[Report 1919] / Medical Officer of Health, Cumberland County Council.

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Cumberland County Council.

ANNUAL REPORT

OF

MEDICAL OFFICER OF HEALTH,

F. H. MORISON, M.D., D.P.H.

FOR THE YEAR 1919.

JAMES BEATY & SONS,
PRINTING AND STATIONERY CONTRACTORS,
CARLISLE

TO THE CUMBERLAND COUNTY COUNCIL.

MR. CHAIRMAN, YOUR LADYSHIP AND GENTLEMEN,

I have the honour to present my Twelfth Annual Report, namely, that for the year 1919.

This year the Report is divided into two sections, the first dealing with the County as a whole, and the second with a Summary of the Reports of the District Medical Officers of Health.

It is to be regretted that up to the time of sending this Report to the printers, the whole of the district reports have not been sent to me.

I have not received reports from the Urban districts of Arlecdon and Frizington and Holme Cultram, and from the Rural districts of Alston, Brampton, Carlisle and Longtown, consequently I have, as regards these districts, only been able to give the Vital Statistics.

I have the honour to be,

Your obedient servant,

F. H. MORISON.

July, 1920.

Area.

1. The area of the County in acres, taken from the Census return of 1911, is as follows :—In the Urban districts 64,158 (from this, however, must be deducted 2,025, the area of the City of Carlisle, which since the Census has become a County Borough) making the present area of Urban districts in the Administrative County 62,133, and in Rural districts 908,928, giving a total for the County of 971,061.

Population.

2. The Registrar-General has again supplied two estimates of population, one for calculating the Birth-rate and one for calculating the Death-rate. These are respectively 214,597 and 206,006. That for the Death-rate is the estimated civilian population of the various sanitary districts during 1919, while that for the Birth-rate is an estimate of the total population, based on the assumption that the ratio between total and civilian population is the same in the districts as in England and Wales as a whole.

Births.

3. The Births registered in the County during 1919 numbered 4,702, 2,457 males and 2,245 females, giving a birth-rate of 21.9 per 1,000 of population, compared with 4,769, and a rate of 21.5 the previous year.

4. In the Urban districts there were 2,858 births, 1,488 males and 1,370 females, giving a birth-rate of 23.4 ; and in Rural districts 1,844, 969 males and 875 females, giving a birth-rate of 19.8 per 1,000 of population.

The corresponding figures for the previous year were :— Urban districts, 2,858, and a rate of 22.9 ; Rural districts, 1,911, and a rate of 19.6. The Birth-rate for England and Wales was 18.5.

Illegitimate Births.

5. The number of Illegitimate Births was 343, so that 72.9 per 1,000 of the total births were Illegitimate, compared with 309 and 64 per 1,000 the previous year.

6. The ratio of Illegitimate Births per 1,000 of total births in the various sanitary districts is as follows :—

Urban Districts.		*Rural Districts.*	
Arlecdon & Frizington	62	Alston	108
Aspatria	48	Bootle	32
Cleator Moor	50	Brampton	127
Cockermouth	89	Carlisle	78
Egremont	44	Cockermouth	68
Harrington	60	Longtown	108
Holme Cultram	123	Penrith	82
Keswick	86	Whitehaven	47
Maryport	54	Wigton	99
Millom	86		
Penrith	191		
Whitehaven	66		
Wigton	125		
Workington	63		

7. In Urban districts 72 per 1,000 births were illegitimate. In Rural districts 73 per 1,000 births were illegitimate.

Deaths.

8. The number of Deaths regsitered was 3,321, 1,685 males and 1,636 females. This gives a death-rate of 16.1 per 1,000.

9. In the Urban districts there were 1975, 1,007 males and 968 females, giving a death-rate of 16.8, and in Rural districts 1,346 deaths, 678 males and 668 females, giving a rate of 15.1.

The death-rate for England and Wales was 13.8.

Infant Mortality.

10. 4,702 births were registered during the year, 493 infants died before reaching the age of one year, so that the infant mortality was at the rate of 104 per 1,000 births.

11. In the Urban districts there were 2,858 births and 332 deaths of infants. The infant mortality rate was, therefore, 112 per 1,000 births, 12 per 1,000 higher than in the previous year; and in Rural districts 1,844 births, 171 deaths of infants, giving an infant mortality rate in Rural districts of 92 per 1,000 births, 9 per 1,000 higher than in the previous year.

The infant mortality for England and Wales was 89.

12. The main causes of infant deaths during the year were :—Measles, 17; Whooping Cough, 8; Influenza, 7; Tuberculosis (all forms), 6; Bronchitis, 54; Pneumonia, 37; Diarrhœa, 22, and Congenital Debility, 106.

13. The difference between the death-rates of legitimate and illegitimate infants is most marked, and is a very disquieting fact.

14. In Urban districts the death-rate of legitimate infants was 108 per 1,000 legitimate births; whilst of illegitimate infants it was 168 per 1,000.

15. In Rural districts the infant death-rate of legitimate infants was 85 per 1,000 of legitimate births; whilst of illegitimate infants it was 185 per 1,000.

16. Taking the figures for the whole County, they are :—

Infant death-rate of legitimate infants .. 99 per 1,000
Infant death-rate of illegitimate infants .. 174 per 1,000

Cancer.

17. 145 deaths were registered as due to Cancer, compared with 130 the previous year.

Zymotic Diseases.

18. There were 190 deaths registered from the seven principal zymotic diseases, giving a zymotic death-rate of 0.9, the same as in the previous year.

The zymotic death-rate in Urban districts was 1.2, and in Rural districts 0.5,

19. The highest rates were in the Borough of Whitehaven (2.8), and Workington (2.2) of the Urban districts, and of the Rural districts the highest rate was in Alston (1.1). In Keswick, Millom, and Penrith Urban districts, and Bootle, Longtown and Penrith Rural districts, there were no deaths from zymotic diseases.

Smallpox.

20. Two notifications were received in the Borough of Workington in August. I saw the cases in consultation with the Medical Officer of Health, and we came to the conclusion that they were cases of Chickenpox. There was no further development.

21. At the time of writing this Report, I consider this County is in great danger of an outbreak of Smallpox, and should such outbreak take place, the outlook is, in my opinion

an exceedingly grave one, with so many people of all ages unvaccinated. An outbreak will be exceedingly difficult to control, and once it reaches epidemic proportions there will be a large number of deaths.

22. There is one, and only one, safe prevention against Smallpox, and that is vaccination and re-vaccination.

23. I have no means of knowing how many people there are in the County who have never been vaccinated, but judging from observations made on the school children during the past twelve years, I don't think it is any exaggeration to say that half of the child and adolescent population is unvaccinated, and therefore, very susceptible to Smallpox.

24. Many parts of the country have been visited by Smallpox during the past year, and serious outbreaks have only been prevented by the vigilance of the Sanitary Authorities concerned. My advice to everyone is get vaccinated or re-vaccinated now, at once, and don't wait till a case of Smallpox occurs. This is the only sure means of prevention.

Scarlet Fever.

25. The prevalence of Scarlet Fever still continues to diminish.

During the year 140 cases were notified, and 2 deaths registered, as against 164 cases, 3 deaths, the previous year.

Sixty-four cases occurred in Urban districts, 35 of which were in the Borough of Workington. In the Rural districts there were 76 cases, 19 in the Carlisle district, and 21 in the Cockermouth district.

Diphtheria.

26. There has been a considerable increase in the number of Diphtheria cases notified, 393 as against 254 in the previous year.

In Urban districts there were 267 cases, of which 152 were in the Borough of Workington.

27. When Diphtheria is endemic in a district, there must be one or more insanitary conditions responsible as the predisposing cause.

Diphtheria has been endemic in Workington for the past two or three years, in 1918 there were 95 cases, and in 1917 60 cases.

During the year Dr. Thomson, the Medical Officer of Health, has issued special Reports on the outbreak of Diphtheria, and gives as the chief predisposing causes the following :—

28. (1) The neglect of scavenging of the streets.
(2) The unsatisfactory condition of the sewers.
(3) The insanitary condition of some of the Schools, which have trough closets which cannot be kept clean.
(4) The insufficient heating and unsatisfactory cleaning of the schools.
(5) The dumping of refuse at the Cloffocks, which is much too near the town.
(6) The unsatisfactory condition of many of the houses in the Borough.

29. In the Rural districts there were 126 cases of Diphtheria, 63 of the cases being in the Cockermouth district, and principally in those parts of the district where large midden privies are in use.

Typhus Fever.

30. No case was notified.

Enteric Fever.

31. Thirteen cases were notified, as against 23 the previous year. Five cases in Urban districts and 8 in Rural districts.

Puerperal Fever.

32. Two cases were notified, one in the Borough of Workington, and one in Maryport.

Five deaths in Rural districts were, however, registered, three in the Cockermouth Rural district, and one each in the Longtown and Penrith Rural districts : none of these were notified.

Measles.

33. 1,999 cases of Measles were notified during the year, compared with 2,701 the previous year.

34. The number of deaths, however, was greater, being 75, as against 52 deaths in 1918.

35. Cases were notified in all the districts, but the epidemic appears to have been most serious in the Boroughs of Workington and Whitehaven, in the Urban districts of Aspatria and Keswick, and in the Rural districts of Alston, Brampton, Whitehaven and Wigton.

Whooping Cough.

36. Twenty-five deaths were registered from Whooping Cough, compared with 34 the previous year.

Diarrhœa.

37. Diarrhœa was responsible for 37 deaths of children under two years of age.

Erysipelas.

38. Ninety-nine cases were notified, compared with 64 in the previous year.

Influenza.

39. Cases of Influenza occurred in every sanitary district, but it was worst in the Urban districts of Gleator Moor, Egremont, Millom, and Workington, and in the Rural districts of Bootle, Cockermouth and Whitehaven.

40. Altogether there were 328 deaths registered from Influenza, a large proportion of which again occurred between the ages of 25 and 45.

41. Pneumonia followed an attack of Influenza in many cases, and in a special report on the epidemic of Influenza the Medical Officer of Health of Millom draws attention to this.

42. In this Special Report Dr. Pratt says :—

> "My own experience was that nearly all serious cases of Influenza had Pneumonia (in one form or another) as a complication, but that in some cases a very careful examination of the patient was necessary to detect its presence."

43. A Conference of the Medical Officers of Health in the County was held early in February to decide what steps should be taken in the event of another serious epidemic, the whole of the Nursing Staff of the County Council was put at the disposal of the Sanitary Authorities, should they be required. Only two Sanitary Authorities, however, availed themselves of this offer.

Respiratory Diseases.

44. During the year 550 deaths were registered as due to Respiratory diseases (excluding Phthisis).

371 in Urban districts, and 179 in Rural. These give respectively rates of 3.1 and 2.0 per 1,000, compared with 3.5 and 2.3 the previous year.

The rate in the County was 2.6, compared with 3.0 in 1918.

Water Supply.

45. HARRINGTON.—The present supply is intermittent, owing to faulty pumping arrangements.

The high parts of the district have no water half their time. A new supply is in contemplation.

46 CARLISLE RURAL.—Several parishes in this Rural area are badly in need of a water supply. At the present time the only supply is from wells.

47 COCKERMOUTH RURAL.—The greater part of the Rural District is well supplied with a constant water supply, either from Crummock Lake, Overwater, or from the River Derwent, by the Maryport scheme, the latter, however, is a filtered river water, and although it has always in the past given a good analysis, is open to suspicion.

48 There are also some good small public and private supplies, in all about 70% of the population is supplied from one or other of those mentioned.

49 The following districts in the Rural area have defective water supplies :—Beehive, Deanscales, Pardshaw, Pardshaw Hall, Eaglesfield, part of Broughton Moor, High and Low Lorton, Bassenthwaite, Embleton, Redmain and Blindcrake.

50 LONGTOWN RURAL.—Many of the parishes in this Rural area are without any water supply, and the matter has been under discussion for, to my own knowledge, the last ten years, but I understand, for a much longer period than this, and nothing has been done, nor is likely to be done, without considerable pressure from the higher authorities.

51 The parishes of Kirklinton Middle, Westlinton and Scaleby, are dependent for water on shallow wells, which are liable to pollution, and often run dry in the summer.

52 WIGTON RURAL.—The villages in the valleys of the Fells, in the southern part of this district, are well supplied with water; each of the following villages has a gravitation supply:—Hesket-New-Market, Caldbeck, Brocklebank, Torpenhow, Ireby and Uldale. In the south-west part of the district the following villages receive a good supply from the mains of the Aspatria and Silloth Joint Water Board: Fletchertown, Mealsgate (part of), Blennerhasset, Westnewton (except Howrigg Hamlet), Allonby, Hayton, Bolton Low Houses, Bolton New Houses, Broughill and Waverbridge, and some scattered houses between Ireby and Mealsgate. About 25 houses in the parishes of Boltons, Woodside and Westward, are supplied from the mains of Wigton Urban District, and a few farms take compensation water.

53 In the northern part of the district practically all the villages depend for their water supply on shallow wells, which, owing to the nature of the soil, are liable to, and many of them actually are, contaminated by soakage, and in many of the villages there is an acute shortage of water in dry summers. Some houses are dependent for their water supply on rain water, which is caught and stored in cisterns.

54 For the last 12 years, to my own knowledge, the Medical Officer of Health (Dr. Briggs) has been trying to persuade the Council to get a satisfactory supply for this part of his Rural area, but so far without avail. In 1911 Dr, Briggs obtained analyses of the water of 101 wells, of these 78 were found to be polluted, 3 were doubtful, and 20 good. Following this, and as the result of Dr. Briggs' representations, the Surveyor was directed to prepare a scheme to supply by gravitation this northern part of the Rural district. The Surveyor submitted a scheme known as the "Overwater" Scheme to supply this area from the mains of the Aspatria and Silloth Joint Water Board.

55 The following parishes could be supplied by such a scheme:—Westnewton (hamlets of Howrigg and Grossrigg, Langrigg and Mealrigg), Bromfield, Blencogo, Dundraw, Waverton (Hamlet of Lesson Hall), Oulton, Aikton (Hamlets of Wampool, Laythers and Whitrigglees), Kirkbride and Bowness (including the villages of Port Carlisle, Glasson, Drumburgh and Easton).

56 Ninety-six of the 101 wells above referred to were in the area which would have come into this "Overwater" Scheme; of these, 75 were polluted, 2 doubtful, and 19 good.

At various times Dr. Briggs has made analyses of these wells, and the result has always been the same, a high proportion have been found to be polluted, and many of them very seriously.

57 In visiting the District it is obvious that many of the wells are liable to contamination from the proximity of middens, privies, etc.

58 This "Overwater" Scheme, which would supply practically all the villages, which so much need water at the present time, was adopted at a meeting of the Rural District Council, held on the 12th December, 1911, and was then submitted, with full particulars, to the Parish Councils concerned. The scheme, as was to be expected, did not meet with a favourable reception from most of the Parish Councils, mainly, I understand, on account of the cost. The opposition of the Parish Councils successfully, as was said locally, "knocked the Scheme on the head."

59 On the 16th April, 1912, at another Meeting of the District Council, the former resolution adopting the Scheme was rescinded, but it would appear that the District Council had not the courage of their convictions, as at this meeting only 16 were present out of 31. 11 voted for rescinding the resolution, 4 against, and one did not vote.

