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COUNTY COUNCIL OF NORTHUMBERLAND.

ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

(WM. F. J. WHITLEY, M.D., D.P.H.),

for the Year 1925.

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CONTENTS.

NORTHUMBERLAND COUNTY COUNCIL.

REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH FOR THE YEAR ENDED 31st DECEMBER, 1925.

To the Chairman and Members of the County Council of Northumberland.

Mr. Chairman, My Lords, Ladies and Gentlemen,

I beg to present my annual report for the year 1925. It is a "survey" report as defined by the memorandum of the Ministry of Health, and as required by the Minister every fifth year. The report deals not only with the sanitary circumstances of the current year, but reviews factors which have influenced the public health in the county during recent years as well as progress made in sanitary administration.

The vital and mortality statistics of county districts are, as usual, summarised, and the various district rates calculated and collated.

Annual Reports of District Medical Officers.—At the end of 1926, two reports were still outstanding, viz., those of the medical officers for the Borough of Berwick-on-Tweed and the Urban District of Ashington. The preparation of the County report is necessarily retarded by delay in the issue of the district reports, as it is impossible to submit a complete summary of sanitary circumstances in the county until information from all districts is received.

The following list shows the dates upon which the various reports were received :—

1926.—March :—9th, River Blyth Port.

April :—17th, Alnwick U.D. ; 28th, Hexham R.D.

May :—3rd, Whitley and Monkseaton U.D. ; 4th, River Tyne Port ; 19th, Bellingham R.D. ; 22nd, Castle Ward R.D. ; 25th, Alnwick R.D.

June :—5th, Prudhoe U.D. ; 8th, Hexham U.D. ; 11th, Earsdon U.D. ; 17th, Morpeth R.D. ; 19th, Belford R.D. ; 25th, Seghill U.D. ; 30th, Blyth M.B. and Morpeth M.B.

July :—8th, Glendale R.D. ; 12th, Rothbury U.D. ; 17th, Bedlingtonshire U.D. ; 21st, Amble U.D. ; 23rd, Cramlington U.D. ; 30th, Gosforth U.D. ; 31st, Longbenton U.D.

August :—6th, Wallsend M.B. ; 17th, Newburn U.D. ; 21st, Norham and Islandshires R.D. ; 25th, Newbiggin U.D.

September :—14th, Seaton Delaval U.D. ; 18th, Rothbury R.D.

October :—5th, Weetslade U.D. ; 30th, Haltwhistle R.D.

The reports for Ashington U.D., and Berwick M.B., had not been received up to time of going to press.

Administration.—The official, technical and administrative staff under the direction of the County Medical Officer consists of :—

The Medical Superintendent of the Council's Sanatorium at Wooley.

The County Tuberculosis Officer (clinical).

5 Assistant County Medical Officers.

School Dentist.

County Sanitary Inspector.

Lady Superintendent of Health Visitors.

There were also, during 1925, 28 Health Visitors, and, at the central office, a clerical staff of eleven.

Vital and Mortality Statistics.—The variation in the principal county rates during recent years are indicated in the following table. The corresponding rates for England and Wales are given for comparison :—

	1919	1920	1921	1922	1923	1924	1925
Birth rate (per 1,000 living)							
Administrative county ...	22·1	28·3	25·5	22·5	22·5	22·2	20·8
England and Wales	*18·5*	*25·4*	*22·4*	*20·6*	*19·7*	*18·8*	*18·3*
General death rate (per 1,000 living)							
Administrative county ...	14·1	12·9	12·4	12·7	11·3	12·1	11·6
England and Wales	*13·8*	*12·4*	*12·1*	*12·9*	*11·6*	*12·2*	*12·2*
Infant mortality rate (per 1,000 births)							
Administrative county ...	102	90	95	87	76	83	82
England and Wales	*89*	*80*	*83*	*77*	*69*	*75*	*75*
Zymotic death rate (per 1,000 living)							
Administrative county ...	0·92	0·76	1·04	0·41	0·74	0·40	0·67
England and Wales	*0·52*	*0·71*	*0·70*	*0·60*	*0·50*	*0·45*	*0·54*
Death rate from Respiratory Tuberculosis (per 1,000 living)							
Administrative county ...	0·97	0·92	0·87	0·88	0·85	0·82	0·78
England and Wales	*0·97*	*0·86*	*0·88*	*0·88*	*0·84*	*0·84*	*0·83*

The birth rate for 1925 (20.8) was lower than the rate for the preceding year, and than the mean rate for the preceding decade; it was, however, distinctly higher than that for England and Wales. It will be noted that, since the high water mark in 1920, the birth rate in this county has, in consonance with the general trend in the country, steadily declined, though in each year a higher level has been reached than in England and Wales.

The general death rate (11.63) was the lowest on record, with the exception of the very low rate recorded in 1923. It was markedly lower than the mean rate for the preceding 10 years, and has in each year since 1921 been below that for England and Wales.

The infant mortality rate also shows a steady decline during recent years, although a higher rate persists than that obtaining for England and Wales.

The zymotic death rate has been subject to some variation, but a tendency to decline is shown since 1921. In 1919 and 1921 the higher rates were due to the comparatively high incidence of infantile Diarrhoea and Enteritis (and, in the latter year, to an epidemic of Whooping Cough), while outbreaks of Measles were contributory factors in the rates of 1920, 1923 and 1925.

The death rate from respiratory tuberculosis in this county shows, it will be observed, a steady decline closely conforming with the decrease in the rate for England and Wales during the same period.

Sanitary Legislation.

The principal public health measures coming in force during 1925 which were of administrative interest to county councils were :—

The Public Health Act, 1925.—Sections II. to V., relating to Streets and Buildings, certain Sanitary Provisions (in relation to drains, sewers, tents, vans, etc., offensive trades), Verminous Premises, etc., Watercourses, Streams, etc., are adoptive. The remainder of the Act comes in force automatically. The following provisions affect county councils :—

Section 61.—Provision of hospitals.—The Minister of Health may empower a county council, under Section 2 of the Public Health (Prevention and Treatment of Disease) Act, 1913, to provide or arrange for the isolation and treatment of patients suffering from infectious disease.

Section 62.—County councils (and local authorities) are empowered, under certain conditions, to remove to hospital, compulsorily, patients suffering from tuberculosis who are in an infectious condition.

Section 66.—Blind Persons.—County councils may make arrangements for assisting in the prevention of blindness and for the treatment of persons suffering from any disease of or injury to the eyes.

Section 67.—Propaganda.—County councils (and local authorities) are empowered to undertake propaganda work in relation to public health.

The Housing Act, 1925.—This Act is chiefly a consolidation of the law in relation to housing. County councils are empowered, in certain cases, to act in default by a local authority pursuant to the authority of the Minister of Health; to promote the formation of or assist public utility societies whose objects include the erection, improvement or management of dwelling-houses for the working classes; provide dwelling-houses for their employees; and, subject to the provisions of this Act, advance money in respect of the construction or alteration of dwelling-houses.

The Milk and Dairies (Consolidation) Act, 1915.—This Act came in force on September 1st, 1925, by the operation of an Order of the Ministry of Health. The Act empowers county councils to stop the supply of milk, in their area, which is likely to cause tuberculosis, and imposes upon them the duty of the inspection of dairies in certain cases and the enforcement of the prohibition of the sale of tuberculous milk for human consumption. County councils may also be called upon to act, in default by district councils, in relation to the registration and supervision of milk producers and vendors.

Orders, Circulars, Memoranda, Etc.

The principal Orders, Circulars, etc., affecting county councils dealt with the following subjects :—

The Tuberculosis Order, 1925, provides for the slaughter of animals affected with certain specified forms of tuberculosis, and for the payment of compensation to the owners. It is a corollary to the Milk and Dairies (Consolidation) Act, the principal objects of which are to put out of use for milk production, and, indirectly, to compel the slaughter of cows giving tuberculous milk or suffering from tuberculous udder or tuberculous emaciation. *The Tuberculosis Order*, 1925 (*No.* 2) prohibits the removal for human consumption of the carcase of an animal slaughtered under the Tuberculosis Order without the written consent of the Medical Officer of Health or other competent officer of the Local Sanitary Authority.

Treatment of Tuberculosis.—Co-operation of Local Authorities with Boards of Guardians; suggested appointment of county tuberculosis officers as consultants at Poor Law Institutions. *Preston Hall Colony.*—

Transfer to British Legion; suggested utilization for treatment of ex-service men. War pensioners.—Grants of leave from residential institutions. *Emigrants to Australia.*—Arrangements for examination by tuberculosis officers of emigrants who have suffered from tuberculosis. *Administration in relation to treatment of tuberculosis.*—Requirements of the Minister of Health as to annual returns made and records kept by Local Authorities.

Prevention of Tuberculosis.—Regulations prohibiting the employment or occupation, involving the milking of cows or the handling of milk vessels, of persons suffering from respiratory tuberculosis. Application was made for the inclusion of the County Council among authorities competent to enforce these Regulations.

Maternity and Child Welfare.—Administration.—Records required to be kept and specimen forms.

Training and Supply of Midwives.—Requirements as to training and grants payable to recognised training institutions and to county councils.

Pemphigus Neonatorum.—Memorandum on mode and sources of infection, treatment and prevention.

Training of Health Visitors.—New requirements as to training and certificates and grants in respect of training.

Poor Law Reform.—A circular in relation to a memorandum of the County Councils' Association dealing with the suggested transfer of the powers and duties of Boards of Guardians to county and county borough councils, and with the proposed substitution of block grants for percentage grants from the Ministry of Health in respect of public health services.

I beg to acknowledge the valuable information and assistance received from time to time from medical officers of health, surveyors and sanitary inspectors.

I am, my lords, ladies and gentlemen,

Your obedient servant,

WILLIAM F. J. WHITLEY.

THE ADMINISTRATIVE COUNTY.

AREA.

The area of the County is 1,278,690 acres, divided as follows:—Boroughs, 14,456 acres; urban districts, 59,807 acres; rural districts, 1,204,427 acres.

POPULATION.

The *civil* population of Northumberland (exclusive of the county boroughs of Newcastle-on-Tyne and Tynemouth) was estimated by the Registrar-General to be 413,400 in the middle of 1925. On this population the mortality rates are calculated.

CHANGES IN AREA.

No alteration in the area of sanitary districts or of the administrative county was made during the year under review.

Boroughs, Urban and Rural Districts, and Port Sanitary Authorities.

The County at the *end* of 1925 was divided for the purpose of sanitary administration into 31 districts, four of which were municipal boroughs, seventeen urban districts, and ten rural districts. There are also the Blyth and Tyne Port Sanitary Authorities. The authorities for the Tweed and Coquet Ports are the Council of the Borough of Berwick-on-Tweed and the Amble Urban District Council respectively.

Boroughs.

Berwick-on-Tweed, Blyth, Morpeth and Wallsend.

The civil population of the boroughs was estimated to be 99,552 in the middle of 1925.

Urban Districts.

Alnwick, Amble, Ashington, Bedlingtonshire, Cramlington, Earsdon, Gosforth, Hexham, Longbenton, Newbiggin-by-the-Sea, Newburn, Prudhoe, Rothbury, Seaton Delaval, Seghill, Weetslade, and Whitley and Monkseaton.

The civil population of the urban districts was estimated to be 208,648 in the middle of 1925.

Rural Districts.

Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshires and Rothbury.

The civil population of the rural districts was estimated to be 105,200.

The area and population of each sanitary district in the administrative county will be found in a table at the end of this report.

Births.

According to the statistics supplied by the Registrar-General the net births belonging to the administrative county numbered 8,634 (6,794 of which occurred in urban and 1,840 in rural districts).

Of the 8,634 births above mentioned 356 (4.1%) were illegitimate.

The birth rate for the county was 20.88 (22.18 in 1924 and 22.56 in 1923).

The following table shows the comparative rates :—

	Birth rate.	Increase since 1924.	Decrease since 1924.	Mean rate 1915–1924.
Administrative County ...	20·88	—	1·30	23·15
Urban districts	22·04	—	1·53	24·52
Rural districts	17·50	—	0·69	19·15
England and Wales ...	18·3	—	0·5	20·40

Deaths.

Net deaths.—According to information supplied by the Registrar-General the net deaths numbered 4,807 (3,648 in urban and 1,159 in rural districts).

Transferable deaths.—710 inward and 446 outward transfers were reported, being a net balance of 264 inward transfers.

The following table shows the comparative rates :—

	Death rate.	Increase since 1924.	Decrease since 1924.	Mean rates 1915–1924.
Administrative County ...	11·63	—	0·43	13·44
Urban districts	11·84	—	0·49	13·69
Rural districts	11·02	—	0·24	12·51
England and Wales ...	12·2	—	—	13·63

Details of the deaths and death rates in the several districts are given in the table at the end of this report.

The diseases causing the greatest mortality in the administrative county during 1925 were as follows :—

Disease.	No. of deaths.	Percentage of total deaths.
Heart Disease	534	11·1
Cancer...	454	9·4
Tuberculosis	447	9·3
Pneumonia	391	8·1
Cerebral Hæmorrhage ...	319	6·6
Bronchitis	216	4·5
	2,361	49·0

As during the preceding year, the above-named six diseases were responsible for about half the deaths in the administrative county.

Infant Mortality.

	Number of deaths.	Death rate per 1000 births	Increase since 1925.	Decrease since 1925.	Mean rates 1915–1924.
Administrative County ...	708	82	—	1	96
Urban districts	606	89	2	—	102
Rural districts	102	55	—	10	72
England and Wales ...	53,008	75	—	—	86

The subjoined tables indicate the rates among legitimate and illegitimate infants respectively :—

	Legitimate Infants.		Illegitimate Infants.	
	No. of deaths under 1 year.	Death rate per 1000 births.	No. of deaths under 1 year.	Death rate per 1000 births.
Administrative County ...	661	80	47	132
Urban districts	569	87	37	146
Rural districts	92	52	10	108

Deaths under 5 Years and at 65 Years and Upwards.

The rates (per 1,000 population) were as follows :—

	Under 5 years.	65 years and upwards.
Administrative County	2·64	4·13
Urban districts	3·07	3·75
Rural districts	1·39	5·26

Infectious Diseases.

Notifications of Infectious Diseases received during the year 1925, under Article 14 (2) of the Sanitary Officers Order, 1922. The attack rate for the Administrative County was 15.1, for urban districts 16.6, and for rural districts 10.6 per 1,000 population.

Sanitary districts.	Smallpox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Puerperal Fever.	Erysipelas.	Encephalitis Lethargica.	Cerebro-Spinal Fever.	Polio-myelitis.	Ophthalmia Neonatorum.	Tuberculosis (Pulmonary).	Tuberculosis (Other Forms).	Pneumonia.	Acute Polio-Encephalitis.	Chickenpox.	Total number notified
Municipal Boroughs—																
Berwick-on-Tweed ...	—	75	5	—	—	4	—	—	—	—	3	1	—	—	—	88
Blyth	17	62	11	1	2	10	2	—	—	13	58	29	129	—	195	529
Morpeth	1	32	3	6	—	2	—	1	—	—	9	3	—	—	—	57
Wallsend	4	109	36	5	1	16	11	—	1	10	160	78	154	—	83	668
Urban Districts—																
Alnwick	—	21	6	2	—	1	—	—	—	—	8	—	—	—	—	38
Amble	—	3	8	—	1	—	—	1	—	—	3	—	—	—	16	32
Ashington	208	94	9	2	2	11	—	—	—	3	48	18	25	—	—	420
Bedlingtonshire ...	145	102	—	2	—	6	3	—	—	—	34	30	120	—	364	806
Cramlington	2	8	2	—	—	3	2	—	—	—	25	15	40	—	214	311
Earsdon	1	22	6	2	—	2	—	—	—	—	14	5	16	—	55	123
Gosforth	4	34	13	3	—	7	—	—	—	2	10	5	4	—	56	138
Hexham	12	14	13	—	1	8	—	—	—	1	37	6	10	—	7	109
Longbenton	3	36	4	—	—	5	1	—	—	1	14	4	49	—	91	218
Newbiggin-by-the-Sea	9	46	3	—	—	6	—	—	—	—	6	2	—	—	—	72
Newburn	35	133	6	4	—	5	5	—	—	1	46	27	65	—	552	879
Prudhoe	94	20	4	—	—	3	2	—	—	4	34	27	28	—	21	237
Rothbury	—	5	—	—	—	1	—	—	—	—	1	—	4	—	1	12
Seaton Delaval ...	1	7	4	—	—	5	3	—	—	—	11	7	37	—	12	87
Seghill	5	—	—	—	—	1	—	—	—	—	3	—	15	—	—	24
Weetslade	29	15	3	—	—	3	—	—	—	1	9	9	4	—	—	73
Whitley&Monkseaton	—	60	11	3	—	9	3	—	—	1	15	9	29	—	78	218
Rural Districts—																
Alnwick	2	44	2	2	—	5	—	—	—	—	11	5	—	—	14	85
Belford	—	17	1	1	—	2	—	—	—	—	5	4	14	—	76	120
Bellingham	—	13	1	1	—	2	1	—	—	—	6	—	7	—	—	31
Castle Ward	18	48	6	1	—	8	—	1	—	2	16	6	38	—	101	245
Glendale	—	15	—	—	—	2	—	—	—	—	4	—	21	—	7	49
Haltwhistle	5	10	5	—	—	—	—	—	—	—	3	1	4	—	—	28
Hexham	3	35	27	—	—	7	1	—	—	2	30	7	15	—	38	165
Morpeth	29	73	8	—	—	5	—	—	—	—	18	8	—	—	98	239
Norham&Islandshires	—	78	1	1	—	1	1	—	—	—	3	3	5	—	28	121
Rothbury	2	12	4	—	—	1	—	—	—	—	4	1	4	—	7	35
Totals ...	629	1243	202	36	7	141	35	3	1	41	648	310	837	—	2124	6257

Among administrative counties in England and Wales the attack rate in Northumberland from the principal infectious diseases ranked as follows :—

Scarlet fever, 8th highest; Diphtheria, 38th; Enteric fever, 14th; Puerperal fever, 48th; Erysipelas, the 13th.

