.

By a "Carrier" is meant a person who although not suffering from Diphtheria nevertheless harbours the diphtheria bacillus in his throat and is therefore a potential danger to those with whom he comes in contact. Five such cases were discovered during the year, all School children, and all living in Starbeck Ward.
These cases were excluded from School, their parents were warned of the danger, and urged to isolate them, and obtain appropriate treatment. They were kept under observation until at least three consecutive swabs proved negative when they were allowed to return to School.
Fortunately the condition proved amenable to treatment, in no case did the condition persist longer than 4-5 weeks.

Supply of Diphtheria Antitoxin.

Diphtheria Antitoxin is supplied by the Corporation free of cost to any medical man who applies for it. During the year 43,000 units were supplied for use in 9 cases of diphtheria or suspected diphtheria.

Enteric Fever.

Year.	No.	Attack rate per 1000.	Deaths.	Death rate.	Case mortality per cent.	Rmvd. to Hsptl.	Percentage removed.
1900	13 ϕ	0.63	5 ϕ	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 θ	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
1912	1	0.03	0	0.00	0.0	0	0.0
1913	5	0.14	1	0.03	20.0	2	40.0
1914	6	0. 7	2	0.06	33.3	3	50.0
1915	2	0.05	1	0.02	50.0	0	0.0
1916	2	0.06	1	0.03	50.0	2	100.0
1917	3	0.09	2	0.06	66.6	1	33.3
1918	5	0.15	0	0.00	0.0	1	20.0
1919	1	0.03	1	0.03	100.0	1	100.0

θ Including Continued Fever. ϕ Borough extended

@ New Isolation Hospital opened.

Two cases of Enteric or Typhoid fever were notified to me during the year, one of them on further observation however proved to be a case of Scarlet Fever and the total nett number of cases occurring during the year was therefore one; giving an attack rate of 0.03 per 1,000. This is the lowest rate since 1912 in which year also 1 case occurred.

The patient a female age 63 became ill about the end o of July and on the 8th August the case was provisionally diagnosed as enteric fever ; on the 13th August the diagnosis was bacteriologically confirmed, and the patient was removed to the Isolation Hospital on the following day and died two days later. The source of the infection could not be ascertained and no further cases occurred.

Encephalitis Lethargica.

This disease was made compulsorily notifiable by an order of the Local Government Board which came into operation on the 1st January 1919. Altogether 4 notifications were received but as one of these referred to a soldier it is not included in our figures.

The three civilians cases were notified in the last quarter of the year, 2 from the Starbeck and one from the West Wards. One was a male aged 22 and two were females aged 10 and 47 respectively. One case proved fatal — a female age 47 who died on the same day as the notification was received. In this case the diagnosis seemed open to a certain amount of doubt but the remaining two cases appeared to be fairly typical cases. They both made good recoveries. None of the cases had been in contact with a previous case.
These three cases were nursed at home and the houses disinfected after death or recovery.

Malaria and Dysentery.

Fourteen cases of Malaria and one of Dysentery have been notified under the Public Health (Pneumonia, Malaria, Dysentery etc) Regulations which came into operation on 1st March 1919.

All the patients were males and all were ex-service men who had contracted the infection overseas.

Tuberculosis.

During the year 32 deaths - 18 less than in 1918 - were registered as being due to some form of tuberculosis. The deathrate is therefore 0.88 per 1,000 as compared with 1.50 per 1,000 in 1918.

Non-Pulmonary Tuberculosis.

Tuberculous disease of parts of the body other than lungs was responsible for 6 deaths-8 less than in 1918 - and the death rate from this cause is therefore 0.17 per 1,000. This is less than half the rate for 1918 (0.42) and is slightly below the average rate for the ten years 1909-18.

Pulmonary Tuberculosis - Phthisis.

During the year 26 deaths - 14 males and 12 females - were attributed to pulmonary tuberculosis as compared with 36 in 1918. This gives a death rate of 0.71 per 1,000 which is considerably lower than the rate for 1918 (1.08) and slightly below the average rate for the ten years 1909-18.

Tuberculosis Death rate in Harrogate.

Year.	Phthisis.		Other Tuberculous diseases.	
	Number of Deaths.	Death rate per 1,000.	Number of Deaths.	Death rate per 1,000.
1900	17	0.57	6	0.20
1901	17	0.59	18	0.62
1902	27	0.90	12	0.40
1903	35	1.16	23	0.77
1904	22	0.72	10	0.33
1905	28	0.90	13	0.42
1906	21	0.67	11	0.35
1907	30	0.94	3	0.09
1908	31	0.97	7	0.22
1909	26	0.79	7	0.21
1910	12	0.36	5	0.15
1911	25	0.74	8	0.23
1912	15	0.44	5	0.14
1913	19	0.53	4	0.11
1914	18	0.51	8	0.23
1915	22	0.62	7	0.20
1916	25	0.75	8	0.24
1917	28	0.84	8	0.24
1918	36	1.08	14	0.42
Average for 10 years 1909-18.	23	0.67	7	0.22
1919	26	0.71	6	0.17

In the next Table is shewn the average annual death-rate for each period of five years since 1896 :-

Quinquennial Period.	Death rate from Phthisis.	Death rate from Other Tuberculous Diseases.	Tuberculosis deathrate.
1896 to 1900	0.90	0.45	1.35
1901 to 1905	0.85	0.51	1.36
1906 to 1910	0.75	0.20	0.95
1911 to 1915	0.59	0.20	0.79
1916	0.75	0.24	0.99
1917	0.84	0.24	1.08
1918	1.08	0.42	1.50
1919	0.71	0.17	0.88