60 It is quite obvious that a public supply is an absolute necessity for this part of the Rural district. No amount of cleaning of the wells will do any permanent good, the soil is a very porous one, and contamination of the wells is bound to take place and moreover, many of the wells run dry during the summer.

61 The only satisfactory solution is a "gravitation" scheme, such as that suggested by the Surveyor in 1911, the estimated cost of which was, at that time, £12,885, the District will be now fortunate if they obtain such a scheme at three times the cost.

62 In this respect the inhabitants of this district have little to thank the District Council for. The District Council, and not the Parish Councils, is the Authority responsible for supplying the whole of their district with a good and abundant supply of water, and if they had had the courage of their own convictions, and had gone on with the scheme as passed in 1911, instead of referring it to the Parish Councils, the whole

of the district would, by this time, have had the inestimable blessing of an abundant and wholesome water supply, instead of being in the plight that they are in at the present time.

Rivers and Streams.

63 COCKERMOUTH URBAN.—In 1912 I ussued a Report on the pollution of the River Derwent. This Report dealt fully with the Sewage disposal of the Cockermouth Urban District.

64 In his Annual Report to the Cockermouth Urban District Council, for the year 1914, the Medical Officer says: "The question of the drainage and sewage disposal of the town has been prominently before your Council during the year. Your Council were unsuccessful in defending an action taken against the Council for the flooding of a tanyard from the gulley connected to your sewer."

65 "The County Council have served notice on your Council to abate the pollution of the river caused by sewage from your outfall works passing in a crude state into the river. A very excellent report on your sewerage system was presented to your Council by Mr. Beswick, of Whitehaven, a Sanitary Engineer engaged on Government Drainage works.

66 "This Report showed that there were many defects in your sewers, and that your outfall works were quite inadequate. The Report brought out prominently the fact that a large amount of river water is gaining access to your sewers; the amount of liquid at the outlet being on a moderate estimate more than three times that which can be accounted for by the water supply to the town and the rain water carried by the sewers.

67 "This is a matter calling for early attention by your Council, as this excessive flow, besides making the question of dealing with the sewage at the outlet almost hopeless, must also be having a very bad effect on the brickwork of your sewers.

68 "Your Council have decided to lay an accessory sewer from the Fitz Bridge to the tanks, and another from the tanks to the sewage field, though your Surveyor has recorded his opinion that this will not abate the pollution of the river, as it will not even then be possible to close the outlet through the Whinnah Dub field without flooding the tanks.

69 "A perusal of Mr. Beswick's report brings one to the same conclusion, as it is evident that from the tanks to the field the question is not one of capacity of pipes, but of levels.

70 "It would be wiser to first relay the sewers in the Bitter Beck and below the Victoria Bridge, where the leakage is evidently occurring.

71 "Your tanks are quite inadequate in size, and being close to the main Workington road, a considerable nuisance is caused by the periodic emptying of them."

72 "On accouut of the levels a large part of your sewage field cannot be used."

73 In his Report for 1919, the Medical Officer says :—

"The sytem, though once a model one, is now out-of-date. The main trouble, however, is the pollution of the River Derwent, and if proper steps are taken to prevent this at all times, except during excessive rainfall when it does no damage, I think a case could be made out for delaying the new scheme until more normal times. The urgent need at present is housing and more housing, and I think that nothing should be allowed to interfere with progress in that direction.

74 "If the direct outlets from the tanks to the river were kept under proper control, and never under any circumstances used in dry weather, or, better still, if it were converted into a true flood water overflow (the same criticism applies to the direct outlet to the river from the first manhole in the sewer field), and if in addition an additional pipe could be led from the latter manhole to the sewer fields at a better level, I think the system could stand for some considerable time yet, but whatever is done should be done with first-class engineering advice, so that there is no danger of hundreds of pounds being spent on sewers that never carry any sewage, as has happened during the last few years."

75 With the last sentence of this quotation I quite agree, but with the former part I cannot agree, if the condition of the sewers is such that they cannot deal adequately with the present volume of sewage, they certainly will not be able to deal with it when some 300 new houses add their sewage to the present volume.

Sewerage.

76 CLEATOR MOOR.—The District Council of this Urban area has at present under consideration a new sewage disposal system.

77 The existing arrangement is most unsatisfactory. All the sewage from the north side is collected into tanks near the station, and is supposed here to be treated by precipitation with lime, but in practice very little is used. The effluent from the tanks runs into the Nor Beck, which is little, is any, better than an open sewer, and so into the River Keekle, and then into the River Ehen, and is a serious source of pollution to this river.

78 The mid system, which serves the central part of the town, drains into tanks on the north side of the railway; a few cottages and small houses have a separate tank, which drains into the main tank.

79 In the south system, serving the south-end of the town, the sewage is first collected into two subsidiary tanks, and flows into a main tank, to which it is conveyed in a sewer under the river.

The whole of the sewage ultimately finds its way into the River Ehen.

80 HOLME CULTRAM URBAN—Silloth Ward is satisfactory, and is completely sewered with an outfall into the Solway.

81 West Silloth and Green Row are partly sewered by unjointed agricultural drain pipes, discharging partly into a ditch in the allotment grounds, which is cleaned out periodically by the Urban District Council, and partly to a brook.

82 In Skinburness most of the houses are sewered to Cesspools, which are emptied, as required, by the occupiers; one row of houses, "The Bungalows," is sewered to a common cesspool, which has an overflow on to land.

83 BLITTERLEES is partly sewered also by agricultural drain pipes, partly to catch-pits and partly to a roadside drain which flows into a brook.

84 SKINBURNESS, which has a large population of visitors in summer, should be properly sewered.

The question of sewering WEST SILLOTH and GREEN ROW should be taken into consideration at as early a date as possible.

85 EDDERSIDE, in the HOLME ST. CUTHBERT'S WARD, was, I believe, sewered about 1913, but in no other part of the district is there any regular system of sewerage.

86 Sewerage is urgently needed for ABBEY TOWN, which has a population of about 600. NEWTON ARLOSH, in the HOLME EAST WAVER WARD, is a compact little village with a population of about 300, and should also be properly sewered.

87 The rest of the district consists mainly of scattered Rural villages, the sewering of which is not an urgent one, but the drainage of farm yards is, in many instances, very unsatisfactory, and should have attention.

88 WIGTON URBAN.—The sewage from this Urban area flows to a field of about 13¼ acres, and about 1½ miles to the north of the town. After screening, it is treated in a series of six detritus tanks arranged three and three, each 8 ft. x 4ft. x 5 ft. 6 in. deep.

89 The effluent from the tanks passes on to land the surface of which is trenched for drainage, but the soil is a heavy clay, and the field is too flat to allow of successful irrigation.

90 The effluent from the irrigation land is little, if any, better than when it leaves the tanks ; it flows into the Colemire Sough, which joins a mill-race diverted from the river Waver, at Lesson Hall, and so into the River Waver.

91 The Surveyor to the Urban District Council has, I understand, prepared a scheme of Sewage disposal which would deal satisfactorily with the Urban district, and some of the small villages in the Rural district in the immediate vicinity.

92 COCKERMOUTH RURAL.—The following parishes in this Rural area are all badly in need of satisfactory schemes of sewering, and for the disposal of sewage. They have all been reported on to the Cockermouth Rural District from time to time, but so far no action has been taken.

93 BROUGHTON (Population 1,363).—Prior to 1909, this parish was reported on as requiring a sewage scheme, but nothing has yet been done. At present slop drains open on to channels in a field which slopes down to the River Derwent.

94 DEARHAM (Population 2127).—Attention has repeatedly been drawn to the condition of this village. In 1909 I reported to you, and a complaint was sent to the Local Government Board. As a result, an Inspector from the Board reported to the Cockermouth Rural district as follows :—

LOCAL GOVERNMENT BOARD,
WHITEHALL, LONDON, S.W.,
17*th January*, 1914.

SIR,

I am directed by the Local Government Board to state that they have had under consideration the report of their Inspector, Dr. Farrar, after his recent visit to Dearham, in the Cockermouth Rural District, with reference to the arrangements in the village for drainage and excrement disposal.

From statistics obtained by Dr. Farrar, it appears that as regards general death-rate and infant mortality rate, Dearham compares unfavourably with the rest of the district.

Dr. Farrar reports that such sewerage as exists in the village is incomplete and unsatisfactory, and that the present system of excrement disposal is by means of midden privies, most of which have unduly large receptacles, and which are generally inadequately scavenged. He recommends that the Rural District should take active steps to bring about the conversion of midden privies to water-closets, and should also adopt the scheme for adequate and satisfactory sewerage for the village.

I am to urge the district to take these recommendations into consideration, and in regard to the latter, to suggest that they should obtain engineering advice, with a view to a suitable scheme at an early date.

I am, Sir,
Your obedient servant,
(Signed) F. J. WILLIS,
Assistant Secretary.

96 In spite of this, and also of the fact that Broughton and Dearham are two of the largest mining villages in the Rural district, nothing has yet been done, while many of the smaller places have been sewered for years.

97 PAPCASTLE AND GOAT (Population 556).—The drainage from both these parishes goes into the River Derwent.

98 BROUGHTON MOOR (Population 997).—At the time of writing this Report, the work in connection with sewering this parish is nearing completion.

99 LITTLE CLIFTON (Population 494).—In March, 1914, the District Council resolved that the engineer prepare plans for the sewering of this area. Nothing has yet been done.

100 STAINBURN (Population 270).—This parish is in close proximity to Workington, and could probably be connected to the Workington sewers.

101 ROSTHWAITE-IN-BORROWDALE.—The Local Government Board decided that this parish should be sewered, and an enquiry was held on the 5th March, 1914, into the suitability of the plans. Nothing has yet been done.

Sale of Food and Drugs Acts.

102 The following is a copy of the County Analyst's Report for the year :—

ANNUAL REPORT OF THE COUNTY ANALYST.

THE COUNTY ANALYST'S LABORATORY,
WHITEHAVEN,
8th January, 1920.

GENTLEMEN,

SALE OF FOOD AND DRUGS ACTS.

During the past year 310 samples were analysed, all of which were taken by Police Inspectors acting under the direction of the County Council. 17 were found to be adulterated. The percentage of adulteration was, therefore, 5.5, showing an improvement on the corresponding figure for the year 1918, which was 6.7.

Adulteration was confined wholly to milk, with one exception. Among the samples of groceries submitted, one purchased as cinnamon was found to be the popular substitute, cassia.

Milk.—178 samples were examined. Out of this number 16 fell below the standard fixed by the Sale of Milk Regulations. This is equivalent to 9%, a more satisfactory figure than that of the previous year, which was found to be 11.7%.

In addition to the above, 8 samples were taken as "appeals to the Cow."

The average composition for the whole year was :—

Milk-fat	3.55
Non-fatty Solids	8.82
Water	87.63
	100.00

and for each Quarter :—

	Jan. to Mar., 47 *samples.*	*April to June,* 48 *samples.*	*July to Sept.,* 47 *samples.*	*Oct. to Dec,* 43 *samples.*
Milk-fat	3.73	3.29	3.44	3.80
Non-fatty Solids	8.81	8.80	8.70	9.00
Water	87.46	87.91	87.86	87.20
	100.00	100.00	100.00	100.00

A list of all the articles analysed throughout the year is attached hereto.

I am, Gentlemen,

Your obedient Servant,

ROBERT HELLON, Ph.D., F.I.C.,
County Analyst.

ARTICLES.

examined under the Sale of Food and Drugs Acts during the year 1919.

Milk	185 samples
Pepper	13 ,,
Sugar	12 ,,
Baking Powder	11 ,,
Coffee	10 ,,
Tea	9 ,,
Butter	9 ,,
Rice	8 ,,
Oatmeal	8 ,,
Lard	6 ,,
Cocoa	6 ,,
Cornflour	5 ,,
Ground Ginger	4 ,,
Jam	4 ,,
Sago	4 ,,
Cheese	3 ,,
Bread	2 ,,
Syrup	2 ,,
Mustard	2 ,,
Flour	2 ,,
Cream of Tartar	2 ,,
Vinegar	1 sample
Tapioca	1 ,,
Cinnamon	1 ,,
	310

Tuberculosis.

103 When the Sanatorium Benefit Clauses of the National Insurance Act came under consideration, your Council wisely decided that the benefits should be available for everyone, insured persons, non-insured and dependants.

104 Sanatorium treatment is provided for both adult males and females at the Blencathra Sanatorium, where 30 beds are retained, in addition, your Tuberculosis Officer is authorised to utilise private beds in the Sanatorium over and above that number if necessity arises, and a bed is available. Boys under 15 years, and girls up to 16 years of age are sent to The " Philipson " Children's Sanatorium, Stannington, as and when a bed can be procured.

105 The scheme has made provision for the opening of nine dispensaries, six of which are open at the present time one or two days a week, these are situated at Penrith, Workington, Whitehaven, Millom, Maryport and Wigton. Three more at Keswick, Cockermouth, and Aspatria, will be opened shortly. It has also been decided lately to open a dispensary at Cleator Moor. Premises have been obtained, and will be ready for use very shortly. The scheme also provides for sub-dispensaries in the smaller areas, as and when the demand for them arises.

106 Your Medical Officer of Health is the Chief Tuberculosis Officer, and the rest of the staff are Assistant Tuberculosis Officers, as well as Assistant Medical Officers of Health and School Medical Officers in the areas in which they are placed.

The routine carried out in all cases is as follows :—

107 As soon as a case has been notified, if no application has been received for Sanatorium Benefit, a letter is sent to the Medical Practitioner who has notified the case, asking if Sanatorium Benefit is required or desired by his patient. If so a form of application is sent to the patient.

108 On the receipt of the application for benefit, if the case is an insured patient, the application is sent to the Insurance Office, the patient is visited and examined by the Tuberculosis Officer of the area, who sends his report to the Chief Tuberculosis Officer, who then makes his recommendation for treatment to the Insurance Committee if the case is that of an insured person, or to the Health Committee if the patient is a non-insured person or dependant.

109 The treatment considered suitable to the case is then arranged. If the case is one requiring residential treatment, and some time is likely to elapse before a bed in the Institution is available, either dispensary or domiciliary treatment is ordered during the period of waiting for a bed. In the case of non-insured persons and dependants, no domiciliary treatment can be granted, but where a dispensary is available, treatment there is advised.

110 Where there is a District Nurse, she also acts as Tuberculosis Nurse, and keeps every notified case under observation until notified by the Tuberculosis Officer that further observation is unnecessary.

111 When anyone is discharged from the Sanatorium, a letter intimating the day on which the patient will leave is sent to the Superintendent of Nurses, asking that the Nurse of the District will visit the patient periodically, but if there is no district nurse,one of the County Council Nurses performs this duty, and keeps the case under observation. A letter is also sent to the patient's doctor, intimating that his patient has left the Sanatorium, and asking him to take charge of the case again.

112 Every case under treatment is reviewed ten days or a fortnight before the period of treatment expires, and further or different treatment in each case is determined on only after examination by one of the Tuberculosis Officers, or if the patient is in an Institution, by the Medical Officer of that Institution, a report being sent to the Chief Tuberculosis Officer.

