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HALIFAX

Rural Sanitary Authority.

ANNUAL REPORT

OF

The Medical Officer of Health

FOR THE YEAR 1893,

BY

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HALIFAX RURAL SANITARY AUTHORITY.

Report of the Medical Officer of Health

For the Year 1893.

To the Chairman and Members of the Halifax Rural Sanitary Authority.

GENTLEMEN,

I have the honour of presenting you with my Annual Report on the health of your district for the year 1893.

As I have only held the appointment during the last quarter of the year, I have, of course, made use of the figures and journals of my predecessor for the purposes of the usual Statistical Tables.

In connection with the statistics for the year, I ought to say that those for the district of Hipperholme refer simply to Norwood Green, since Hove Edge has been included in the Borough of Brighouse during the year; and I was advised by the Local Government Board to separate the Hove Edge returns from those of Norwood Green, in order to include them in my report on the health of the Borough of Brighouse. The birth

and death rates &c., I have, of course, calculated on the diminished population.

Population.—The population of the whole of your combined districts is 8,442 ; at the census of 1881 it was 8,320, and at that of 1891 it was 8414. I have estimated the population as an increasing one taking the intercensal increase as the basis of my calculations ; but it must not be forgotten that a rural population is often a decreasing one, and especially so in times of trade depression such as has hung over the country for many months past ; the indications of such fluctuations in intercensal years are very often not apparent for a long time, but as we are not yet far removed from the census year, I think the estimation I have arrived at will not be far wrong.

The populations of the different sub-districts are as hereunder :—

	Census, 1881.	Census, 1891.	Estimated to 1893 (middle).
Clifton	2182	2275	2296
Fixby	503	485	481
Greetland	535	405	380
Hartshead	842	991	1028
Hipperholme (*i.e.*, Norwood Green) ...	852	875	880
Norland	1493	1437	1424
Skircoat	1913	1946	1953
Total for whole District ...	8320	8414	8442

Thus an increase is noticeable in Clifton of 21, in Hartshead of 37, in Hipperholme (Norwood Green) of 5, and in Skircoat of 7 on the 1891 population ; whilst in Fixby there is a decrease of 4, in Greetland of 25, and in Norland of 13, leaving a net increase of 28 since 1891 in the whole district.

Births.—During the year there have been registered 241 births, namely 133 of males and 108 of females, or at the rate of 28·5 per thousand per annum of the estimated population.

This is a higher rate than that of the preceding year, and is also higher than the average of the preceding five years, as will be seen from the Table following.

Deaths.—The total deaths during the past year have numbered 143, namely 79 of males and 64 of females, or at the rate of 16·9 per thousand per annum, as compared with 17·6 the rate for 1892, and 18·0 the average for the preceding five years.

NOTE.—A correction is necessary here for deaths occurring in the Brighouse and District Joint Hospital: there were five deaths in all in that Institution, and of these only one was a resident of your District; thus a deduction of four is necessary, which makes the total deaths 139, namely 77 of males and 62 of females, or at the rate of 16·4 per thousand per annum.

In considering each District separately I give the special death rates from various diseases, but I have thought it advisable to tabulate them here for purposes of comparison.

Table showing the Population, Births, Deaths, &c., in the Rural Sanitary District of the Halifax Union, for the five years 1888 to 1892 inclusive; also the average for these five years and the rates for 1893.

Year.	Population.	Births.	Deaths.	Birth Rate.	Death Rate.
1888	9533	289	172	29·2	18·0
1889	9750	248	166	25·5	17·0
1890	9838	256	157	26·0	15·9
1891	9525	290	205	30·4	21·5
1892	9626	265	170	27·5	17·6
Average for above five years	.....	269	174	27·7	18·0
1893	8442	241	139	28·5	16·4

District.	Population 1893 (middle).	Birth Rate.	Death Rate.	Zymotic Death Rate.	Respiratory Death Rate (including Phthisis).	Phthisis Death Rate.	Infant Deaths per thousand of Children born.
Clifton	2296	30·4	18.7	2·17	3·48	0·43	100
Fixby	481	22·8	12·4	0·0	6·23	0·0	272
Greetland	380	26·3	15·7	0·0	2·63	0·0	100
Hartshead	1028	38·9	21·4	4·86	5·83	0·0	150
Hipperholme (Norwood Green)	880	20·4	19·3	2·27	2·27	3·40	166
Norland	1424	30·1	18·2	2·10	2·80	1·40	93
Skircoat	1953	25·0	12·2	2·04	0·0	0·0	183
Total for combined Districts	8442	28·5	16·4	2·25	2·84	0·71	137
England and Wales ...		30·8	19·2	2·47			159
Rural Districts ...			17·4				

Classification of Deaths according to Ages.

Under 1 Year.—The death-roll of this class has been exceedingly large, amounting to 33 deaths of infants under one year of age out of 143 deaths at all ages. This is at the rate of 137 per thousand of the total births, or in plain language it means that about one seventh of the children born have not survived the first year of life. Taking the proportion to the total deaths at all ages we find that the deaths of infants constitute 23·0 per cent. of these. I append a short special report on the probable causes of this large mortality.

1 and under 5.—The deaths in this class have been 20, not a large percentage considering the great number of diseases children of this age are specially liable to, and more particularly their susceptibility to zymotic diseases.

5 and under 15.—Nothing calls for special mention in this class ; the deaths have numbered eight only.

15 and under 25.—Similarly in this class the deaths have only been few in number—six in all.