The age and sex distribution of these were as follows :-

	0-1 yrs.	1-5 yrs.	5-15 yrs	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65 yrs upwds.	All ages.
Males.	0	0	1	1	2	3	3	2	0	12
Females.	0	1	1	3	4	2	1	2	0	14
Total.	0	1	2	4	6	5	4	4	0	26

From these Tables it will be seen that the deathrate from Tuberculosis which had been falling fairly steadily till about 1914 has increased considerably since that period. This is perhaps best seen in the table showing the rate in quinquennial periods from which it will be seen that the deathrate fell from 1.36 in the period 1901-05 to 0.79 in the period 1911-15. During the three following years there was a steady increase up to 1.50 in 1918. The reason for this increase is obvious. It is, I think undoubtedly due to the stress and strain of the War which affected not only those members of the community who were serving with the forces but also those who were at home. It is satisfactory that the Tuberculosis deathrate for 1919 is not much more than half that for 1918 and one hopes that when normal conditions again prevail it will continue to decline not less rapidly than in the years before the War.

Notification of Tuberculosis.

During the year 95 notifications of cases of Tuberculosis were received; 47 on Form A, 6 on Form B ; 24 on Form C ; and 18 on Form D.

In 40 instances the case had previously been notified so that the number of new cases notified was 55.

In addition to these 5 cases (4 Pulmonary and 1 Non-pulmonary) which were not formally notified were otherwise brought to the knowledge of the Department. Altogether therefore 60 new cases of tuberculosis were brought to our knowledge as compared with 82 in 1918.
In 51 of these cases the lungs and in 9 other parts of the body were affected.

Non-Pulmonary Tuberculosis.

The number of cases of Non-pulmonary tuberculosis brought to the knowledge of the Department during the year was 9.

The age and sex distribution of these cases were as follows :-

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65 yrs upwds.	All Ages.
Males.	2	1	1	0	0	0	1	0	0	5
Females.	0	1	1	1	1	0	0	0	0	4
Total.	2	2	2	1	1	0	1	0	0	9

and they were distributed among the various wards thus :-

Central.	East.	West.	Bilton.	Starbeck.
2	0	2	3	2

The parts of the body affected were :-

Meninges.....	2
Abdomen.....	3
Intestine.....	1
Cervical Glands.....	2
Genito-urinary organs.	1

Pulmonary Tuberculosis - Phthisis.

During the year 51 cases of phthisis were notified or otherwise brought to the knowledge of the Department.
The age and sex distribution of these was as follows :-

	1-5 yrs.	5-15 yrs	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65 & over	All ages.
Males.	-	4	7	7	5	3	1	-	27
Females.	-	3	5	10	3	2	1	-	24
Total.	-	7	12	17	8	5	2	-	51

and they occurred in the various Wards thus :-

Central.	East.	West.	Bilton.	Starbeck.
11	13	10	7	10

As in former years enquiry was made into the family history, degree of isolation provided etc, and the following information was obtained :-

Family History.

In 45 cases fairly reliable information was obtained on this point, and in 17 cases it was found that there was a definite history of tubercle in one or more near relatives of the patients. In the remaining 28 cases no history of tubercle in living or dead relatives could be elicited.

Housing Conditions.

The houses in which the cases occurred were all through houses and no serious sanitary defects were found in any. There was no marked overcrowding but there is no doubt that in many instances the houses were occupied by a larger number of persons than was desirable especially in view of the fact that one of the number was suffering from tuberculosis.

Isolation.

In 32 instances more or less satisfactory isolation of the patient was obtained. In 31 cases the patient occupied a separate bedroom and in one a separate bed. In 14 instances there was no attempt at isolation and in 5 instances no information was obtainable but as these 5 cases were all of fairly well to do people living in good houses the presumption is that suitable isolation was provided. It will be readily understood that it is very difficult to obtain satisfactory isolation and in an ordinary working class cottage occupied by a family isolation is almost impossible no matter how much the inmates desire to do their best. It is therefore very satisfactory that so large a proportion of the cases was isolated.

Control of Tuberculosis.

The measures taken to control tuberculosis have been carried out on the same lines as in previous years. All cases notified are visited by a Health Visitor as soon as possible after receipt of the notification. An exception is made in those cases where the notifying practitioner requests that no visit be made but these are always well to do people living in good houses where there seems to be little need for an official visit.

Advice is given as to the best methods of preventing the spread of the disease, stress being laid upon the danger of the sputum, on the desirability of securing adequate isolation, and on the advantages of fresh air and sunlight.

Disinfectants are provided free of cost and houses are disinfected after death or removal; 52 houses having been disinfected during the year.

So far as is possible cases of Phthisis are kept under observation and visited as frequently as possible and during the year 291 visits were paid to such cases. Owing to shortage of staff and pressure of other work it was not found possible to visit these cases as frequently as one wished but in future it is hoped to visit each case at least once in six weeks. Those patients in attendance at the Dispensary will be visited at longer intervals to ensure that they are still under observation. The work is carried on in close co-operation with the West Riding Tuberculosis Dispensary, and every effort is made to get those patients who are not receiving medical treatment to attend the dispensary. Suspicious cases among school children are also referred to the dispensary by the School Medical Officer. Sanatorium treatment is provided by the West Riding County Council which during the year sent 24 patients, 12 males and 12 females, from Harrogate to various Sanatoria.

Pneumonia.

By the Public Health (Pneumonia etc) Regulations 1918 which came into operation on 1st March 1919, all cases of Acute Primary Pneumonia, and Influenzal Pneumonia are required to be notified to the Medical Officer of Health.

Between that date and the end of the year 64 cases (33 males and 31 females) were notified from the following wards.