The highest attack rates (per 1,000 population) from notifiable infectious diseases in districts in the administrative county were stated by the Registrar-General to be as follows :—

Small-pox.—Prudhoe 10.02, Ashington 6.55, Bedlingtonshire 5.06 and Weetslade 3.88.

Scarlet fever.—Norham and Islandshires 14.68, Newburn 6.47, Newbiggin 6.43 and Berwick-upon-Tweed 6.15.

Diphtheria.—Amble 1.73, Hexham urban district 1.53, Hexham rural district 1.22 and Alnwick urban district 0.86.

Enteric fever.—Morpeth borough 0.78, Alnwick urban district 0.29, Belford 0.20 and Gosforth 0.19, Newburn 0.19, and Norham and Islandshires 0.19.

Puerperal fever.—Amble 0.22, Hexham urban district 0.12, Ashington 0.06 and Blyth borough 0.06.

Erysipelas.—Hexham urban district 0.94, Newbiggin 0.84, Rothbury urban district 0.83 and Seaton Delaval 0.62.

The attack rates (per 1,000 population) for England and Wales and for the administrative counties of Northumberland and Durham were as follows :—

	Scarlet fever.	Diphtheria.	Enteric fever.	Puerperal fever.	Erysipelas.
England and Wales	2·36	1·23	0·07	0·06	0·39
Northumberland	3·01	0·49	0·09	0·02	0·34
Durham ...	3·36	0·86	0·08	0·04	0·50

Zymotic Diseases.

The zymotic diseases which are generally notifiable are Small-pox, Scarlatina, Diphtheria, Fevers (Typhus, Enteric, Continued, and Relapsing). The seven principal zymotic diseases, upon which the zymotic death rate is calculated, are the four just mentioned, and in addition Whooping Cough, Measles and Diarrhœa and Enteritis (under 2 years).

Two hundred and seventy-eight deaths were caused by the seven principal zymotic diseases, being an increase of 112 compared with the number registered in 1924. Of these deaths 243 took place in the urban and 35 in the rural districts.

The zymotic diseases which caused the greatest mortality were :—

Diseases.	Number of deaths.		
	1925.	1924.	1923.
Measles	112	15	136
Diarrhœa and Enteritis (under 2 years)	87	69	60
Whooping Cough...	46	54	77

As Diarrhœa and Enteritis, Measles and Whooping Cough are not generally notifiable, no information can be given as to the number of cases which occurred.

The comparative rates for zymotic diseases are set out in the following table :—

	Death Rate.	Increase since 1924.	Decrease since 1924.
Administrative County ...	0·67	0·27	—
Urban districts	0·78	0·29	—
Rural districts	0·33	0·19	—
England and Wales	0·54	0·09	—

Table shewing death rates, per 1,000 living, from each of the seven principal zymotic diseases for the seven years ended Dec. 31st, 1925 :—

Diseases.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
Smallpox	Nil.	Nil.	Nil.	Nil.	Nil.	0·002	Nil.
Scarlatina	0·047	0·081	0·040	0·032	0·037	0·017	0·019
Diphtheria ...	0·177	0·153	0·085	0·059	0·029	0·036	0·041
Enteric Fever ...	0·032	0·030	0·035	0·009	0·009	0·012	0·019
Measles	0·267	0·053	0·186	0·335	0·335	0·036	0·271
Whooping Cough	0·095	0·109	0·256	0·144	0·189	0·131	0·111
Diarrhœa&Enteritis (under 2 years)	0·301	0·333	0·409	0·127	0·224	0·219	0·266

Small-pox.—The epidemic of the previous year was continued during the year under review, 629 cases being reported compared with 392 in 1924. The chief incidence was in Ashington (208), Bedlingtonshire (145) and Prudhoe (94). The County Medical Officer arranged for the loan of the services of county health visitors to assist the medical officer for Prudhoe in discovering new cases and contacts, and in securing vaccination. The epidemic in this locality speedily subsided. An offer of assistance on similar lines was made to the Ashington authority, but after consideration was not accepted. During the preceding year, on the recommendation of the County Medical Officer, the Ashington Council secured the services of Dr. Jameson, an expert on small-pox, who was in charge of the hospital at Gloucester. He worked under considerable difficulty, however, at Ashington, owing largely to the mildness of the disease and the persistent refusal of vaccination, and also to some laxity in the administration of the hospital. By energetic action Dr. Jameson was able to secure a considerable diminution in the number of cases. He declined however to remain, although pressed to do so by the County Medical Officer, as he felt that under the conditions then prevailing he could not make further headway. There is reason to believe that Small-pox existed in Ashington for some time before it was recognised. From the first the district has been the chief focus of infection in the county, and neighbouring districts have made repeated efforts to eradicate the disease from their borders and have succeeded, only to be re-infected by cases traceable to Ashington, a most unfortunate state of affairs. It is most regrettable that one community should be utterly indifferent to any loss of trade, inconvenience and general discomfort which it may inflict upon another. Assistance which the County Medical Officer personally offered and suggestions which he made were ignored.

Typhus fever, Cholera, Plague, Anthrax (in human subjects).—No cases were reported.

Cerebro-Spinal Meningitis.—Three cases were notified; five deaths occurred.

Poliomyelitis.—One case was reported; no death occurred.

Chicken-pox was reported from 22 sanitary districts.

Scarlatina.

The notifications numbered 1,243 (898 from urban and 345 from rural districts). The mortality from this disease was 8 (5 deaths occurring in urban and 3 in rural districts). In 1924, 7 deaths were reported and in 1923, 15.

	Death rate per 1000 population.	Increase since 1924.	Decrease since 1924.	Attack rate per 1000 living.
Administrative County ...	0·019	0·002	—	3·00
Urban districts	0·016	—	0·003	2·91
Rural districts	0·028	0·019	—	3·28
England and Wales ...	0·03	0·01	—	—

The greatest number of cases occurred in Newburn (133), Wallsend (109), Bedlingtonshire (102), Ashington (94), Norham and Islandshires (78), Berwick (75) and Morpeth rural district (73).

Enteric Fever.

Thirty-six cases (30 in urban and 6 in rural districts) were notified, resulting in 8 deaths (7 in urban and 1 in rural districts). In 1924 the mortality was 5 and in 1923, 4.

	Death rate per 1000 population.	Increase since 1924.	Decrease since 1924.	Attack rate per 1000 living.
Administrative County ...	0·019	0·007	—	0·087
Urban districts	0·022	0·009	—	0·097
Rural districts	0·009	—	—	0·057
England and Wales ...	0·01	—	—	0·07

The greatest number of cases occurred in the boroughs of Morpeth (6) and Wallsend (5), and in the urban district of Newburn (4).

Diphtheria and Membranous Croup.

The notifications numbered 202 (147 from urban and 55 from rural districts). The diseases (one or both) were notified from 27 districts, i.e., in all districts excepting the urban districts of Bedlingtonshire, Rothbury and Seghill and the rural district of Glendale.

Seventeen deaths occurred (13 in urban and 4 in rural districts).

	Death rate per 1000 population.	Increase since 1924.	Decrease since 1924.	Attack rate per 1000 living.
Administrative County ...	0·041	0·005	—	0·49
Urban districts	0·042	—	—	0·47
Rural districts	0·038	0·019	—	0 52
England and Wales ...	0·07	0·01	—	1·23

Measles.

One hundred and twelve deaths occurred (101 in urban and 11 in rural districts); 15 deaths were reported in 1924 and 136 in 1923.

	Death Rate per 1,000.	Increase since 1924.	Decrease since 1924.
Administrative County	0·271	0·235	—
Urban districts	0·327	0·282	—
Rural districts	0·104	0·095	—
England and Wales	0·13	0·01	—

Whooping Cough.

The deaths numbered 46 (36 in urban and 10 in rural districts); 54 deaths were reported in 1924 and 77 in 1923.

	Death Rate per 1,000.	Increase since 1924.	Decrease since 1924.
Administrative County	0·111	—	0·020
Urban districts	0·117	—	0·040
Rural districts	0·095	0·038	—
England and Wales	0·15	0·05	—

Puerperal Fever.

This disease caused 9 deaths (7 in urban and 2 in rural districts) compared with 6 in 1924 and 13 in 1923.

	Death Rate per 1,000.	Increase since 1924.	Decrease since 1924.
Administrative County	0·021	0·007	—
Urban districts	0·022	0·006	—
Rural districts	0·019	0·010	—

The distribution of the 9 deaths was as follows:—Blyth, 1; Wallsend, 3; Haltwhistle, 1; Morpeth rural district, 1; Amble, 1; Seaton Delaval, 1; Ashington 1.

Diarrhœa and Enteritis.

At all ages.

The number of deaths of all ages was 110 (100 in urban and 10 in rural districts). In 1924, 90 deaths occurred and in 1923, 91.

	Death Rate per 1,000.	Increase since 1924.	Decrease since 1924.
Administrative County	0·266	0·047	—
Urban districts	0·324	0·049	—
Rural districts	0·095	0·038	—

Under 2 years.

The deaths from this cause, under 2 years of age, numbered 87 (69 in 1924 and 60 in 1923); 81 occurred in urban and 6 in rural districts.

	Death Rate per 1,000 births.	Increase since 1924.	Decrease since 1924.
Administrative County	10·1	2·5	—
Urban districts	11·9	2·9	—
Rural districts	3·2	1·1	—
England and Wales	8·4	1·1	—

Respiratory Diseases.

Respiratory diseases (exclusive of Respiratory Tuberculosis) caused 662 deaths in the administrative county during the year; 520 occurred in urban and 142 in rural districts. 740 deaths were reported during 1924 and 638 during 1923. The following table shows the comparative rates :—

	Death Rate per 1,000 living.	Increase since 1924.	Decrease since 1924.
Administrative County	1·60	—	0·22
Urban districts	1·68	—	0·32
Rural districts	1·35	0·13	—

Influenza

One hundred and seven deaths were recorded (69 in urban and 38 in rural districts) as directly attributable to this disease. The deaths during 1924 numbered 199 and during 1923, 39. The following table indicates the comparative rates :—

	Death Rate per 1,000 living.	Increase since 1924.	Decrease since 1924.
Administrative County	0·26	—	0·23
Urban districts	0·22	—	0·25
Rural districts	0·36	—	0·17

TUBERCULOSIS.

Table 1.

Deaths and death rates.

	Respiratory Tuberculosis.				Other Tubercular Diseases.				Tuberculosis (all forms).			
	Deaths.	Death rates per 100,000 living.	Increase in rates since 1924.	Decrease in rates since 1924.	Deaths.	Death rates per 100,000 living.	Increase in rates since 1924.	Decrease in rates since 1924.	Deaths.	Death rates per 100,000 living.	Increase in rates since 1924.	Decrease in rates since 1924.
Administrative County	324	78	—	4	123	30	—	1	447	108	—	5
Urban districts ...	255	83	—	5	100	32	—	4	355	115	—	9
Rural districts ...	69	65	1	—	23	22	8	—	92	87	9	—
England and Wales ...	32382	83	—	1	8005	21	—	1	40387	104	—	2

TABLE OF VITAL AND MORTALITY STATISTICS, &c., 1925.

1925. Sanitary Districts.	Medical Officers of Health.	Area. (Acres)	Population: Census, 1921.	Population: Estimated to middle of 1925.	Nett births belonging to the district.	Nett deaths belonging to the district: Under 1 year.	Nett deaths: At all ages.
Municipal Boroughs							
1.—Berwick-on-Tweed	P. W. Maclagan, M.D.	6,396	12,985	12,200	250	19	171
2.—Blyth	J. M. MacLachlan, M.B., C.M.	4,313	31,922	34,070	786	80	411
3.—Morpeth	Hugh Dickie, M.A., M.D.	328	7,376	7,662	173	14	103
4.—Wallsend	Robert Rutherford (M.C.), M.B., B.S., D.P.H., B.Hy.	3,420	42,995	45,620	1,068	116	625
Urban Districts—							
1.—Alnwick	R. W. E. Trevor Roper, M.B., Ch.B., M.R.C.S., L.R.C.P.	4,777	6,988	6,988	139	20	115
2.—Amble	J. A. Loughridge, M.B., Ch.B.	1,258	4,631	4,637	91	8	54
3.—Ashington	M. Bruce, M.B., C.M.	3,043	29,389	31,740	630	85	333
4.—Bedlingtonshire	Wm. Hudson, M.D., B.S., D.P.H., B.Hy.	8,533	26,406	28,630	688	61	317
5.—Cramlington	J. Anderson, M.D., C.M., B.Hy.	4,583	8,517	9,307	243	10	101
6.—Earsdon	Taylor Dixon, M.B., B.S.	4,705	11,303	12,080	278	24	136
7.—Gosforth	W. Galbraith, L.R.C.P., L.R.C.S.	1,303	15,717	15,890	246	24	161
8.—Hexham	J. A. Jackson, M.D.	3,149	8,843	8,476	153	13	113
9.—Longbenton	T. S. P. Parkinson, M.B., B.S.	3,347	13,740	13,780	276	15	155
10.—Newbiggin-by-the-Sea	H. Hart Jackson, M.R.C.S., L.R.C.P.	633	6,808	7,149	201	15	69
11.—Newburn	A. W. Messer, M.B., C.M., B.Sc.	4,673	18,830	20,570	402	27	237
12.—Prudhoe	Robt. McConll, L.R.C.P., L.R.C.S.	3,989	8,024	9,377	234	16	106
13.—Rothbury	F. Barrow, M.R.C.S., L.S.A.	970	1,082	1,210	20	2	21
14.—Seaton Delaval	A. S. Taylor, L.R.C.P., L.R.C.S., L.M., L.F.P.S.	3,348	7,835	8,090	158	14	77
15.—Seghill	P. Henderson, L.R.C.P., L.R.C.S., L.F.P.S.	1,427	1,949	2,137	44	6	28
16.—Weetslade	Theodore Craig, M.B., B.S.	2,398	6,934	7,472	191	23	92
17.—Whitley & Monkseaton	J. Paul Sparks, M.D., B.S.	1,873	22,228	21,110	323	14	223
Rural Districts—							
1.—Alnwick	A. Scott Purves, M.D.	93,009	14,367	12,460	227	10	158
2.—Belford	T. McDonald, M.B., C.M.	39,619	3,634	4,909	72	5	63
3.—Bellingham	J. Graham Miller, M.B., C.M.	246,180	3,932	5,676	88	5	65
4.—Castle Ward	Willmot Holmes, M.R.C.S., L.R.C.P.	65,124	13,137	13,280	207	16	118
5.—Glendale	Alex. Dey, M.B., C.M.	147,942	8,351	8,003	138	6	98
6.—Haltwhistle	J. M. Glasse, M.B., Ch.B.	96,323	9,751	9,463	182	18	98
7.—Hexham	J. Steedman, M.D., Ch.B., L.M., D.P.H.	190,809	24,565	22,140	356	12	232
8.—Morpeth	J. P. Philip, O.B.E., M.D., D.P.H.	85,045	18,095	19,200	404	23	207
9.—Norham & Islandshires	J. McWhir, M.B., Ch.B.	47,072	5,906	5,324	93	5	57
10.—Rothbury	F. Barrow, M.R.C.S., L.S.A.	166,904	3,054	4,749	72	1	43