25 and under 65.—Of deaths occurring at this age-period we have a goodly number, namely, 46. Sub-dividing the period into smaller periods of ten years we get the following :—

25	and under	35	...	...	8
35	„	45	...	...	9
45	„	55	...	...	13
55	„	65	...	...	16

This shews, therefore, that the majority of the deaths were at the later ages—a distribution which somewhat palliates the record.

65 and upwards.—In this age-group there were 28 deaths, and of these 28 deaths nine were those of people who had attained the age of 70 but under 75, nine those of people who had attained the age of 75 and under 80, and five those of people over 80 years of age.

This classification of deaths according to ages is not a useless refinement nor a mere statistical exercise, as some people are apt to think. It is really useful inasmuch as it gives us an idea of the economic value of the population. To put it in plain language, every member of the community "has an actual money value represented by the wages he is capable of earning," this amount being "obtained by capitalizing the income derived from wages and deducting all the expenses of subsistence." This value varies of course at different ages, and is greatest at the age of 25, after which it declines.

Now the total deaths at all ages under 25 years in your combined districts has been 65, whilst the deaths at ages over 25 years has been 74.

Glancing at Table A (in the Appendix) you will see that the majority of the deaths at ages under 25 has been at ages when the economic value of the population was relatively small; the deaths in the age-periods *5 and under 15* and *15 and under 25*, when this value is at its greatest, being small in numbers. Again, in the age-period *25 and under 65* this economic value of the population decreases gradually as age increases. You will then see from the subdivision of this period I have made above, that most of the deaths have been at the later ages, when the economic value is small. But as we go further on still, and still adhere to Dr. Farr's basis, as above, we find that there are a goodly number of people,

comparatively speaking, who have completed more than 80 years of age before death; at the age of 80 "the cost of future maintenance is greater than the earnings."

It is from a consideration of such matters as these that one can see the benefit conferred on the population by good sanitation; in the absence of proper sanitary conditions, diseases which cut off life at the most productive period are allowed to thrive, and the economic value of the population is thereby lessened, whereas money laid out in remedying sanitary defects may be regarded as money devoted to lengthening the lives and increasing the money value of a community.

Causes of Death.—Of the 139 deaths, *chest diseases* (bronchitis, pneumonia, pleurisy, &c.) have caused 24; in addition to this, *phthisis* has caused six deaths. In a foregoing table I give the respiratory and phthisis death-rates for each district separately. Next in importance come *zymotic diseases*, which in your combined districts have caused 19 deaths. *Heart disease* has been the cause of 12 deaths. The other causes of death are of minor importance only.

Infant Mortality.—This is one of the most difficult questions, as well as one of the most vitally important that the modern sanitarian has to face. Here we are confronted in a rural district with conditions quite as bad, in parts, as we could expect to find in the most densely crowded, unhealthy, uneducated urban district. Let us first of all look at our facts; during the year, in your combined districts, 241 infants have been born into the world, and 33 infants have died. For every 1000 of the population of these districts there have been 28·5

births, and for every 1000 births there have been 137 deaths of infants.

Inquiring further into facts we find that the mean age at death of male infants has been $2^1/_5$ months, and of female infants $3\frac{1}{2}$ months nearly, indicating a greater vitality amongst female infants. Though the figures are only small I have ventured to classify the deaths at various ages as below, so that we may have the whole of the facts cut and dry before going into theory or speculation :—

	Males.	Females.
Died within first 24 hours ...	1	2
,, 1st week ...	1	3
,, 2nd ,, ...	1	0
,, 3rd ,, ...	3	0
,, 4th ,, ...	1	2
,, 2nd month ...	3	1
,, 3rd ,, ...	2	2
,, 4th ,, ...	0	1
,, 5th ,, ...	3	0
,, 6th ,, ...	1	0
,, 9th ,, ...	0	2
,, 12th ,, ...	1	3
	17	16

Of course each of the above classes is exclusive of those preceding or succeeding it. From this it is apparent that the first three months of life has been in both sexes the most fatal period, 12 males and 10 females having died within that time.

Next as to the causes of these deaths, as evidenced by the registration returns.

In males the causes of death have been in order of magnitude, convulsions, marasmus or inanition, and

gastric or intestinal diseases; in females, diarrhœa, marasmus, convulsions and premature birth. Taking the two classes together diseases of the digestive system, with convulsions, have been the cause of more than two-thirds of the infant deaths.

Thus summarising the above facts briefly, we may surmise that the cause at work is one which is probably confined, though not exclusively, to the first three months of life, in which period the infantile digestive system is in an undeveloped state; that this cause is one confined almost exclusively to the digestive or (reflexly from that) to the nervous system, and that it affects both sexes of infants almost in the same proportion. In later months, when the development of the digestive system is completed, we notice a falling off in the deaths. Now the salivary secretion of the infant, which is necessary for the digestion of starchy and farinaceous foods, is not fully established until the fourth month of life; simultaneously with that we notice a slight falling off in the infant deaths, because the above-named foods do not then disturb the alimentary canal itself, nor, by so doing, reflexly irritate the nervous system and cause convulsive diseases. Hence the main cause, I would say, which has influenced our infant mortality has been improper food, administered before the digestive system can deal with it, and which, therefore, has set up diseases of the alimentary tract, thereby inducing *directly* marasmus or wasting, diarrhœa and general debility, and, *reflexly or indirectly*, diseases of the nervous system, mainly convulsive in character.

Having then got at one of the causes at least of this infantile mortality, can we do anything to remedy it?