Central.	East.	West.	Bilton.	Starbeck.
10	20	15	13	6

Twelve notifications related to Influenzal Pneumonia and the remainder to Primary Pneumonia. The number of deaths from Pneumonia during the year was 23 - 10 males and 13 females- 9 fewer than in 1918 and the pneumonia death rate was therefore 0.63 per 1,000.

Influenza.

During the year 21 deaths were registered in Harrogate as being due to Influenza. The deaths of two Harrogate residents which occurred elsewhere have to be added making the total number of deaths 23 - 8 males and 15 females.

The age and sex distribution was as follows :-

	1-5 ys.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65 yrs. upwds.	Total.
Males.	-	1	2	0	1	3	1	2	10
Females.	1	-	-	3	-	3	0	6	13
Total.	1	1	2	3	1	6	1	8	23

Of the 21 deaths which occurred in Harrogate 2 took place in January, 7 in February, and 9 in March, during the remainder of the year only 3 deaths occurred from Influenza. Pneumonia or other lung complication was given as a secondary cause of death in 18 cases, meningitis in 4 cases, and in 1 case death was certified to be due to uncomplicated influenza. The disease appears to have made its re-appearance in epidemic form about the middle of February and continued till about the end of March about which time it disappeared. As influenza is not notifiable I have no definite information as to the number of cases which occurred but there is no doubt that the disease was not nearly so prevalent as in 1918. It also appeared to be of a milder type and to have been more fatal to older people than was the epidemic of 1918. In 1919 only 35 per cent of the deaths were those of persons under 45 years of age whereas the proportion in 1918 was 73 per cent.

Anthrax.

No case of Anthrax occurred during the year. In December however a notification was received from the Medical Officer of Health, Liverpool, to the effect that a number of shaving brushes had recently been found to be infected with anthrax and that similar brushes were stated to be in the possession of a Harrogate shopkeeper. Enquiry was immediately made at this shop, and the information was found to be correct. None of the brushes had been sold and the whole consignment - 12 in number - was taken possession of. The brushes were sent to the County Bacteriological Labatory for examination and were found to be heavily infected with Anthrax. The whole consignment was, of course, destroyed.

Cancer.

Under this heading are included deaths from all forms of malignant disease.

During the year 38 deaths - 18 ~~males and 20 females~~ - were registered as being caused by some form of cancer. This gives a death rate of 1.05 per 1,000 which is one of the lowest recorded in recent years.

Cancer de thrate in Harrogate.

1906	0. 98	1912	0.84
1907	0.81	1913	1.12
1908	0.75	1914	1.40
1909	0.85	1915	1.45
1910	1.04	1916	1.59
1911	0.97	1917	1.59

1918 ..... 1.77

1919 ..... 1.05

Cancer.

Age and Sex incidence of the disease :-

	Under 45 yrs.	From 45-55.	From 55-65	From 65 - 75.	From 75- 85	85 yrs. Upwards,	Total.
Males.	1	2	3	10	2	0	18
Females.	3	5	4	6	2	1	21
Totals.	4	7	7	16	4	1	39

Table showing organs affected :-

Males.		Females.	
Stomach & Intestines.....	8	Stomach and Intestines.....	4
Liver.....	1	Genito - Urinary System....	4
Urinary organs.....	3	Breast.....	7
Mouth and Throat.....	3	Abdomen.....	2
Larnyx.....	1	Larnyx.....	1
Glands.....	1	Liver.....	3
Mediastinum.....	1		
Totals.	18		21

The figures in these Tables are taken from the local returns and differ slightly from the Registrar General's figures.

MATERNITY AND CHILD WELFARE.

Child Welfare work is carried on in Harrogate in two directions (a) Health Visiting and (b) Welfare Centres.

Health Visiting.

There are now three Health Visitors who give half their time to this work, the other half being devoted to School Nursing. The dual appointment has certain administrative disadvantages but it undoubtedly prevents overlapping and saves much time. The senior Health Visitor (Miss. A Wardle) is mainly engaged in attending to the Welfare Centres, School Clinics, and Administrative work. The remaining two Visitors are engaged principally in home visiting, in addition of course to their School work, and they also assist at the Centres.

The prevalence of Diphtheria in Starbeck during about half the year took up the greater part of the time of one of the Health Visitors and towards the end of the year too a considerable portion of the time of Nurse Ley - who was eventually appointed to the post of Matron - was taken up in making arrangements for the equipment etc of the Babies Hospital. For these reasons the work in this direction has suffered to some extent, more especially as regards the keeping of accurate records.

During the past two or three years an attempt has been made to keep children under observation till they reach the age of 5 years but with the present staff it has been found that this can only be done to a limited extent and then only by cutting down the number of visits paid to infants under one year of age.

There are about 1500 infants under Five years of age who could be visited and to visit each of these only once in 4 months, and of course younger infants ought to be visited much more frequently, means paying 4500 visits annually or an average of about 20 visits per day. As we only employ the equivalent of one and a half full time visitors it will be evident that it is quite impracticable to supervise this number satisfactorily. It has been determined therefore to concentrate upon the younger children and the present arrangements are that newly born infants will be visited within 10-14 days after birth and on an average ten times during the following 12-18 months, visits being made more or less frequently as circumstances require. Where surroundings are satisfactory and the infant is making favourable progress further visits will not as a rule be paid but an effort will be made to keep unsatisfactory cases under observation until they reach 5 years of age and come under the supervision of the School Medical Department.

During the year visits were paid to 301 births or 70 per cent of the number notified, as compared with 61 per cent in 1918. In addition 1249 subsequent visits were made of which 467 were to infants between 1 and 5 years of age.