113 In this way, after notification to the recovery or death of the patient, or until his removal to another district, the case is never lost sight of.

114 Some dispensary patients are careless about going for examination, more especially those who are nearly well, and imagine themselves able to do a fair day's work. Such cases are invariably looked up from time to time by the Nurse attending at the dispensary, and advised, sometimes almost beseeched, to attend for examination regularly.

115 This scheme, so far as it has yet developed, has worked admirably, and it has been a great boon to many sufferers, but much yet remains to be done before a complete scheme is developed.

116 During the year 215 cases of Pulmonary Tuberculosis were notified (142 in Urban and 73 in Rural Districts) as against 196 in the previous year. There were 58 cases of "other forms" of tuberculosis compared with 39 in the previous year.

117 161 deaths from Pulmonary Tuberculosis occurred (100 in Urban and 61 in Rural Districts) as against 177 in the previous year. There were 63 deaths from other forms of Tuberculosis, compared with 71 in the previous year.

118 A slight increase in the number of notifications does not, necessarily, point to an increase in the incidence of Tuberculosis, and I think it is due to stricter notification of cases by Medical Practitioners.

119 During the year 234 applications for Sanatorium Benefit have been received, 82 of these were from ex-service men, 150 from insured persons (123 male and 27 female), 29 from dependants of insured persons over 16 years of age (1 male and 28 female), and 55 from dependants under 16 years of age (27 male and 28 female). 22 of the above patients have been under treatment twice during the year.

Ninety-eight cases were still in receipt of treatment at the end of the year.

120 Of the applications for Sanatorium Benefit, 3 were not suitable cases for treatment, 3 persons withdrew their applications for benefit, and 1 died before examination by the Tuberculosis Officer.

121 Of the cases treated, 131 were sent to the Sanatorium, 32 were treated at home (*i.e.*, received Domiciliary Treatment), and the remainder were referred to Dispensaries. Two were recommended for Hospital Treatment. One insured female and 3 dependants (female) under 16 were awaiting admission to the Sanatorium at the end of the year. Two died; three left the district before commencing treatment.

Ten open-air shelters were in use during the year.

122 The following table shows the cases treated during the year, and the result (up to the end of the year) of that treatment :—

TABLE SHOWING CASES TREATED DURING 1920.

CLASS OF APPLICANT	Sex	No. of Applicants	No Treatment offered	Withdrawn or refused treatment.	Died before examination	Died before com'ment of treatmnt	Hospital.	Left district before exam	Domiciliary	Sanatorium Treatment.					
										No.	Improvd	Stationary.	Not Improved	Dead.	Still in San
Insured Persons	M	123	2	8	—	1	2	3	27	69	31	10	—	2	26
	F	27	1	2	—	—	—	—	5	15	10	2	—	—	3
Dependants over 16	M	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	F	28	5	2	—	—	1	—	—	14	12	1	—	—	1
Dependants under 16	M	27	—	2	1	1	—	—	—	20	10	—	—	—	10
	F	28	1	2	—	1	—	—	—	13	5	—	—	—	8

123 Five Dispensaries were open during the year, one for ten months only, and another for nine months.

124 At the beginning of the year there were 249 names on the registers of the Dispensaries, and 166 new names were entered on the registers during the year.

125 There were 1,463 attendances at the Dispensaries, and 1,226 examinations were made.

126 The number of casual consultations (excluding contacts) was 199.

127 34 patients ceased to attend from one cause or another.

Visits were paid to 788 patients' homes by the Tuberculosis Officers and Nurses.

90 contacts were examined.

There were 6 deaths of Dispensary patients from Tuberculosis.

128 In 1914 the County Council recognised that something more would have to be done if tuberculosis was to be more satisfactorily dealt with. The provision already made for the diagnosis and immediate treatment of early cases was adequate, but if any headway was to be made in prevention, something would have to be done for the isolation of advanced and chronic cases to prevent spread of infection.

129 About eight acres of land were purchased, on which it was proposed to erect a hospital to which these cases could be removed. The war, however, prevented this scheme from being carried out.

130 In 1918 a report was submitted by your Tuberculosis Officer on the condition of all patients who had received Sanatorium Benefit since the commencement. In that report it was pointed out that although the majority of patients received marked benefit from the treatment granted,on their return home, in a large percentage of cases all the gain was soon lost.

131 Reasons for this falling off were given in that report, and in accordance with instructions from your Health Committee, I issued a further report on the treatment of Tuberculosis, which was considered by that Committee on 12th April, 1919.

132 In my report I recommended the institution of an Industrial Colony, and pointed out that the purpose of the Colony was to save those tuberculous patients whose disease had been almost or completely arrested by Sanatorium Treatment or otherwise, but who remain liable to relapse. The benefit of such a colony is not physical alone. There is the additional advantage that in the longer period of treatment the habit of a disciplined hygienic life has a chance of becoming ingrained in the patient.

133 For such improved and for many apparently cured persons, ordinary work and surroundings entail recurrence of the disease with corresponding economic loss. The time spent at the Sanatorium and the associated outlay is thus largely wasted.

134 Residence in a colony is a test period, a period of gradual accommodation of the patient to the conditions of ordinary working life in some cases. For others return to their ordinary occupations at any time would mean certain relapse, it is a period of education and training in new pursuits.

135 As an outcome of these reports, on the recommendation of your Health Committee, the County Council decided that a hospital for advanced and chronic cases was not enough to meet the Tuberculosis requirements. The land already bought for the erection of a hospital was, therefore, as the site was not suitable for colony purposes, disposed of, and Englethwaite Hall and the adjoining land of about 32 acres was purchased.

136 In this salubrious area an Industrial Colony is to be started, and various trades are to be taught. Work suitable for each will be encouraged under medical supervision.

137 In the Hall itself there will be beds for advanced and chronic cases, and hospital beds for cases requiring a few days rest. The Colonists proper will live and sleep for the most part in open-air shelters in the grounds, but will take their meals in the common dining room of the Hall.

138 At the time of writing this report alterations and improvements are being carried out as rapidly as possible, and it is hoped that within a very short time this establishment will be in full working order.

139 The possibilities of extension in this work are great, but the two main directions in which I would wish to see it developed are :—

(*a*) The establishment of a village settlement.
(*b*) The erection of an open-air residential school for delicate children.

140 With regard to the former, early in the present year an influential deputation waited upon the Minister of Health to urge the establishment of Village Settlements.

141 The case for the establishment of village settlements put before the Minister was, broadly, that Sanatorium treatment for Tuberculosis, even when accompanied by training in a suitable occupation, had been found to be inadequate as a means of combating the disease. General experience had proved that patients who returned from the Sanatorium to their homes and former occupations were unable to earn a living and maintain their health. The interest, both of the patient and the community, require that patients should pass through the three stages of :—(1) Sanatorium treatment, (2) training suitable to his capacity, (3) permanent residence and work in suitable surroundings. The village settlement should be a natural development of the Sanatorium and Training Colony, and the crippled patient should be able to look forward, on completion of his course of treatment and training, to take up permanent residence in a settlement, where, still in close touch with the Sanatorium, he could work under conditions which would enable him to maintain his health, and retain association with his family and dependants. In the case of a civilian, the patient's earnings would require

to be supplemented, but even so the community would be the gainer, because of prevention of the spread of infection, and by the fact that the tuberculous patient would be in some degree a productive worker.

142 With regard to an Open-air School, this is neither the time nor the place to speak of it. No tuberculosis scheme can be complete without this adjunct, and money spent on it would be well invested.

143 The ideal scheme for tuberculosis, apart from healthy surroundings and good food, would include :—

(1) PREVENTION.

Suitable restorative centres for the treatment, especially of young persons in poor health, anæmic and dyspeptic, or showing other signs of predisposition to disease, and open-air schools for delicate children.

(2) EARLIER DIAGNOSIS.

144 The symptoms and signs of Pulmonary Tuberculosis may cause such small disturbance to patients that no medical advice is sought till the disease has advanced past remedy.

Until the need for periodic and thorough medical examination of the whole community is realised by the public, prevention of disease and its early discovery are unattainable ideals.

(3) EARLY SANATORIUM AND HOSPITAL TREATMENT.

145 For all types of medical and surgical Tuberculosis.

146 (4) Provision of suitable accommodation, and, if necessary, isolation of chronic and incurable cases.

147 (5) Work for all cases, sufficiently recovered, of suitable character under medical supervision, and in a favourable environment.

Public Health (Venereal Diseases) Regulations 1916.

148 The scheme of the Council for diagnosis and treatment of Veneral Diseases consists of :—

149 (*a*) The free provision to medical practitioners of facilities for obtaining pathological reports on blood and morbid products from patients infected, or suspected of being infected, with Veneral Disease.

150 (*b*) Provision of Salvarsan substitutes free to such medical practitioners as have satisfied the Medical Officer of Health that they are qualified to receive them under Section (2) of the Local Government Board circular of 29th August, 1916.

151 (*c*) The establishment of Treatment Centres at such places in the County as the Council may consider suitable.

Conjointly with the City Council of Carlisle, the appointment of a Specialist Medical Officer, and the establishment of a treatment centre at the Cumberland Infirmary, Carlisle.

(*d*) PROPAGANDA.

152 The development of the work during the year 1919 is conveniently considered under these four headings.

(1) PATHOLOGICAL EXAMINATIONS.

153 Under an agreement with Professor Hutchens, University of Durham, College of Medicine, Newcastle-on-Tyne, to provide for reports on pathological examinations of blood and specimens in connection with the diagnosis and treatment of venereal diseases, the following pathological examinations were made during the year :—

From Persons residing in the County of Cumberland.	*For Medical Practitioners.*	*For Treatment Centres.*
Examination of Blood for Wasserman Reaction	24 ..	44
Examinations for Spirochaeta Pallida	— ..	—
Examinations for Genococci ..	— ..	4

(2) PROVISION OF SALVARSAN SUBSTITUTES.

154 The number of medical practitioners entitled to receive free supplies of salvarsan substitutes on application was two on 1st January, 1919. During the year the names of six other medical practitioners have been added to this list, making a total of 8.

155 Salvarsan substitutes were supplied for treatment, both at the Cumberland Infirmary and by private practitioners. The following particulars relate to the nature and quantity of salvarsan substitutes supplied during the year :—

Nature of Substitute.	*Quantity.*	*Number of Doses supplied. Cumberland Infirmary*	*Medical Practitioners.*
Galyl	.2 ..	.. —	.. 3
,, ...	.35 ..	.. 88	.. 15
,, ...	.40 ..	.. 76	.. 2
Novarsenobillon	— ..	.. —	.. 10

(3) ESTABLISHMENT OF TREATMENT CENTRES.

156 (*a*) CARLISLE.—The establishment of a Treatment Centre at the Infirmary is still the tedious subject of negotiations between the Infirmary Committee, the Authorities of the County of Cumberland and the City of Carlisle, and the Ministry of Health.

157 From 1st January, 1919, to 3rd September, 1919, a Venereal Disease clinic was held at the Cumberland Infirmary by members of the staff, and on the 10th September, Dr. A. E. Quine, the newly-appointed Medical Officer for this work, took over the clinics.

RETURN OF ALL PERSONS RESIDENT IN THE COUNTY OF CUMBERLAND WHO WERE TREATED AT THE TREATMENT CENTRE AT THE CUMBERLAND INFIRMARY DURING THE YEAR ENDED 31ST DECEMBER, 1919.

	Syphilis.		*Gonorrhea.*		*Conditions other than Venereal.*		*Total.*	
	M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
1. Number of persons who, on the 1st January, 1919, were under treatment or observation for ..	1—	2	—	—	—	—	1	2
2. Number of persons dealt with during the year at or in connection with the out-patient clinic *for the first time*, and found to be suffering from ..	14	8	1	1	3	2	18	11
TOTAL, Items 1 and 2 ..	15	10	1	1	3	2	19	13
3. Number of Persons who ceased to attend the out-patient Clinic :—								
(*a*) Before completing a course of treatment for	—	1	—	—	—	—	—	1
(*b*) After completion of a course of treatment, but before final tests as to cure of	2	—	—	—	—	—	2	—
4. Number of persons transferred to other Treatment Centres after treatment for	5	—	—	—	—	—	5	—

5. Number of persons discharged from the out-patient Clinic after completion of treatment and observation for ..	—	—	..	—	—	..	3	2	..	3	2
6. Number of persons who, on the 1st January, 1919, were under treatment or observation for ..	8	9	..	1	1	..	—	—	..	9	10
TOTALS, 3, 4, 5 and 6 ..	15	10	..	1	1	..	3	2	..	19	13

7. Total Attendance of Patients at the Out-patient Clinic ..	279
8. Number of Doses of Salvarson substitute administered in Out-patient Clinic	158

158 (*b*) Arrangements were made to open an out-patient clinic at Whitehaven, in January, 1920, by agreement with the Whitehaven and West Cumberland Infirmary. Preliminary steps were taken to provide Venereal Disease Treatment Centres at Penrith and Maryport in 1920.

(4) PROPAGANDA.

159 No organised propaganda campaign has been undertaken during the year, what should be done in the future is a matter for future consideration. From experience in the past, however, I do not hesitate to say that the majority of thinking people are glad to get information on a subject which has been kept in the background far too long.

160 Until the Council's scheme has been put in operation in 1920, it is not possible to judge to what extent patients will avail themselves of the facilities provided.

The co-operation of the medical practitioners is assured in the towns selected for the establishment of Treatment Centres.

The provision of facilities for disinfection (Prophylaxis) by persons who have been exposed to the risk of infection is not contemplated in the Council's scheme.

Maternity and Child Welfare.

(1) INSPECTION OF MIDWIVES.

161 Eighty-two Midwives were on the roll during the year 1919, 18 are *bona-fide* and 57 are District Nurse Midwives; the remainder being in practice on their own account. 296 visits of regular inspection have been made to the midwives,

and 48 special visits have been paid by the Inspector, who is also Superintendent of the Cumberland Nursing Association. She reports as follows :—

> "The standard of work is very good amongst the trained Nurse Midwives, and they pay special attention to, and are much interested in, Ante-Natal work. So far as they understand their work, the *bona-fide* midwives do their work well, but they need a good deal of supervision, so far as surgical cleanliness is concerned, and also with regard to the carrying out of the rules of the Central Midwives Board."

162 The supply of midwives is not adequate to the requirements, about 20 more are needed. There is, I think, a great need for Midwives in the following areas :—

Cleator Moor	2	Longtown R.D. ..	2
Egremont	1	Wigton R.D.	3
Moor Row	1	Cockermouth R.D. ..	2
Arlecdon & Frizington ..	2	Holme St. Cuthbert's in the Holme Cultram Urban District ..	1
Whitehaven	2		
Workington	2		
Bootle R.D.	1		

(2) General Arrangements for attending to the Health of Expectant and Nursing Mothers.

