

BENWELL AND FENHAM URBAN  
DISTRICT COUNCIL.

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ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

YEAR ENDING 31st DECEMBER, 1899.

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Newcastle-on-Tyne :  
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1900.



TO THE CHAIRMAN AND MEMBERS OF THE  
BENWELL AND FENHAM URBAN DISTRICT COUNCIL.

MEDICAL OFFICER'S ANNUAL REPORT.

GENTLEMEN,

The advent of the New Year warns me that it is again my duty to lay before you a summary of matters coming within my province. It will be my endeavour to lay before you such facts as will indicate the condition of your Authority, and although my monthly statements fairly keep you *au courant* as to its state, the compilation of statistics, in a readily referable form, will enable you to compare the present and past condition, and to note such advances as have been made. I cannot, however, allow this opportunity to escape without thanking you for the uniformly cordial manner in which you have appreciated my work, and to hope that I may, as long as I am your Medical Officer, continue to give you satisfaction.

POPULATION.—The population of the district is increasing, and, with the assistance of the School Board Attendance Officer, a census has been taken which amounts to 14,000, and it is on this number the statistics are calculated.

BUILDING.—The building trade has been very active, 343 new houses have been built; their erection has been carefully supervised by your officer; by this means proper and efficient drainage is effected. No unauthorized connections are allowed, each branch drain is examined from sewer to yard wall where an inspection pipe is placed; from this point the drain is tested with water with a head of 4 feet. The builders are not allowed to cover up a single drain until the connections are without fault. A uniform water closet and ash receptacle system is adopted. No new ashpits are allowed; endeavour, as quickly as possible, is being made to dis-establish those already existing.

WATER.—The water supply of the district, by the Whittle Dene Company, is pure and constant; no surface wells are allowed to be used.

**DUTIES.**—As Medical Officer it is my duty to watch the interests of your Authority, to be at hand to counsel and advise on any outbreak of disease or unsanitary condition, to assist in the removal of any nuisance or defect injurious to health; with this view I have made periodical inspections of the several localities with your Sanitary Inspector. I have on three occasions examined and reported on the condition of carcasses suspected to be diseased and unfit for food.

The work of the Board has gone on harmoniously, many numerous and important works have been and are to be carried through. The devotion of the Council to the interests of the public has secured general commendation, and the full attendance of members at every monthly meeting, at which I am present, indicates the ardour with which the duties are discharged.

**PUBLIC PARK.**—This is now an accomplished fact, the public ceremony at the opening taking place on August 19th. So far £400 has been expended on its development.

**ABATTOIRS** are being provided (6 slaughter houses and 6 lairs, with yards), they were rendered necessary by the difficulty experienced by butchers in getting suitable places for slaughtering purposes. The Board will be able by their officers to more completely supervise the condition under which animals are slaughtered, and to see that the bye-laws thereon are duly enforced.

**VACCINATION.**—The alteration of the law, making vaccination no longer compulsory was generally viewed with distrust. It is pleasing to find that “conscientious objectors” are not very rife, and that a larger proportion of children undergo the operation than formerly. The key to the situation is the use of calf lymph, the objection to arm to arm vaccination being not now available; failure in results are not unfrequent; the quality of the lymph will, however, without doubt, soon reach the proper standard of efficiency.

**NEW ESTATES.**—During the year three new building estates have been opened out at New Benwell, viz., the Cruddas Estate, the Glebe Land, and Benwell Grove; on the two latter several houses are already erected. The sewage will pass into the ordinary system. The Fenham Estate, mentioned in my last annual report, also in development, will require a drainage of its own, going along the west border of the Authority to the river Tyne, and will cost £10,000. The area of the estates is over 340 acres.

A large area of land, over 23 acres, has been secured by the Armstrong, Whitworth Company on the borders of the river, east of Scotswood bridge, formerly a fenny marsh. This is a very large development, and will eventually greatly increase the rateable value of the locality, and add to the prosperity of the district.

REFUSE DISPOSAL.—In connection with this matter the Council have purchased a riverside site (one acre in extent) at a cost of £2,000. This is available for a limited deposit, or may be utilized for the erection of a destructor.

### BIRTHS.

During the year, 603 births (314 males, 289 females) were registered, equal to a rate of 43 per 1000 per annum.

1899	...	...	43
1898	...	...	41·9
1897	...	...	48·4
1896	...	...	40
1895	...	...	39

The per centage of deaths under one year, numbered in proportion to the recorded births, is 19.