In addition to their work among living children the Health Visitors also enquire into still-births and infant deaths, and during the year they made enquiry concerning 14 still births and 15 deaths of infants under one year of age.

Welfare Centres.

There are two Welfare Centres in Harrogate, one is held at the Primitive Methodist Schoolroom, Dragon Parade, on Thursday afternoons and one at the Railwaymen's Mission Hall, Starbeck on Wednesday afternoons. There is an average attendance of about 80 children at each of the meetings of the Harrogate Centre and about 30 at the Starbeck Centre.

The Medical Officer in charge of the Centres - Dr. Laura Veale- attends at each session. Each child is seen by the Medical Officer at the first visit and at regular intervals thereafter. The children are weighed at each visit; at Starbeck they are weighed without their clothes but at the Harrogate Centre the number attending has been so large that time has not permitted of the undressing of every child and it has been necessary to weigh them in their clothes.

At the Starbeck Centre talks have been given to the Mothers on various subjects connected with Infant Welfare but it has unfortunately not been practicable to arrange for similar talks at the Harrogate Centre. With the acquisition of more suitable premises at No. 2, Dragon Parade for the Harrogate Centre it is hoped to be able to reorganise the work so as to permit of this being done.

The number of attendances made at these Centres during the year was as follows :-

Harrogate Centre.

Total attendance of children under 1 year.....	1816
Average attendance of children under 1 year (47 Sessions).....	38
Total attendance of children between 1 & 5 years...	1941
Average attendance of children between 1 & 5 years.	41
Total attendance of Mothers.....	3025
Average attendance of Mothers.....	64

Starbeck Centre.

Total attendance of children under 1 year.....	606
Average attendance of children under 1 year.....	12
Total attendance of children between 1 & 5 years...	769
Average attendance of children between 1 & 5 years.	16
Total attendance of Mothers.....	1140
Average attendance of Mothers.....	24

Hospital Accommodation.

During 1919 the only Hospital accommodation available for young children was at the Harrogate Infirmary.

During the year however the Corporation obtained the sanction of the Ministry of Health to establish and maintain a hospital for the accommodation of 6 - 8 infants under 5 years of age for whom institutional treatment was desirable. This Hospital was opened at the beginning of 1920, and an account of its working will be given in the Annual Report for that year.

Work of Voluntary Societies.

St. Agnes Home, 19, East Park Road.

This home, which is maintained by voluntary subscriptions with the aid of a grant from the Ministry of Health is intended for the reception of illegitimate children for whom their mothers cannot provide a home. There is accommodation for 10 infants which was increased at the beginning of 1920 to 12. The number admitted during 1919 was 17 and the average duration of stay of these infants who left during the year was just over 8 months. The Nursing staff consists of a Matron and three probationer Nurses.

Harrogate Day Nursery - East Parade.

This Nursery which is also maintained by voluntary subscriptions and a grant from the Board of Education, is open for the reception of infants whose Mothers go out to work. The children are with a very occasional exception only cared for during the day, being brought by their mothers in the morning and taken away in the evening. The number in residence varies very considerably, being as a rule highest in summer when work is more plentiful and lowest in Winter. The maximum number accommodated during 1919 was 25. During the eleven months the Nursery was open 2,719 attendances were made. The Nursing Staff consists of a Matron and two probationer nurses. (The Medical Officer to the Welfare Centres (Dr. Laura Veale) is also Medical Officer to the St. Agnes Home and the Day Nursery and in this way this work is linked up with the Welfare work of the Corporation).

Maternity.

The arrangements for attending to the health of expectant and nursing mothers are similar to those for infant welfare. The mothers are visited by the Health Visitors who paid 94 visits to expectant mothers and gave general advice as to the care of their health. Mothers are also advised to attend at the Welfare Centres where they are seen by the Medical Officer and advised. An average of 13.14 expectant mothers attended at each session during the year. No separate maternity hospital has been formed and expectant mothers are seen at the Infant Welfare Centres during the ordinary sessions. There are unfortunately at the Centres no conveniences for making a proper examination and the Medical Officer has not been able to do more than make a very superficial examination and give general advice.

Dr.Laura Veale has however been good enough to arrange for those cases in which a thorough examination seemed necessary, to attend at the out-patients Department of the Harrogate Infirmary where she has been able to make a thorough examination. As, has already been stated, more suitable premises have been obtained, and it is intended to equip these with the necessary conveniences for making a complete examination, and when this is done much more useful work will be carried out.

There is no local institution other than Nursing Homes for the reception of ordinary maternity cases nor does there at present appear to be any very great need for such an institution. As regards complicated cases the Corporation have an arrangement whereby complicated cases are admitted to the Harrogate Infirmary or in the event of that Institution being full to a Nursing Home. It was not necessary during the year to take advantage of this arrangement.

Mothercraft and Child Welfare Exhibition.

An interesting and successful Mothercraft and Child Welfare Exhibition was held in the Winter Gardens on May 14th and 15th.

The Exhibition was opened on the first day by Lady Peel and on the following day by the Mayoress of Wakefield.

There were many interesting exhibits contributed by, St. Agnes Babies Home, Harrogate Day Nursery, National Association for Prevention of Consumption, British Womens Temperence Association, National Society for the Prevention of Cruelty to Children etc.

A demonstration of Infant care as taught in Schools was arranged by the Teachers and scholars. Short addresses were given on May 14th by Dr. J. R. Kaye (County Medical Officer) on the Repponsibilities of Motherhood and by Dr. Smith (Medical Officer of Health, York) on "The Child", The Mother and the State". On the following day addresses were given on "The Seeds of Consumption in the young" by Dr. Jacob (National Association for the prevention of Consumption) and on "The Toddler" by Dr. Marion Mackenzie (Leeds).