Firstly, then, I would advise the printing of hand-bills giving simple and plain instructions as to the proper feeding and management of infants; these could be supplied to the Registrar by the Local Authority at a trifling cost, or he could give one to each person registering a birth; in a short time neighbours would reap the benefit, and the knowledge would become diffused.

Secondly, since in many cases of uncertified deaths Coroners, either to save themselves trouble or the County rates a few pounds, do not hold an inquest, and evil-disposed persons, knowing of this uncertainty of action of Coroners, have not the wholesome fear of their actions being inquired into, communication should be opened with the Coroner for the district to see if it would not be possible to increase the number of inquests on uncertified deaths. An inquest should be held in every case, and not only that, but medical evidence should be called, and if necessary *post mortem* examinations made so as to clear away the vagueness which surrounds these uncertified deaths, and inculcate that wholesome and salutary fear which would make many people more careful of their own infants or those entrusted to their care and management.

Thirdly, a system might be carried out by which women in outlying districts should have the benefit of skilled attendance at the critical time of childbirth. This may be managed by an extension of the Poor Law Relief Service, or by the registration and proper control of midwives, many of whom as well as so-called monthly nurses, are grossly incompetent for the work they undertake. These midwives know little of the phenomena of natural labour, and nothing practically of those of abnormal labour; a child is perhaps born in whom the

respiratory apparatus has not commenced its functions properly—the lungs not being thoroughly inflated with air after birth; in a few days the infant succumbs to collapse of the lungs, or perhaps inflammation of the lungs caused by this collapse. This is a thing of pretty common occurrence. Again, in the case of premature birth, many parents are of opinion that it is impossible to rear a seventh or eighth month child, and even if they desire to rear it they are ignorant of the fundamental principles on which to act. I say, "if they desire to rear it," and I say it advisedly, for it is a well-known fact that many parents are perfectly indifferent to the death of a premature child, since it is probable it will always be weakly, not be fit for much work, and may entail the expenses of a doctor through illness which a stronger child would throw off.

Special instructions could be added on the handbills mentioned above, as to the management of prematurely born children.

Were these measures to be set in force and well acted up to, I feel confident they would result in a reduction of this dreadful infantile mortality which, it must be borne in mind, is one of the most delicate and reliable tests of the health of a district.

Zymotic Diseases.—The deaths from the recognised seven principal zymotic diseases have been as under:—

Small-pox ...	2	Whooping Cough ...	4
Scarlet Fever	1	Enteric (Typhoid) Fever	1
Diphtheria ...	1	Diarrhœa	10
Total	19		

This gives us a zymotic death-rate of 2·25 per thousand.

This is a rather high rate, but is accountable for by the epidemic of diarrhœa which was general throughout the whole country during the exceptionally long and hot summer we had last year. The small number of deaths from the graver zymotic diseases, especially small-pox, diphtheria and enteric fever, is a matter for congratulation. The number of cases of zymotic disease which have been notified during the year is a small one only, namely, 31 in the whole district, and has been composed of the following :

Small-pox	... 10	Typhoid Fever	... 4
Scarlet Fever	... 8	Erysipelas	... 2
Diphtheria	... 6	Continued Fever	1

In Table B, in the Appendix, you will find the numbers of the above diseases which have occurred in the several sub-districts.

In this connection, I would ask your representatives on the Brighouse and District Joint Hospital Board to support me in my urgent plea for the utilisation of the valuable Isolation Hospital, which has already stood idle and empty for such a length of time. I am not asking you to build one ; it stands ready for use at any moment. I am simply asking you to make use of a building which cost £5020 to erect, and which for a long time has been of absolutely no use at all ; which is rotting and wearing day by day, and which at present is a dead loss on your hands. Not a week passes but brings a case or cases of some infectious disease which might, with benefit to the afflicted person, his family, his neighbours, and the public generally, be removed to the Hospital, and which would relieve it of the opprobium it is fast getting of being a useless and disappointing waste of public money.

Sanitation.—I have, during my term of office, made numerous inspections of your district, general and special, and in Table C in the Appendix as well as in the report of your Sanitary Inspector, you will find an account of the work done and that at present in hand.

The greatest difficulty which presents itself in the case of a widespread rural district is that of prescribing for any nuisance or insanitary state the best remedy at the least cost. This has proved a very real difficulty to us. There is no doubt at all that many places in the district stand very greatly in need of sanitary reform, but in this reform economic and not optimistic principles have to be our guide, whilst at the same time we have to guard against the "penny wise and pound foolish" policy.

And no wonder that ratepayers object to contribute towards an outlay from which, as they conceive, they will derive no immediate advantage. They have never had placed in their hands any precise information as to the amount of preventable disease and death with the usual consequences of loss of wages, &c., which the provision of proper drainage and pure water supply would avert, but they have looked only at the immediate cost and have been blind to the future gain in the shape of avoidance of ill health and suffering or death, the betterment of property, the probable increase in the prosperity and importance of the district by the encouragement to land-owners to build houses or works, and so forth.

Thus it is that sanitation is impeded. I have often wondered whether or not Local Sanitary Associations would not do good in the way of opening people's eyes to the evils that exist and the remedies for them, so that

they would not hamper the action of Rural Sanitary Authorities by persuading their representatives to object to some sanitary work because of its increasing their rates slightly.