1899	...	...	19
1898	...	...	21·4
1897	...	...	17·1
1896	...	...	15·2
1895	...	...	19·7

### BIRTHS—MONTHLY RETURNS—

January	...	...	...	46
February	...	...	..	39
March	...	...	...	48
April	...	...	...	50
May	...	...	...	47
June	...	...	...	45
July	...	...	...	54
August	...	...	...	50
September	...	...	...	55
October	...	...	...	51
November	...	...	...	70
December	...	...	...	53

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603

## DEATHS.

During the year, 265 deaths were registered from all causes and at all ages.

1899	...	...	265
1898	...	...	269
1897	...	...	201
1896	...	...	173
1895	...	...	210

## THE MORTALITY—

1899	...	...	18·9
1898	...	...	20·6
1897	...	...	16·7
1896	...	...	16·4
1895	...	...	20·0

## DEATHS—MONTHLY RETURNS—

January	...	...	...	14
February	...	...	...	16
March	...	...	...	25
April	...	...	...	21
May	...	...	...	13
June	...	...	...	15
July	...	...	...	27
August	...	...	...	29
September	...	...	...	34
October	...	...	...	26
November	...	...	...	23
December	...	...	...	22

As in previous years, the mortality was highest in the hot weather, the mean temperature in August was with two exceptions, 1857 and 1779, higher than it has been since 1771, this continued until September 8th.

In September, of the 34 deaths registered, 20 were of children under one year of age, 17 of these deaths were due to mal-assimilation, digestive and intestinal diseases.

The heat of summer, coupled with improper diet and insanitary surroundings, soon initiates the slaughter of the innocents. Artificially fed babies suffer most. Given a high temperature,



improper artificial feeding, bad hygiene and almost invariably we can count on putrefactive changes in the stomach and bowels, producing septic poisons, local irritations, intestinal inflammations and generally depraved systemic conditions. In relation to babies, their diet should be lighter in the hot weather. The vital forces are then lowered and the digestive apparatus impaired. The removal of fermentative septic and indigestible matter is the key to the treatment of these cases. The first announcement of trouble is vomiting and purging, this is nature's endeavour to get rid of the trouble. If we help it in the right direction relief will follow, if we intercept nature we go wrong; if a child is seen early a mild purgative and cessation from food may be sufficient. Unfortunately parents neglect first warnings, and only call in medical skill when "the first aid" the parents themselves afford is proved to be ineffective—disaster ensues.

The hygienic management of infants is of the greatest importance. Every mother should be instructed to afford—

- 1st.—Pure air to breathe.
- 2nd.—Proper diet at regular intervals.
- 3rd.—Boiled water to drink.
- 4th.—A clean bottle if artificially fed.
- 5th.—Absolute cleanliness.
- 6th.—No excitement.

If every infant was kept under such favourable conditions, the resistance of the vital organism would prevent the growth and development of the noxious germs introduced.

With reference to aliment, boiled milk must be the food, to be diluted with water previously boiled, proportionately to age. Sweetened with sugar of milk.

The proportions are—

For a child under one month two-thirds water gradually decreased to one-half at end of third month, and to one-fourth until end of six months. After which pure milk may be given.

The most successful mode of preparing cows' milk is sterilization. Milk subjected to  $212^{\circ}$ , it will then be free from germs.

DEATHS—  
LOCALITIES—

	1899.	1898.	1897.	1896.	1895.
South Benwell ... ..	123	103	50	51	72
New Benwell ... ..	48	72	65	41	37
Priestman's Cottages and Handyside's Buildings	17	8	13	7	9
Delaval ... ..	15	13	17	16	20
Benwell and Denton ...	10	16	13	16	18
Fenham ... ..	4	6	0	4	1
River Tyne ... ..	1	1	1	3	3
Scotswood ... ..	47	50	42	35	37

DEATHS—AGES—

Under						60 and above.
1 year.	1 to 5	5 to 15	15 to 25	25 to 40	40 to 60	
115	44	16	16	17	19	36

The average for the last five years is:—

Under						60 and above.
1 year.	1 to 5	5 to 15	15 to 25	25 to 40	40 to 60	
76	32·2	11	9·8	14·6	23	32

INFANTILE DEATHS.—115—43·3 per cent. of the mortality were of children under one year of age.