1925. Sanitary Districts.	Total (deaths).	Birth Rate per 1,000 living.	Death Rate per 1,000 living: Nett death rate.	Death Rate per 1,000 living: Standardised death rate.	Zymotic Death Rate per 1,000 living.	Phthisis Death Rate per 1,000 living.	Respiratory Death Rate per 1,000 living.	Infant Mortality Rate under 1 year per 1,000 births.	General Death Rate Decrease since 1924.	General Death Rate Increase since 1924.	Zymotic Death Rate Decrease since 1924.	Zymotic Death Rate Increase since 1924.	Infectious Diseases: Number of Cases notified.	Infectious Diseases: Attack Rate per 1,000 living.	Isolation Hospital Accommodation?	Number of Cases Notified sent to Isolation Hospital.	Percentage of notified Cases (Exclusive of Tuberculosis) sent to Hospital.	Reference No.
Municipal Boroughs																		
1.—Berwick-on-Tweed	171	20·49	14·01	11·68	0·41	0·90	1·80	76	5·55	—	1·20	—	88	7·2	Yes	—	—	1
2.—Blyth	411	23·07	12·06	12·82	0·67	0·99	1·79	101	0·59	—	—	0·22	329	13·5	Yes	61	13·8	2
3.—Morpeth	103	22·58	13·44	13·24	1·50	0·52	1·56	81	—	0·67	—	1·30	57	7·4	Yes	10	22·2	3
4.—Wallsend	625	23·41	13·70	14·44	1·49	1·55	2·08	108	—	1·19	—	1·27	668	14·6	Yes	136	36·2	4
Urban Districts—																		
1.—Alnwick	115	19·69	16·45	14·9	1·43	0·85	1·86	144	—	5·39	—	1·15	38	5·4	Yes	22	73·2	1
2.—Amble	54	19·62	11·65	11·42	0·21	0·43	1·29	88	2·74	—	0·66	—	32	6·9	Yes	1	3·4	2
3.—Ashington	333	20·13	10·49	11·77	0·93	0·69	1·89	102	1·48	—	0·11	—	420	22·2	Yes	—	—	3
4.—Bedlingtonshire	317	24·03	11·07	11·52	0·38	0·48	1·74	88	1·36	—	0·26	—	806	28·1	Yes	147	19·8	4
5.—Cramlington	101	26·02	10·95	10·91	0·22	0·75	0·75	41	2·36	—	0·22	—	311	33·4	Yes	3	1·1	5
6.—Earsdon	136	23·01	11·26	11·58	0·66	0·99	1·73	86	—	0·95	—	0·23	123	10·2	Yes	29	27·9	6
7.—Gosforth	161	15·48	10·13	10·33	0·75	0·37	1·38	97	0·69	—	—	0·50	138	8·6	Yes	44	33·8	7
8.—Hexham	113	18·05	13·33	12·51	0·82	0·59	2·12	85	1·34	—	—	0·24	109	12·8	Yes	13	29·7	8
9.—Longbenton	155	20·02	11·25	11·42	0·87	0·79	1·67	54	0·29	—	—	0·33	218	15·7	Yes	29	19·3	9
10.—Newbiggin-by-the-Sea	69	28·11	9·65	9·64	0·28	0·69	1·09	74	4·05	—	0·15	—	72	10·0	Yes	9	14·1	10
11.—Newburn	237	19·54	11·52	11·99	0·92	0·92	1·55	67	—	0·48	—	0·58	879	42·7	Yes	176	21·8	11
12.—Prudhoe	106	24·95	11·30	11·2	0·64	0·55	1·92	68	—	1·41	—	0·43	237	25·2	Yes	97	50·1	12
13.—Rothbury	21	16·32	17·06	14·20	Nil	0·82	0·82	100	—	6·01	—	—	12	9·9	Yes	Nil.	—	13
14.—Seaton Delaval	77	19·51	9·51	9·45	0·61	0·61	0·99	88	2·37	—	—	0·24	87	10·7	Yes	9	13·0	14
15.—Seghill	28	20·80	13·10	13·27	0·46	0·46	1·40	136	—	3·07	—	0·46	24	11·2	Yes	5	23·8	15
16.—Weetslade	92	25·56	12·31	12·05	0·53	0·53	2·01	120	—	0·70	0·28	—	73	9·7	Yes	32	56·1	16
17.—Whitley & Monkseaton	223	15·30	10·56	10·54	0·28	0·33	1·09	43	0·40	—	—	0·24	218	10·3	Yes	45	23·2	17
Rural Districts—																		
1.—Alnwick	158	18·22	12·68	11·54	0·16	0·56	1·92	44	—	0.51	—	0·08	85	6·8	Yes	2	2·9	1
2.—Belford	63	14·67	12·83	11·00	Nil	0·61	1·63	68	0·92	—	0·40	—	120	24·4	Yes	Nil.	—	2
3.—Bellingham	65	15·50	12·45	9·92	0·17	0·35	1·41	57	0·43	—	—	—	31	5·4	No	—	—	3
4.—Castle Ward	118	15·58	8·98	8·92	0·15	0·45	1·20	77	—	0·08	—	—	240	19·4	Yes	38	17·0	4
5.—Glendale	98	17·24	12·24	10·76	Nil	0·87	1·62	43	2·67	—	0·23	—	48	5·9	Yes	Nil.	—	5
6.—Haltwhistle	98	19·23	10·55	9·55	0·53	0·95	0·95	98	—	0·40	—	0·53	28	2·9	No	3	20·3	6
7.—Hexham	232	16·08	11·28	10·25	0·27	0·87	1·13	50	0·58	—	—	0·09	163	7·4	Yes	27	21·1	7
8.—Morpeth	207	21·04	10·79	10·84	0·79	0·73	1·56	57	—	1·60	—	0·62	229	12·4	Yes	29	13·6	8
9.—Norham & Islandshires	57	17·50	10·70	9·53	0·37	0·75	0·37	33	1·59	—	—	0·37	125	22·7	Yes	30	26·1	9
10.—Rothbury	43	15·16	9·05	9·06	0·42	0·42	1·47	14	4·52	—	—	0·42	35	7·5	Yes	4	13·3	10

Table 1 shows the number of deaths and the death rates per 100,000 living from all forms of Tuberculosis. It will be noticed that in respiratory tuberculosis while there is a decrease of 4 in the administrative county and 5 in the urban districts, an increase of 1 is indicated in the rural districts since 1924. In the other forms of tuberculosis similarly, in the administrative county and the urban districts there is a decrease of 1 and 4 respectively, and an increase of 8 in the rural districts since 1924. For all forms of the disease the decrease in the administrative county is 5, and in the urban districts 9, and an increase in the rural districts of 9.

Table 2.

Deaths and death rates, 1900—1925.

Administrative County of Northumberland.

Year.	Respiratory Tuberculosis.		Other Tubercular Diseases.		Tuberculosis (all forms).		Total Deaths from all causes.	% of Deaths from Tuberculosis.
	No. of Deaths.	Death rate per 100,000 living.	No. of Deaths.	Death rate per 100,000 living.	No. of Deaths.	Death rate per 100,000 living.		
*1900	537	138	244	62	781	200	6,822	11.4
*1901	495	125	280	71	775	196	7,261	10.6
*1902	498	125	240	60	738	185	6,605	11.1
*1903	485	119	323	79	808	198	6,826	11.8
*1904	490	117	317	76	807	193	7,131	11.3
1905	344	102	239	71	583	173	5,016	11.6
1906	362	104	208	60	570	164	5,026	11.3
1907	355	100	197	55	552	155	4,790	11.5
1908	344	95	220	60	564	155	5,377	10.5
1909	377	101	207	55	584	156	4,994	11.6
1910	355	93	225	60	580	153	4,917	11.7
1911	366	98	200	54	566	152	5,159	10.9
1912	328	86	193	50	521	136	4,861	10.7
1913	353	91	189	48	542	139	5,175	10.4
†1914	360	92	180	47	540	139	5,125	10.5
†1915	376	103	197	54	573	157	5,786	9.9
†1916	394	110	187	52	581	162	4,915	11.8
†1917	378	106	194	54	572	160	4,851	11.7
‡1918	434	122	164	46	598	168	6,129	9.7
1919	367	97	136	36	503	133	5,335	9.4
1920	363	92	144	37	507	129	5,072	9.9
1921	347	87	151	38	498	125	4,944	10.1
1922	355	88	127	31	482	119	5,113	9.4
1923	345	85	122	30	467	115	4,599	10.1
1924	337	82	126	31	463	113	4,951	9.3
1925	324	78	123	30	447	108	4,807	9.3
Mean for 10 years preceding 1925	369	96	155	40	524	136	5,169	10·0

Notes.—*Prior to 1905 Tynemouth U.D., Benwell and Walker were in County area.
†1914-1918 were "war" years.
‡1918 was the year of two severe epidemics of influenza.

Table 2 shows the deaths and death rates from 1900 to 1925 in the administrative county from respiratory tuberculosis, other tuberculous diseases and all forms, with the total number of deaths from all causes and the percentage of deaths due to tuberculous disease. It will be noted

with satisfaction that in 1900 the death rate per 100,000 living from all forms of tuberculosis was 200 and in 1925 it was 108. The percentage of deaths from tuberculosis in 1900 was 11.4 against 9.3 in 1925. A study of these figures is of great interest. It is necessary to emphasize that the total number of deaths in 1900 was 6,822 whilst the total number of deaths in 1925 was 4,807.

Table 3.

In the following table are indicated notifications and mortality during 1925.

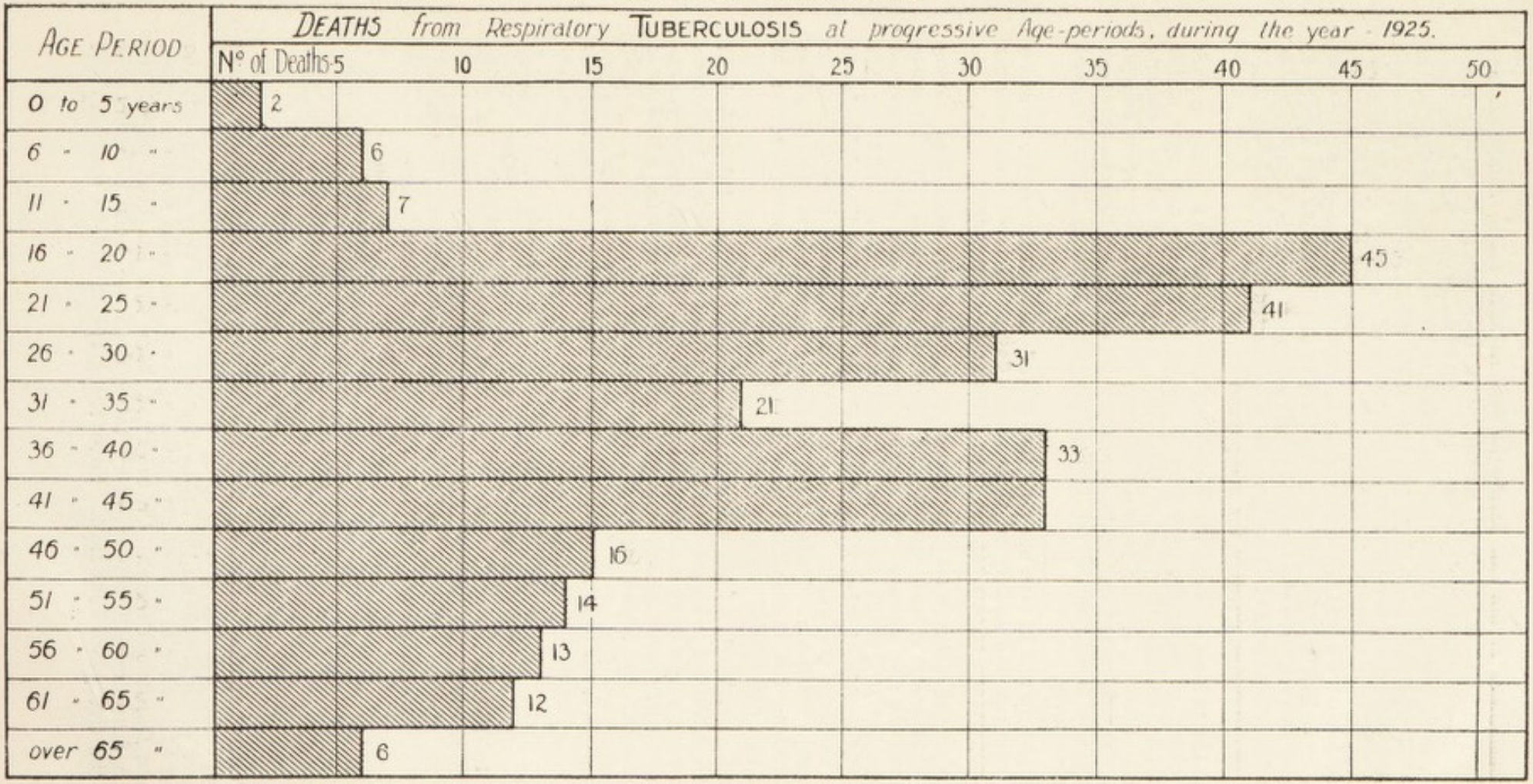
Age Periods.	New Cases.		Deaths.	
	Pulmonary.	Non-pulmonary.	Pulmonary.	Non-pulmonary.
Years.				
0— 1 ...	1	13	2	15
1— 5 ...	19	84	7	36
5—15 ...	107	105	17	22
15—25 ...	199	51	86	14
25—45 ...	212	41	139	17
45—65 ...	73	8	64	16
65 and upwards	8	1	9	3
At all ages ...	619	303	324	123

Table 3 has been set out in compliance with the requirements of the Ministry of Health and a graph has been prepared showing the age periods of deaths from respiratory tuberculosis during the year. It will be noted that in the graph 279 deaths are dealt with. These are the deaths from respiratory tuberculosis actually occurring in the county during 1925. This number was chosen for analysis in preference to the net deaths furnished by the Registrar General because it has been possible to divide the deaths into smaller and more equal groups than those officially supplied. This graph indicates in no uncertain way that tuberculosis is pre-eminently a disease of youth, and that its greatest influence is exerted during the best working period of a man's life. Out of 279 deaths registered in the county, 86 occurred between the ages of 16 and 25, 138 occurred between the ages of 16 and 35, and 204 occurred between the ages of 16 and 45. Before the age of 16, and after the age of 45, the number of deaths is comparatively insignificant. After 15, the critical age of puberty and adolescence, the increase is rapidly progressive up to 20 years. Between 20 and 35 there is a gradual diminution in the number of deaths, whilst between 35 and 45 there is again an increase. After the age of 45 the death rate falls rapidly.

It would appear that tuberculosis is exceptionally virulent to young adults between the ages of 16 and 20. This fact has been observed in other areas. What precisely is the reason for this is difficult to say. It may be assumed that each one of us has ingested in the past small doses of tubercle bacilli and that we are continuing to do so every day of our lives. These repeated small doses undoubtedly produce gradual immunity. It would appear, however, that in many cases the physiological processes of development taking place in the young organism at the time of puberty render a child particularly susceptible.

From a study of the graph it will be seen that the great proportion of deaths from tuberculosis takes place between the ages of 16 and 45. More than 40% of these occur before the age of 25, so that it cannot be fairly argued that they are caused by the struggle for existence; the real

County of NORTHUMBERLAND



Compiled from crude deaths as supplied by local Registrars. The official groups supplied by the Registrar General being too large & unequal to furnish useful comparisons.

responsibilities of life can hardly be said to have begun before the age of 25 years. It is also very striking that there should be a very rapid diminution in the death rate after the age of 45 years. This is the time when one's resistive powers are commencing to wane and another of the crisis of life is approaching, but this crisis does not appear to be one upon which the tubercle bacillus is capable of exerting much influence; it may be that sufficient immunity has been acquired to enable survivors to withstand its attack. The reason is probably as much physiological as sociological, and the lesson to be learned is that we do not appear to protect and conserve the forces of youth sufficiently. It is highly probable that the infection in the first instance is contracted in very early childhood and lies dormant possibly for many years.