The drainage of rural districts is indeed a puzzling problem, but one thing is certain, that the state of things existing in very many places at present, must not be allowed to continue. Many houses and clusters of houses have no drainage further that a few yards of pot pipes to conduct the sewage into a field; a grip is cut for another few yards, and then the sewage is left to find its own way. For the most part, the soil is clayey and the sewage cannot soak into the earth. It spreads out in all directions over the field, and is seen as a branching network of streamlets with a thick scum on the surface; in hot dry weather the stench from these sewage-logged fields is enough to cause diphtheria in a whole village in a very short time. But besides these noxious emanations, there is the terrible risk of pollution of water supplies; in rural districts this cannot be too carefully looked after. I say nothing of the imaginary danger of parasitic and other diseases being transmitted to animals grazing in such fields, and from their milk or flesh to man, because so far there is no evidence to show that such transmission can take place; the experience of our large sewage-farms has negatived the probability of such being the case, though a few years ago it was made much of. Of course such sewage contaminated pasture land is a frequent cause of dysentery or "bloody flux" in cattle, sheep and pigs, and this disease would render the flesh or milk, as the case might be, unfit for human consumption.

Such being the unsatisfactory state of things; what is our remedy?

Firstly, there are many places where, for reasons by no means obvious, house drains are conducted so as to empty their sewage into a field, although the public sewer is within 50 or 60 feet of the site of the house; these of course we can readily and effectually deal with.

Then there are single isolated houses where the sewage is turned straight into the fields: in these cases a proper cesspool must be constructed as far away from the house and source of water supply as possible. This cesspool must be made watertight by being constructed of cemented brickwork, well puddled on the outside, and it must have a proper covering. To necessitate frequent cleansing it must be of small size. The sewage must be conducted to it in proper glazed pipes, well laid and trapped and ventilated. A simple mode of ventilation in favourable ground is to conduct the sewage in pot pipes for a certain distance and then to let it run along an open culvert in the field for a short distance and then again continue the pipes to the cesspool. By having a 4-inch pipe at the house end of the drain carried up to a height of 10 feet, away from windows and chimnies, we have both an inlet and outlet for fresh air which constantly circulates through the drain and keeps it sweet. If this is not practicable, of course a proper brick disconnecting chamber must take the place of this open culvert.

It will be my endeavour this year to remedy as many of these leaky and offensive cesspools as possible.

Where two or more houses are to be dealt with, your Authority has the onus cast upon it of providing a sewer or a cesspool. I am of opinion that taking into consideration the cost of the construction and keeping in repair of a proper cesspool, the easement payable, the

cost of fixing and keeping in repair a chain-pump, and of emptying the cesspool at regular and frequent intervals, your Authority would do well to construct no more, but instead, to construct a sewer down the line of your nearest and most suitable road into which sewer houses built in the future could turn their drainage. Your cesspools will at some time be found inadequate and will be a dead loss on your hands, whilst sewers properly made have a long life and fulfil the necessary conditions of immediate removal of sewage from the vicinity of dwellings.

I have made special mention of one or two cases in the résumé of each district.

NOTE.—In connection with my remarks on the general Sanitation of your districts, I should like to make a suggestion which, I am sure, if once got into working order, would ensure more systematic work being done. That is to have kept at some prominent and easily accessible house in each District, say the local Post Office or Co-operative Stores, a *Complaint Book*, in which people of the district could enter their names and addresses and any nuisance or insanitary condition on their premises; on our systematic visits we could call and see this, and go straight to the places in question. I am sure if this were commenced and advertised at the beginning it would greatly benefit outlying districts where inspections cannot be made at very frequent intervals.

Clifton.—This district, with a population estimated at 2,296, has a birth-rate for the year of 30·4 and a death-rate of 18·7 per thousand; the respiratory death-rate is somewhat high, as might be expected from its altitude and exposed position, but the zymotic death-rate, phthisis death-rate and infantile mortality are all lower than the average of the district.

The infectious diseases which have been notified to me as occurring in the district have numbered 12, namely, eight of scarlet fever, three of small-pox, and one of

continued fever. The cases of small-pox were, with one exception, removed to the Brighouse and District Joint Hospital, this exception being in the case of a man who was found dead at Kirklees Mill Farm Cottage on the 29th of April. I was called in to see the body by P.S. Copping, and a few minutes examination sufficed to shew that the man had died from pure hæmorrhagic small-pox, the most malignant form of the disease. When I saw the body it was lying in a room opening off a cottage occupied by a man, his wife, and five children. I vaccinated all these before I left the house, and left strict instructions that they were not to leave the premises until arrangements had been made for removal of the body, disinfection, &c. I found that two women had been to wash and lay out the body; these I traced to their houses and re-vaccinated, vaccinating also those with whom they had come in contact. On the same day I communicated with the Coroner and next day the body was buried, the houses of all those who had come in contact with the man disinfected, and the persons themselves were taken to the Hospital where they had baths and their clothing thoroughly disinfected. Besides this, a stable, where the man had slept on the night previous to his death, was disinfected, a quantity of straw being burnt as well. Though the afflicted man had been going about ill for three days before his death, though he was living in a small three-roomed cottage with six adults and one child, and though he had been attended after death by two women who had afterwards gone home to their families, our precautions were so efficient that, I am happy to state, only one mild case of the disease was traceable to that source; this was in a man who had visited the house and about whom I was not informed when I made my inquiries.

Sanitation.—In the middle of November, I had complaints about a nuisance existing in several of the houses in Kiln Fold, and on investigation an old dry-walled drain was discovered running under the floor of one house and opening into a sewage-sodden field a short distance away; this was at once attended to. At the same time the inspection of the other houses shewed that several sink pipes were either untrapped or not disconnected; the house drains combined and emptied their sewage into an adjoining field. Your Authority appointed a Deputation to view this place with a view to deciding on some scheme of drainage, and I am happy to state were unanimously in favour of constructing a sewer at a level deep enough to drain the whole block of property. Measures are now being taken with a view to accomplishing this object, though they have been somewhat delayed by the desire to make the drainage of this particular area fit in with a general drainage scheme for the whole district, unquestionably the best and most economic plan.