163 The present would appear to be a favourable opportunity for reviewing the activities of the County Council in regard to this most important matter from the commencement. In 1907 an Act was passed, the Notification of Births Act, 1907. This was, unfortunately, an Adoptive Act, that is to say, a Sanitary Authority could put into force the requirements of the Act or not as it thought fit. At a Meeting of your Health Committee, towards the end of 1908, no Sanitary Authority, having up to that time adopted the Act, I recommended that the Local Government Board be asked to allow the County Council to adopt the Act for the whole County. This request was not granted, on the ground that it was considered adviseable to give Local Sanitary Authorities more time to consider the matter for themselves. In making an application for the adoption of the Act, the County Council had to satisfy the Board that adequate arrangements were made for fulfilling the requirements of the Act, and for doing the work. The proposition of the County Council at that time was to utilise the services of the District Nurses and part of the time of the then small staff of school nurses as Health Visitors.

164 At a Meeting of your Health Committee, on September 22nd, 1913, the advisability of adopting the Act was again brought forward as only three Local Sanitary Authorities had up to that time adopted the Act, namely the Boroughs of Whitehaven and Workington, and the Urban District of Penrith.

165 At this Meeting a resolution was passed resolving to petition the Local Government Board again to sanction putting the Act into force by the County Council for the remainder of the County. The sanction of the Board was obtained this time, and the Act came into force on the 1st July, 1914, the County Council being constituted the Authority for carrying out the requirements of the Act.

166 In 1915, the Notification of Births (Extension) Act was passed, making it compulsory on all Sanitary Authorities to carry out its requirements, but when the earlier Act had been adopted by the County Council for the whole or any part of the County Area, that particular Council still remained the Authority for carrying out of the requirements of the Act.

167 From this short summary of the activities of the County Council in this matter, it becomes obvious that the importance of the work was early recognised, and that the various methods of having the work done had been under consideration for some time.

168 In organising such work as this, an intimate knowledge of the requirements of the whole area, a knowledge which must take cognisance of the distribution of the population, of the means of transit as well as of any organisations already in existence, such as voluntary nursing associations, is absolutely necessary if the proposed work is to be done efficiently and with due consideration for economy.

169 It would have been an easy solution of the problem to say: "We have in this County between four and five thousand births per annum, one whole-time Health Visitor can visit 500 infants, we will require 8 to 10 Health Visitors." A whole-time Health Visitor working in this County could not look after anything like 500 babies, and if the work had to be carried on by whole-time Health Visitors, we would require between 20 and 30. We had also to remember that a considerable proportion of the population in this County lived far away from the centres of population, and, therefore, a much smaller number of infants could be looked after by

one Health Visitor. Consequently if whole-time Health Visitors were to be employed for this purpose alone, it would sometimes happen that a long and fatiguing journey by rail or by bicycle, or both, might make it only possible to visit two or three cases. Travelling expenses under such a system would have been so heavy an item as could hardly be justified by the amount of work accomplished. At this time few realised what a large amount of school work would ultimately fall to Nurses to do, but it was certain that School work and Maternity and Child Welfare work would embrace the same areas clearly, therefore if Nurses could be obtained who could be trusted to undertake both duties, this was the method that should be adopted. The Cumberland Nursing Association was approached to enquire if they would allow their Nurses, acting as District Nurse Midwives, to undertake to work under the County Council.

170 This Association always anxious to do the greatest good to the greatest number, willingly offered help. Since this small commencement, the work has increased rapidly in extent, the relations between the Health Department and the Nursing Association have been of the most cordial nature, and up to the present nothing has occurred to disturb a relationship so necessary for efficient work.

171 I take this opportunity of expressing to the Nursing Association the debt of gratitude I owe to Miss Marsh, the Superintendent, and her staff of Nurses, for the able and willing help they have always given, help without which it would have been difficult to carry on at all during the trying time through which we have passed.

172 Arrangements have now been made with the Nursing Association to carry on the Maternity and Child Welfare work in those areas in which there is a Nurse Midwife. In these areas Ante-Natal visiting, Midwifery, Maternity Nursing, Supervision of Children between 1—5 years of age, and Health Visiting, are all carried on by the District Nurses, many of whom are fully trained Nurses, and all have the Central Midwives' Board's Certificate.

Fees are paid to the Nursing Association for each item of work undertaken by it.

173 Up to the present it has not been possible to start any centres for carrying on Maternity and Child Welfare work,

but arrangements have been made for the Medical advice and attendance of Private Practitioners, the Council, if necessary, paying the fees.

A similar arrangement to that mentioned has been agreed upon with the West Cumberland Nursing Association, and it is hoped before long that much needed work in the area covered by this Association will be started.

At the present time there are 62 Nurses belonging to the Cumberland Nursing Association engaged in this work. The Maternity and Child Welfare work of these areas not yet provided for is undertaken by Nurses of the County Council staff, whose whole time is divided between School work, Tuberculosis, and Maternity and Child Welfare work.

174 During the past year the following is a summary of the work done by District Nurses :—

Ante-Natal Visits paid	531	
Maternity Nursing	354	cases
Visits to Infants	11,231	
Visits to Children between 1—5 years ..	457	

175 The County Staff has paid 3,327 visits to infants.

In several areas considerable difficulty has been experienced in getting sufficient milk for infants and young children, and in these cases dried milk has been supplied at or below cost price, or even free, when the circumstances of the parents were such as to justify this discrimination. In the past the Nurses have been responsible for the distribution of this milk, but so soon as Maternity and Child Welfare Centres are opened a supply will be available at each, and will be distributed from them. Owing to the shortage of both Medical and Nursing staffs during the past year, it has not been possible, as I have previously stated, to open any Maternity or Child Welfare Centres, but during the present year such centres are to be opened in Penrith, Keswick, Cockermouth, Cleator Moor, Millom, Maryport, Aspatria and Wigton.

176 Maternity and Child Welfare Centres are already open in the Boroughs of Workington and Whitehaven, and in the Urban district of Penrith, under the management of a Committee of the Councils of these districts.

Later other Centres may be opened in smaller districts as, and if, the demands for them arises. When all these centres have been opened, there will still be a section of the population living too far away from any centre to make use of it, and so domiciliary visiting will have to continue in these areas as in the past.

Extensions of this work are still under consideration, and before long I hope to see :—

(*a*) Hospital accommodation for all conditions which cannot be treated satisfactorily at home, and for complicated cases of pregnancy. At present there is no special provision ; all that can be done is to admit the urgent cases into one of the General Hospitals.

(*b*) Maternity Hospitals and more Hospital accommodation for infants and young children, associated with ordinary hospital accommodation, special hospitals, except those for infectious diseases, should, on the grounds of efficiency and economy, no longer be tolerated.

(*c*) A Convalescent Home for adults and for delicate children for the whole County, and in connection with it an Open-air Residential School.

(*d*) An arrangement for the supply of food, and tubercle free milk for expectant and nursing mothers.

(*e*) Provision made in all areas for " Home Helps."

177 In reviewing from year to year the sanitary conditions, and the circumstances which adversely affect the health of the people in this Administrative County, nothing becomes so plain as that the present system of Public Health Administration is one allowing of considerable overlapping of powers and duties, and so tends to inefficiency and waste of public money.

178 The Physical Examination of Men of Military age by National Service Medical Boards from November 1st, 1917, to October 31st, 1918, has produced reports which should give everyone serious cause for thought.

179 As all know, the examination of recruits in the early days of the war was not a satisfactory one, and no useful information could be gathered from tabulation, even if this were possible. When new Boards were appointed under the

Military Service Act of 1917, all examinations were standardised, and the results given in the Report recently issued serve to indicate fairly accurately the physical condition of the manhood of the nation.

180 Very shortly, the conclusions arrived at were :—

10% were rejected as totally and permanently unfit.
36% were passed as possessing a full normal standard of health.
54% had some or a marked physical defect.

181 There are, in my opinion, three essential requirements to be fulfilled if anything is to be done to better the physical standard revealed, and to prevent future generations from falling to the same low standard as the present one has reached.

182 These three factors are :—

1. The awakening of the general public to a sense of their individual responsibility in this matter.
2. A re-organisation of the Public Health Service as at present constituted.
3. The compulsory medical examination of every man, woman and child in the Country at periodic intervals to detect the earliest signs of oncoming disabling disease, so that immediate steps may be taken to prevent their development.

183 The third of these requirements is not one that can be dealt with locally, any movement in this direction must come from the central Authority, guided to action by public opinion, and, therefore, no more need be said about it here.

184 As regards the second, re-organisation, before discussion it will be necessary to outline the service as at present carried out in Cumberland.

185 The County is at present divided into 23 Sanitary Areas, 14 Urban and 9 Rural districts, each with its own staff of Officials.

The population of the Urban districts varies from 27,227, the largest, to 3,600, the smallest, and the Rural districts from 22,482 to 2,827.

186 The two Boroughs of Workington and Whitehaven have each a Medical Officer of Health engaged whole-time ; the latter is also M.O.H. to the Whitehaven Rural District.

Both these M.O's.H. act, by arrangement with their Councils, as Tuberculosis Officers inder the County Council in their respective areas.

The two Boroughs are autonomous areas for Education purposes, and the M.O's.H. are also School Medical Officers.

187 The Urban and Rural districts of Cockermouth have one M.O.H. for the two areas, and by arrangement with these two Councils he also acts under the County Council as School Medical Officer and Tuberculosis Officer for the greater part of his area. He is not in private practice.

The Urban and Rural districts of Penrith have recently (March, 1920), appointed a whole-time Medical Officer for these two areas.

The M.O's.H. in all the other areas are engaged in private practice in addition to their Public Health duties.

188 In the early days of the Public Health Service such an arrangement as was in operation in this Administrative County was probably the best fitted to the conditions as they existed then, when every man was for himself, and every community, however small, for itself in matters of health.

In these days communication between one district and another was not common, social intercourse was of infrequent occurrence, so that what affected the health of one community was a matter of little importance or interest to its neighbours, when each small community lived in a more or less water-tight compartment of its own.

189 As intercourse between one community and another became more prevalent, and the causes of disease better understood, the health conditions of each community became a matter of vital importance to those adjoining it, and the sanitary conditions of one district became a matter of great importance to those in its immediate neighbourhood.

190 At the present time, for work under the County Council, the County is divided into five areas, each with an Assistant Medical Officer in charge, and he is responsible for the whole

of the work in his area. This is the method that has been in operation ever since the formation of a County Health Department in 1908, and I consider it is not only the most efficient method of carrying out the work, but is more economical than confining an Assistant to one branch of work alone.

191 One of the first duties of the M.O.H. of a County is to " inform himself, as far as practicable, respecting all influences affecting or threatening to affect injuriously the public health in the County, and for this purpose to visit the several districts in the County."

192 After the formation of the Department, a commencement was made with a sanitary survey of the County, taken parish by parish, and though at first this survey proceeded very slowly, a good deal was accomplished with the staff then available.

193 During the war this work had to cease, but it is to be taken up again as soon as circumstances permit, and records of the sanitary condition of every part of the Administrative County will be prepared, and will be available for reference. These records must necessarily be kept up to date if full use is to be made of them.

194 With such a working scheme, the Medical Officer of Health of a County is in a position to deal with " influences affecting or threatening to affect injuriously " the health of the people more efficiently than the M.O.H. of a district, whose duties and powers are confined to his own small area, and who possibly is not aware of the " influences affecting or threatening to affect " adjoining neighbours.

195 The Medical Staff of the County Council consists of the Medical Officer of Health and seven whole-time Assistants, one of whom devotes the whole of his time to the diagnosis and treatment of Venereal Diseases. The County Medical Officer of Health is also the School Medical Officer and Tuberculosis Officer. The Chief Assistant is the Deputy County Medical Officer of Health.

196 As examples of what the older methods have left undone, we can take the water supplies of the various districts. To supply the 23 Sanitary districts in the Administrative County there are at least 18 separate water schemes, but several of the Districts have no water supply beyond an unsatisfactory and dangerous one from wells, which in many

cases are polluted, and in many more liable to dangerous pollution, in spite of the fact that in some cases water mains to supply other districts pass close to these areas.

197 What could have been accomplished by the proposed methods is revealed by a glance at the water shed areas of this County, which shows very clearly that had the County requirements been considered as a whole, every area in the County could have had an abundant and satisfactory water supply from one of six or seven sources, and at a cost infinitely smaller than that which has already been incurred, and which will have to be still further incurred to supply the inadequately treated districts.

198 As another example, the Sewage Disposal schemes at present in operation may be mentioned. Each area has a small scheme of disposal of its own, or no scheme at all, as the results of old methods. Cheaper and much more efficient schemes could have been carried out by a combination of areas.

199 The tendency of Public Health legislation in recent years has been to give to County Councils and to County Borough Councils more and more responsibility for carrying out duties relating to health. For example, the County Council is now responsible for the Medical Inspection of School Children under the Education (Administrative Provisions) Act, the Sanatorium Benefit Clauses of the National Insurance Act, the Mental Deficiency Act, in the case of this County the Maternity and Child Welfare Act (for the whole County, with the exception of the two Boroughs and one Urban district), the Venereal Diseases Regulations, and the Midwives Act.

200 There is consequently now overlapping of duties, which means inefficiency and waste of public money.

As an example of this, consider the case of Infectious Diseases. If the School Medical Officer discovers a case in School, it is his duty to notify it to the Local Medical Officer of Health of the District in which the School is situated, but it may be that the residence of the scholar is not in the same sanitary area as the School, and if so it is the duty of one Medical Officer of Health to enquire into home conditions, and of another to arrange what steps shall be taken in order to prevent possible infection arising from the School.

201 In the case of Tuberculosis, under the Public Health (Tuberculosis) Regulations, 1912, the Tuberculosis Officer has definite duties to perform, and it would tend to greater efficiency and economy if one authority was in a position to deal with all conditions under these Regulations.

202 Home conditions and sanitary arrangements have to be enquired into by both the Medical Staff of the County Council and by the local M.O.H. in the carrying out of these various duties, and it would be a great advantage if these functions could all be performed by one Medical Officer.

203 Many of the small Sanitary Authorities have too low a rateable value to carry out the various schemes which are necessary for healthy living, and if these schemes are not carried out these insanitary areas may become a serious menace to the health of a very wide area. I, therefore, suggest that for Public Health purposes there should be a general rate levied over the whole County, so that the richer parts should for their own protection, if for no higher motive, help the poorer and more needy districts.

204 At first sight this may seem an unfair arrangement, but this is what is now done in large County Boroughs ; the rate is the same all over the Borough, to the mutual advantage of both the richer and the poorer wards.

205 A method of improving the public health service of this County has for some years been evident to me. The fundamental principle of it is that there should be one supreme Sanitary Authority for the whole of the County, and that Authority the County Council.

206 I think the following suggestions would lead to great improvements :—

(*a*) That the autononous areas for education purposes should remain as they are at present, or should have their areas slightly modified and extended.

(*b*) That the rest of the Sanitary areas should be formed into combined Sanitary areas, with a whole-time M.O.H. in charge of the Health Department of each area.

(*c*) That in view of (*b*), it would be unnecessary to have many small District Councils as at present, and that one Council should be appointed for each combined Sanitary area.

(*d*) That to prevent overlapping and duplication of work, each M.O.H. in the County should act as Assistant M.O.H. under the C.M.O.H., and that all reports and recommendations made by them should, before approval and adoption by their Councils, be submitted to the County Council for their consideration and approval, or otherwise, so that the broadest possible view might be taken of all matters relating to Public Health.