At the present moment much research and experiment is going on with the object of producing immunity in calves against the onslaught of the tubercle bacillus. It would be well that we ourselves should cultivate a disposition for applied research on these lines to our own infant population. Could we not undertake investigations on similar lines to the work which has been done in the Schick and Dick tests in Diphtheria and Scarlet Fever.

Ought we not to turn our attention more to the conditions under which our children live and spend their school days. It is doubtful whether the importance of this has yet been sufficiently appreciated.

An actual instance may be quoted of a young girl who, upon leaving the elementary school, intended to follow a clerical career. For some six months she attended one of the intensive courses at a commercial college and afterwards passed into a local office. At the age of 17 we find this girl working for her living during the day and attending night classes four evenings per week, with home work in addition which is done on Saturday afternoon. I cannot be persuaded that such a state of affairs is anything but harmful and no one ought to be surprised if sooner or later this girl develops tuberculosis.

The assertion has been made that the death rate from tuberculosis in Northumberland is higher than in any other county. This is inaccurate. Below is given a short statement from which it will be seen that Northumberland was fourth among English counties during 1925 for all forms of tuberculosis and eighth for respiratory tuberculosis.

Highest death rates from Tuberculosis in English counties during 1925 :

	Tuberculosis (all forms). Death rates per 100,000 living.		Tuberculosis (respiratory). Death rates per 100,000 living.
1. Durham ...	... 120	1. London ...	... 94
2. Cornwall ...	... 112.3	2. Cornwall ...	... 93
3. London ...	... 112.1	3. Suffolk, East	... 85
4. Northumberland	108	4. Isle of Wight	... 83
		5. Durham ...	... 82
		6. Northamptonshire	81
		7. Leicestershire	... 79
		8. Northumberland	... 78

Tuberculosis and Overcrowding.

Popular opinion commonly associates overcrowding and tuberculosis as being cause and sequence. A graph has been constructed on the left hand side of which are shown the urban districts of the county arranged in the order of number of persons per inhabited room, compiled from the figures of the Registrar General. On the right hand side has been placed the mean death rate from respiratory tuberculosis per 1,000 of population for the five years 1921-1925. From the graph it will be seen that the

urban districts which are most overcrowded do not necessarily possess the highest death rates from tuberculosis. Whilst the graph is instructive it cannot be too literally interpreted as some of the districts are small and the inclusion of one or two more deaths raises the rate disproportionately. It is difficult to find a satisfactory explanation. It is impossible to resist the conclusion that persons living constantly in overcrowded houses are not exposed to greater risk of infection than those living under more favourable conditions. Without unduly labouring the point, it may be suggested that individuals living under these unfavourable conditions are daily being inoculated with small doses of the tubercle bacillus and thus acquire some degree of immunity. This statement is made for what it is worth.

Administration.

For convenience, the following data is given categorically in order to meet the requirements of the Ministry of Health :—

Public Health (Prevention of Tuberculosis) Regulations, 1925.—No action was taken under these regulations.

Public Health Act, 1925, *Section* 62.—No action was taken.

Tuberculosis Scheme.

I.—The following is a list of the Council's dispensaries :—

Ashington (Elizabeth Craig Memorial)—Medical Officer, Dr. F. L. Moore.

Newburn—Medical Officer, Dr. W. L. M. Gabriel.

Hexham War Memorial Hospital—Medical Officer, Dr. J. B. McDougall.

Blyth—Medical Officer, Dr. F. L. Moore.

Wallsend—Medical Officer, Dr. F. L. Moore.

The County Council possesses its own Sanatorium of 144 beds, in which both early and advanced cases are treated. Cases of Ex-servicemen, for whom immediate treatment is required, and who are paid for by the Ministry of Pensions, are generally sent to Barrasford or to some Institution specifically chosen. The problem of providing accommodation for advanced cases still remains a very difficult one, and investigations were made with a view to utilising beds in Poor Law Hospitals. Unfortunately this was not found practicable, and there is every indication that patients have very strong objections to entering this class of institution. The Medical Superintendent of the Sanatorium is Dr. J. B. McDougall; the accommodation is for 144 patients; there is a clerk-steward and matron, with a nursing staff of twenty.

II.—*Co-operation with Sanitary Authorities and their Officers.*—District Medical Officers are notified of the admission of patients to and discharge from the Sanatorium

III.—School Medical Officers and Child Welfare Medical Officers refer any suspected cases to the Central Office, and these are immediately handed over to the Tuberculosis Officer, such children being automatically suspended from school until a diagnosis has been arrived at. The Almoners of the Royal Victoria Infirmary and of the Fleming Memorial Hospital frequently communicate with the Central Office with the view to securing facilities for treatment.

IV.—*Co-operation with Medical Practitioners.*—Recently a circular was issued to every Practitioner in the County pointing out that he was entitled to avail himself of the services of the Tuberculosis Officer for consultation work, as it had been found that many practitioners were still in ignorance of this. In the vast majority of cases, the co-operation is excellent. One or two regrettable instances, however,

have occurred where on notification a practitioner has expressly asked that no Public Health Official should be permitted to visit or get into touch with the patient: in another case, on notification, the practitioner makes the request that the patient shall not be asked to attend the Tuberculosis Dispensary. Some areas are conspicuous by the fact that very few cases are sent forward to the Dispensary. This, however, may be due to lack of facilities: another Tuberculosis Officer and additional Health Visiting Staff are most certainly needed for work in the more Northerly portion of the County. On the discharge of each patient from the Sanatorium, a detailed report on the progress and conduct is forwarded to the medical attendant.

V.—*Arrangements for following up of Cases in which the Diagnosis is doubtful.*—In every case the patient is asked to come up to the Dispensary for observation until the diagnosis is complete. If the patient fails to attend, the Health Visitor of the District calls to investigate. In my own view, patients are kept too long under observation, and this is responsible in a large measure for the long waiting list. In cases where there is real difficulty, it would be better to send patients into the Sanatorium where they can be kept under skilled observation, under circumstances most favourable for arriving at a definite conclusion.

VI.—*Arrangements for securing the Examination and Systematic Supervision of Home Contacts.*—These are carried out by the Health Visitors, who visit the cases and bring up the Contacts to the Dispensaries when convenient. If found to be impossible, the Tuberculosis Officer visits the home, and himself examines them. Once or twice practitioners have objected to the examination of Contacts. The Contacts are asked to come up to the Dispensaries regularly, and the Nurse on visiting the home, enquires as to the health of the Contact.

VII./VIII.—No special methods of diagnosis and treatment have been in use. Artificial Pneumothorax is carried out at the Sanatorium, and patients return occasionally for re-fills.

IX.—No dental treatment is provided by the Council for Tubercular Patients.

X.—No arrangements are made for the provision of nursing or extra nourishment for patients living at home.

XI.—No arrangements exist for treating Non-Pulmonary Tuberculosis in adults. For children, however, a proportion of one-third of the beds at Stannington is reserved for the treatment of Surgical Tuberculosis. Surgical splints are provided for these children on leaving the Sanatorium.

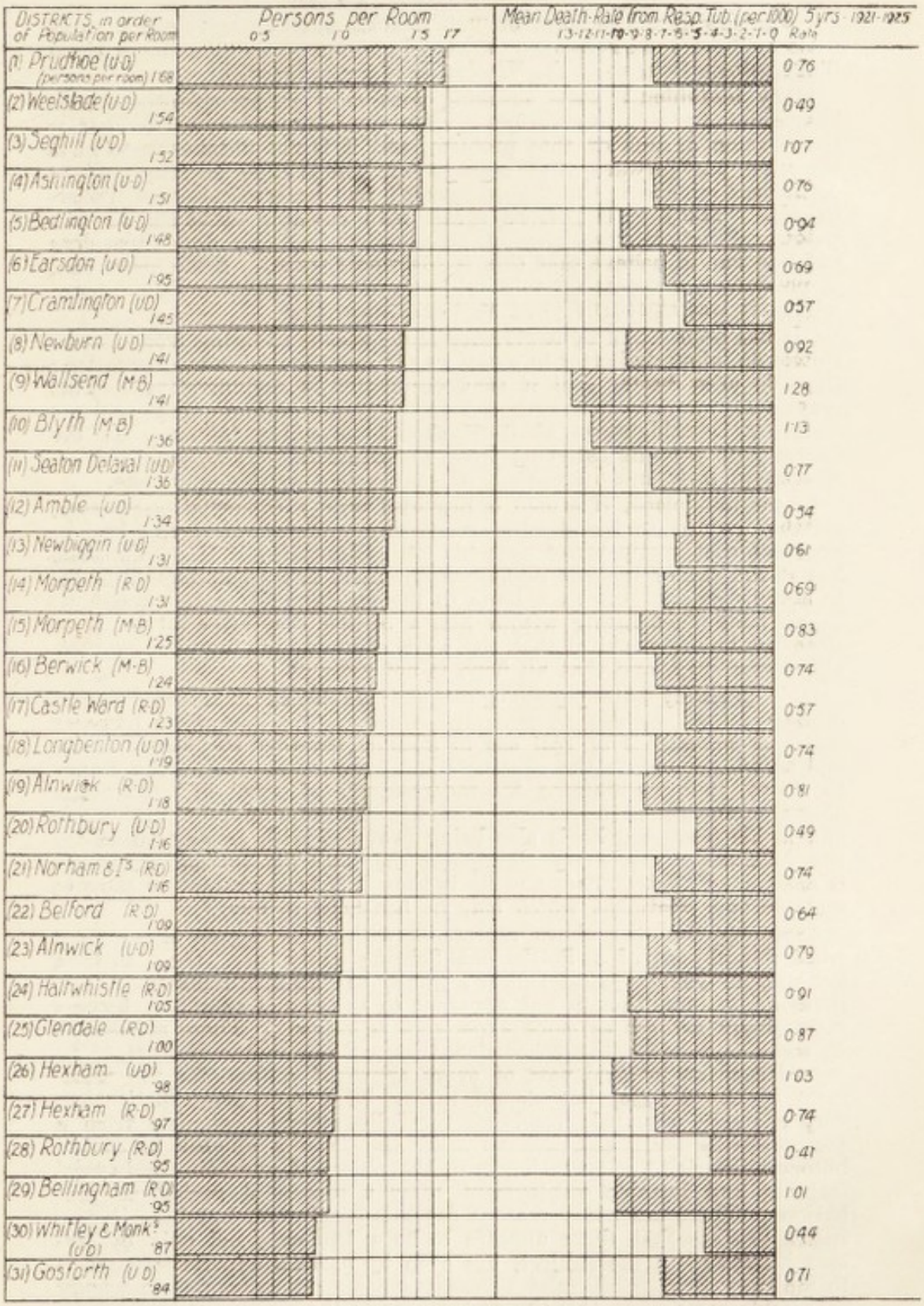
XII.—No organised Committee for care and after-care has been established; this work has been done unofficially in connection with the Settlement Scheme.

XIII.—No local arrangements for finding employment for patients beyond individual interest exist.

XIV.—65 Shelters have been provided by the County Council. Each of these is actually supervised by the Health Visitor in charge of the area, who reports on the structural state. In case of defect or difficulty, the County Sanitary Inspector visits, and makes the necessary arrangements.

XV.—*Any special Points noticed locally as to the Incidence of Tuberculosis.*—The graph on page 23 shows the actual incidence of the disease for the past five years. It will be seen that the Boroughs of Wallsend and Blyth, with the Urban Districts of Hexham, Newburn and Haltwhistle stand out rather conspicuously.

COUNTY OF NORTHUMBERLAND



XVI.—*Any Special Methods Adopted or Proposed for the Prevention of Tuberculosis.*—None has been adopted.

XVII.—*Special Difficulties Encountered.*—The one great difficulty is to secure notification of the disease early enough. It is doubtful whether the so-called early case of Tuberculosis is ever seen by Practitioners.

Wooley Settlement Scheme.

No review of the problem of Tuberculosis in this county can be complete without some reference to what is known as the Northumberland Tuberculosis Colony or the Wooley Settlement Scheme.

Many individuals, some speaking with more authority—others with less, give expression to various theories and dogmatise as to what is the solution of this or that problem, and it is not uncommon to have the view put forward that segregation, colonisation or some village settlement scheme is the "open sesame" for the eradication of Tuberculosis. Many such persons speak with enviable optimism on this point. Practical experience of colonisation and its difficulties does not lead one to believe that this is the whole truth. Some years ago, in presenting a report on this subject to the Sanatorium House Committee, it was stated by your Medical Officer that :—

"It has been found by experience that patients suffering from Tuberculosis do infinitely better in every way if provided with an occupation; they do even better still if that occupation is remunerative. This may seem a paradox, and it may appear curious that such a mercenary consideration of itself should have any influence on the recovery of patients suffering from Tuberculosis. It is, however, an undoubted fact, and the reason, of course, is a psychological one.

In the first place, if a man is provided with a congenial occupation, suitably graded to his physical condition, his mind is at rest and he does not continually brood over his lot. Secondly, if this occupation has at the end of it some remuneration, there is a wholesome stimulus to activity which acts as a tonic to the man's mind and, through it, to his body; generating within him a feeling that after all he is of some use in the world in that the work of his hands is still a marketable commodity, and that all hope is not yet past.

It is precisely this psychological attitude which it is the business of Sanatorium workers to inspire. Further, this payment, however small in amount, is of real use in keeping together the man's home, and he himself enjoys the sweetness and pleasure of earning the money to do so, thus maintaining his independence of spirit and character. There is the added advantage that his treatment may be prolonged, and in his treatment he is also being provided with an occupation for the future. From every standpoint therefore his outlook upon life is altered and brightened, and he is thus in a better receptive state to undergo any treatment which may be beneficial to him."

Assuming that the above represents with some degree of accuracy what the objects of a Settlement Scheme really are, then such a Scheme, to your Medical Officer's mind, has definite limitations, and these limitations, though not apparent to the casual observer, become increasingly evident as more experience is gained. There appears to be some ground for the conclusion that a Settlement ought not to be regarded as an integral part of every approved scheme for the treatment of the disease, but should rather be a specialised institution, very centrally situated, receiving carefully selected colonists from a comparatively large geographical area, and from a number of contributory authorities co-operating with the object of providing industrial training and suitable employment after a successful period of probation. There are many reasons for this conclusion, but here it may suffice to state that there appears to be a tendency, not only by laymen interested in the subject, but even by medical experts themselves to multiply Settlements and to apply Settlement principles to wholly unsuitable cases. In this lies real danger to the movement as a whole.

If one makes a simple classification of patients afflicted according to the amount of involvement of disease—

(1) Moderately early, with good recuperative powers,
(2) More advanced, with fair recuperative powers,
(3) Very advanced, and more or less hopeless,

one is then in a better position to realise the limitations of Settlement life; the conditions prevailing being very similar to those existing in Sanatoria, but with some divergence in psychological outlook.

Some observers hold the opinion that the principles of colonisation may be applied with considerable benefit, and even to the prolongation of life to the whole of the above three classes. It is true that occasionally one does see cases where there is an extraordinary amount of involvement and where the patient does hang on to his thread of life with extreme tenacity.

Such a patient may be put into a Settlement and may even do well for a time, the altered environment exerting a very beneficial psychological stimulus. What generally happens, however, is that the man is not able, owing to his disability, to take his full share even of Settlement work. He is in and out of the Sanatorium, and ultimately breaks down altogether. In admitting this type of patient (and it must be admitted that he is a patient), are we not asking the Settlement to do work which ought to be undertaken by the Sanatorium? Strictly speaking, ought Settlers to be patients? Surely the true object of colonisation is to take men who have been treated for Tuberculosis in a Sanatorium and who are now reasonably fit, to train and employ them in such a manner and under such conditions that they will eventually be cured and able to return to civil life. Class (3) cases ought to be considered ineligible for admission to a Settlement. It is one of the disadvantages of running a Settlement in conjunction with a Sanatorium that there is a temptation to try this sort of experiment, which when repeated has a tendency to obscure the prime purpose of the work.

With regard to Class (2), very considerable care is necessary in choosing those who are really eligible. Not only should the physical condition be carefully measured, but the temperamental constitution as well. Much of what has been written of Class (3) patients applies with equal force to Class (2). There is a considerable number in this second category who do quite well whilst living on Sanatorium lines but who, when placed in positions of responsibility or on attempting to do work in a Settlement, rapidly go down-hill.

There appears to be ample ground for believing that for Tubercular Settlers it is better to utilise occupations and industries which require the expenditure of physical rather than nervous energy.