1899	...	43·3
1898	...	43·4
1897	...	41·3
1896	...	37·5
1895	...	38·5

CAUSES—

	1899.	1898.	1897.
Premature Birth and Debility	26	23	27
Bronchitis and Pneumonia	28	25	10
Convulsions ... ..	14	14	9
Whooping Cough ... ..	1	2	2
Meningitis ... ..	2	3	2
Marasmus ... ..	7	5	8
Measles ... ..	1	0	2
Heart Disease ... ..	1	0	1
Diarrhœa ... ..	4	15	4



CAUSES (*continued*)—

Gastro Entiritis	...	...	...	28	...	28	...	13
Syphilis	...	...	...	1	...	1	...	1
Spina Bifida	...	...	...	0	...	0	...	2
Accidents	...	...	...	1	...	0	...	0
Scarlet Fever	...	...	...	0	...	1	...	1
Hernia	...	...	...	1	...	0	...	0

Of these 115 infantile deaths, DISORDERS OF THE RESPIRATORY SYSTEM account for—

1899 ... .. 24·3 per cent.

The average of the preceeding five years is 16·7.

DISORDERS OF THE DIGESTIVE SYSTEM accounts for 30·4. The average for the preceeding five years is 33·2.

PREMATURE BIRTH AND CONGENITAL DEBILITY account for 22·6 per cent. The average of the preceeding five years being 26.

NERVOUS DISORDERS AND DENTITION account for 14·8 per cent. The average of the preceeding five years being 15.

ZYMOTIC DISEASE.—One death, accounts for ·8 per cent. The average for the last five years being 9·2.

It will be seen, therefore, by these figures that *digestive, respiratory and nervous disorders*, together with premature birth and congenital debility, are the main factors of the infantile death rate.

## GENERAL DEATH RATE.

CAUSES.—DISORDERS OF THE RESPIRATORY SYSTEM caused 51 deaths, 19·2 per cent. of the mortality; of these deaths, 41 were in children under five years of age.

PHTHISIS caused 13 deaths, 4·9 per cent. of the mortality. The return of deaths from this cause presents a favourable contrast to that of 1898, when 26 were registered. Its curability at an early stage, and its prevention are subjects of interest to all. Its infectious nature renders it a public danger, the whereby (now so clearly demonstrated) being well worthy of the recognition of Health Authorities; by the destruction of the sputa of tuberculous persons, the prevention of the use of meat or milk of cattle similarly affected, its incidence would be reduced to a minimum. The vitality of the germ is impaired and destroyed by fresh air, sun and hygienic

surroundings, and the provision of sanatoriums for the treatment and isolation of tuberculous persons is worthy of the support and assistance of those responsible for the public health.

The hereditary transmission of Phthisis is now considered to be an inconsiderable factor in the propagation of the disease.

The lowered vitality and the introduction of the bacillus being the causes to which the disease is mainly attributable.

Bacteriological research determines with accuracy and certainty the presence or otherwise of the germ. All suspected cases should be submitted to the test, and their early and proper treatment thereby secured.

HEART DISEASE caused 24 deaths, 9 per cent. of the mortality. The average of the preceeding four years being 8 per cent.

DEATHS OVER 60 YEARS.—35 persons died over 60 years of age, 13·2 per cent. of the mortality. The average of the last four years being 13·7 per cent.

ACCIDENTS caused 8 deaths.

ZYMOTIC DEATHS—

	1899.	1898.	1897.	1896.
Measles ...	6	4	11	2
Whooping Cough ...	2	8	1	8
Diphtheria ...	6	1	0	2
Puerperal Fever ...	1	0	0	1
Typhoid ...	2	1	2	1
Scarlet Fever...	2	4	1	1

These zymotic diseases are responsible for 7·1 of the mortality, and a zymotic rate of 1·3 per 1000 per annum. The average zymotic rate for the last five years being 1·3.

ZYMOTIC DEATHS—LOCALITIES —

	1899.	1898.	1897.	1896.
South Benwell ...	6	5	3	4
New Benwell ...	8	6	3	3
Priestman's Cottages, Paradise and Handyside's Buildings ...	4	1	1	2
Scotswood ...	1	3	1	3
Benwell and Denton ...	0	1	1	1
Delaval ...	0	2	3	2

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE  
HAS BEEN MADE AS—

SCARLET FEVER—

January	...	...	...	2
February	...	...	...	2
March	...	...	...	11
April	...	...	...	1
May	...	...	...	4
June	...	...	...	14
July	...	...	...	11
August	...	...	...	15
September	...	...	...	14
October	...	...	...	25
November	...	...	...	50
December	...	...	...	19

Total ... 168 cases, 2 deaths.