Puerperal Fever.

One case of puerperal fever was notified during the year. In addition two females belonging to Harrogate died elsewhere from puerperal fever and these have to be included in the figures. There was also in Harrogate one death from other causes associated with child-birth. The total number of deaths from childbirth during the year was therefore three giving a proportion of one death to 143 live births. In 1918 the proportion was nil and in 1917 it was one death to 208 births.

Ophthalmia Neonatorium.

Five cases were notified during 1919 - three by medical practitioners and two by a midwife. One case apparently fairly severe was admitted to the Infirmary. The other four received medical treatment at home. The cases treated in the Infirmary left the district immediate after being discharged and I have no information as to the ultimate result. The other four cases did well and recovered without any serious damage to the sight.

Measles.

Measles Death-rate in Harrogate.

2 deaths were certified as being due to Measles giving a deathrate of 0.06 per 1,000.

1906	0.44	1913	0.00
1907	0.03	1914	0.03
1908	0.00	1915	0.68
1909	0.18	1916	0.00
1910	0.09	1917	0.00
1911	0.03	1918	0.21
1912	0.03	1919	0.06

There was a considerable decrease in the prevalence of Measles during the year, 112 cases having been notified as compared with 639 in 1918. Of the cases notified 100 were cases of Measles and 12 were cases of German Measles. Nearly one half (48) of the notifications were received from Medical Practitioners. Three deaths occurred but as one was that of a child who did not belong to Harrogate it is not included in our statistics. The nett number of deaths is therefore 2 giving a deathrate of 0.06.

The deathrate for England and Wales was 0.10, and for 148 smaller towns it was also 0.10 per 1,000.

For the first three quarters Harrogate was almost entirely free from Measles only 21 cases being notified during that period. During the last quarter however 91 cases were notified, nearly all from two boarding schools, 66 from one and 9 from the other. The elementary schools were almost quite free from Measles during the year.

Whooping Cough.

1906	0.00	1913	0.00
1907	0.06	1914	0.06
1908	0.19	1915	0.08
1909	0.12	1916	0.00
1910	0.12	1917	0.06
1911	0.15	1918	0.12
1912	0.12	1919	0.00

There were no deaths from Whooping Cough during the year and the town appeared to be almost quite free from this disease.

Acute Poliomyelitis and Cerebro Spinal Meningitis.

No cases of these diseases were notified during the year.

Diarrhœa and Enteritis.

Deaths and Death Rate from 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
1912	3	0.09
1913	9	0.25
1914	2	0.06
1915	2	0.06
1916	4	0.12
1917	5	0.15
1918	2	0.06
1919	3	0.08

There were three deaths of children under two years of age registered as due to this group of diseases giving a death-rate of 0.09 per 1,000 living and a rate of 7.0 per 1,000 births. In England and Wales the rate per 1,000 births was 9.59 and in the 148 smaller towns it was 8.67.

Two of the deaths occurred in the second and one in the third quarter. Two deaths occurred in the Milton and one in the Starbeck Wards and all three were legitimate children.

Sanitary Administration.

Staff.

The staff of the Department consists of two Sanitary Inspectors, one Workshops Inspector, and one Cleansing Inspector who is responsible for the collection of house refuse. In addition two labourers are employed who assist the Inspectors in drain testing etc.

There are three Health Visitors who are also School Nurses - one half of their time being devoted to Health Visiting.

Hospital Accommodation.

Isolation Hospitals.

The Isolation Hospital is situated at Thistle Hill about three miles from Harrogate. It is a Joint Hospital serving three districts - Harrogate Borough, Knaresborough Urban, and Knaresborough Rural Districts, and is managed by a Joint Committee composed of members of each of the Councils of these three districts. There is accommodation for 70 patients and three diseases, viz :- Scarlet Fever, Diphtheria, and Enteric Fever, can be treated concurrently The accommodation appears to be sufficient for the ordinary needs of the district. The Smallpox Hospital which is also a Joint Hospital under the control of the same Committee, is situated on the Corporation Farm just outside the Borough Boundary. It has accommodation for 28 patients, and is kept constantly ready to receive patients at short notice.

Local and Adoptive Acts. etc.

The following is a list of the Local and Adoptive Acts in force in the district :-

Harrogate Improvement Act 1841
Harrogate Waterworks Act 1846.
Harrogate Provisional Order, 1866 (Altering Act 1 1841).
Harrogate Provisional Order 1867 (sewage Outfall Works).
Harrogate Provisional Order 1868 (Altering & Extending Act 1841) & Authorising Erection of Reservoirs Baths etc.
Harrogate Waterworks Act 1869.
Harrogate Provisional order 1869 (Purchase of lands for sewage irrigation)
Harrogate Provisional order 1871 (Storage of Mineral water etc. Altering boundaries Extending borrowing powers).
Harrogate Provisional order 1877. (Lands for sewage Farm).

Gas, & Water orders Confirmation Act 1880.
Harrogate Provisional order 1886 (Collins field 1 acre).
Harrogate Provisional order 1891 (Electric lighting order).
Harrogate Corporation Act 1893.

Harrogate Provisional order 1897 (Collins Field).

Harrogate Provisional order 1897 (Beckwith land etc).

Harrogate Waterworks Act 1897.

Harrogate Corporation (Waterworks Transfer) Act 1897.

Harrogate Extension order 1900.

Harrogate Water Act 1901

Harrogate Corporation Act 1901

Harrogate Provisional order 1902 (Purchase of lands for sewage disposal).

Harrogate Water Act 1903.