By this is not meant that there is no scope for the use of intelligence, but in the great majority of cases, it is not expedient that Tubercular Settlers should be called upon to carry out work which is not of a more or less routine nature. There is danger of draining what little reserve forces a patient may possess, and disease once quiescent and arrested passes into activity. It is necessary to stress the importance of this view. The emotional side of a Tubercular patient's temperament requires most careful consideration, possibly to the length of restraint in participation of simple amusements; the preparation necessary for a Sanatorium Pantomime may upset the balance of metabolism which keeps a patient alive. Many such, with a considerable amount of involvement, will go on living almost indefinitely, providing that they are not unduly strained mentally or physically, and this balance is not upset. There is evidence that mental effort is more exhausting, and, as such, should be restricted.

From what has been said above, it would appear that the number of individuals suitable for Settlement treatment is still further reduced, and that not every patient in Class (2) will respond satisfactorily.

For success, the selection of the right type of man or woman is of paramount importance. The individual responsible for this duty should possess a good working knowledge of human nature and its

failings, and the principles of psychology as exhibited in Tubercular patients. He should also be capable of measuring success or failure from a comparative standpoint, not from the standard of healthy stock, but from that of an individual whose productivity is impaired by Tuberculosis.

Recently a National appeal was made on behalf of the Cambridgeshire Tuberculosis Colony at Papworth. A speaker, whilst advocating its claims, expressed the hope that before many years were over each county would possess a Settlement of its own. With this view I am not in agreement. It would appear undesirable from many standpoints to have a collection of small and possibly inefficient units, but rather that several counties should amalgamate to promote one large institution, and so pool their resources of men and material. One of the most important factors for consideration in the establishment of a settlement is its geographical situation. It should be placed as near to a large industrial centre as can be conveniently arranged, and where good and cheap transport can be secured. There must be markets for goods, and with a vast population to cater for, the prospects are much brighter. A Settlement situated in beautiful sylvan surroundings, miles away from anywhere, and with heavy carriage to pay upon every ounce of material used, is badly handicapped when competing for markets.

Further, it is open to question whether there is any real advantage in having Settlements directly attached to Sanatoria. That it is an inspiration to the other patients cannot be denied, but there is a tendency to try experiments by admitting settlers who are not of the suitable type, and this action destroys the individuality of the Institution.

Settlement work is highly interesting and probably there are few men in the country possessed of the necessary qualifications for it. It is also problematical whether the same individual should act as head of the two institutions; sooner or later one of them must claim his sympathies, and when that time arrives, the other must suffer. In theory the arrangement is ideal, in practice it is expecting too much of one man.

Whilst a Settlement may arise within the precincts of a sanatorium as the result of experience of occupational therapy, it will in many cases be found that it is very desirable if a satisfactory settlement is to be developed that the two institutions should be entirely separated.

Employment of Patients.

One of the most valuable therapeutic agencies in the treatment of tuberculosis is the employment of the patient's time in suitable and congenial work. It is from the occupational therapy stage that the patient graduates into the Settlement, and it is here that the danger may arise of drafting unsuitable material. This danger is enhanced if the Settlement is part and parcel of the same organisation. This brings us to a very much wider question. It is usual for a patient, prior to his discharge, to have an interview with the Medical Superintendent. The hackneyed advice about a light job in the open air is too well-known to require repetition. This favourable sinecure practically never exists. Employers wish naturally to have sound men about them, and in these days competition is keen. We are speaking now not of the well chosen and physically fit man who is a suitable candidate for a Settlement, but of the vast majority of patients discharged from a sanatorium who, if removed from responsibility and worry, will go on for years, doing a little bit if living under conditions resembling those of sanatorium life. These people are not in my judgment suitable cases for admission to a Settlement; they are an entirely different problem. What the solution of that problem is I cannot at the moment say, but one thing we do appear to be losing sight of is that tuberculosis ought to be prevented rather than cured.

The employment of ex-patients in the sanatorium in which they have received treatment is, generally speaking, not desirable. I have every sympathy with the policy of employing in sanatoria as many ex-patients as possible who are physically fit, but after some experience I am driven to the conclusion that the ex-patient requires indulgence, is not at the best more than 75% physically fit, and that awkward problems are likely to arise if he has to work alongside able-bodied men. This is a matter which cannot be overlooked and gives rise to very considerable internal administrative difficulties.

Payment of Settlers.

This is a subject bristling with difficulties. It may be boasted that a scheme is self-supporting, but when it comes to be examined by careful and unprejudiced eyes it may be found that every legitimate charge has not been included, and that if it had, the balance sheet would have been very materially altered.

At the inception of the Settlement at Wooley it was laid down in the scheme that it should be self-supporting, financed from voluntary sources, and not in any way a charge upon the rates, initiated from a small nucleus and added to bit by bit ; that no step should be taken to develop or extend until it had been satisfactorily demonstrated from experience that such extension was justified, not only financially but by the influence which it might exert on the patients themselves and their future. In the same report it was pointed out that patients should be paid something for their labour (the produce of which should be a marketable commodity) so that they might not feel that they were wholly incapacitated, nor yet being exploited. This is a matter of the highest importance ; it is essential to preserve the spirit of independence, and a man should be paid exactly what his labour is worth.

There is a tendency on the part of some observers working on this subject to depart from these principles ; as a matter of fact, we have done so at Wooley, and in my opinion with disadvantage. The disposition to extend is natural, but it is wiser to conserve resources until schemes are well established. Caution in the early stages is essential.

No settler should be paid any more than his work is worth ; if such individual is not capable of earning sufficient money to provide for his own maintenance, that person has no legitimate place in the Settlement. The assertion has been made that a man should be paid not for what he does, nor for what his labour is worth, but according to his obligations. This is fundamentally and economically unsound, and whilst I have every sympathy with the man attacked by tuberculosis who is not able to earn sufficient money to meet his commitments, I wish to point out that this, though having a very pregnant bearing upon the prospects of a man's recovery, is really outside the subject, and to introduce it is not in my judgment logical. It embarrasses the finances of any Settlement, and it tends to concentrate the attention of the public upon the cure of the disease, rather than its prevention. It is wrong to charge the maintenance of the wives and families against a Settlement scheme by inflating the wages of a settler, and paying him more than his labour is worth. This problem must be met and considered independently. If such a principle be established, it means that disability caused by any form of chronic sickness will require to be considered on the same lines. It may, however, and in the end probably will be found that instead of the present organisation of Poor Law Relief, some extended form of sickness benefit will be established, but even this involves a great risk that the subject of prevention may be entirely overlooked.

The question of settlers' wages must be considered in relation to the pay of the staff of the institution itself, otherwise we may have the anomalous position of an able-bodied man actually receiving less than a settler, which immediately causes trouble. Further, there must be some sort of proportion in the pay of the two classes employed. I am speaking from actual experience.

The question of discipline in a Settlement is one of the most difficult problems which the Director has to face. Settlers enjoy more privileges than patients; they expect to do so and although working and receiving wages they still possess the psychology of the tubercular patient, and on occasions are apt to revert to the habits and customs of their sanatorium days. Their association with patients undergoing treatment and in the same atmosphere intensifies and encourages this. On the other hand the association of patients with settlers, beneficial though it may be in many respects, has a tendency to unsettle a patient who may be doing work which ought strictly to be classed as occupational therapy. In other words a man doing work which is really part of his treatment may expect to be paid for it and also enjoy the privileges of a settler.

Settlers also associate with the staff and compare notes, and in this way arises a multitude of difficulties which require great patience and an administrator of experience and tact. These difficulties would not arise if the two institutions were separated.

The Director of the Settlement.

In concluding, I feel that I ought to express some opinion upon this subject, but before doing so wish to pay a warm tribute to Dr. McDougall for his untiring energy and magnificent services to the Wooley Settlement. The thought has occurred to me however, on several occasions, that he ought to have been relieved of a considerable portion of routine work which could just as easily have been carried out by a well trained layman. The possession of a man with experience in the diagnosis and treatment of tuberculosis and of sanatorium administration equal to that of Dr. McDougall is a great asset to any county and should be utilised to the fullest extent. It would appear to be wrong in principle that such a man should be occupied in matters which are purely commercial. Strictly speaking, Settlement work is organisation of sanatorium principles on business and commercial lines and the place of the physician is that of a co-operator with the business expert.

Finally, what has been written above represents simply my own personal convictions, and has been written primarily for the perusal of my Council and Committee. I am aware that it may be read by a much wider circle, possibly by many who do not agree with the views expressed therein, and by others who may be contemplating the initiation of a Settlement Scheme. To the latter my advice would be :—

(1) Commence with the smallest possible nucleus. There is much experience to be gained and many pitfalls to be avoided.

(2) Realise that there are at least two problems—

(*a*) The comparatively fit man who can be trained and employed in a Settlement with some prospect of cure and return to civil life.

(*b*) The patient with a good deal of involvement of disease who has no chance whatever, if after his period of sanatorium treatment, he returns to his old environment, but who, under the regulated conditions of an Institution undoubtedly has his life prolonged.

(3) Make up your mind which of these problems you are going to tackle.

The experience gained at Wooley during the past few years has been invaluable. The Medical Superintendent of the Sanatorium and myself have gained an insight into the problem which we could not otherwise have done. It has cost us both no little anxiety, time, thought and even financial expenditure. We have jointly carried this burden on our shoulders voluntarily and cheerfully. I am, however, much against my wishes and inclination, forced to the conclusion that it is extremely difficult—almost impossible—to carry out a satisfactory scheme without national aid. I say this with great reluctance.

Wooley Sanatorium.

Third Annual Report of the Medical Superintendent.

Year ending September 30th, 1925.

Three years have passed since Wooley Sanatorium opened its doors to patients from the Administrative County suffering from Pulmonary Tuberculosis. In this comparatively brief period, however, there has been a well marked swing of the pendulum of opinion regarding the general problems of treatment. Time was—not so long ago—when the selection of a sanatorium site was regarded as the alpha and omega in treatment; the aspect of the wards, relative to the rising and setting of the sun was a detail of the first magnitude, and the supposed advantages of proximity to fragrant pine forests were legion. The assumption was that, with a perfect edifice on a perfect site, successful treatment followed as a matter of course. Times have changed. Site, aspect, architectural details and the like have their place still in the deliberations of local authorities, but the great cry to-day is for a more detailed study of the patient, of how to prolong treatment and at the same time to keep him and his dependents free from mental strain and financial distress whilst he is undergoing treatment.

It will be well to enquire into the reasons for this change in attitude towards treatment.

Two Outstanding Facts.

In the light of our present knowledge we must face at least two outstanding facts. The first is that life under open-air conditions, and under medical supervision, is generally acknowledged to be the best form of treatment available for the person afflicted with consumption. Under these conditions the patient invariably does well, even in apparently hopeless cases—provided the patient has a flicker of resistance left in his body. This point is shown in the following table, compiled from the report of the Tuberculosis Officer for the County of Lancashire.

Group I.

No tubercle bacilli present in the sputum.

	No.	Percentage dead at the end of 1923.
Cases receiving treatment in sanatoria during period 1914-18	927	17%
Cases NOT receiving treatment in sanatoria during period 1914-18... ...	700	45.3%

Group II.

Tubercle bacilli present in the sputum.

	No.	Percentage dead at the end of 1923.
Cases receiving treatment in sanatoria during the period 1914-18	1,301	69.2%
Cases NOT receiving treatment in sanatoria during the period 1914-18 ...	940	87.4%

The advantages of sanatorium treatment are obvious from such a table as this, although the table does *not* show the advantages accruing to the community from the isolation from the general community of the actively infectious cases in Group II.

The second certainly is that a patient's domestic affairs—including his bank balance or its equivalent, very frequently determine the ultimate result of treatment. In other words, the treatment of consumption is not entirely a medical affair which can be carried out successfully by a Tuberculosis Officer or a Medical Superintendent or by the patient's private doctor. Besides being a disease which may disable him physically, Pulmonary Tuberculosis is, for the working man, an economic tragedy, and in by far the great majority of cases must be solved by considering both " the number of sounds which are in his chest " and the number of pennies in his pocket. A sanatorium built in Elysian fields, and where there are hyper-alimentation and beds of roses will do little to solve the problem of tuberculosis for the consumptive miner who has a wife and four or five children living and sleeping in two rooms in an unhygienic locality. Sooner or later he will have to join them, as things are at present, for he is the breadwinner.

The Real Test of Treatment.

The acid test of success in treatment is the capacity of the individual to return to work after treatment and earn a full day's wages. How is this possible in the large majority of cases admitted to and discharged from sanatoria up and down the country. Some, it is true, return to their previous occupations and do remarkably well, but the vast army who try to do likewise and perish in the attempt is legion.

Since October 1st, 1924, 329 patients were admitted to Wooley Sanatorium, and 325 patients discharged. I cannot give the exact numbers, but from personal knowledge of these patients and from reports which have reached me from time to time, it would be safe to say that quite 60% have not been able to resume their previous occupations *and keep fit.* Besides, employers are loath to employ consumptives to work in competition with skilled and fit men, for they are aware that the risks to the consumptive in ordinary industrial occupations are great, and that a full day's work by a consumptive is not in itself a commercial proposition. Some employers endeavour to fix patients up in light jobs, but these so-called light jobs are either very rare or they never become vacant.

The " Early " Case.

It may be said that if the cases were discovered in the early stages of the disease the ultimate outlook would be better. Undoubtedly it would, but, as has been said, the working man (and woman) has no time to be an early case of consumption. This may seem a strange observation, but the fact is that the so-called " early " case is frequently not incapacitated to any great extent ; he works from day to day and from week to week without ever suspecting that the fatigue, the eough which is fast becoming chronic, the general feeling of loss of tone which are more or less constantly with him are the omens of an impending disaster. He masquerades under the assumption that he is " subject to influenza," because this is a much more fashionable and infinitely more reassuring thought than the one which infers that he might possibly have consumption. The " early " case has to be " ferretted " out ; his natural instinct is for him to come into the open only when forced to do so by the occurrence of some dramatic symptom such as haemoptysis (spitting of blood) or pleurisy, accompanied by pain. This is one explanation, at least, for the shortage of " early " cases. So far as Wooley is concerned, the following figures show whether or not the " early " case is increasing in numbers.

Male and Female Patients admitted to Wooley Sanatorium.

		1922-23.	1923-24.	1924-25.
Stage I.				
	A.	143	85	34
	B.	33	25	35
	C.	5	15	34
Stage II.				
	A.	24	23	28
	B.	30	30	26
	C.	28	26	33
Stage III.				
	A.	7	21	35
	B.	40	14	27
	C.	74	38	53

Each of the stages has been divided into sub-groups A., B. and C. A. representing those which may be expected to re-act most favourably to treatment, B. will respond less favourably, and C. least of all, e.g., stage I.A. cases will derive most and stage III.C. least benefit from sanatorium treatment.

By adopting the "percentage disability" classification we may compare the figures for 1923-24 with those of 1924-25.

Patients Admitted.

1923-24.	1924-25.
88 (or 29.5%) were 10-30% disabled.	39 (or 11.8%) were 10-30% disabled.
140 (or 46.9%) were 30-70% disabled.	191 (or 58%) were 30-70% disabled.
59 (or 19.8%) were 70-100% disabled.	87 (or 26.4%) were 70-100% disabled.

There were twelve cases of non-pulmonary tuberculosis admitted during the year, and twelve cases in which tuberculosis was not diagnosed.

The waiting list on October 1st, 1925, has a dismal tale to tell, for early cases are few (5 out of 22).

The immediate results of treatment are on the whole good.

Much improved	175
Moderately improved	53
Slightly improved	14
Stationary	10
Worse	40
Died	21
Tuberculosis not diagnosed	12
Total	325

But, as has been said above, it is not the immediate results of treatment which matter so much, as the *ultimate* results, and these, all over England, leave much to be desired. In a previous report I have ventured to suggest that the ultimate results may be improved by prolonging treatment, and this we have tried in all earnest to do.

The average duration of stay is as follows for the years mentioned.

	1922-23.	1923-24.	1924-25.
Males	125.2 days	189.6 days	167.1 days
Females ...	159.2 days	145.8 days	149.9 days

Of males and females the number in residence less than one month=31 (15 of whom were patients re-admitted for refills in connection with Artificial Pneumothorax).

These figures are highly satisfactory, for it is generally recognised that the usual three months in a sanatorium, except for the educational facilities afforded to the patient, is of little value.