SCARLET FEVER—LOCALITIES—

South Benwell	...	...	...	70
Scotswood	...	...	...	52
New Benwell...	...	...	...	35
Paradise, Delaval and Handyside's Bldgs	...	...	...	6
Benwell	...	...	...	7
				168

With such a lengthened catalogue of cases, the deaths (2) clearly indicate the mildness of the type; some of the cases receive no medical attendance, and are only discovered when desquamation or the extension of the disease are the consequences; such cases are sources of spread. The aggregation of large bodies of children in the Board Schools renders them a ready target for infection.

Every endeavour is made by the officers of the Council to isolate children, notified to be suffering from infectious disease, in their own homes, and to prevent the school attendance of the other members of the infected family. With this measure most carefully carried out, infection is still wide spread and continuous.

An Infectious Hospital, whereby the initiatory cases might be isolated, would stem spread. Its provision has been constantly under the consideration of the Council, they are unanimous as to its desirability; difficulties as to a site have arisen, but I have reason to think that *now* serious opposition will be abandoned. It will be desirable, when the plans of the hospital are considered, to provide a *disinfecter*, as the means hitherto used are mainly fumigation.

TYPHOID—3 cases; 2 deaths.—

July	...	...	...	1
August	...	...	...	1
September	...	...	...	1

All in South Benwell.

As previously explained, the Council affords (free of cost) to all medical men, practising in the district, the bacteriological examination of suspected typhoid blood; difficulties in diagnosis are thus eliminated, and the question of the nature of the disease accurately determined.

DIPHTHERIA—13 cases; 6 deaths.—

January	...	...	...	1
April	...	...	...	4
June	...	...	...	1
July	...	...	...	1
August	...	...	...	4
September	...	...	...	2—13

Of these 13 cases, 6 were double notifications, the disease having seized a second member of the family.

MEASLES has been epidemic: the deaths registered 6 against

4 in 1898

11 in 1897

2 in 1896

6 in 1895

6 in 1894

40 in 1893

#### GENERAL WORK.

HOUSE TO HOUSE VISITATIONS have been made thrice during the year.

THE SCHOOLS are visited monthly; South Benwell School has its full complement of attenders.



DISINFECTOR.—The Board have this matter under consideration.

COW SHEDS AND DAIRIES.—There are eight cow sheds containing 185 cows, they have been regularly visited, and are healthy. We had some trouble with one dairyman, his cattle being inferior and his premises filthy; he obstinately refused registration, with which he has now complied. I think prosecution and a fine would have had a salutary effect.

A general inspection of the dairies has been made, the application of the occupiers for registration is arranged and the Act enforced.

### SANITARY WORK.

	Found.	Abated.
Choked and defected gullies ... ..	175	173
Do. do. drains ... ..	132	131
Do. do. water closets ... ..	72	72
Defective waste pipes... ..	21	21
Foul and defective privies ... ..	14	14
Defective hatches ... ..	75	72
Leakage from ashpits... ..	33	33
Defective yard paving ... ..	52	52
Foul yards ... ..	103	103
No water supply ... ..	3	3
Passages to limewash... ..	56	56
Cases of overcrowding ... ..	5	5
Dangerous walls ... ..	7	7
Number of houses disinfected ... ..	140	
Visits to infected houses ... ..	800	
Disinfectants supplied ... ..	152	
Occupiers and owners interview ... ..	810	
Informal notices served ... ..	482	
Formal do. ... ..	42	
Notices complied with ... ..	504	
Prosecutions ... ..	1	

### DRAIN TESTING.

431 outside drains inspected ... ..	90 defective.
390 inside do. do. ... ..	144 do.
278 lengths of new sewer inspected ... ..	78 do.



## REFUSE REMOVAL.

Monthly ashpits ... ..	2,548 loads.
Weekly do. ... ..	4,507 do.
Daily scuttles ... ..	2,425 do.
	<hr/>
	9,480

Of these—

4,680 were sent to sea.

4,800 were laid on land.

I am,

Yours obediently,

N. HARDCASTLE,

Medical Officer of Health.

*Newcastle-on-Tyne,*

*January, 1900.*





(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1898, in the Urban Sanitary District of BENWELL AND FENHAM: 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.		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.													
	Census 1891.	Estimated to middle of 1897.		Registered Births.	FEVERS.													Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Smallpox.												Scarlatina.	Diphtheria.
(a.)	(b.)	(c.)	(d.)	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	
BENWELL AND FENHAM ...	10,500	14,000	603	0	66	1	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Under 5 ...																										
				5 Upwards	0	102	9	1	0	3	0	0	1	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS ...	10,500	14,000	603	0	66	4	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				5 Upwards	0	102	9	1	0	3	0	0	1	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notification of Infectious Disease has been compulsory in the District since December 15th, 1889.  
No Isolation Hospital provided.