(*e*) That the whole County would be divided into, say, ten Sanitary areas, each in charge of a M.O.H., who would devote the whole of his time to public health duties. A satisfactory salary would then be available for him, and the services of specially educated and efficient officers could possibly be obtained.

Housing.

207 Section 1 (1) of the Housing, Town Planning, &c., Act, 1919, states :—

It shall be the duty of every local Authority within the meaning of Part III. of the Housing of the Working Classes Act, 1890, to consider the needs of their area with respect to the provision of houses for the working classes, and within three months after the passing of this Act, and thereafter as often as occasion arises, or within three months after notice has been given to them by the Local Government Board, to prepare and submit to the Local Government Board a scheme for the exercise of their powers under the said Part III.

208 In accordance with this Section of the Act, schemes have been submitted by all local authorities in the County, and I herewith submit for your information a summary of these schemes :—

ESTIMATE OF HOUSING NEEDS.

209 (1) Working-class houses required during the next three years to :—

	Urban.	*Rural.*	*County.*
(*a*) Meet the unsatisfied demand for houses (taking account of growth of population, overcrowding, etc.) ..	1234	652	1886
(*b*) Re-house persons to be displaced by the clearance of unhealthy areas ..	292	10	302
(*c*) Replace other dwellings which are unfit for human habitation and cannot be made fit	1497	722	2216

	Urban.	*Rural.*	*County.*
(*d*) Replace obstructive or other buildings (now inhabited and not included under heading (*c*) which should be demolished	39 ..	8 ..	47
(*e*) Replace other houses which, although they cannot at present be regarded as unfit for human habitation, fall definitely below a reasonable standard	405 ..	392 ..	797
(*f*) Meet anticipated deficiences, *e.g.*, arising from new industrial developments	426 ..	300 ..	726
	3971 ..	2084 ..	5977
			78
			6055

Note.—The return from one district gave only the total (78), but no information under which headings the needs came, hence the apparent discrepancy.

210 The estimated need for the County is, therefore 6,055 houses.

211 Arlecdon and Frizington, Cleator Moor, Harrington, Holme Cultram, Keswick, Maryport, and Penrith districts, have scheduled areas as unhealthy under Part I. or Part II., which are being or may have to be dealt with.

In these districts 877 houses have to be dealt with in this way.

212 No areas have yet been scheduled in the schemes submitted by Whitehaven, Workington or Wigton, otherwise the total number of houses to be dealt with under Part I. or Part II. schemes would have been very much greater.

INSANITARY HOUSES.

213 (Other than houses in unhealthy areas). Prevailing conditions.—

	Urban.	*Rural.*	*County.*
(1) How many inhabited houses are there in the district which are not and cannot be made fit for human habitation ?	1457 ..	716 ..	2173
(2) Number of persons inhabiting these houses	5900 ..	2913 ..	8813
(3) How many houses are already subject to :—			
(*a*) Closing Orders ?	24 ..	36 ..	60
(*b*) Demolition Orders ?	— ..	— ..	—
(4) How many houses are seriously defective, but can be made habitable ?	525 ..	956 ..	1481

214 Several districts in their returns have not stated any houses are unfit for human habitation. Had these been included in the above figures, the number of inhabited houses which are unfit for habitation would have been very much greater than 2,173, *e.g.*, no figures are given in the returns from Egremont, Holme Cultram and Workington.

215 The chief defects are :—Back-to-back houses, structurally defective houses, insufficient air space, want of ventilation, insufficient light, cellar dwellings, and obstructive buildings.

216 The schemes submitted make provision for the erection of 4,830 houses, and the types of houses are as follows :

	Urban.	*Rural.*	*County.*
(*a*) Houses with living rooms, scullery and two bedrooms	112 ..	4 ..	116
(*b*) Living room, scullery and three bedrooms	559 ..	456 ..	1015
(*c*) Parlour, living room, scullery and two bedrooms	727 ..	— ..	727
(*d*) Parlour, living room, scullery, and three bedrooms	1337 ..	1192 ..	2529
(*e*) Parlour, living room, scullery and four bedrooms	331 ..	62 ..	393

217 I think special mention ought to be made of the scheme submitted by the Millom Urban district. They make provision for 50 houses containing parlour, living room, scullery or back kitchen, three bedrooms, a bath room, and hot and cold water laid on. Theirs is the only scheme in which a bath room is mentioned.

218 The schemes have been classified as follows :—

Adequate	*Doubtful.*	*Excessive.*	*Inadequate.*
Whitehaven, Borough	Cockermouth U.D.	—	Workington Borough
Arlecdon and Frizington U.D.	Millom	—	Cleator Moor U.D.
Aspatria			Egremont U.D.
Holme Cultram			Harrington
Keswick			Alston R.D.
Maryport			Longtown R.D.
Penrith			Wigton R.D.
Wigton			
Bootle R.D.			
Brampton R.D.			
Cockermouth R.D.			
Penrith R.D.			
Whitehaven R.D.			

Carlisle R.D. has not yet been classified.

Arlecdon and Frizington Urban.

Dr. J. CLARKE.
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	4,887	4,759
For birth-rate ..	5,091	5,332
Birth-rate	28.4	27.5
Death-rate	12.8	15.1
Zymotic death-rate ..	0.4	1.4
Phthisis death-rate ..	0.8	0.8
Total Tuberculosis at death-rate	1.0	1.2
Respiratory diseases death-rate	2.4	3.1
Infant mortality rate per 1,000 births ..	75	61

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	22
Smallpox	Nil.
Scarlet Fever ..	1
Diphtheria	6
Fevers (Enteric, &c.)	1
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	3
Cases treated in hospital	—
Measles 6	Nil.
Whooping Cough ..	Nil.
Diarrhœa	(1)

Figures in brackets indicate deaths.

Aspatria Urban.

Dr. W. P. BRIGGS,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	3456	3,342
For birth-rate ..	3,600	3,745
Birth-rate	22.7	19.7
Death-rate	13.3	12.8
Zymotic death-rate ..	0.8	0.9
Phthisis death-rate ..	0.5	0.9
Total Tuberculosis death-rate ..	0.5	0.9
Respiratory diseases death-rate ..	1.1	0.9
Infant Mortality rate per 1,000 births ..	97	121

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	190
Smallpox	Nil.
Scarlet Fever ..	1
Diphtheria	14
Fevers (Enteric, &c.)	1
Puerperal Fever ..	Nil.
Pulmonary Tuberlosis	Nil.
Cases treated in hospital	—
Measles ..	149 (1)
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

ZYMOTIC DISEASES.

this district has for several years been remarkably free from Zymotic Diseases till this year.

SCARLET FEVER.

One case imported from neighbouring village.

DIPHTHERIA.

Eleven cases of a mild type. Anti-toxin is supplied by the Council. On the subject of Diphtheria, Dr. Briggs says :— "Insanitary surroundings act prejudicially. Damp and ill-constructed houses, and bad drainage, play a large part in outbreak of Diphtheria."

MEASLES.

An extensive outbreak from the middle of March till the end of July. The epidemic was started by a child from near Glasgow. This child attended the Infant School, and in a fortnight practically every child in the school was down.

SMALLPOX.

"The number of unvaccinated children in the district is year after year rapidly increasing, and our population in consequence is becoming more and more a vulnerable one to the ravages of Smallpox."

WATER SUPPLY.

From the Overwater gravitation scheme, of good quality, and is abundant.

SEWERAGE.

Septic tank system, with multiple contact and continuous filtration. Is satisfactory.

Still a few premises, and notably the schools, which have not made connections.

REFUSE REMOVAL.

Dr. Briggs again advises the Council to insist that all householders provide metal receptacles with covers for ashes and refuse.

HOUSING.

A large amount of overcrowding, which is steadily increasing. "If a house becomes vacant there are numerous applicants for it, regardless of its structural and sanitary condition.

About 30 houses unfit for habitation, as well as about 40 back-to-back houses. "The 58 to be erected will be a partial remedying of the overcrowding, but many more must be built before the conditions, under which our population is house, can be regarded as approximately satisfactory."

Cleator Moor Urban.

Dr. JOHN CLARKE,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	8,326	7,992
For birth-rate ..	8.673	8,956
Birth-rate	25.3	27.7
Death-rate	19.9	16.5
Zymotic death-rate ..	0.8	0.8
Phthisis death-rate ..	0.8	1.0
Total Tuberculosis death-rate ..	1.5	1.3
Respiratory diseases death-rate ..	4.3	2.8
Infant mortality rate per 1,000 births	168	116

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	38
Smallpox	Nil.
Scarlet Fever ..	2
Diphtheria	10
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	6
Cases treated in hospital	—
Measles	6 (1)
Whooping Cough ..	(Nil.)
Diarrhœa	(3)

Figures in brackets indicate deaths.

INFANT MORTALITY.

The rate is 168 per 1,000 births, and as the Medical Officer of Health (Dr. Clark) says is "excessive and appalling."

WATER SUPPLY.

The supply is constant and abundant, of good quality, and well adapted for domestic purposes.

Special Reports were issued on :—

(*a*) The Cowsheds and Dairies.
(*b*) The Slaughter Houses.

Dr. Clark draws attention to the antiquated and unsatisfactory system of sewage disposal.

HOUSING.

373 houses are considered unfit for human habitation.

Thirty-five wooden dwellings are at present being erected to slightly ease the acute lack of housing accommodation.

Cockermouth Urban.

Dr. D. J. MC.LEISH,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	4,622	4,282
For birth-rate ..	4 815	4,798
Birth-rate	20.9	15.0
Death-rate	16.2	23.1
Zymotic death-rate ..	0.2	1.1
Phthisis death-rate ..	2.1	0.4
Total Tuberculosis death-rate ..	2.3	0.7
Respiratory diseases death-rate ..	2.5	4.2
Infant mortality rate per 1,000 births	49	166

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	62
Smallpox	Nil.
Scarlet Fever ..	2
Diphtheria	10
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	8
Cases treated in hospital	—
Measles	32 (0)
Whooping Cough ..	(0)
Diarrhœa	(0)

WATER SUPPLY.

Gravitation from Crummock Lake. Constant and good.

RIVER POLLUTION.

From tipping of refuse.

DRAINAGE AND SEWERAGE.

System now out of date. Closet accommodation is insufficient in many parts of the town.

Scavenging is well carried out with the exception that the carts are uncovered, and the receptacles are in many cases quite unsuitable.

OFFENSIVE TRADES.

Nuisances are caused by a gut scraper's business. in Waterloo Street, and a tallow chandler's in Main Street.

COMMON LODGING HOUSES.

One which is clean, but is becoming unfit for the business.

MILK SUPPLY.

Some of the cowsheds are not structurally satisfactory.

SLAUGHTER HOUSES.

Most of the slaughtering is done in private slaughter houses, which are situated near houses, and in closely populated parts of the town.

HOUSING.

Of the 529 inspected there were :—

Damp, and in need of repair	111
Two or three-roomed cottages with no through ventilation	246
Back-to-back houses	96
Unfit for habitation	46
Overcrowded	8
*Empty and not inspected	22

*These are probably unfit, as there is a dearth of good accommodation in the town.

STAFF.

One Sanitary Inspector, who is also the Housing Inspector and Surveyor.

HOSPITAL ACCOMMODATION.

None—except for Smallpox.

The Medical Officer of Health reports that Measles was prevalent during May and June, that the school in which the disease originated was closed for three weeks, and that there was little further spread.

Egremont Urban.

Dr. E. A. BRAITHWAITE.
MEDICAL OFFICER OF HEALTH.

Vital Statistics.

	1919.	1918.
Population :—		
For death-rate	6,458	6,357
For birth-rate	6,727	7,123
Birth-rate	23.6	30.1
Death-rate	17.9	22.8
Zymotic death-rate	1.0	0.6
Phthisis death-rate	0.7	0.4
Total Tuberculosis death-rate	0.7	0.9
Respiratory diseases death-rate	3.7	4.4
Infant mortality rate per 1,000 births	144	88

Infectious Diseases Cases (and Deaths).

	1919.
Total notifications	35
Smallpox	Nil.
Scarlet Fever	6
Diphtheria	8
Fevers (Enteric, &c.)	Nil.
Puerperal Fever	Nil.
Pulmonary Tuberculosis	6
Cases treated in hospital	10
Measles	4 (Nil)
Whooping Cough	(3)
Diarrhœa	(3

Figures in brackets indicate deaths.

WATER SUPPLY.

From Wormgill, 800 feet above sea level. Is constant and of good quality. More than adequate.

DRAINAGE AND SEWERAGE.

Nearly all of the district is sewered and drained. The sewage is disposed of by broad irrigation and deep filtration, and the Medical Officer reports the systems as efficient and up-to-date.

CLOSET ACCOMMODATION.

Water closets all over the district, only about 30 earth closets in isolated cottages and farms.

SCAVENGING.

Refuse is collected in ashbins, and removed daily by the Council's men in carts, or is deposited in middens, which are emptied periodically.

MILK SUPPLY.

From farms in the neighbourhood.

HOSPITAL ACCOMMODATION.

At Galesmire. Scarlet Fever (3), Diphtheria (7) were removed to hospital. Influenza was prevalent, and caused 18 deaths.

STAFF.

One Sanitary Inspector.

HOUSING.

A great shortage of houses. There is much overcrowding in 62 houses there are two families, and in nine at least there are three families. The general standard of houses varies very much. Some are very good indeed, but others are small, and owing to the density of population are more crowded than they should be.

The principal defects are smallness of rooms and deficient ventilation.

Harrington Urban

Dr. GEORGE R. CULLEN.
MEDICAL OFFISER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	4,279	4,023
For birth-rate ..	4,457	4,508
Birth-rate	25.8	28.1
Death-rate	14.0	16.1
Zymotic death-rate ..	0.7	0.9
Phthisis death-rate ..	0.9	0.9
Total Tuberculosis death-rate ..	1.8	1.2
Respiratory diseases death-rate ..	4.6	2.4
Infant mortality rate per 1,000 births	69	118

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	59
Smallpox	Nil.
Scarlet Fever ..	1
Diphtheria	6
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	6
Cases treated in hospital	—
Measles ..	25 (2)
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

INFECTIOUS DISEASES.

Measles was prevalent during November and December. The Medical Officer expresses regret that compulsory notification is not now required, and expresses the opinion that possible epidemics have been "nipped in the bud," owing to notification of the first cases.

Five cases of Diphtheria, all treated with anti-toxin supplied by the Council.

WATER SUPPLY.

From Crummock Lake. The quality of the water is excellent, as the Medical Officer says: "when we get it." Scraping the mains and intermittent pumping often discolour the water. The outlying and higher parts of the district do not get a satisfactory supply, the mains, reservoir and pumping plant are not large enough.

A new gravitation scheme is under consideration.

DRAINAGE AND SEWERAGE.

The present system at Lowca will not be adequate if new houses are built there. Scavenging is well carried out, receptacles are, however, unsuitable, and the ash carts are without covers.

CLOSET ACCOMMODATION.

Water closets mostly, but some houses still have privies.

DAIRIES AND COWSHEDS.

The cowsheds are as satisfactory as the buildings will allow.

MILK.

The milk supply is plentiful.

NUISANCES.

80 nuisances have been dealt with, mainly by informal notice.

Holme Cultram Urban.