On December 15th, I visited some houses at Hole Bottom, which obtained their water supply from a stream close at hand; on tracing the stream for three-quarters of a mile up I found several manured fields sloping towards it (from which, of course, the manure could be easily washed by such heavy rains as were then prevailing); also six houses draining straight into it, and a privy built on a flag practically bridging over the stream, with an offensive accumulation on the other side. The water-mains pass immediately behind the houses. Such being the case, I gave a certificate to the effect that the houses had not within a reasonable distance an available and sufficient supply of wholesome water. On analysis

the water was declared "potable!" I pointed out, of course, that the pollution being intermittent, was thereby rendered more dangerous to health than if it had been continuous. No action has been taken in the matter as yet, but I shall have other samples taken for analysis, being firmly convinced (as indeed who would not be?) that a stream receiving regularly the sewage of six houses, and being open to the other sources of pollution I have named, should, after a course of three quarters of a mile, be wholesome enough for drinking purposes. The idea of waiting for exact chemical evidence, which, of course, gives no idea whatever of any specific pollution such as by typhoid bacilli, is to my mind intensely ridiculous.

The Parochial Committee has, I believe, decided to take in hand the emptying of ashpits and privies in Clifton, the largest of your districts, and for this measure I unhesitatingly prophecy beneficial results.

Fixby. — Here the population, 481, has been estimated as a decreasing one, though the decrease is very slight. The birth-rate for the year is 22·8, and the death-rate 12·4; these have necessarily been calculated on very small figures. The infant mortality, 272 per thousand births, and the respiratory death-rate 6·23, are both misleading on the same account.

No case of infectious disease has been notified during the year.

No noteworthy sanitary measures have been carried out during the year.

Greetland.—In this sub-district, which has a population of 380, the birth-rate 26·3 and the death-

rate 15·7, are both very favourable. There have been no deaths from zymotic disease or phthisis; the respiratory death-rate and the infant mortality are also favourable, but the latter less so than the former. To add to this good record we have a clean bill of infectious diseases.

Some portions of the district have been inspected, but no improvement calling for special mention in a report of this nature have been found necessary.

Hartshead.—The population of this district I have estimated at 1,028, an increase of 37 since the census year. The district boasts a very high birth-rate, namely 38·9, though the death-rate is not quite so favourable, being 21·4—above the average of the districts. The zymotic and respiratory death-rates also are not so favourable as they might be, the former being 4·86 and the latter 5·83 per thousand. There have been no deaths from phthisis, and infant mortality is slightly above the average of the combined districts.

Only one case of zymotic disease has been reported to me during the year, that being a case of typhoid fever in Littlethorpe. In this case the drainage was in a truly disgraceful state: the drains had been laid with practically no fall, and were consequently blocked; the overflow from the gulley ran under the flags of the kitchen floor, at times bubbling up through the cracks; the ashes grate was part full of sewage. The defective drainage was quickly put to rights, but the soil under the kitchen floor is, I fear, still sewage-sodden and very far from healthy. The patient recovered after a prolonged and serious illness.

Hipperholme (Norwood Green).—During the year the larger half of this division of your district has been incorporated with Brighouse and Rastrick, so that the population, &c., only apply to the Norwood Green portion. The population of this I have estimated at 880, an increase of five since the census year. The birth-rate for the year is 20·4 and the death-rate 19·3 per thousand. The statistics are not very favourable, the zymotic death-rate being 2·27, that from respiratory diseases 2·27, and from phthisis 3·4, whilst the infant mortality has reached 166 per thousand of the total births. Two cases of diphtheria and one of typhoid fever have been notified during the year.

From a sanitary point of view the place is in a far from satisfactory condition, but the improvements suggested by me at the visits I have paid have been well and promptly carried out.

The *Sewage Tanks*, which I have recently inspected, are working well, but the good derived from them might very easily be doubled, and the effluent made still more innocuous. At present the sewage, after the sludge has settled, falls into a large trough which runs longitudinally along the centre of the tank, and delivers the sewage always on to the same portion of the coke-bed, the coke for about a foot on each side being quite dry and useless for its purpose. Of course the sewage, in its percolation through the coke-bed, always follows the easiest, that is the established, channel, and practically is unfiltered. The same fault is to be found with the other two tanks. Now were there four branch troughs or so in each tank, arranged to distribute the sewage over the whole bed of coke, the efficiency of the tanks as filter beds would be about doubled. Of course the most efficient method

would be to have besides this a double system of filter-beds, so that they could be used alternately every two days or so, and have time to get aerated in the interval, but I am afraid this is too much to hope for.

Norland.—Here I have estimated the population as a decreasing one, namely 1,424, a decrease of 13 since the census of 1891. The birth and death-rates are both favourable, being 30·1 and 18·2 respectively. The zymotic death-rate 2·10 and the respiratory death-rate 2·80 are lower than the average of your districts, whilst the infant mortality, 93 per thousand of the total births, is the lowest of any. The phthisis death-rate is rather high but by no means remarkable. On the whole the vital statistics are very favourable.

During the year four cases of diphtheria and two of typhoid fever have been notified.