A large number of patients discharged, however, whilst perfectly willing to remain under treatment, simply cannot afford to continue on account of the domestic conditions necessitating their return home. A mother who has a large family at home is not altogether happy when separated from her children for five or six months, and the habit of the husband or eldest daughter of writing doleful letters every other day enumerating and frequently exaggerating the home difficulties does much to upset her peace of mind. Similarly, the married man—the bread-winner—realises his domestic responsibilities and will, in the absence of adequate financial relief, frequently ask to be discharged although he himself may be perfectly happy and contented in his rural surroundings. We find no difficulty, however, in getting single men and women and pensioners to remain for a reasonable period of treatment, although in the case of insured persons without dependents, the system for the distribution of sick and disablement benefit must surely be altered to meet the immediate requirements of patients. As it is, no money is paid to them during treatment. It accumulates until the patient is discharged, whereupon there is a veritable financial windfall handed over, which is too frequently spent in ways which cannot be regarded as judicious.

Economic Considerations in Treatment.

It is no mere theorising to say that patients will remain longer under open-air conditions and medical supervision if only the strain on their economic resources is relieved a little, and it seems to me that there are at least three ways of doing this, each having its own peculiar application.

Firstly.—In the case of the tuberculous mother who has strong home attachments, every possible effort should be taken *prior to her admission* to convince her of the need for prolonged treatment, and to get her or her friends to make all possible arrangements for the family in her absence. In many cases this is not difficult ; if it cannot be done, and if the patient has active disease with tubercle bacilli in the sputum, then the failure to make all necessary arrangements will almost certainly have its tale to tell in later months or years—not only on the patient, but on the other members of the family. What a power of good an energetic, tactful and sympathetic social worker or Care Committee could be in such a case !

Secondly.—In the case of insured patients who have no dependants, sick and disablement benefit should be paid week by week ; also, there is an urgent need for the extension of the period of sick benefit to *all* insured patients to cover that time during which the patient is regarded by his or her doctor as a source of infection and unable to work at his or her previous occupation. This procedure has been strongly recommended by the Joint Tuberculosis Council of Great Britain in their evidence before the Royal Commission which is at present investigating the National Health Insurance Act.

Thirdly.—For the large number of patients for whom a return to their previous occupation is a physical impossibility, some kind of permanent occupation under sheltered conditions and medical supervision should be arranged, and payment made for the services so rendered. In previous reports and at many meetings of the Sanatorium House Committee I have pointed out the practicability of such a scheme even when it is carried out without the aid of State or rate grants.

On the question of establishing Settlements or Colonies for the Tuberculous I hold the view that these should be built up gradually, and should not in their initial stages, at any rate, be a burden on either rates or taxes. If the proper spirit for their development is present, a nucleus can be started with very little capital indeed. As like begets like, so does success beget success. When it has been proved to the satisfaction of the Ministry of Health and the Local Authority concerned, that the employment of

the ex-patient can, in actual practice, be a successful venture then, I feel sure, both State and rate grants for extensions and developments will be forthcoming. That such a scheme can be successful in one place is no proof that the principle can be universally adopted. It would be a thousand pities if large capital grants were made indiscriminately for this purpose, for there is nothing surer than that the money would, in a large percentage of cases, be wasted. The story of the origin, growth and development of the Wooley Settlement Scheme is nearing, in magnitude, book size. It may not—as a story—have the romance inevitably associated with a " best seller," but for thrills, adventures, and in some respects, deeds of daring, it would be interesting reading. In an addendum to this report there is a brief account of the work accomplished in this important aspect of the treatment of Pulmonary Tuberculosis at Wooley.

Education.

This section of the report cannot be regarded as complete without mention of the great value of education of patients and public in problems of prevention and treatment. During the winter months the weekly lectures to the patients are considered an indispensable feature in education, and in matters of general public propaganda in Health, Northumberland probably leads the way in England, for the monthly magazine printed and published at Wooley has reached thousands of homes during the past twenty months. Further reference is made to this in the addendum to this report.

It will be seen that the factors which are most likely to benefit patients suffering from pulmonary tuberculosis are those which will combine to enable him to continue treatment for as long as possible. If only treatment could be made perpetual the ideal would be reached, but in the great majority of cases this is impossible. The ideal, however, is presented and it should be our aim to strive to attain it. But in its attainment it is obvious that the function of the doctor is a limited one. He can examine patients, treat the disease and its complications, advise on problems medical, economic and sociological, but the task of carrying out the economic and sociological side of treatment must be no prerogative of his. Social workers and philanthropists must come to the aid of the consumptive if more permanent results than those obtained from present day methods of treatment are to be obtained.

Complications.

The remaining details of this report are, to a large extent, statistical. Complications have been numerous, as will be seen from the following table.

Complications.	No. of cases.	Complications.	No. of cases.
Hysteria	4	Lupus	1
Bronchiectasis... ...	3	Fistula in Ano ...	1
Diabetes	2	Perianal abscess ...	1
Haemorrhoids	1	Pleurisy with effusion	5
Dilated stomach ...	1	Tuberculous Cystitis...	1
Abdominal Tuberculosis	3	Nephritis	1
Tenosynovitis	1	Tub. Ulceration of Mouth	2
Tuberculous laryngitis	10	Gastritis (severe) ...	2
Influenza (severe) ...	2	Emphysema	1
Asthma (severe) ...	2	Tuberculous Empyema	3
Valvular Disease of Heart	4	Neuritis (severe) ...	1
Spontaneous Pneumothorax	3	Appendicitis	1
Smallpox	1		
Tuberculous abscess on leg	1		

Selective Collapse by Artificial Pneumothorax.

Special attention has been given again to the operation of Selective Collapse in the treatment of the more advanced cases. Altogether the operation has been performed 51 times during the year. During the past three years, 165 injections have been given to 28 patients. The results have been most encouraging, especially when sanatorium treatment is given *pari passu* with the collapse therapy. It should be remembered that the type of case chosen is the advanced patient who has little or no response to effort. As the whole question is of a medico-scientific nature it is proposed, with the permission of the County Medical Officer, to publish a report on the work in the medical press during 1926.

Clinical Work.

In connection with the clinical pathology of the disease nothing has been attempted beyond the routine examination of sputa, smears from pleural effusions, urine examinations and the like. Once more I am indebted to Dr. Gabriel for his valuable assistance at intervals, but my plea for permanent clinical help has not, so far, been answered.

The X-ray apparatus has been used extensively for screening, and the results are uniformly good. The apparatus is indispensable as an aid to diagnosis, and in the treatment by Artificial Pneumothorax.

General Behavior of Patients.

I have no real complaint to make under this heading. One or two awkward situations have arisen during the year, but these have been reported separately to the House Committee and need not be mentioned in detail here. It is never very difficult to discover the patient who makes himself a fool in the midst of a happy family.

Routine.

The general routine has not been altered except in so far as prospective settlers are allowed five to six hours of vocational training, instead of three-and-a-quarter hours which is the maximum for Grade C patients who are the fittest. Grade A patients rest all the time; some are constantly in bed, whilst Grade B patients have two-and-a-quarter hours exercise per day.

Concerts have been numerous during the year, and anything which is conducive to the patients' physical and psychological well-being is granted so that the morbid aspect of treatment may be obliterated.

If we are to judge by results, the system has worked well. Men and women who are disgruntled and dissatisfied will not tolerate life entailing six months and more or rural confinement.

Conclusion.

In concluding this report I must pay my debt of gratitude to the County Medical Officer, Dr. Whitley, whose co-operation and advice on all things have helped me to overcome many difficult obstacles; to Dr. Gabriel, who has relieved me at intervals, and to Miss Connor, the Matron, who took up her duties on September 1st, 1925, and who has already shown the keenest interest in the wide and divergent problems with which we are confronted in the institutional treatment of the disease. To the members of the nursing, domestic and out-door staff every credit is due for the assistance they have given me during the year. Lastly, to the Clerk-Steward, Mr. Patterson, I have to acknowledge my heartfelt thanks for the help he has given me in all that appertains to the internal administration of the Sanatorium.

JOHN B. MCDOUGALL,

M.D. (Glasg.), M.R.C.P. (Edin.), F.R.F.P. & S. (Glasg.),
Medical Superintendent.

TREATMENT OF TUBERCULOSIS.

Applications.

Adults.

Six hundred and forty-one applications for treatment were received during 1925. Of this number, 75 were second and subsequent applications, leaving a total of 566 primary applications.

Table giving Analysis of Primary Applications and Stage of disease at time of application.

Classification.	Ex-Servicemen.	Adults.		Total.
		Male.	Female.	
Stage I.	12	38	56	106
Stage II.	35	70	88	193
Stage III.	—	8	10	18
Surgical	—	6	9	15
	47	122	163	332
Not considered definite cases of Tuberculosis...	38	104	92	234
Total	85	226	255	566

Children.

Four hundred and twenty-six applications for treatment were received during 1925. Of this number, 24 were second and subsequent applications, leaving a total of 402 primary applications.

Table giving Analysis of Primary Applications.

Classification.	Male.	Female.	Total.
Pulmonary	20	31	51
Surgical	27	18	45
Glands	4	6	10
	51	55	106
Not considered definite cases of Tuberculosis	167	129	296
Total	218	184	402

Summary of applications received.

	Primary applications.	Secondary or subsequent applications.	Total.
Adults	566	75	641
Children	402	24	426
	968	99	1,067

Treatment granted to applicants during 1925.

Table showing kind of treatment received by applicants and classification of applicants who did not receive treatment.

Class of applicant.	Sex.	Sanatorium treatment.	Dispensary treatment.	Domiciliary treatment.	Left district before admission to Sanatorium.	Died before admission to Sanatorium.	No treatment offered.	Refused treatment.	Awaiting admission to Sanatorium.	Total.
Children ...	M.	5	140	8	—	3	9	2	62	229
	F.	14	97	7	1	7	8	1	62	197
Adults	M.	96	80	29	1	8	2	9	21	246
	F.	116	75	27	2	13	1	21	30	285
Ex-service men...	M.	51	25	6	—	7	3	3	15	110
Total ...		282	417	77	4	38	23	36	190	1,067

Sanatorium Treatment.

Cases in Sanatoria on January 1st, 1925.

Class of applicant.	Sex.	Condition on discharge from Sanatorium.					In Sanatorium December 31st, 1925.	Total.
		Much Improved.	Improved.	Stationary.	Not so well.	Dead.		
Children	M.	10	7	4	—	—	9	30
	F.	1	14	2	3	—	3	23
Adults	M.	27	14	2	6	1	2	52
	F.	31	18	4	5	3	5	66
Ex-service men ...	M.	6	7	4	—	—	3	20
Totals		75	60	16	14	4	22	191

Sanatorium treatment granted during 1925 to cases whose applications were received during 1924.

Class of applicant.	Sex.	Condition on discharge from Sanatorium.					In Sanatorium December 31st, 1925.	Total.
		Much Improved.	Improved.	Stationary.	Not so well.	Dead.		
Children	M.	3	4	2	—	—	19	28
	F.	2	8	1	—	1	16	28
Adults	M.	20	5	6	3	3	1	38
	F.	—	1	1	—	—	—	2
Ex-service men ...	M.	5	5	3	1	1	2	17
Totals		30	23	13	4	5	38	113

Sanatorium treatment granted during 1925 *to cases whose applications were received during* 1925.

Class of applicant.	Sex.	Condition on discharge from Sanatorium.					Transferred to isolation hospital.	In Sanatorium Dec. 31st, 1925.	Total.
		Much Improved.	Improved.	Stationary.	Not so well.	Dead.			
Children	M.	1	1	—	—	—	—	3	5
	F.	—	2	—	2	—	—	10	14
Adults	M.	15	11	3	6	9	—	52	96
	F.	30	9	7	4	1	—	65	116
Ex-service men ...	M.	14	8	15	—	4	—	10	51
Totals		60	31	25	12	14	—	140	282

Summary.

Class of applicant.	Sex.	In Sanatorium Jan. 1st, 1925.	Admitted during 1925.	Total treated in Sanatoria during year.	Condition on Discharge from Sanatorium.					Total discharges.	In Sanatoria Dec. 31st, 1925.
					Much Improved.	Improved.	Stationary.	Not so well.	Dead.		
Ex-service men...	M.	20	68	88	25	20	22	1	5	73	15
Civilians ...	M.	52	134	186	62	30	11	15	13	131	55
	F.	66	118	184	61	28	12	9	4	114	70
Children ...	M.	30	33	63	14	12	6	—	—	32	31
	F.	23	42	65	3	24	3	5	1	36	29
Totals ...		191	395	586	165	114	54	30	23	386	200

Dispensaries.

Attendances during 1925.

Dispensary.	Old cases.	New cases.
Wallsend	897	265
Blyth	554	165
Newburn	181	83
Ashington	753	210
Hexham	383	117
Totals	2,768	840

4,108 house visits were paid by health visitors.
120 domiciliary visits were paid by Dr. Moore.

AFTER-HISTORY OF TUBERCULOUS PATIENTS.

The following tables indicate the history of patients up to the year 1925, whose applications were received in 1914 and in 1919 and subsequent years. Records prior to 1914 and during the war period are unfortunately incomplete.

Table Giving Classification at the Time of First Examination and Present Condition of Cases Applying for Treatment in 1914.

Adults.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working or fit to work.	Improved or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male ...	Stage I. (Early) ...	11	5	3	—	—	3	11
Female	Do.	5	—	1	—	1	3	5
Male ...	Stage II. (Intermediate)	40	4	3	—	26	7	40
Female	Do. ...	15	1	1	1	9	3	15
Male ...	Stage III. (Advanced)	28	—	—	—	27	1	28
Female	Do. ...	21	—	—	—	19	2	21
Male ...	Surgical	5	1	2	—	—	2	5
Female	Do.	1	—	—	—	—	1	1
	Suspected surgical ...	1	1	—	—	—	—	1
	Totals ...	127	12	10	1	82	22	127
	Percentages ...		9.4	7.9	0.79	64.6	17.3	

Children.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working or fit to work.	Improved or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male ...	Pulmonary	18	6	1	—	7	4	18
Female	Do.	10	3	2	—	3	2	10
Male ...	Surgical	3	—	—	—	3	—	3
Female	Do.	2	—	1	—	1	—	2
Male ...	Suspected surgical ...	1	1	—	—	—	—	1
	Totals ...	34	10	4	—	14	6	34
	Percentages ...		29.4	11.8	—	41.1	17.6	

TABLE GIVING CLASSIFICATION AT THE TIME OF FIRST EXAMINATION AND PRESENT CONDITION OF CASES APPLYING FOR TREATMENT IN 1919.

Adults.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Stage I.	11	7	—	3	—	1	11
Female ...	(Early)	34	15	11	—	—	8	34
Ex-service men		46	19	12	2	2	11	46
Male	Stage II.	31	5	4	1	20	1	31
Female ...	(Inter-	30	1	5	—	21	3	30
Ex-service men	mediate)	77	8	19	2	40	8	77
Male	Stage III.	11	—	—	—	11	—	11
Female ...	(Advanced)	16	—	—	—	16	—	16
Ex-service men		11	—	—	—	10	1	11
Male	Surgical ...	2	2	—	—	—	—	2
Female ...		1	—	—	—	1	—	1
Ex-service men		—	—	—	—	—	—	—
	Totals ...	270	57	51	8	121	33	270
	Percentages ...		21.1	18.8	2.9	44.8	12.2	

In addition to the above, 72 Primary Applications for treatment were received; the applicants, however, after examination, were not considered to be definite cases of Active Tuberculosis.

Children.

Sex.	Classification.	No of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Pulmonary ...	32	12	5	1	11	3	32
Female ...		30	9	7	1	11	2	30
Male	Surgical ...	8	3	1	2	—	2	8
Female ...		13	7	2	1	2	1	13
Male	Glands ...	9	6	—	1	1	1	9
Female ...		11	6	2	—	1	2	11
	Totals ...	103	43	17	6	26	11	103
	Percentages ...		41.7	16.5	5.8	25.3	10.6	

In addition to the above, 121 Primary Applications for Treatment were received; the applicants, however, after examination, were not considered to be definitely tubercular.

Table Giving Classification at the time of First Examination and Present Condition of Cases Applying for Treatment in 1920.

Adults.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Stage I.	15	10	—	—	3	2	15
Female ...	(Early)	18	1	9	1	3	4	18
Ex-service men		47	19	15	2	3	8	47
Male	Stage II.	34	5	3	—	24	2	34
Female ...	(Inter-	34	6	5	1	20	2	34
Ex-service men	mediate)	83	11	29	6	28	9	83
Male	Stage III.	8	—	—	—	8	—	8
Female ...	(Advanced)	22	—	1	—	21	—	22
Ex-service men		17	—	—	—	17	—	17
	Totals ...	278	52	62	10	127	27	278
	Percentages		18.7	22.3	3.6	45.7	9.7	

In addition to the above, 76 Primary Applications for treatment were received; the applicants, however, after examination, were not considered to be definitely tubercular.