Drs. CRERAR or PARK (Acting).
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	4,345	4,180
For birth-rate ..	4,526	4,684
Birth-rate	19.6	17.0
Death-rate	13.1	16.2
Zymotic death-rate ..	0.4	0.4
Phthisis death-rate ..	0.4	0.9
Total Tuberculosis death-rate ..	0.4	1.1
Respiratory diseases death-rate ..	1.6	1.6
Infant mortality rate per 1,000 births ..	45	87

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	47
Smallpox	Nil.
Scarlet Fever ..	4
Diphtheria	1
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	Nil.
Cases treated in Hospital —	
Measles ..	35 (Nil)
Whooping Cough ..	(2)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

Keswick Urban.

Dr. J. R. BURNETT.
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	4,047	3,496
For birth-rate ..	4,216	3,917
Birth-rate	13.7	10.9
Death-rate	12.1	19.7
Zymotic death-rate ..	Nil.	Nil.
Phthisis death-rate ..	0.7	2.2
Total Tuberculosis death-rate ..	0.7	2.2
Respiratory diseases death-rate ..	0.7	3.4
Infant mortality rate per 1,000 births ..	34	163

Infectious Diseases Cases (and Deaths).	1919
Total notifications ..	94
Smallpox	Nil
Scarlet Fever ..	1
Diphtheria	16
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	4
Cases treated in Hospital —	
Measles ..	65 (Nil
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

WATER SUPPLY.

From a reservoir fed by streams and springs on Skiddaw.

The supply is constant and abundant, but in the height of the season the higher parts of the town were cut off for some hours at a time. Dr. Burnett recommends that steps should be taken to remedy this.

DRAINAGE AND SEWERAGE.

All the district is sewered, with the exception of Biery, Forge and the Lake Side, where there are earth closets.

The sewage is treated satisfactorily at the sewage works, about a mile beyond the western boundary of the district.

SCAVENGING.

"The old ashpit is now fortunately a thing of the past."

Refuse is collected from ash-bins twice weekly, and taken to the tip. Middens, in which horse and cow manure are collected, have to be emptied every week, but several are in populous parts, and are a menace to health.

FOOD.

(*a*) Milk.—"For the most part the quality is good and reliable, but not free from extraneous dirt."

The cows and cowsheds are inspected by a Veterinary Inspector who reports satisfactorily, but "there is still room for improvement, particularly as regards the cleanliness of byres and animals, and in the conditions under which the milking process is carried on."

(*b*) Other Foods.—Slaughtering is all done in private slaughter houses, thus "making strict supervision an impossibility." The meat is of good quality.

INFECTIOUS DISEASES.

Diphtheria.—Outbreaks have occurred on three occasions, but the worst was towards the end of the year, when six cases occurred in the Infant School.

Scarlet Fever.—Only one case.

Influenza was epidemic early in the year; there were two deaths from Pneumonia following. Arrangements were made for nursing patients.

Measles.—In September a single case, a visitor; no spread. In October, two children who visited Whitehaven, where it was prevalent, developed the disease. It spread rapidly. A special nurse was appointed.

Several of the schools were closed.

HOUSING.

It is proposed to erect 55 new houses. No complaints or representations as to unhealthy areas.

Maryport Urban.

Dr. T. A. HINDMARSH.
MEDICAL OFFICER OF HEALTH.

Vital Statistics.

	1919.	1918.
Population :—		
For death-rate ..	11,127	10,009
For birth-rate ..	11,591	11,215
Birth-rate	23.7	20.5
Death-rate	13.3	19.0
Zymotic death-rate ..	0.4	0.3
Phthisis death-rate ..	0.5	0.6
Total Tuberculosis death-rate ..	0.7	0.9
Respiratory diseases death-rate ..	3.1	2.4
Infant mortality rate per 1,000 births ..	105	104

Infectious Diseases Cases (and Deaths).

	1919.
Total notifications ..	84
Smallpox	Nil.
Scarlet Fever ..	2
Diphtheria ..	Nil.(1)
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	1
Pulmonary Tuberculosis	3
Cases treated in Hospital —	
Measles ..	34(Nil)
Whooping Cough ..	(2)
Diarrhœa	(2)

Figures in brackets indicate deaths.

WATER SUPPLY.

From the River Derwent. Interruptions in the supply took place during the summer, due either to leakage in the pipes or to deficient pumping force.

SCAVENGING.

In many parts of the town leaves much to be desired. The open bins should be abolished, and closed ones provided.

CLOSET ACCOMMODATION.

Large numbers of houses are without separate water closet accommodation, there being one water closet in a common yard for the use of the occupants of two to four houses.

SCAVENGING.

House refuse collected daily, and deposited on the shore below high water mark, also on a piece of vacant land.

HOUSING.

Shortage, 307. 100 houses are to be built under Housing Scheme.

393 houses are overcrowded.

35 houses contain more than one family.

684 back-to-back houses.

Eleven areas were represented as being unhealthy. An improvement and reconstruction scheme for these and for the areas (2) previously represented is to be carried out.

Millom Urban.

Dr. JOHN PRATT,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	9,227	9,435
For birth-rate ..	9,612	10,572
Birth-rate	22.7	20.9
Death-rate	17.9	16.4
Zymotic death-rate ..	Nil.	0.6
Phthisis death-rate ..	0.6	0.6
Total Tuberculosis death-rate ..	0.9	0.6
Respiratory diseases death-rate ..	3.7	3.6
Infant mortality rate per 1,000 births ..	100	81

Infectious Diseases Cases (and Deaths).	1919
Total notifications ..	61
Smallpox	Nil.
Scarlet Fever ..	5
Diphtheria	5
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	6
Cases treated in Hospital —	
Measles ..	7 (Nil)
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

WATER SUPPLY.

From reservoir at Basan Bank, five or six miles from the town. The water is of good quality, but there is usually a sediment of earthy matter derived, probably from the peaty soil.

The increase of storage capacity is under consideration.

DRAINAGE AND SEWERAGE.

Six sewer systems, all discharging untreated into tidal waters.

CLOSET ACCOMMODATION.

Water closets mainly. 30 houses have dry privies, six of these might be connected up with existing sewers, the rest are at isolated cottages.

SCAVENGING.

Refuse collected in fixed receptacles.

MILK SUPPLY.

Is sufficient for the inhabitants. Milk (Mothers and Children) Order, 1918, has been put in force.

INFLUENZA.

A severe epidemic occurred in February and March. About 2,000 cases and 32 deaths. A special report was issued by the Medical Officer of Health.

HOUSING.

No very serious cases of overcrowding.

Penrith Urban.

Dr. A. S. MACTAVISH.
Acting Medical Officer of Health.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	8,230	7,642
For birth-rate ..	8,573	8,563
Birth-rate	15.8	15.6
Death-rate	15.3	17.1
Zymotic death-rate ..	Nil.	0.1
Phthisis death-rate ..	1.0	1.7
Total Tuberculosis death-rate ..	1.3	1.9
Respiratory diseases death-rate ..	1.4	2.2
Infant mortality rate per 1,000 births ..	58	37

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	81
Smallpox	Nil.
Scarlet Fever ..	1
Diphtheria	19
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	13
Cases treated in Hospital —	
Measles ..	25 (Nil.)
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

Housing.

111 houses are needed to house persons displaced by the clearance of unhealthy areas, houses unfit for habitation, replacing obstructive buildings and overcrowding.

Maternity and Child Welfare.

A record of the year's working is contained in the report.

Whitehaven Borough.

Dr. T. S. MC.INTOSH.
Medical Officer of Health.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	18,436	17,693
For birth-rate ..	19,205	19,823
Birth-rate	27.5	24.4
Death-rate	17.7	22.4
Zymotic death-rate ..	2.8	2.2
Phthisis death-rate ..	0.9	1.4
Total Tuberculosis death-rate ..	1.6	1.8
Respiratory diseases death-rate ..	3.3	5.5
Infant mortality rate per 1,000 births ..	115	113

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	614
Smallpox	Nil.
Scarlet Fever ..	3
Diphtheria	13
Fevers (Enteric, &c.)	Nil
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	53
Cases treated in Hospital —	
Measles ..	468 (39)
Whooping Cough ..	(Nil.)
Diarrhœa	(6)

Figures in brackets indicate deaths.

BIRTH-RATE is the highest since 1916.

The INFANT MORTALITY rate is the lowest since 1916.

The DEATH-RATE, although lower than in 1918, still continues high.

WATER SUPPLY.

From Ennerdale Lake, about 8 miles inland. Is of exceptional purity and softness. No evidence of contamination. Possible sources of contamination are the two or three houses on the shores, or on ground which falls to the lake.

The supply is constant, being pumped to the higher parts of the town. There is an ample supply of water, but it is not laid on to all the houses. Many court and other houses have no taps indoors.

DRAINAGE AND SEWERAGE.

The whole of the town is sewered. The sewers are ventilated by surface gratings, shafts and chimneys, and are flushed by four automatic tanks. The sewage is discharged crude into the sea.

CLOSET ACCOMMODATION.

Water closets are general. No privies or earth-closets, except at a few outlying farms or cottages.

CLOSET ACCOMMODATION.

Is, in many parts of the town, insufficient, one closet being used by two or more families.

SCAVENGING.

Since 1918 house refuse has been dumped on the shore below high-water mark. This is not satisfactory. The matter of refuse-disposal is under consideration. House refuse is collected daily, from unsatisfactory uncovered receptacles.

The Medical Officer considers that a bye-law should be passed compelling people to provide suitable covered, metal dust-bins.

Covered carts required for removal of refuse. Attention is drawn to the lateness at which refuse is removed.

SANITARY INSPECTION.

Informal notices served	228
Complied with	194
Statutory Notices served	34
Complied with	28

The commonest nuisance to be dealt with is "w.c's. in an insanitary condition."

FOOD.

(*a*) *Milk Supply.*—Dairies, cowsheds and milk-shops were generally satisfactory. A Veterinary Inspector examines the animals quarterly. No disease likely to contaminate milk was found.

Milk (Mothers and Children) Order, 1918.—14 families were supplied.

(*b*) *Other Food.*—2,240 Eggs, 4 carcases of beef, and portions of others (476 lbs.), 7 carcases of mutton, 25 stones fish, over 11 cwt. bacon, and 698 lbs. ham were condemned as unfit for food. In all cases attention was drawn to the food by the vendors.

SLAUGHTER HOUSES.

Six registered, two licensed.

The bye-laws as to cleanliness and removal of refuse are not complied with.

The premises are in most cases unsuitable in situation and construction.

A municipal abattoir is under consideration.

MEASLES.

Was epidemic during the latter part of the year. A Special Report on this outbreak is included in the Annual Report.

DIPHTHERIA.

Dr. Mc.Intosh draws attention to the fatality of Diphtheria when medical advice and help are not obtained till the disease is far advanced, and he rightly says: "It is particularly regrettable that delay in obtaining treatment should occur in Diphtheria, which is a disease for which we have a serum, a wonderfully successful remedy, if only administered early.."

The Council does not supply anti-toxin, nor does it defray the cost of bacteriological examination.

CEREBRO-SPINAL MENINGITIS.

One case, a boy of 13.

Very useful leaflets are published and distributed by the Medical Officer of Health on Tuberculosis, Influenza, Scarlet Fever, Diphtheria, Whooping Cough and Measles.

MATERNITY AND CHILD WELFARE.

There are nine midwives in the Borough, five trained and four *bona-fide*. Two of the trained Midwives are Officers of the Council. They alternately do midwifery work and Health Visiting and School Nursing.

All Midwives are inspected Quarterly by the Medical Officer of Health, the County Council having delegated their powers to the Borough Council.

Nearly all notified births are visited by Health Visitors, and advice given to the mothers.

The Maternity and Child Welfare Centre is open one day a week. Dried milk is supplied at cost price when considered advisable. There were 1,477 attendances at the Centre, and 194 consultations with the Medical Officer.

There were 13 cases of Ophthalmia Neonatorum. All recovered completely except one, in which case the sight of one eye was lost.

Dr. Mc.Intosh advocates extension of this work in the direction of lying-in houses and home helps.

HOUSING.

Number of working-class houses, 3,815. No new houses completed during the year. The Council's scheme was started on the Coach Road site.

A scheme to build 980 houses has been adopted.

Dr. Mc.Intosh expresses the opinion that the overcrowding of persons in houses is not great, but that the overcrowding of houses on area is serious. The general standard of housing is low. A really satisfactory house is the exception rather than the rule.

Even the better-class houses are in most cases badly designed, and many are damp.

Of the working-class houses, Dr. Mc.Intosh says :—

"In these a bath is almost unknown. In a very large number of cases there is no back-yard. Many are without an indoor tap or sink. It is not uncommon for one w.c. to be used in common by two or more families, and I know of one instance where only one water-tap and two w.c's. are available for a group of ten houses."

"The number of back-to-back and back-to-earth houses is very great."

"I have arrived at the conclusion that there are about 1,000 houses unfit for human habitation, and incapable of being made fit.....practically one-quarter of the houses in the Borough."

"I believe the Council to be fully alive to the unsatisfactory nature of the existing housing conditions. Indeed the Health and Housing Committee by proposing, and the Council by adopting, a scheme to provide 980 new houses for the working classes, have shown their determination to do all in their power to provide a remedy."

Wigton Urban.

Dr. JAMES A. GORDAN.
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	3,331	3,168
For birth-rate ..	3,470	3,550
Birth-rate	18.4	18.8
Death-rate	14.1	20.5
Zymotic death-rate ..	0.3	0.9
Phthisis death-rate ..	0.6	1.8
Total Tuberculosis death-rate ..	0.9	2.5
Respiratory diseases death-rate ..	3.3	4.4
Infant mortality rate per 1,000 births ..	78	60

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	24
Smallpox	Nil.
Scarlet Fever ..	Nil.
Diphtheria	7
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	4
Cases treated in Hospital —	
Measles ..	4 (Nil.)
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

WATER SUPPLY.

The present supply is inadequate to the growing needs of the town, and Dr. Gordon points out that none is available for watering the streets or flushing the sewers. "It is imperative that the question of seeking an additional supply be considered without delay."

DRAINAGE AND SEWERAGE.

A better and more up-to-date method of sewage purification is suggested. The present conditions are described as unsatisfactory.

SCAVENGING.

Ashpits and ashbins, without covers are in use. House refuse is removed twice weekly.

FOOD.

(*a*) Milk Supply.—Six cowsheds in the district. Visited quarterly by Veterinary Inspector.

HOUSING.

89 houses are unfit for habitation. It is estimated that 150 houses will be required. Land has been acquired for the first 60, and building is in progress.

Dr. Gordon draws attention to the fact that there is no Infectious Disease Hospital, and says:—"This want of accommodation for cases requiring immediate isolation results in the unavoidable multiplication of the disease through the family generally."

Workington Borough.

Dr. C. S. THOMSON.
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	26,137	24,798
For birth-rate ..	27,227	27,784
Birth-rate	24.4	25.5
Death-rate	20.1	17.1
Zymotic death-rate ..	2.2	1.4
Phthisis death-rate ..	0.8	0.8
Total Tuberculosis death-rate ..	1.2	1.4
Respiratory diseases death-rate ..	3.7	3.7
Infant mortality rate per 1,000 births ..	148	103

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	869
Smallpox	Nil.
Scarlet Fever ..	35
Diphtheria	152
Fevers (Enteric, &c.)	3
Puerperal Fever ..	1
Pulmonary Tuberculosis	30
Cases treated in Hospital —	
Measles ..	506 (26)
Whooping Cough ..	(8)
Diarrhœa	(8)

Figures in brackets indicate deaths.