Harrogate Waterworks Tramroad Act 1904.

Harrogate Provisional Order 1906 (Swimming baths).

Harrogate Corporation Water Act 1911.

Harrogate Provisional order 1913 (Harlow Car Estate).

Electric lighting Orders Confirmation (No. 4) Act 1915. (Extension of area of supply).

The Acts adopted are :-

The Infectious Disease (Notification) Act 1889.

The Infectious Disease (Prevention) Act 1890.

The Public Health Acts Amendment Act 1890 (Secs. 13-52.

The Notification of Births Act 1907

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

Arrangements for Chemical and Bacteriological Work.

The bacteriological examination of material from suspected cases of Diphtheria, Enteric Fever etc, is carried out by the County Council at their Laboratory at Wakefield at the public expense. Outfits for sending the material are kept at the Public Health Office and can be obtained by any medical practitioner on application.

I learn from Dr. Kaye, County Medical Officer of Health, that the number of specimens sent by medical men in Harrogate during 1919 was :-

Widals' Re-action (Enteric Fever).....	3
Sputa. (Tuberculosis).....	38
Diphtheria.....	663 including 619 sent by the School Medical Department....
Other.....	29
	733

The number of specimens sent in 1919 is very much above that for 1918 in which year 308 specimens were sent. This is entirely due to the abnormally large number sent by the School Medical Staff.

Housing.

General Housing Conditions.

(a) Number of houses etc.

There are in the Borough 8490 houses of which about 3,500 may be described as houses for the working classes. The total number of new houses certified for occupation during recent years is as follows :-

1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
71	54	68	61	24	17	7	0

and the number of working class houses erected during the same years is as follows :-

1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
62	49	31	57	23	14	7	0

No working class houses are at present in course of erection and I am not aware that the erection of any is in contemplation by individuals or Societies other than the Corporation.

(b) Population.

The population is estimated by the Registrar General as 36,231. It is difficult to be certain on this point but I imagine that this estimate is not very far out.

There has been no important change in the population during the year and I am not aware of any that are likely to occur in the immediate future.

(c) Extent of Shortage of houses etc.

As a result of a survey made in November it is estimated that to meet the shortage 490 new houses will be required within the next three years. No houses are at present being built by private enterprise and there appears little prospect of any improvement in this respect in the immediate future. The Corporation have adopted a Housing Scheme and have acquired 16 acres on which 158 houses can be built. A portion of this land is now being laid out and plans are being prepared for 110 houses. It is hoped that these houses will be completed during 1920 and they should relieve the condition considerably.

Overcrowding.

In November a housing survey was made of the district and information as to overcrowding was obtained as regards 2985 houses of an estimated total of about 3,500 working class dwellinghouses. In 1595 instances the information was obtained by personal enquiry by members of my staff with some help from outside, in the remaining 1310 instances the information as to the number of persons per house was obtained from records at the Food Office and the number and extent of the rooms in these houses were already fairly accurately known to the department. Registrar General's standard of overcrowding was adopted, i.e. a house with more than two persons per room was considered to be overcrowded. The proportion of overcrowded houses was about the same in each group - in the first there were 54 houses with a population of 466 and in the second 51 with a population of 428. Altogether 105 houses had more than two occupants per room. ~~xxxxxxxxxxxx~~ These houses were inhabited by 894 persons, an average of just over 8 per house.
The amount of overcrowding is less than I anticipated. Very few cases of gross overcrowding came to notice and it is worthy of note that of 110 houses occupied by more than one family only 6 were found to be overcrowded.
No action beyond the carrying forward of the Housing Scheme has been taken during the year. As there are no empty houses in the district it is difficult to see what other action is possible.

Fitness of Houses.

Generally speaking the standard of housing in the district is fairly high. Practically all are through houses, and there are not more than 70 - 80 houses in the area without through ventilation. The principal defect found to exist is dampness; other defects are mainly dilapidated and broken floors, defective plastering and similar slight structural defects.

Action as regards unfit houses has been taken entirely under the Public Health Acts.

The following Table shows the number of houses found with defects and the number remedied during the year under these Acts.

Houses found with defects.....	117
Houses made fit again after preliminary notice.....	89
Houses in regard to which notices were served.....	28
Houses made fit after notices....	16
Total number of houses made fit..	105
Houses with defects not remedied at the end of 1919	12

During the year no action has been taken under the Housing Acts. As, has already been stated, houses with minor structural defects were dealt with under the Public Health Acts and although there are about 20 houses in the area which are, in my opinion, unfit for habitation they are so, not so much because of dilapidations as because of their lack of efficient lighting and ventilation. The shortage of houses has made it impracticable to enforce closing orders on these houses if such were made, and it has therefore been deemed advisable to postpone action for the time being.

A good deal of difficulty has been experienced in getting defects remedied. This has arisen from two main causes, viz :- Difficulty in getting necessary material and lack of means on the part of the owner. There is still difficulty in getting necessary material through not to quite the same extent, and as regards the latter the Corporation have always met owners in a reasonable spirit and allowed of the repairs being spread over as long a period of time as possible.

Water supply, Closet accommodation, and Refuse Disposal.

These matters are dealt with on pages - 13-17 to which reference should be made.

Unhealthy areas.

There is no area in the district which can be described as an "Unhealthy Area". What unfit houses there are occur in small groups or singly.

Bye-laws relating to houses, to houses let in lodgings, etc.

There are no byelaws in force relating to houses let in lodgings or to tents, vans, and sheds, nor does there at present appear to be any necessity to frame such byelaws.

The existing byelaws which deal with the cleansing of ashpits and the prevention of nuisance from filth and animals, though somewhat old, work well and all nuisances which occur can be dealt with under these byelaws or under the Public Health Acts.