On the 22nd of November I visited the district with your Sanitary Inspector, and we were met by one of the Parochial Committee. The chief object of our visit was to inquire into the drainage of Scarr Head, a place which had been severely visited by typhoid fever some time back. There are no less than 45 houses at that point which turn their sewage into an open field on a steep slope below the houses. The whole field is simply a network of branching and dividing streams of sewage, which after winding through the field eventually finds its way into the river.

I recommended your Authority to take this sewage into the sewer of the Sowerby Bridge Local Board, if they would allow it.

Negotiations were commenced, but there was some opposition on the part of the Parochial Committee, and

I am not aware of any definite result having been attained as yet. It is a matter which very urgently requires remedying, and that too before the advent of warm weather, or the consequences might manifest themselves in an epidemic of diphtheria or typhoid fever, to say nothing of the invidious undermining of health such a state of things favours.

Skircoat.—Here with a population of 1953, we have a birth-rate of 25·0 and a death-rate of 12·2 per thousand. The zymotic rate is 2·04 per thousand of the population, and the infant mortality 183 per thousand of the total births. With the exception of the latter I regard the statistics as very favourable.

In regard to zymotic diseases, this district has been rather unfortunate, having a record of seven cases of small-pox in addition to one of erysipelas. These former were nearly all in the Copley portion of the district, and were traceable to an exceedingly mild unrecognised case in St. Stephen's Terrace, or to infection at workplaces in Halifax, where the epidemic was very rife. They were all removed to the Brighouse and District Joint Hospital where one child 13 months old, and unvaccinated, died.

The epidemic was not widespread, and by prompt notification and isolation, with the usual thorough disinfection, was easily checked. The medical men were very prompt in their notification of any suspicious cases, most of them wiring direct to me, so that no time was lost in removing the patients.

I had occasion, during the latter part of the year, to call the attention of the West Riding Inspector to the state of things at the chemical works, near North

Dean Station, where waste iron sulphide and lime were being tipped on the river bank, so that the stream washed a good portion of it away. The proprietors, however, assured us that they would at once cart it away, so no further action was taken.

I append here a short account of the work done by your recently appointed Inspector of Nuisances, Mr. Arthur Rowe, summarised from his periodical reports to me. The work that has been done in his department I can safely say has been well and thoroughly done, but the figures, of course, only apply to the work done whilst he has held the post, since November, 1893.

Summary of Work done by Inspector of Nuisances during 1893 (part).

Total Number of Visits	...	125 (about).
,, ,, Cases Reported		35
,, ,, Notices Served		46
,, ,, Nuisances Abated		33

Classification of Nuisances according to Nature.

House Drains Defective	...	...	18
Cellar Drains Defective	...	...	2
Houses Overcrowded	...	...	3
Houses Dirty	...	...	1
Stagnant Water in Cellars	...	...	2
Offensive Privies Privies without Doors, &c.	...	...	12
Offensive Accumulations	...	...	2
Nuisances from Defective Sinkpipes		...	6
			46

Removal of Nuisances.

House Drains Disconnected	6
,, Repaired	10
Cellar Drains Repaired	2
Overcrowding Remedied	3
Dirty House Cleansed	1
Privies Cleansed, Reconstructed, &c. ...	9
Accumulations Removed	2
	33

This completes a short summary of the vital statistics, infectious diseases, &c., of your various districts for the year, together with a brief summary of the sanitary work done since I have been in office (October 25th).

You will find the Inspector's Summary of Work, and the usual Statistical Tables in the Appendix.

In conclusion I have to thank your Committee for the very hearty support and encouragement given to me in the discharge of my duties—a support which makes work lighter and life longer, and which helps on the advance of Sanitary Science and the ultimate good of the people.

I am, Gentlemen,

Your obedient Servant,

MEREDITH YOUNG.

TABLE C 1893.

Halifax Rural Sanitary District.

Medical Officer of Health.

MEREDITH YOUNG, M.B., C.M.

Date of First Appointment, October 25th, 1893. Present Salary, £60.

Term of Appointment.

Rateable Value of District for General District Rate.

Special Reports presented during 1893. None.

Sanitary Inspector.

ARTHUR ROWE. Salary, £72.

Water Supply.

Any extension or change during 1893? Norland supply increased.

Portions of District inadequately supplied? Portions of Fixby, Norwood Green, and Norland.

Cases of Lead Poisoning in 1893? None.

Sewerage and Sewage Disposal.

Extension or Improvements during 1893? None.

Excrement Disposal.

Are the privy middens, &c., cleansed by sanitary staff, by contractors, or by tenants? By tenants.

Is the present arrangement satisfactory? No.

Bye-Laws, Regulations, and Adoptive Acts.

Any new Bye-Laws, or Regulations for Dairies, Cowsheds, &c.? [If so, please send Copy.] No.

What portions (if any) have been adopted of the { Infectious Diseases (Prevention) Act? / Public Health Acts Amendment Act? None.

Regulated Buildings, Trades, &c.	Number?	General Condition.	Legal Proceedings (if any).
Common Lodging-houses			
Canal Boats	12	Satisfactory ..	None.
Slaughterhouses ...	1	...	...
Bakehouses			
Dairies			
Cowsheds ...	16	Fairly satisfactory ...	...
Milkshops	3	Satisfactory ...	...
Offensive Trades ... (Please specify nature).	1 (Tannery)	...	...

Meteorological Observations (if any) taken in or near the District. None available.

Births.

Please state (*a*) Number of each sex :—Male, 133 ; Female, 108.
(*b*) No. Illegitimate.

Deaths.

Please state (*a*) Number of each sex :—Male, 77 ; Female, 62.
(*b*) No. Uncertified.