Children.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Pulmonary ...	20	12	3	—	2	3	20
Female ...		34	11	5	1	10	7	34
Male	Surgical ...	17	7	2	1	2	5	17
Female ...		14	7	4	1	—	2	14
Female ...	Skin	1	1	—	—	—	—	1
Male	Glands ...	9	5	2	—	2	—	9
Female ...		7	4	—	2	1	—	7
	Totals ...	102	47	16	5	17	17	102
	Percentages		46.1	15.7	4.9	16.6	16.6	

In addition to the above, 130 Primary Applications were received, but after examination the applicants were not considered to be definitely tubercular.

Table Giving Classification at the time of First Examination and Present Condition of Cases applying for Treatment in 1921.

Adults.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Stage I.	11	5	5	—	1	—	11
Female ...	(Early)	22	9	6	4	1	2	22
Ex-service men		25	9	11	2	1	2	25
Male	Stage II.	28	4	2	—	18	4	28
Female ...	(Inter-	38	3	6	2	27	—	38
Ex-service men	mediate)	34	7	9	1	10	7	34
Male	Stage III.	10	—	—	—	10	—	10
Female ...	(Advanced)	14	—	—	—	14	—	14
Ex-service men		13	—	1	—	12	—	13
Male	Surgical ...	1	—	—	—	1	—	1
Female ...		3	—	1	—	2	—	3
Ex-service men		3	—	3	—	—	—	3
	Totals ...	202	37	44	9	97	15	202
	Percentage		18.3	21.7	4.4	48.0	7.4	

In addition to the above, 104 Primary Applications were received, but after examination the applicants were not considered to be definitely tubercular.

Children.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Pulmonary ...	34	14	11	1	7	1	34
Female ...		31	8	6	—	16	1	31
Male	Surgical ...	17	5	11	—	1	—	17
Female ...		7	3	2	—	1	1	7
Male	Glands ...	6	2	3	1	—	—	6
Female ...		10	4	1	4	—	1	10
Male	Skin	1	—	—	—	—	1	1
Female ...		2	—	1	—	—	1	2
Male	Miliary ...	2	1	—	—	1	—	2
Female ...		1	—	—	—	1	—	1
	Totals ...	111	37	35	6	27	6	111
	Percentages		33.3	31.5	5.4	24.3	5.4	

In addition to the above, 196 Primary Applications were received in respect of children; on examination, however, the applicants were not considered to be definitely tubercular.

TABLE GIVING CLASSIFICATION AT THE TIME OF FIRST EXAMINATION AND PRESENT CONDITION OF CASES APPLYING FOR TREATMENT IN 1922.

Adults.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Stage I.	20	6	8	—	3	3	20
Female ...	(Early)	7	2	3	—	—	2	7
Ex-service men		11	3	2	2	2	2	11
Male	Stage II.	40	8	11	1	16	4	40
Female ...	(Inter-	40	7	10	2	17	4	40
Ex-service men	mediate)	21	2	2	1	10	6	21
Male	Stage III.	16	—	1	—	15	—	16
Female ...	(Advanced)	16	—	—	—	14	2	16
Ex-service men		5	—	—	—	5	—	5
Male	Surgical ...	4	2	1	—	1	—	4
Female ...		2	1	1	—	—	—	2
Ex-service men		6	2	3	—	1	—	6
	Totals ...	188	33	42	6	84	23	188
	Percentages		17.5	22.3	3.2	44.6	12.3	

In addition to the above, 147 Primary Applications were received, but after examination the applicants were not considered definitely tubercular.

Children.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Pulmonary ...	22	9	8	1	4	—	22
Female ...		25	5	10	2	7	1	25
Male	Surgical ...	20	12	6	—	1	1	20
Female ...		16	5	8	—	1	2	16
Male	Glands ...	17	12	3	—	—	2	17
Female ...		13	10	1	1	1	—	13
Female ...	Skin	1	—	1	—	—	—	1
Male	Miliary ...	1	—	—	1	—	—	1
Female ...		2	—	1	—	1	—	2
	Totals ...	117	53	38	5	15	6	117
	Percentages		45.3	32.5	4.3	12.8	5.1	

In addition to the above, 167 Primary Applications were received; after examination, 164 of these applicants were not considered to be definitely tubercular and 3 were diagnosed as Keratitis.

Table Giving Classification at the time of First Examination and Present Condition of Cases Applying for Treatment in 1923.

Adults.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Stage I.	24	12	3	2	6	1	24
Female ...	(Early)	29	7	9	4	5	4	29
Ex-service men		10	2	2	4	2	—	10
Male	Stage II.	49	7	15	3	22	2	49
Female ...	(Inter-	64	8	12	9	30	5	64
Ex-service men	mediate)	23	3	4	2	11	3	23
Male	Stage III.	12	—	3	1	8	—	12
Female ...	(Advanced)	13	—	1	—	12	—	13
Ex-service men		3	—	—	—	3	—	3
Male	Surgical	5	—	3	—	2	—	5
Female ...		3	1	2	—	—	—	3
Ex-service men		—	—	—	—	—	—	—
	Totals ...	235	40	54	25	101	15	235
	Percentages		17.0	22.9	10.6	42.9	6.3	

In addition to the above, 144 Primary Applications for Treatment were received. After examination, these applicants were not considered to be definite cases of active Tuberculosis.

Children.

Sex.	Classification.	No. of applicants.	Present Condition.					Total.
			Well, working, or fit to work.	Improved, or moderately well.	Relapsed.	Dead.	Lost sight of or left the district.	
Male	Pulmonary ...	39	16	17	2	3	1	39
Female ...		31	7	10	2	11	1	31
Male	Surgical ...	11	2	7	1	1	—	11
Female ...		15	3	9	3	—	—	15
Male	Glands ...	7	6	1	—	—	—	7
Female ...		6	2	2	1	—	1	6
Male	Miliary ...	—	—	—	—	—	—	—
Female ...		3	1	—	—	2	—	3
	Totals ...	112	37	46	9	17	3	112
	Percentages		33.0	41.1	8.0	15.2	2.7	

In addition to the above, 195 Primary Applications for treatment were received. After examination, these applicants were not considered to be definite cases of active Tuberculosis.

Table X.

SUMMARY INDICATING THE CONDITION IN SUBSEQUENT YEARS OF CASES OF TUBERCULOSIS EXAMINED IN 1914, AND IN 1919 TO 1923 INCLUSIVE.

Adults.

Year when examined.	Number examined.	Condition in the years 1923, 1924 and 1925.										
		Year.	Well and working.		Moderately well.		Relapsed.		Dead.		Lost sight of or left district.	
			No.	%	No.	%	No.	%	No.	%	No.	%
1914	127	1923	17	13.3	6	4.7	2	1.5	82	64.6	20	15.8
		1924	11	8.7	9	7.1	4	3.1	82	64.6	21	16.5
		1925	12	9.4	10	7.9	1	0.8	82	64.6	22	17.3
1919	270	1923	62	22.9	46	17.0	25	9.3	111	41.1	26	9.6
		1924	66	24.4	41	15.2	12	4.4	116	42.9	35	12.9
		1925	57	21.1	51	18.8	8	2.9	121	44.8	33	12.2
1920	278	1923	72	25.9	48	17.3	16	5.8	114	41.0	28	10.0
		1924	38	13.7	71	25.5	12	4.3	121	43.5	36	13.0
		1925	52	18.7	62	22.3	10	3.6	127	45.7	27	9.7
1921	202	1923	36	17.8	63	31.1	15	7.4	78	38.6	10	4.9
		1924	34	16.8	50	24.7	15	7.4	90	44.5	13	6.4
		1925	37	18.3	44	21.7	9	4.4	97	48.0	15	7.4
1922	188	1923	54	28.7	43	22.8	8	4.3	68	36.2	15	7.9
		1924	38	20.2	38	20.2	14	7.4	80	42.5	18	9.5
		1925	33	17.5	42	22.3	6	3.2	84	44.6	23	12.3
1923	235	1925	40	17.0	54	22.9	25	10.6	101	42.9	15	6.3

Table Y.

Children.

Year when examined.	Number examined.	Condition in the years 1923, 1924 and 1925.										
		Year.	Well or fit to work.		Moderately well.		Relapsed.		Dead.		Lost sight of or left district.	
			No.	%	No.	%	No.	%	No.	%	No.	%
1914	34	1923	15	44.1	1	2.9	1	2.9	13	38.2	4	11.8
		1924	12	35.3	1	2.9	2	5.8	13	38.2	6	17.6
		1925	10	29.4	4	11.8	—	—	14	41.1	6	17.6
1919	103	1923	43	41.7	14	13.6	15	14.5	22	21.3	9	8.7
		1924	53	51.4	6	5.8	8	7.8	26	25.2	10	9.7
		1925	43	41.7	17	16.5	6	5.8	26	25.2	11	10.6
1920	102	1923	49	48.0	30	29.4	4	3.9	11	10.8	8	7.8
		1924	41	40.2	26	25.5	4	3.9	15	14.7	16	15.7
		1925	47	46.1	16	15.1	5	4.9	17	16.6	17	16.6
1921	111	1923	37	33.3	38	34.2	8	7.2	24	21.6	4	3.6
		1924	48	43.2	22	19.8	7	6.3	27	24.3	7	6.3
		1925	37	33.3	35	31.5	6	5.4	27	24.3	6	5.4
1922	117	1923	44	37.6	50	42.7	8	6.8	12	10.3	3	2.5
		1924	48	41.0	47	40.2	5	4.3	13	11.1	4	3.1
		1925	53	45.3	38	32.5	5	4.3	15	12.8	6	5.1
1923	112	1925	37	33.0	46	41.1	9	8.0	17	15.2	3	2.7

Tables X and Y are of exceptional interest and have been constructed with a view to showing what the results of Sanatorium treatment in this county really are. The patients selected in the year 1914 (which was the year when the Council first enjoyed the services of a Tuberculosis Officer) have been taken and the after-histories carefully followed up to the present day. Each year since the end of the war the same work has been undertaken (and this it is hoped to continue). It is of interest to note that out of 127 adults examined in 1914, 23 (or 18.1%) are known to be alive at the present day, 12 (or 9.4%) are well and fit to work, 10 (or 7.9%) are moderately well, and 82 (or 64.6%) are dead. It is hoped in the future, by careful examination of the figures, to ascertain whether there is any constant percentage in the number of annual deaths.

In the case of the children the figures in 1914 are somewhat small and do not permit of reliable deductions being made. It is, however, interesting to note that the percentage of children remaining well and fit is very much higher than in the case of adults. The same thing holds good in the other years. Strictly speaking the figures are hardly comparable inasmuch as they include (in the case of children) other forms of Tuberculosis than Phthisis.

Bacteriological Examinations.

The following table indicates specimens submitted for examination classified as to districts from which they were received :—

Sanitary Districts from which specimens were received.	Diphtheria.		Tuberculosis.		Enteric Fever.		Total specimens examined.		Grand Total.
	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.	
Municipal Boroughs.									
Berwick-on-Tweed ...	3	17	3	17	—	—	6	34	40
Blyth	4	28	24	89	1	1	29	118	147
Morpeth	1	7	5	29	2	1	8	37	45
Wallsend	54	150	69	218	8	3	131	371	502
Urban Districts.									
Alnwick	5	11	7	17	—	1	12	29	41
Amble	—	2	—	2	—	—	—	4	4
Ashington	1	6	19	124	2	4	22	134	156
Bedlingtonshire ..	2	27	15	83	2	—	19	110	129
Cramlington	—	—	7	55	—	—	7	55	62
Earsdon	—	1	7	38	—	—	7	39	46
Gosforth	15	74	10	37	5	4	30	115	145
Hexham	14	53	5	25	—	—	19	78	97
Longbenton	13	53	3	25	1	1	17	79	96
Newbiggin-by-the-Sea	6	11	1	45	—	—	7	56	63
Newburn	6	32	13	46	1	5	20	83	103
Prudhoe	1	7	4	26	—	—	5	33	38
Rothbury	—	—	—	5	—	—	—	5	5
Seaton Delaval	2	4	10	17	—	—	12	21	33
Seghill	—	—	1	—	—	—	1	—	1
Weetslade	2	3	3	25	—	—	5	28	33
Whitley & Monkseaton	14	51	10	64	2	4	26	119	145
Rural Districts.									
Alnwick	2	10	10	25	—	—	12	35	47
Belford	1	11	1	6	—	—	2	17	19
Bellingham	2	13	4	8	—	2	6	23	29
Castle Ward	2	41	7	48	2	7	11	96	107
Glendale	—	2	4	4	—	—	4	6	10
Haltwhistle	1	7	1	7	—	1	2	15	17
Hexham	28	87	5	33	—	5	33	125	158
Morpeth	2	8	7	43	—	1	9	52	61
Norham & Islandshires	—	4	1	7	—	—	1	11	12
Rothbury	1	9	2	7	—	—	3	16	19
Total, 1925	182	729	258	1175	26	40	466	1944	2410
Total, 1924	169	1212	212	986	29	54	410	2252	2662

Sale of Food and Drugs Acts.

The samples taken for analysis under the above Acts, the results of the analysis and the percentage of samples adulterated are shown in the following table :—

No. of Samples taken.	Description of Article.	Result of Analysis.			Percentage of Samples Not Genuine.	Vendor Prosecuted.	Convictions including cases dismissed on payment of costs.
		Genuine.	Not Genuine.	Doubtful.			
141	Milk	119	22	—	15·6	15	11
52	Butter	48	1	3	1·9	—	—
44	Vinegar	41	3	—	6·8	2	2
24	Jams and Jellies	24	—	—	—	—	—
20	Cocoa	20	—	—	—	—	—
18	Lard	18	—	—	—	—	—
17	Baking Powder	17	—	—	—	—	—
12	Coffee	12	—	—	—	—	—
8	Ground Rice	8	—	—	—	—	—
8	Pepper	8	—	—	—	—	—
7	Margarine	1	—	6	85·7	—	—
7	Corn Flour	7	—	—	—	—	—
6	Custard Powder	6	—	—	—	—	—
5	Self-raising Flour	5	—	—	—	—	—
4	Olive Oil	4	—	—	—	—	—
4	Malt Vinegar	4	—	—	—	—	—
4	Tea	4	—	—	—	—	—
3	Cream of Tartar	3	—	—	—	—	—
3	Oatmeal	3	—	—	—	—	—
3	Tapioca	3	—	—	—	—	—
2	Condensed Milk	2	—	—	—	—	—
2	Rice	2	—	—	—	—	—
2	Cakes	—	2	—	100·0	—	—
2	Semolina	2	—	—	—	—	—
2	Flour	2	—	—	—	—	—
2	Ground Almonds	2	—	—	—	—	—
2	Sweets	2	—	—	—	—	—
1	Custard	—	1	—	100·0	—	—
1	Seidlitz Powder	—	1	—	100·0	—	—
15	Miscellaneous	15	—	—	—	—	—
421		382	30	9	7·1	17	13

The percentages of samples found on analysis to be "not genuine" for the ten previous years, 1916-25 inclusive, were as follows :—7.9, 10.9, 9.8, 6.07, 6.2, 6.4, 8.2, 7.1, 5.4, and for 1925 as shown above 7.1.

The above table relates to the whole of the administrative county except the borough of Berwick-upon-Tweed, which is a separate authority under the Sale of Food and Drugs Acts.

Berwick-upon-Tweed—The annual report of the medical officer of health is not yet to hand, and no details of the administration of the above Acts are available for 1925.

Isolation Hospitals.

The amount of hospital accommodation available for infectious disease was as indicated in the subjoined table. The population of the 29 sanitary districts for which isolation hospital accommodation was provided was 398,261, and the beds available numbered 527, independently of the accommodation at port hospitals, giving one bed for each 784 of population. Cases isolated in hospital during the year numbered 1,107, being distributed as indicated in the table at the end of this

report. The rural districts of Bellingham and Haltwhistle with a combined population of 15,139 were still without provision for isolating cases of infectious disease.