Meteorology.

As in former years I append Table showing the principal meteorological features of the year for which I am indebted to Mr. C. E. Rivers, Borough Meteorologist.

Meteorological Table for 1919

Month.	Rainfall. Total Inches	Rainfall. Greatest in 24 hours. Inches.	Rainfall. Greatest in 24 hours. Date.	Days in which 0.01 in. or more fell.	Mean.	Temperature. Maximum. Degrs.	Temperature. Maximum. Date.	Temperature. Minimum. Degrees.	Temperature. Minimum. Date	Bright Sunshine (Campbell Stokes Recorder) Hours.	Direction of Wind. S.W. Quadrant including W. days.	Direction of Wind. S.E. Quadrant including S. days.	Direction of Wind. N.E. Quadrant including E. days.	Direction of Wind. N.W. Quadrant including N.
anuary..	4.14	0.88	1st.	27	35.4	48.2	15th.	38.7	13th	36.6	10	8	4	3
ebruary..	1.93	0.77	16th..	14	33.7	45.8	23rd.	13.2	9th.	40. 7	3	1	5	5
arch.	4.16	1.06	19th..	21	36.5	54.1	2nd.	22.3	30th.	104.0	6	5	4	11
pril...	1.62	0.28	14th.	19	44.6	60.7	22nd.	27.0	28th.	135.1	14	3	1	12
ay...	1.46	0.27	1st.	14	54.5	75.0	28th.	36.2	20th.	220.4	3	11	8	6
une...	1.45	0.34	24th..	16	57.4	81.6	7th.	39.3	26th.	196.6	17	2	3	8
uly...	2.36	0.72	19th.	13	55.5	73.7	10th.	41.3	30th.	138.9	10	–	6	14
ugust...	2.35	0.78	28th..	13	58.4	77.5	9th.	38.2	31st.	196.8	17	4	3	7
eptember..	1.11	0.35	1st.	14	54.2	80.7	11th.	32.1	20th.	143.3	15	6	–	9
ctober...	3.31	1.11	23rd.	14	45.2	66.4	4th.	29.2	15th.	140.5	10	4	3	12
ovember...	2.12	0.25	17th.	27	36.3	54.3	23rd..	22.5	16th.	35.8	9	3	7	8
ecember...	4.39	0.65	15th..	25	39.6	51.0	3rd.	26.6	26th.	39.7	16	8	–	5
Year...	30.40	1.11	23rd Oct.	217	45.9	81.6	7th June	13.2	9th Feb	1428.4	130	55	44	100

Factories & Workshops.

At the end of the year there were 198 workshops on the register. These have been regularly inspected and any defects found have been remedied.

The following Tables give a summary of the work done.

Premises.	Number of		
	Inspections.	Written Notices	Prosecutions.
Factories (including Factory Laundries).	406	2	...
Workshops. (including Workshop Laundries).	3110	8	...
Workplaces. (other than Outworkers' premises included in Part 3 of this Report).	...	...	...
Total.	3516	10	...

Defects Found In Factories, Workshops, & Workplaces.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found	Remedied	Remained at end of Inspection	
1	2	3	4	5
Nuisances under the Public Health Acts *				
Want of cleanliness.....	8	8	...	...
Want of Ventilation.....	2	2	...	...
Overcrowding.....	..	..	...	...
Want of drainage of floors.....	..	..	...	...
Other nuisances.....	4	4	...	...
Sanitary Accommodation. (insufficient	..	..	...	...
(Unsuitable or defective	3	3	...	...
(Not separate for sexes.	1	1	...	...
OFFENCES UNDER THE FACTORY AND WORKSHOPS ACT.				
Illegal occupation of underground bakehouses (s 101).....	..	..	...	...
Breach of special sanitary requirements for bakehouses (ss 97-100)...	25	25	...	...
Other offences.....	..	..	...	...
Total.	43	43	...	...

* Including those specified in secs. 2,3,7, & 8 of the Factory & Workshop Act 1901 as remediable under the Public Health Acts.

Registered Workshops.

Workshops on the Register (s 131) at the end of the year. 1.		No. 2
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Bakehouses.....	50
	Millinery & Dressmaking	58
	Tailors & Bootmakers...	43
	Miscellaneous.....	50
Total number of Workshops on Register....		198

Other Matters.

Class. 1.		No. 2
Matters notified to H.M. Inspector of Factories Failure to affix Abstract of the Factory & Workshop Act (s 133 1901).....		...
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts but not under the Factory & Workshop Acts (s 5 1901)	Notified by H.M. Inspector.	6
	Reports (of action taken) sent to H.M. Inspector.	6
Other.....		
Underground Bakehouses (s 101) in use at the end of the year.		10

Cases of Infectious Disease notified during the year 1919.