Death Returns.

What correction (if any) is made for non-residents dying within the District? Two Males and two Females deducted.

Are any Returns obtained of deaths of residents occurring in public institutions (Workhouses, Hospitals, &c.), outside the District? No.

Hospital for Infectious Diseases.

No. of Beds? 48. Charges to Patients? Nil.

Construction (Brick, Stone, Wood, Iron, Altered House or Cottage, &c., &c.)? Corrugated Iron and Wood. Outbuildings of Brick.

What Diseases are admitted? Small-pox only.

Disinfection.

Apparatus (Steam? Hot Air?) Steam.

Work done in 1893? Disinfection of Bedding Clothing, &c., of Small-pox cases.

Amount paid as compensation for articles destroyed? 15s.

Sanitary Work.

Total No. of Nuisances remaining over from 1892? None.
Reported during 1893? 46.
Abated during 1893? 33.
Unabated at the end of 1893? 13.

Total No. of Summonses or other legal proceedings? None.

House Drainage :—No. of Sinks disconnected and trapped during 1893? Six approximately.

Closets.

Approximate No. of each kind in District—

W.C.	Pail, Pan or Tub-C.
Trough-C.	Covered Privy-Middens.
Slop-C. (Waste-water, C.).	Uncovered Privy Middens

No. of each of the above kinds constructed during 1893? One W.C.; 20 Covered Privy-Middens.

Destructor.

None.

What action has been taken in regard to the following matters?

Closure of Houses unfit for habitation? None.

Overcrowding? Three cases remedied.

Seizure of Unsound Food? None. Prosecutions? None.

Samples taken under the Sale of Food and Drugs Act? None. Prosecutions? None.

River Pollution? One case remedied.

Smoke Abatement? None.

(A)

TABLE OF DEATHS DURING THE YEAR 1893, IN THE RURAL SANITARY DISTRICT OF THE HALIFAX UNION, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

Names of Localities adopted for the purpose of these Statistics: Public Institutions being shown as separate Localities.	Mortality from all Causes, at subjoined Ages.								Mortality from subjoined Causes, distinguishing Deaths of Children under Five Years of Age.																				
													Fevers.																
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	Total.
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
CLIFTON (H) ...	41	7	8	2	3	16	5	Under 5	3	...	...	1	...	..	..	...	...	...	...	...	...	2	...	...	...	3	...	...	7	16
								5 upwards	2	...	...	...	...	...	..	...	...	...	...	...	...	2	1	...	1	5	4	...	10	25
FIXBY	6	3	...	1	1	...	1	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	3	3
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
GREETLAND ...	6	1	...	1	...	3	1	Under 5	...	...	...	...	..	...	...	...	...	...	...	...	..	...	...	..	...	..	...	...	1	1
								5 upwards	...	...	...	...	...	...	...	...	...	...	1	...	..	...	...	...	...	1	...	...	3	5
HARTSHEAD ...	22	6	4	...	1	4	7	Under 5	...	..	...	...	...	...	...	...	...	...	..	..	2	2	...	..	...	1	...	...	5	10
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	..	5	2	2	2	12
HIPPERHOLME (Norwood Green) ..	17	3	1	2	1	8	2	Under 5	.	1	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	.	...	3	4
								5 upwards	...	...	...	...	...	1	...	...	...	...	...	...	...	..	...	3	2	1	2	4	13
NORLAND	26	4	2	1	...	12	7	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	2	...	..	...	...	1	...	...	3	6
								5 upwards	...	...	...	...	..	...	...	...	...	...	...	..	..	1	...	...	2	3	1	...	13	20
SKIRCOAT	25	9	5	1	...	5	5	Under 5	1	...	1	...	...	..	...	...	...	...	...	...	...	2	...	..	...	...	...	..	6	10
								5 upwards	...	...	...	...	..	...	...	..	...	...	...	...	...	..	...	...	...	...	4	1	10	15
Totals	143	33	20	8	6	48	28	Under 5	4	1	1	1	..	...	...	...	...	...	...	..	4	6	..	...	...	5	...	...	28	50
								5 upwards	2	...	...	...	...	1	...	...	...	..	1	...	...	4	1	...	6	19	12	5	42	93

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

Deaths occurring outside the district among persons belonging thereto	...	...	...	...	...	...	...	Under 5	...	...	...	...	...	...	..	...	...	...	...	...	...	..	..	...	..	...	..	...	...	...
								5 upwards	...	...	...	...	..	...	..	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths occurring within the district among persons not belonging thereto	4	...	2	...	...	2	...	Under 5	2	...	...	...	..	...	...	...	..	...	...	...	...	..	...	..	...	...	...	...	...	...
								5 upwards	2	..	...	..	...	..	...	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...

Area in Acres, 9,728. Population (Census 1891), 8,414.