WATER SUPPLY.

By gravitation from Crummock Lake, about 16 miles distant.

For trade purposes water is taken from the River Derwent.

Twenty-six houses in Findlay Place receive their water supply indirectly from the River Derwent. The water is pumped from a shallow well in the gravel, some fifteen feet from the river.

These cottages belong to the London & North-Western Railway Co., and Dr. Thomson has advised that the Company be approached with a view to having water supplied from the town's supply. The Derwent is a polluted river. It is polluted by two streams from Barepot. "In this district of the town the Conservancy system prevails. Slop waters pass from a drain into the stream facing Glenfield Terrace, and eventually below the railway into the Derwent, about a quarter-of-a-mile above the spot at which the well derives its supply."

SEWERAGE SYSTEM.

Dr. Thomson draws attention to the report on the sewerage system issued by Dr. S. Monckton Copeman, in 1908. In that report Dr. Copeman says: "it is obvious that a thorough overhauling of the whole sewerage system is urgently required. Owing to the use of clay for 'luting,' the junctions along the oldest portions of the sewerage system, these junctions are now for the most part found on examination not to be water-tight."

Dr. Thomson draws attention to the probable fouling of the ground, and remarks: "the examination of the sewers as a whole has not been made," and continues, "I beg that the subject of the sewers will be faced."

RIVERS AND STREAMS.

A considerable amount of pollution of the Derwent takes place from houses in Concrete Row and Glenfield Terrace.

DRAINAGE.

Considerable work has been done in the reconstruction of drains. Between 1908 and 1915 three-hundred bottom outlet gulleys were replaced by properly trapped side outlet gulleys. Under 200 remain to be dealt with. There are a few water-closets which are not supplied with water for flushing.

In Findlay Place there are twenty-six closets that are flushed with water from sink wastes, roof water, and yard surface water. Fifty-six trough closets.

SCAVENGING AND REFUSE DISPOSAL.

The streets are scavenged daily.

Dr. Thomson has recommended the use of galvanised iron receptacles, with covers for the storage of refuse instead of the present buckets, tubs, and wooden boxes. He also considers that the Cloffocks is too near the town to deposit the refuse.

INFECTIOUS DISEASES.

Influenza was prevalent in the early part of the year. A special ward at the Infectious Disease Hospital was set aside for the treatment of the most urgent cases.

Measles was epidemic in November—December

Enteric Fever.—Only three cases.

Diphtheria has been epidemic in the Borough during the year. Dr. Thomson deals with this matter very fully in his report, and in "Special Reports" which he has issued from time to time.

MATERNITY AND CHILD WELFARE.

A Special Report is issued on this subject, in it Dr. Thomson draws attention to the need of maternity beds, and a better Infant Consultation Centre.

HOUSING.

"Taking into account overcrowding, houses occupied by two families, and all houses from the irreparable to those in fair sanitary condition, yet falling below the ultimate desirable standard, one is keeping strictly on the safe side in saying that about one-sixth of the houses in the town are involved."

From the Report it appears that :—

175 houses are overcrowded.
568 houses are occupied by more than two families.
254 houses are back-to-back.

It is stated that 14 houses are unfit, and cannot be made fit, for habitation ; details of these houses are given.

Dr. Thomson suggests that as a matter of urgency a few army huts be bought, and placed in a field to temporarily house the inhabitants of these unfit houses.

Alston Rural.

Dr. STEWART CARSON,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.

	1919.	1918.
Population :—		
For death-rate ..	2,714	2,608
For birth-rate ..	2,827	2,922
Birth-rate	16.2	14.3
Death-rate	21.0	19.5
Zymotic death-rate ..	1.1	0.3
Phthisis death-rate ..	1.1	1.1
Total Tuberculosis death-rate ..	1.1	1.5
Respiratory diseases death-rate ..	0.7	0.8
Infant mortality rate per 1,000 births ..	108	Nil.

Infectious Diseases Cases (and Deaths).

	1919.
Total notifications ..	137
Smallpox	Nil.
Scarlet Fever ..	Nil.
Diphtheria	3
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	3
Cases treated in Hospital —	
Measles ..	121 (2)
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

Bootle Rural.

Dr. J. JOHNSTON,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	5,432	5,446
For birth-rate ..	5,659	6,102
Birth-rate	16.2	16.7
Death-rate	15.0	15.8
Zymotic death-rate ..	Nil.	Nil.
Phthisis death-rate ..	0.5	0.5
Total Tuberculosis death-rate ..	0.5	0.7
Respiratory diseases death-rate ..	1.6	2.2
Infant mortality rate per 1,000 births ..	54	29

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	82
Smallpox	Nil.
Scarlet Fever ..	9
Diphtheria	1
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	3
Cases treated in Hospital —	
Measles ..	59 (Nil.
Whooping Cough ..	(Nil.)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

BIRTH-RATE.

16.25, the lowest for the last ten years, probably the lowest on record.

DEATH-RATE.

17.4 is the highest for the last ten years.

WATER SUPPLY.

Generally the district is well supplied by gravitation schemes.

The various farms below Bootle Station are still in need of a supply. Eskdale Green is in need of a better supply.

DRAINAGE AND SEWERAGE.

The first length of a new sewer at Town Head, Bootle, has been laid. Some 29 drains have been relaid or renewed.

CLOSET ACCOMMODATION.

Eight new w.c's. have been put in.

SCAVENGING.

According to the report of the Sanitary Inspector does not receive anything like the attention which its importance warrants.

HOUSING.

No action is considered necessary under the Housing Acts.

Brampton Rural.

Dr. J. ARNOTT,

MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	6,865	6,820
For birth-rate ..	7,151	7,642
Birth-rate	19.7	17.5
Death-rate	17.0	19.2
Zymotic death-rate ..	0.5	1.0
Phthisis death-rate ..	1.0	0.4
Total Tuberculosis death-rate ..	1.3	0.4
Respiratory diseases death-rate ..	1.6	3.6
Infant mortality rate per 1,000 births ..	77	104

Infectious Diseases Cases (qnd Deaths).	1919.
Total notifications ..	92
Smallpox	Nil.
Scarlet Fever ..	1
Diphtheria	6
Fevers (Enteric, &c.)	2
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	5
Cases treated in Hospital	—
Measles ..	65 (2)
Whooping Cough ..	(Nil.)
Diarrhœa	(1

Figures in brackets indicate deaths.

Carlisle Rural.

Dr. J. MACDONALD,

MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	10,694	10,361
For birth-rate ..	11,140	11,609
Birth-rate	15.9	16.0
Death-rate	13.9	15.5
Zymotic death-rate ..	0.5	0.4
Phthisis death-rate ..	0,9	1.0
Total Tuberculosis death-rate ..	1.3	1.2
Respiratory diseases death-rate ..	0.6	1.5
Infant mortality rate per 1,000 births ..	56	59

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	120
Smallpox	Nil.
Scarlet Fever ..	19
Diphtheria	20
Fevers (Enteric, &c.)	1
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	6
Cases treated in Hospital	—
Measles ..	43 (1)
Whooping Cough ..	(1)
Diarrhœa	(1)

Figures in brackets indicate deaths.

Cockermouth Rural.

Dr. D. J. MC.LEISH,
Medical Officer of Health.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	21,582	20,664
For birth-rate ..	22,482	23,153
Birth-rate	22.1	23.3
Death-rate	14.9	16.7
Zymotic death-rate ..	0.9	1.1
Phthisis death-rate ..	0.7	0.7
Total Tuberculosis death-rate ..	0.9	0.8
Respiratory diseases death-rate ..	2.7	2.9
Infant mortality rate per 1,000 births ..	118	105

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	271
Smallpox	Nil.
Scarlet Fever ..	21
Diphtheria ..	63
Fevers (Enteric, &c.)	2
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	6
Cases treated in Hospital —	
Measles	86 (1)
Whooping Cough ..	(3)
Diarrhœa	(8)

Figures in brackets indicate deaths.

Water Supply.

About 73% of the population is supplied from good public supplies.

Dr. Mc.Leish gives a list of many parishes with defective supplies, and says :—" Most of these defective supplies have been reported on previous to 1913, but apart from the supply prov ded by a private Company at Grange, not one of these defective supplies is one whit better, though the Water Committee have deliberated on most of them, and have considered plans and estimates in most cases."

Drainage and Sewerage.

Broughton, Papcastle and Goat, Little Clifton, Stainburn, Rosthwaite, Dearham, part of Oughterside, are all mentioned as still unsewered.

Housing.

626 houses are said to be required. 225 are unfit for human habitation, and 200 are required to replace houses, which, although they cannot at present be regarded as unfit for habitation, fall definitely below a reasonable standard.

" The Housing Committee are preparing schemes for about 450 new houses. As soon as some of these are built overcrowding will be abated, and in time unfit houses will be closed and demolished.

Longtown Rural.

Dr. J. RANKINE,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	6,425	6,693
For birth-rate ..	6,442	7,218
Birth-rate	19.2	18.5
Death-rate	16.8	15.6
Zymotic death-rate ..	Nil.	0.3
Phthisis death-rate ..	0.9	1.0
Total Tuberculosis death-rate ..	1.0	2.3
Respiratory diseases death-rate ..	2.1	2.9
Infant mortality rate per 1,000 births ..	85	156

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	46
Smallpox	Nil.
Scarlet Fever ..	6
Diphtheria	3
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	4
Cases treated in Hospital —	
Measles ..	27 (Nil.
Whooping Cough	.. (Nil.)
Diarrhœa ..	.. (Nil.)

Figures in brackets indicate deaths.

Penrith Rural.

Dr. A. S. MACTAVISH,
ACTING MEDICAL OFFICER OF HEALTH.*

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	11,456	11,115
For birth-rate ..	11,934	12,454
Birth-rate	18.1	14.6
Death-rate	12.8	14.4
Zymotic death-rate ..	Nil.	0.3
Phthisis death-rate ..	0.4	0.8
Total Tuberculosis death-rate ..	0.4	1.2
Respiratory diseases death-rate ..	2.0	1.5
Infant mortality rate per 1,000 births ..	73	60

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	96
Smallpox	Nil.
Scarlet Fever ..	6
Diphtheria	7
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	6
Cases treated in Hospital —	
Measles ..	57 (Nil.)
Whooping Cough	.. (Nil.)
Diarrhœa ..	.. (Nil.)

Figures in brackets indicate deaths.

FOOD SUPPLY.

The whole or part of 107 carcases of meat were condemned, and destroyed as unfit for human food. In 37 cases the carcases were Tuberculous.

HOUSING.

248 houses are estimated as the requirements of this district.

Whitehaven Rural.

Dr. T. S. MC.INTOSH.
Medical Officer of Health.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	13,571	13,135
For birth-rate ..	14,137	14,717
Birth-rate	22.4	24.4
Death-rate	13.9	15.6
Zymotic death-rate ..	0.6	0.8
Phthisis death-rate ..	0.3	0.6
Total Tuberculosis death-rate ..	0.8	0.9
Respiratory diseases death-rate ..	2.2	3.0
Infant mortality rate per 1,000 births ..	94	75

Infectious Diseases Cases (and Deaths.	1919
Total notificatiins ..	156
Smallpox	Nil.
Scarlet Fever ..	6
Diphtheria	10
Fevers (Enteric, &c.)	Nil.
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	13
Cases treated in Hospital —	
Measles ..	77 (Nil.)
Whooping Cough ..	(4)
Diarrhœa	(4)

Figures in brackets indicate deaths.

Water Supply.

The district as a whole appears to be well supplied with water of satisfactory quality. A table is given of the supply to the various parishes.

Complaints have been made from Distington as to the quantity and quality. Greater pumping facilities are to be installed. Schemes for a new supply for Distington are under consideration.

Drainage and Sewerage.

Tenders have been invited for an installation at Beckermet, and schemes are being prepared for Winder and Gosforth. Moresby Sewage Works have been improved.

Infectious Diseases.

Measles was prevalent in the last three months of the year.

Diphtheria.—Ten cases. One case notified only on the day of death.

Influenza.—Thirty-three deaths. The epidemic of 1918 continued in the early part of 1919.

Housihg.

A scheme to provide 520 houses has been adopted. There is a serious shortage of houses in this area.

Wigton Rural.

Dr. W. P. BRIGGS,
MEDICAL OFFICER OF HEALTH.

Vital Statistics.	1919.	1918.
Population :—		
For death-rate ..	10,359	10,167
For birth-rate ..	10,791	11,392
Birth-rate	20.8	20.1
Death-rate	16.8	18.2
Zymotic death-rate ..	0.4	0.5
Phthisis death-rate ..	0.5	0.4
Total Tuberculosis death-rate ..	0.8	1.0
Respiratory diseases death-rate ..	2.5	2.4
Infant mortality rate per 1,000 births ..	106	70

Infectious Diseases Cases (and Deaths).	1919.
Total notifications ..	167
Smallpox	Nil.
Scarlet Fever ..	8
Diphtheria	13
Fevers (Enteric, &c.)	3
Puerperal Fever ..	Nil.
Pulmonary Tuberculosis	10
Cases treated in Hospital —	
Measles ..	98 (Nil.)
Whooping Cough ..	(2)
Diarrhœa	(Nil.)

Figures in brackets indicate deaths.

WATER SUPPLY.

Dr. Briggs in his report gives a list of the villages and parishes which have a satisfactory water supply, he then goes on to say :—" The Northern part of our district is flat, and experiences great difficulties in regard to water supply. All the villages in this area depend for their supply on shallow wells, many of which are admittedly polluted, and most are liable to pollution. Sinking wells in such districts, where there are midden:steads, badly paved farm yards and buildings, and open slop-drains, is not calculated to improve matters, and separate small gravitation schemes are too expensive for landlords to take in hand. Not only are these wells liable to contamination by soakage, but in dry summers they run dry, and insufficiency is to contend with.

Many houses are without any supply, and depend on their neighbours or upon rain water.....It is indisputable, however, that these parishes (a list of parishes is given) are in great need of water, which can only be met satisfactorily by some gravitation scheme. I am well aware of the cost involved in any gravitation scheme in these days, but having regard to the urgent need of water, unless absolutely prohibitive the cost should not be allowed to stand in the way of our discharging our duty of providing a pure and sufficient supply for the whole of our district, which urgently requires it."

"The Wigton Urban Council, I understand, are about to increase their water supply, and some of our villages (notably Oulton) within an easy radius, might obtain a supply at a cheaper rate than if they were included in a larger comprehensive scheme."

"The villages of Thursby, Gamblesby, Biglands, Aikton, Little Bampton, Oughterby and Kirkbampton, are all dependent on wells, and should be provided with a different water supply, and might be included in a well-thought-out scheme."

"However the problem is ultimately solved, we cannot get away from the fact that a pure and efficient supply of water is necessary to health, and it is our duty to discover the most economical means, compatible with efficiency, of providing such of these parts of our area that are without it."

RIVERS AND STREAMS.