Notifiable Disease.	At all ages.	Number of cases notified. At ages - years.							Number of cases notified in each Ward.					
		Under One.	1 & under 5 yrs	5 and under 15 yrs	15 and under 25 yrs.	25 and under 45 years.	45 & under 65 yrs.	65 & Upwds.	Central	East.	West.	Bilton.	Starbeck.	Total No. of cases rmvd. to Hospital
Small-pox.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera (Plague).....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphtheria (including Membranous Croup).....	115	-	12	22	17	2	2	-	5	16	16	9	69	96
Erysipelas.....	10	-	-	1	1	2	4	1	1	2	-	5	2	-
Scarlet Fever.....	81	-	4	60	13	4	-	-	4	16	16	8	43	71
Typhus Fever.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteric Fever.....	1	-	-	-	-	-	1	-	-	-	-	-	1	1
Relapsing Fever.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Continued Fever.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerperal Fever.....	1	-	-	-	-	-	-	-	-	-	-	1	-	-
Cerebro-spinal meningitis.....	-	-	-	-	-	-	-	-	-	-	-	-	—	-
Poliomyelitis.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Encephalitis Lethargica	3	-	-	1	1	-	1	-	-	1	1	-	1	-
Ophthalmia Neonatorum.	5	5	-	-	-	-	-	-	-	4	-	-	1	1
Pulmonary Tuberculosis.	51	-	-	7	12	25	7	-	11	13	10	7	10	-
Pneumonia.....	64	3	10	7	8	18	12	4	10	20	15	13	6	-
Other forms of Tuberculosis.....	9	2	2	2	1	1	1	-	2	-	2	3	2	-
Measles.....	100	-	5	38	43	3	-	-	7	2	83	5	3	-
German Measles.....	12	1	2	3	4	2	-	-	1	3	7	1	-	-
Totals..... @	452	11	35	201	100	57	28	5	41	71	150	52	138	169

@ Included in the total "At all ages" (452) are 15 cases - 1 each of Erysipelas & Puerperal Fever, 11 of Measles, and 2 cases of Pneumonia-in which the ages could not be ascertained.

Causes of Deaths in Harrogate Borough 1919.

Causes of Deaths.	Males.	Females.
All Causes.....	184	207
Enteric Fever.....	-	1
Small-pox.....	-	-
Measles.....	-	2
Scarlet Fever.....	-	1
Whooping Cough.....	-	-
Diphtheria and Croup.....	2	3
Influenza.....	8	15
Erysipelas.....	-	-
Pulmonary Tuberculosis.....	14	12
Tuberculous Meningitis.....	1	-
Other Tuberculous diseases.....	2	3
Cancer, malignant disease.....	18	20
Rheumatic fever.....	-	-
Meningitis.....	1	-
Organic Heart disease.....	26	25
Bronchitis.....	18	17
Pneumonia. (all forms).....	10	13
Other respiratory diseases.....	4	3
Diarrhoea &c (under two years).....	2	1
Appendicitis and typhlitis.....	-	2
Cirrhosis of liver.....	-	-
Alcoholism.....	-	-
Nephritis and Bright's disease.....	4	7
Puerperal fever.....	-	2
Parturition apart from puerperal fever.....	-	1
Congenital debility &c.....	3	8
Violence apart from suicide.....	6	3
Suicide.....	-	1
Other Defined diseases.....	65	69
Causes ill-defined or unknown.....	-	-
Special Causes (included above).		
Cerebro-spinal fever.....	-	-
Poliomyelitis.....	-	-
Deaths of Infants under 1 year of age.....	9	13
Total Births.....	220	211
Legitimate.....	194	185
Illegitimate.....	26	26
Population for Birth rate.....	37742	
Population for Death rate.....	36231	

Infant Mortality during the year 1919.

Nett Deaths from stated causes at various ages under 1 year of age.

Causes of Death.	Under 1 week.	1-2 wks	2-3 wks	3-4 wks	Total under 4 wks	4 wks under 3 mth	3 mths and under 6 mth	6 Mth & under 9 ~~mth Mths.~~	9 Mths. and under 12	Total Deaths under One year.
All Causes.....										
Certified...	7	1	-	-	8	6	4	2	2	22
Uncertified.	-	-	-	-	-	-	-	-	-	-
Small-pox.....	-	-	-	-	-	-	-	-	-	-
Chicken-pox...	-	-	-	-	-	-	-	-	-	-
Measles.....	-	-	-	-	-	-	-	-	-	-
Scarlet Fever.	-	-	-	-	-	-	-	-	-	-
Whooping Cough	-	-	-	-	-	-	-	-	-	-
Diphtheria & Croup.....	-	-	-	-	-	-	-	-	-	-
Erysipelas....	-	-	-	-	-	-	-	-	-	-
Tuberculous Meningitis....	-	-	-	-	-	-	-	-	-	-
Abdominal Tuberculosis..	-	-	-	-	-	-	-	-	-	-
Other Tuberculous diseases.	-	-	-	-	-	-	-	-	1	1
Meningitis (not tuberculous)..	-	-	-	-	-	-	-	-	-	-
Convulsions...	-	-	-	-	-	-	-	-	-	-
Laryngitis....	-	-	-	-	-	-	-	-	-	-
Bronchitis....	-	-	-	-	-	-	-	-	-	-
Pneumonia (all forms).....	-	1	-	-	1	-	1	2	1	5
Diarrhoea.....	-	-	-	-	-	1	2	-	-	3
Enteritis.....	-	-	-	-	-	-	-	-	-	-
Gastritis.....	-	-	-	-	-	-	-	-	-	-
Syphilis.....	-	-	-	-	-	1	-	-	-	1
Rickets.....	-	-	-	-	-	-	-	-	-	-
Suffocation Overlying....	-	-	-	-	-	-	-	-	-	-
Injury at Birth.....	-	-	-	-	-	-	-	-	-	-
Atelectasis..	-	-	-	-	-	-	-	-	-	-
Congenital Malformations	-	-	-	-	-	1	-	-	-	1
Premature Birth	7	-	-	-	7	2	-	-	-	9
Atrophy, Debility & Marasmus	-	-	-	-	-	1	-	-	-	1
Other causes...	-	-	-	-	-	-	1	-	-	1
Total.....	7	1	-	-	8	6	4	2	2	22

Nett Births in the year.

Legitimate..... 379
Illegitimate..... 52

Nett Deaths in the year.

Legitimate Infants..... 15
Illegitimate Infants..... 7