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH, DURING THE YEAR 1893, IN THE RURAL SANITARY DISTRICT OF THE HALIFAX UNION;

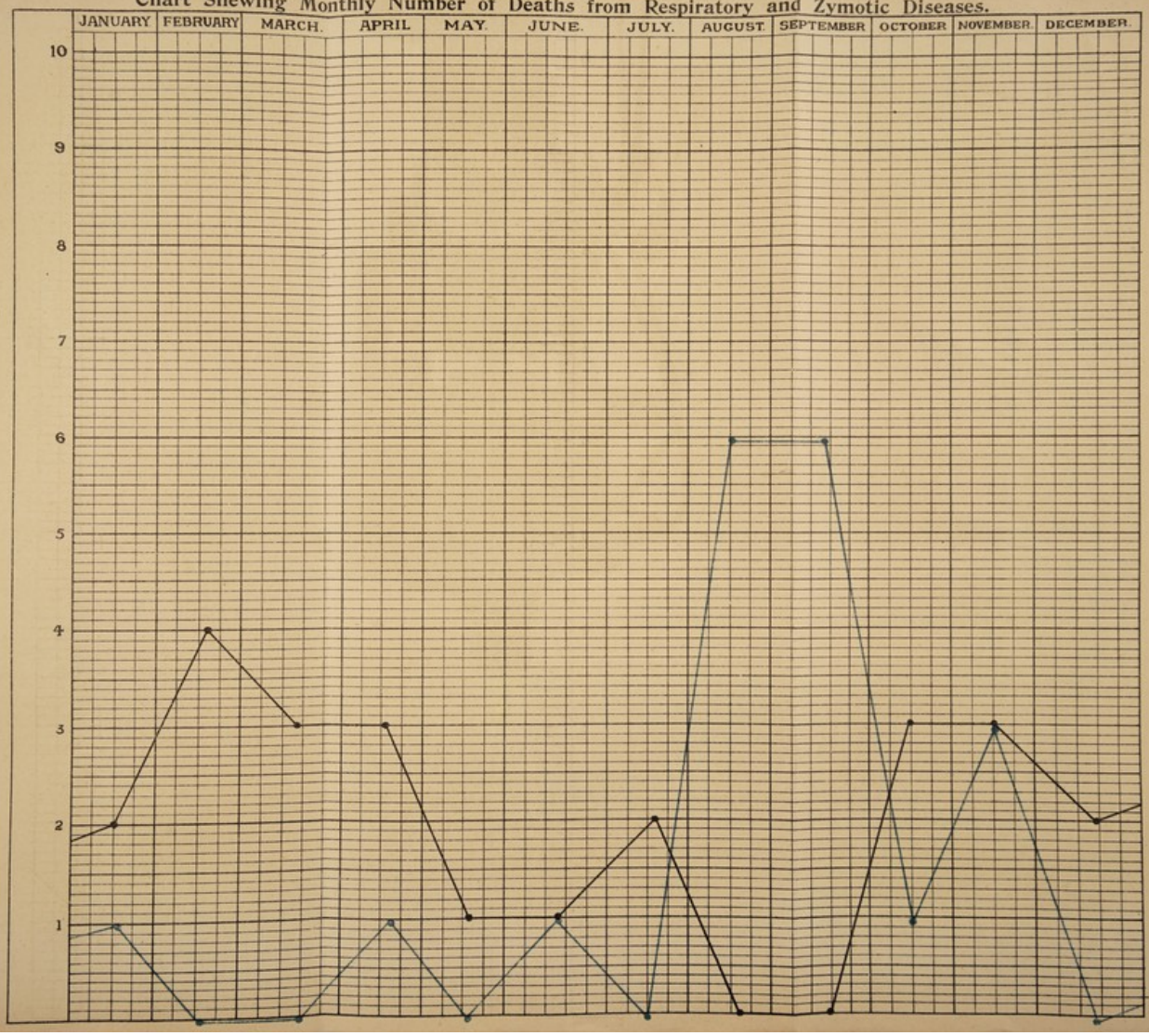
(B) CLASSIFIED ACCORDING TO DISEASES, AGES AND LOCALITIES.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality coming to the knowledge of the Medical Officer of Health.													Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.												
					1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
									Fevers.													Fevers.								
(a.)	(b.)	(c.)	(d.)	(e.)	Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		
CLIFTON (H)	2275	2296	70	Under 5	...	2	...		...	..	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	..	...	...	...
				5 upwards	3	6	...	..	..	...	1	..	...	...	1	...	...	2	..	...	...	...	...	...	...	...	...	...	...
FIXBY	485	481	11	Under 5	...	..	..	...	...	..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	..	...	...	...
				5 upwards	...	...	...	..	...	..	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	..	..	...	...
GREETLAND	405	380	10	Under 5	..	..	...	..	...	...	...	..	..	...	..	..	...	..	..	..	..	...	...	...	...	...	...	...	...
				5 upwards	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HARTSHEAD	991	1028	40	Under 5	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
				5 upwards	...	...	.	..	...	1	..	..	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...
HIPPERHOLME ... ... (Norwood Green)	875	880	18	Under 5	...	...	..	..	..	..	.	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
				5 upwards	...	..	2	..	..	1	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
NORLAND	1437	1424	43	Under 5	...	...	1	..	..	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...
				5 upwards	...	...	3	..	..	2	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
SKIRCOAT	1946	1953	49	Under 5	1	..	...	...	...	...	...	...	...	...	0	...	...	1	...	...	...	...	...	...	...	...	...	...	...
				5 upwards	6	...	...	...	...	...	...	...	...	...	1	...	...	6	...	...	...	...	...	...	...	...	...	...	...
Total ..	8414	8442	241	Under 5	1	2	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
				5 upwards	9	6	5		...	4	1	...	...	...	2	...	...	8	..	..	...	...	...	...	...	...	...	...	...	...

Notification of Infectious Disease has been compulsory since Jan., 1890.

The Isolation Hospital is the Brighouse and District Joint Hospital, and is situate in Clifton, marked (H.).

Chart Shewing Monthly Number of Deaths from Respiratory and Zymotic Diseases.



The **black** line shews the Monthly Number of Deaths from Respiratory Diseases; the **blue** line shews the Deaths from the seven principal Zymotic Diseases.