"The Ellen, Waver and the Wampool, are all polluted. The chief sources of pollution are coal mines and coke ovens, and villages and farms, and notably by the outfall from the Sewage Works of the Wigton Urban District."

At Bolton Gate there is pollution of the river from house drainage, and Dr. Briggs has suggested the provision of a sewage system. The matter has been considered, but was laid aside on account of the cost.

The Ellen is also polluted from house drainage at Mealsgate, and at Blennerhasset "there is marked and direct pollution, which can only be remedied by the adoption of a scheme of sewage disposal."

SEWERAGE, EXCREMENT AND REFUSE REMOVAL.

A useful table is given in this Report respecting the conditions in each parish.

CLOSET ACCOMMODATION.

"The privy midden is the prevailing type of sanitary convenience." Nearly all are serious nuisances. Generally they are not emptied sufficiently often.

SCAVENGING.

Fletchertown is the only village where public scavenging has been adopted. The cleansing of midden privies is still most unsatisfactory in every district where they obtain.

Causes of Death at Different Periods of Life in the Administrative County of Cumberland, 1919.

Causes of Death.	Sex.	Aggregate of Urban Districts. All Ages.	0—	1—	2—	5—	15—	25—	45—	65—	Aggregate of Rural Districts. All Ages.	0—	1—	2—	5—	15—	25—	45—	65—
All Causes	M	1007	182	57	49	40	47	112	233	287	678	105	24	28	27	31	87	126	250
	F	988	140	40	51	50	62	114	189	322	668	66	11	16	23	34	87	127	304
1 Enteric Fever	M	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—
	F	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—
2 Smallpox	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3 Measles	M	37	9	17	11	—	—	—	—	—	6	2	1	—	3	—	—	—	—
	F	32	8	11	8	5	—	—	—	—	—	—	—	—	—	—	—	—	—
4 Scarlet Fever	M	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—
	F	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
5 Whooping Cough	M	9	3	4	2	—	—	—	—	—	4	1	1	2	—	—	—	—	—
	F	6	5	—	1	—	—	—	—	—	6	4	1	1	—	—	—	—	—
6 Diphtheria and Croup	M	17	—	1	5	10	1	—	—	—	9	—	—	4	5	—	—	—	—
	F	18	1	1	10	6	—	—	—	—	5	—	—	—	3	2	—	—	—
7 Influenza	M	94	5	5	3	6	7	28	31	9	81	11	6	5	7	8	25	15	4
	F	92	2	5	3	4	10	31	23	14	61	4	1	2	5	9	27	7	6
8 Erysipelas	M	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
	F	2	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—
9 Pulmonary Tuberculosis	M	44	1	—	1	4	12	19	6	1	30	—	—	1	1	4	13	8	3
	F	56	—	—	—	7	16	26	7	—	31	—	—	—	2	6	14	8	1
10 Tuberculous Meningitis	M	8	—	1	3	2	2	—	—	—	6	1	1	1	1	2	—	—	—
	F	7	1	—	2	3	—	1	—	—	2	—	—	1	1	—	—	—	—
11 Other Tuberculous Diseases	M	10	2	2	3	2	—	1	—	—	4	—	1	—	—	1	2	—	—
	F	18	2	—	3	4	6	2	1	—	8	1	—	—	2	2	1	2	—
12 Cancer, malignant Disease	M	67	—	—	1	—	—	5	38	23	62	—	—	—	—	—	1	25	36
	F	78	—	—	—	—	—	4	38	36	68	—	—	—	—	—	5	28	35
13 Rheumatic Fever	M	3	—	—	—	1	2	—	—	—	4	—	—	—	1	—	3	—	—
	F	5	—	—	—	1	2	2	—	—	—	—	—	—	—	—	—	—	—
14 Meningitis	M	8	1	1	1	1	1	2	1	—	9	3	—	2	1	1	1	1	—
	F	11	1	1	2	3	3	1	—	—	4	—	—	2	—	1	—	1	—
15 Organic Heart Disease	M	87	—	—	—	1	2	9	34	41	77	—	—	—	1	1	3	5	23	44
	F	91	—	—	—	2	3	9	22	55	91	—	—	—	—	—	3	4	27	57
16 Bronchitis	M	94	31	10	5	2	1	1	12	32	35	14	3	—	—	—	1	2	15
	F	82	33	4	3	1	—	1	13	37	49	12	2	—	—	1	1	6	27
17 Pneumonia (all forms)	M	92	24	10	7	3	2	10	25	11	35	9	5	4	1	3	4	3	6
	F	84	13	10	3	4	3	9	12	10	34	7	3	6	1	3	3	2	9
18 Other Respiratory Diseases	M	18	2	—	1	—	1	2	7	5	14	2	—	3	—	—	3	3	3
	F	21	1	2	3	1	—	—	5	9	12	—	—	1	1	1	1	1	7
19 Diarrhœa &c.	M	14	9	—	—	—	—	2	3	—	11	8	1	—	—	1	—	—	1
	F	23	13	1	3	—	—	1	4	1	13	5	—	1	—	—	—	1	6
20 Appendicitis and Typhlitis	M	1	—	—	—	1	—	—	—	—	1	—	—	—	—	1	—	—	—
	F	6	—	—	1	3	1	1	—	—	1	—	—	—	—	1	—	—	—
21 Cirrhosis of Liver	M	1	—	—	—	—	—	—	1	—	3	—	—	1	—	—	—	1	1
	F	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
21A Alcoholism	M	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22 Nephritis and Bright's Disease	M	20	1	—	—	—	1	3	6	9	10	—	—	—	—	—	1	2	7
	F	13	—	—	2	—	—	2	7	2	15	—	—	—	1	2	1	1	10
23 Puerperal Fever	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F	2	—	—	—	—	—	2	—	—	5	—	—	—	—	—	5	—	—
24 Parturition, apart from Puerperal Fever	M	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F	7	—	—	—	—	3	4	—	—	3	—	—	—	—	—	3	—	—
25 Congenital Debility, &c.	M	62	62	—	—	—	—	—	—	—	29	29	—	—	—	—	—	—	—
	F	45	44	1	—	—	—	—	—	—	21	21	—	—	—	—	—	—	—
26 Violence, apart from Suicide	M	44	—	—	5	2	8	9	13	7	24	1	—	—	1	4	11	6	1
	F	15	—	—	5	1	3	1	3	2	9	1	—	2	—	—	—	2	4
27 Suicide	M	11	—	—	—	—	—	5	4	2	4	—	—	—	—	—	2	1	1
	F	3	—	—	—	—	—	3	—	—	1	—	—	—	—	—	—	1	—
28 Other Defined Diseases	M	251	31	6	1	5	7	15	44	142	208	24	4	3	3	4	15	29	126
	F	262	25	3	2	5	11	13	50	153	222	11	3	—	6	4	19	39	140
29 Causes Ill-defined or Unknown	M	13	1	—	—	—	—	1	6	5	10	—	1	1	—	—	—	6	2
	F	7	1	1	—	—	—	1	2	2	6	—	1	—	—	—	2	1	2

Causes of Death in the Administrative Areas in the County of Cumberland, 1919.

Causes of Death	Arlecdon and Frizington U.D.		Aspatria U.D.		Cleator Moor U.D.		Cockermouth U.D.		Egremont U.D.		Harrington U.D.		Holme Cultram U.D.		Keswick U.D.		Maryport U.D.		Millom U.D.		Penrith U.D.		Whitehaven M.B.		Wigton U.D.		Workington M.B.		Alston with Garrigill R.D.		Bootle R.D.		Brampton R.D.		Carlisle R.D.		Cockermouth R.D.		Longtown R.D.		Penrith R.D.		Whitehaven R.D.		Wigton R.D.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Civilians only All Causes	43	29	29	17	79	87	35	39	68	50	36	24	23	34	21	28	79	70	89	77	52	74	160	188	23	24	271	256	29	28	31	51	50	67	81	68	177	145	48	60	69	78	103	86	90	85
1 Enteric Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2 Smallpox	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	21	18	—	—	13	13	2	—	—	—	2	1	—	—	—	—	—	—	—	1	—
3 Measles	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	5	—	—	—	—	—	1	1	2	—	—	2	2	1	1
4 Scarlet Fever	—	—	—	—	—	—	—	—	2	1	—	—	2	—	—	—	2	—	—	—	—	—	—	2	5	—	1	8	9	—	1	—	1	1	2	6	2	—	—	—	—	1	—	—
5 Whooping Cough	—	1	2	—	2	1	—	1	1	—	1	1	—	—	—	1	1	—	19	15	3	3	8	6	1	2	42	38	3	1	6	7	6	6	10	8	14	9	6	8	6	2	22	11	8	9
6 Diphtheria and Croup	—	2	—	2	9	9	1	1	7	11	1	1	1	1	1	1	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7 Influenza	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8 Erysipelas	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	4	4	2	2	1	2	2	—	—	2	3	—	—	—	—	1	—	1	—	2	—	—	—	1	2	1	—	—	—
9 Pulmonary Tuberculosis	3	1	—	2	2	5	5	5	3	2	2	3	1	1	3	—	2	—	1	—	—	1	2	2	—	—	2	3	—	—	—	—	—	1	1	2	—	2	—	1	—	—	1	2	2	—
10 Tuberculous Meningitis	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	1	1	—	—	1	3	6	—	1	1	4	—	—	—	—	—	1	1	2	—	2	—	1	—	—	1	2	1	—
11 Other Tuberculous Diseases	1	—	—	—	2	4	1	—	—	—	1	1	—	—	—	—	—	1	1	—	—	1	1	—	—	—	—	1	—	—	1	—	—	—	1	2	—	2	—	1	—	3	—	1	—
12 Cancer, Malignant Disease	3	3	2	—	4	3	4	3	6	4	2	3	3	5	1	3	8	7	3	6	7	8	8	15	—	1	16	17	5	3	3	8	7	11	11	8	10	10	6	5	3	10	5	4	12	9
13 Rheumatic Fever	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—	—	1	—	—	—	—	—	2	4	—	—	—	—	—	—	—	4	2	—	2	1	—	—	—	—	—
14 Meningitis	—	—	—	—	3	2	—	1	1	1	—	1	1	—	—	—	1	1	—	—	—	1	1	—	—	—	2	2	—	—	—	—	—	—	—	—	2	1	—	2	1	—	—	—	—
15 Organic Heart Disease	3	2	2	1	4	9	3	8	4	7	2	—	1	4	8	8	4	7	6	7	9	9	17	9	—	2	24	18	1	3	2	8	7	8	8	12	20	24	5	7	15	13	13	5	6	11
16 Bronchitis	1	—	1	—	4	5	3	3	11	5	8	4	2	1	—	—	7	15	11	8	1	2	15	23	4	2	26	13	—	2	3	3	—	4	1	—	13	18	4	3	3	9	5	5	6	5
17 Pneumonia (all forms)	6	2	2	1	17	6	1	1	4	—	4	3	1	2	—	2	6	5	6	4	6	2	8	10	2	2	29	24	—	—	1	2	2	4	—	5	16	7	1	—	3	3	6	7	6	6
18 Other Respiratory Diseases	1	1	—	—	1	2	—	1	2	—	—	—	—	—	1	—	—	—	1	—	—	1	2	—	—	1	2	5	—	—	—	—	1	1	—	—	3	3	—	1	3	3	5	3	2	1
19 Diarrhœa, &c. (under 2 years)	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—	1	—	—	2	3	—	1	2	6	—	—	—	—	1	—	—	—	7	1	—	—	—	—	4	—	—	—
20 Appendicitis and Typhlitis	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	3	3	—	—	1	2	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—
21 Cirrhosis of Liver	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21a Alcoholism	—	—	—	1	1	2	—	1	—	—	—	—	—	—	—	1	4	2	3	2	2	2	4	3	1	2	2	—	1	1	2	3	—	1	3	—	1	4	—	—	1	2	5	1	—	—	—
22 Nephritis and Bright's Disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	3	—	—	1	—	—	—	—	—	—
23 Puerperal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	* 1	—	—	—	—	—	—
24 Parturition, apart from Puerperal Fever	—	1	—	—	—	—	—	1	—	1	—	—	—	—	—	1	6	2	5	6	1	4	14	4	2	—	13	14	1	1	—	—	3	—	3	2	1	11	4	1	2	4	2	6	—	4	5
25 Congenital Debility, &c.	4	—	3	1	7	7	—	2	5	2	1	1	1	1	—	1	3	—	5	1	—	2	3	2	1	—	12	5	1	1	1	—	2	1	4	1	6	4	1	—	1	—	7	1	1	1
26 Violence, apart from Suicide	3	—	2	1	4	—	—	2	8	1	1	—	—	2	—	—	2	—	—	1	—	—	1	—	—	—	4	1	—	—	—	—	—	2	1	—	2	1	—	—	—	—	—	1	—
27 Suicide	—	—	1	—	—	—	—	—	1	—	—	1	1	—	1	—	2	—	—	—	—	—	3	3	—	—	4	1	—	—	1	—	—	1	3	4	3	1	1	—	—	—	—	2	—
28 Other Defined Diseases	16	6	14	6	17	27	13	8	9	9	9	6	8	18	2	9	26	20	18	22	20	29	39	43	10	10	55	58	12	15	10	15	18	22	26	19	48	40	20	24	23	27	22	36	33	32
29 Causes Ill-defined or unknown	—	—	—	—	—	2	2	—	—	—	—	—	—	1	1	—	2	—	1	—	—	—	3	3	—	—	4	1	—	—	1	—	—	3	4	3	1	1	—	—	—	—	2	—
Special Causes (included above)—																																													
Cerebro-spinal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Deaths of Infants under 1 year of Age, Total	9	2	6	2	22	15	2	3	15	8	5	3	1	3	1	1	13	16	13	9	3	5	34	27	4	1	54	45	3	2	1	4	3	8	7	3	43	16	4	7	8	8	22	8	14	10
Illegitimate	3	—	—	1	2	—	—	1	1	—	—	—	1	1	—	—	1	2	1	1	—	1	3	3	—	—	8	5	—	—	—	—	1	2	3	1	4	3	—	1	1	2	4	2	—	1
Total Births	77	68	36	48	121	99	48	55	90	69	66	49	47	42	29	29	155	120	117	102	61	75	278	251	32	32	333	333	25	21	45	47	64	77	91	67	265	233	69	60	116	101	168	150	126	99
Legitimate	74	62	34	44	113	96	42	50	85	65	64	44	41	37	28	25	148	112	106	94	51	59	258	236	30	26	309	315	21	20	42	47	60	63	79	85	251	213	60	55	106	93	160	143	118	93
Illegitimate	3	6	2	2	8	3	4	5	4	3	2	5	6	5	1	4	7	8	11	8	10	16	20	15	2	6	24	18	4	1	3	—	4	14	12	2	14	20	9	5	10	8	8	7	8	6
Population for Birth-rate	5091		3620		8673		4815		6727		4457		4528		4216		11591		9612		8573		19205		3470		27227		2827		5659		7151		11140		22482		6093		11934		14137		10791	
,, Death-rate	4887		3456		8326		4622		6458		4279		4345		4047		11127		9227		8230		18436		3331		26137		2714		5432		6867		10694		24382		6425		11436		13571		10359	