	Population served.	Number and kind of hospitals provided.	Beds provided for		
			Small-pox.	Infectious diseases other than Small-pox	Small-pox or other Infectious diseases.
I. Joint Hospital Districts.					
(1) *Earsdon Joint Hospital District—*					
Earsdon U.D.	66,509	Iron and wood buildings :—			
Seghill U.D.					
Whitley & Monkseaton U.D.					
Longbenton U.D. ...		At Scaffold Hill (1) ...	...	72	...
Seaton Delaval U.D. ...		At Earsdon (1) ...	16	...	...
Cramlington U.D. ...					
(2) *Gosforth, Newburn, and Castle Ward Joint Hospital District—*					
Gosforth U.D.	49,740	Permanent building ...	...	32	...
Newburn U.D.... ...					
Castle Ward R.D. ...					
(3) *The urban and rural districts of Alnwick and the rural district of Belford—*					
Alnwick U.D.	24,357	Iron and wood building	12	...	...
Alnwick R.D.					
Belford R.D.					
(4) *The urban and rural districts of Rothbury—*					
Rothbury U.D. ...	5,959	do. ...	3	8	...
Rothbury R.D. ...					
(5) *Hexham rural and Prudhoe—*					
Hexham R.D.	31,517	do. ...	...	12	...
Prudhoe U.D.					
II. Hospitals Provided by Individual Sanitary Authorities.					
Berwick M.B.	12,200	One wooden building	6	...	...
		Iron & wood building	...	30	...
Blyth M.B.	34,070	Permanent building ...	...	8	...
Morpeth M.B.	7,662	Iron building ...	4	...	...
		Brick building ...	...	20	...
Wallsend M.B. ...	45,620	Permanent building	20	...	...
		do. ...	...	86	...
Alnwick U.D.	6,988	Permanent building ...	...	12	...
Amble U.D.	4,637	Iron building ...	4	.	...
Ashington U.D. ...	31,740	Iron building ...	23	...	...
		Brick building ...	...	12	...
Bedlingtonshire U.D....	28,630	One brick building ...	10	...	...
		Iron & brick building	...	18	...
Gosforth U.D.... ...	15,890	Permanent building ...	12	...	...
Hexham U.D.	8,476	Two iron and wood buildings	8	16	...
Newbiggin-by-the-Sea U.D.	7,149	One wooden hospital...	5	...	...
Newburn U.D. ...	20,570	One iron and wood building	4	...	...
Belford R.D.	4,909	One iron and wood hospital	8	...	...

	Population served.	Number and kind of hospitals provided.	Beds provided for		
			Small-pox.	Infectious diseases other than Small-pox	Small-pox or other Infectious diseases.
II. HOSPITALS PROVIDED BY INDIVIDUAL SANITARY AUTHORITIES—*contd.*					
Glendale R.D.	8,003	Two cottages	...	...	8
Hexham R.D.	22,140	One iron and wood hospital	12	...	...
Morpeth R.D.	19,200	do. ...	20	...	...
Norham and Islandshires R.D.	5,314	do. ...	6	...	...
River Tyne Port Sanitary Authority		Floating hospital ...	...	...	30 (Cholera, Plague, Yellow Fever or Small-pox)
River Blyth Port Sanitary Authority		Permanent building ...	...	20	
III. SANITARY AUTHORITIES HAVING MADE ARRANGEMENTS FOR PATIENTS TO BE RECEIVED BY NEIGHBOURING SANITARY AUTHORITIES.					
Blyth U.D.	34,070	Patients from this district are received into the hospital of the Blyth Port Sanitary Authority	...	...	...
Weetslade U.D. ...	7,472	Patients from this district are received into the Gosforth, Newburn and Castle Ward Joint Hospital	...	...	...
Castle Ward R.D. ...	13,080	Smallpox cases are received into the Gosforth U.D. Smallpox Hospital	...	...	...
IV. SANITARY AUTHORITIES WITHOUT ANY HOSPITAL FOR INFECTIOUS DISEASES AND WITH NO ARRANGEMENTS WITH NEIGHBOURING SANITARY AUTHORITIES.					
Bellingham R.D. ...	5,676		...	...	...
Haltwhistle R.D. ..	9,463		...	...	...

In view of the continued prevalence of Small-pox in the county during the year under review, the county medical officer suggested to the Health Committee the desirability of the erection of a few hospitals, situate in central positions in the county, which would not only be available in case of any extensive epidemic, but would be an economical solution of the problem of isolation for many districts inadequately provided with accommodation. He was requested to approach local authorities with a view to induce them to combine for the purpose of joint action with regard to hospital accommodation.

Several conferences of authorities were held, but no definite result had accrued at the end of the year.

Blind Persons Act, 1920.

Under the Blind Persons Act of 1920, it is the duty of the County Council whether in combination with any other council, or councils, or otherwise, to make arrangements to the satisfaction of the Minister of Health for promoting the welfare of blind persons ordinarily resident within its area, and the Council may for this purpose provide, maintain, or contribute towards the provision and maintenance of workshops, hostels, and homes; and, with the approval of the Minister of Health do such other things as may appear to them desirable for the purpose aforesaid.

The Council, after considerable pressure from representatives of the Ministry of Health, approached the Newcastle and Gateshead Home Teaching Society with a view to their undertaking the work on behalf of the County Council.

After several conferences it was decided to pay to this Society a sum of £600 in return for which they should carry out the work of the Act in so far as it relates to the visiting or teaching of blind persons within their own homes, and for this purpose the Society agreed to appoint and employ in the area of the administrative county one Home Teacher. Miss Mary Blair, of Deneback, Jarrow-on-Tyne, was appointed to do this work.

The County Council undertook to reimburse the Society for any expenditure above this amount, whilst the Society in return agreed to give credit for any sum not expended—the arrangements to be provisional for twelve months.

A very complete and extensive preliminary survey of the blind had previously been made by the health visiting staff of the Department. Every case had been personally visited, recorded, surveyed and indexed.

On the 1st January, 1925, there were 177 blind persons on the register—105 males, and 72 females. During the year 61 new cases were discovered—25 males and 36 females. 7 Blind persons died during the year—4 males, and 3 females. 2 Males and 2 females left the county. On the 31st December,1925, 227 blind persons remained on the register—124 males, and 103 females. 3 Adults were admitted for training during the year at the Training School, Benwell, and 4 children for education at the same school. 23 Adults were trained by the home teacher during the year; 10 in basket making; 1 in rug making; 2 in knitting; and 10 were taught to read Braille. 11 Blind persons were employed at intervals during the year as workers, after home training.

The number trained prior to 1925 at the Adult Training School, etc., and employed during the year were as follows :—

At Adult Workshops	4.
As Home Workers :—	
In Boot repairing	3.
Piano tuning	1.
Knitting	2.
Mat making	1.
Basket making	6.
Tea agents	3.
Masseuse	1.
Pianist	1.

The total number of visits made to blind persons by the home teacher during 1925 was 869.

A second home teacher is very urgently required. It is impossible for one person to adequately cover the county area and to do justice to her pupils and herself. The periods between visits are too long, the quality of the pupils' work suffers and progress is necessarily very slow.

Housing.

Housing.—As far as figures are available from the annual reports of *District Medical Officers of Health, the position in regard to housing continues to show a slight improvement. The number of new houses built during 1925 was less than in any of the three previous years, viz. : 1,218, as against 1,886, 1,347, and 1,793 respectively. The normal increase of population (2,800) required the provision of 560 houses, leaving a balance of 658 towards reducing the shortage existing at the end of the previous year.

An examination of the subjoined table reveals the fact that during the six years 1920 to 1925, building has little more than kept pace with the normal increase in population, for whereas the ascertained shortage in 1919 was shewn as 19,823, at the end of 1925 it was still 19,548, or a net gain of 275 houses for the six years.

This latter fact may, however, be somewhat discounted by reference to the line in the table shewing :—"Increase over previous year." Therein will be noted the marked diminution of the figures for 1925 as compared with those for 1920.

*Reports have not yet (December) been received from Berwick or Ashington.

HOUSING.	1919	1920	1921	1922	1923	1924	1925	Total.
Population	378128	393195	397834	401960	405900	410600	413400	413400
Increase over previous year		15067	4639	4126	3940	4700	2800	35272 (1919 to 1925)
Additional houses required to house normal increase		3013	928	825	790	940	560	7056
Houses actually built ...		179	908	1886	1347	1793	*1218	*7331
Shortage { Increase of ...		+2834	+20					2854
Shortage { Decrease of ...				−1061	−557	−853	−658	3129 — 275 net decrease in shortage.
Carried forward from previous year		19823	22657	22677	21616	21059	20206	19823 (1919)
Net shortage at end of year	19823	22657	22677	21616	21059	20206	19548	19548 Total.

*Excluding the boroughs of Berwick, Morpeth, and Wallsend; the urban districts of Ashington, Bedlington, Hexham, and Rothbury; and the rural districts of Alnwick, Castle Ward, Haltwhistle, and Norham and Islandshires, no information being forthcoming as to 1925 from these districts.

Housing Legislation.—The Housing Act, 1925, which came into operation on July 1st, simplifies to a large extent the administrative side of the above subject. It co-ordinates and consolidates the contents of a large number of previous enactments (thereby repealed) dealing with the housing of the working classes, and may now be regarded as the primary statute for this purpose.

It confers and imposes very comprehensive powers and duties upon local authorities with regard to :—The provision of additional housing accommodation; the inspection of existing houses; the institution of improvement or reconstruction schemes dealing with insanitary or obstructive buildings; power to borrow and advance money to private persons for the purpose of building, altering, converting or acquiring houses.

Failure on the part of a local authority to carry out the provisions of the Act may entail a transfer of its powers to the County Council.

Rivers Pollution.

The importance of keeping rivers and streams free from sewage pollution cannot be over-estimated; they are in many instances the only available water supply for cattle, and even—in some cases—utilized for domestic purposes.

Local sanitary authorities are jointly responsible—with the County Council—for preventing pollution, yet in many cases, local authorities (Urban and Rural) either permit pollution, or actually are themselves the defaulters, inasmuch as "all sewers are vested in the local authority," and often the cause of a water-course being polluted is the fact that a "sewer" has been made to discharge therein.

Sewage treatment works—often so palpably inefficient as to become a polluting rather than a purifying medium—discharge their effluent into streams or rivers.

A convenient stream may provide the readiest and most economical method of disposing of liquid waste. It is, however, an illegal solution of the problem.

A Report issued in 1925 by the Tyne Pollution Sub-Committee of the Standing Committee of the Board of Agriculture and Fisheries, indicated that as a result of detailed investigation it was estimated that no less than 17,000,000 (seventeen million) gallons of untreated sewage was being discharged each day into the river Tyne between Blaydon and the river mouth, a distance of 14 miles.

The fact that this portion of the river is a tidal estuary may be some mitigation of the circumstance, but it is also true that a very large percentage of the solids contained in the sewage will not be carried out to sea by the tide, but will be deposited on the bed of the river as sludge or on banks as scum.

The river in the vicinity of Newcastle—Gateshead—Felling, has proved to be—in certain stages—absolutely devoid of dissolved oxygen, or in other words, sewage sick. The constant addition of crude sewage from the increased number of new houses erected each year, *all with water-flushed sanitary conveniences*, will within a few years present a very serious problem to the responsible authorities concerned.

The administrative interest of the County Council in this section of the river is confined to that portion adjoining the boundary of Wallsend.

Other cases of pollution within the county, upon which comment has previously been made, are shewn below :—

Reports of County Medical Officer of Health.	Present condition.
Ashington. The gross pollution of the Haydon letch and the River Lyne by the discharge therein of untreated sewage from Ashington (reported last in 1919 Annual Report).	The District Medical Officer's Reports shew that a scheme for the "re-sewering of the town, and the ultimate discharge of the sewage into the sea" was prepared in 1922, and actually commenced in 1924. The work entails a cost of £120,000, and when completed will finally obviate the pollution of the letch and river complained of. The scheme was well advanced at the end of 1925.

Reports of County Medical Officer of Health.	Present condition.
Seaton Delaval. The necessity for schemes to obviate the pollution of the Lysdon and Meggie's burns, and the disposal of sewage from Shankhouse (reported in 1919).	The outfall of the Shankhouse sewer was reported in 1924 by the District Medical Officer of Health as having been connected to the Cramlington District Council's sewers. No indication is given of any action being taken to deal with the condition of the Lysdon and Meggie's burns. The report of a civil engineer was being awaited with reference to the advisability of combining with neighbouring authorities for the purpose of constructing a joint sewer.
Cramlington. Pollution of the Horton burn and River Blyth was referred to in the 1919 Annual Report. There still remains the necessity for effectively and efficiently disposing of the sewage from the southern part of this district.	A scheme to remedy this condition was sanctioned in 1915, and brought to fruition in 1923.
Weetslade. Complaints extending over a period of several years have been made respecting the condition of the Seaton burn, and the insufficiency of the means for treating sewage at Annitsford and Seaton Burn. No additions to or improvements have been made to the irrigation grounds, despite the addition to the volume of sewage due to increase in the number of houses.	At the end of 1925, a long discussed project was taking definite shape for the formation of a Joint Sewerage Board, with the object of constructing a sewer from Seaton Burn to follow the course of the Seaton burn and discharge in the sea near Seaton Sluice. Five or six neighbouring authorities have shewn interest in the project.
Alnwick Rural District. Attention was drawn in 1919 to "the necessity for improved methods of dealing with the sewage from Togston, Rennington, Christon Bank, Shilbottle, and Glanton."	The District Sanitary Officers' report for 1925 states :—"During the past 5 years improvements have taken place in the *sewerage* of Shilbottle Grange, Christon Bank, and Alnmouth." No suggestion of improvement in the method of disposal or treatment is indicated. Continued pollution of the Rennington burn is admitted.

Reports of County Medical Officer of Health.	Present condition.
Belford Rural District. Emphasis was laid upon the desirability of improving both the method of drainage and the disposal of sewage at Belford and Chathill in 1919.	The District Medical Officer of Health, in each of his annual reports for the years 1920 to 1925, complains of "the defective system of drainage, and the lack of means for sewage treatment at Belford." The inference to be drawn is that the local authority has not seen fit to accept the advice of either of its medical advisors, and evidently another course will have to be adopted in stimulating the local authority to a sense of its responsibilities.
Bellingham Rural District. Schemes of sewerage or sewage disposal were advocated in 1919 for Greenhaugh, Lanehead, Falstone, East Woodburn, Otterburn, and Plashetts. In addition it was pointed out that in many cases the disposal of domestic refuse was the cause of river pollution.	The District Medical Officer of Health has in the interim drawn attention to some of these matters. There is no indication of the local Council having undertaken any of the matters referred to with a view to their rectification.
Castle Ward Rural District. Treatment was urged for the sewage emanating from the villages of Walton and Stamfordham. Lack of such means was causing pollution of the How burn and River Pont.	The Sanitary Officers' report for 1925 states "that a scheme of sewage treatment for Whalton would shortly be completed."
Glendale Rural District. Attention was drawn in 1920 to the need for sewage treatment works at Lowick; and in 1923, the necessity for improvement in the system of sewerage at Wooler — to prevent the periodical pollution of the Wooler Water—was referred to.	The District Medical Officer of Health's report states that "the work of remodelling the sewerage system at Wooler was placed in the hands of an Engineer in 1925," and "a scheme for improving the conditions at Lowick was under consideration."
Haltwhistle Rural District. What was described as "probably the worst instance in the county of the pollution of a stream by sewage" in the report of 1919, referred to Haltwhistle Town. The report also stated that "sewerage and sewage disposal schemes were required at Bardon Mill, Tow House, Redburn, Coanwood, and Harper Town."	The District Medical Officer, in his report for 1924, referred to the town "irrigation ground" as being *"far from satisfactory."* In 1925, the Medical Officer intimated that "a comprehensive scheme had been decided upon for Haltwhistle," and that additional schemes were under consideration for other parts of the Rural area.

Reports of County Medical Officer of Health.	Present condition.
Hexham Rural District. In 1919, schemes of sewerage and sewage disposal were advocated as essential to remedy cases of river pollution at Acomb, Allendale and Catton, Corbridge, Haydon Bridge, and Wylam. Attention was also drawn to pollution taking place at Hagg Bank, Ovington, Dilston, Warden, Simonburn, Humshaugh, Hardhaugh, Fourstones, and Newbrough, by crude sewage from the Council's sewers. "Notice" was served on the Rural District Council by the County Authority in 1921 with regard to the pollution of the River Tyne at Corbridge and Haydon Bridge.	The Medical Officer of Health for the Rural District, in his report for 1921, stated that :—"An Engineer was preparing plans of schemes for the treatment of the sewage at Corbridge and Haydon Bridge." Neither of these schemes have yet materialized, nor has anything apparently been done to ameliorate the remainder of the conditions complained of, with the exception of Acomb, where an up-to-date plant for the treatment of sewage has been installed, and is reported to be working satisfactorily.
Morpeth Rural District. The necessity was urged in 1919 for the adoption of a sewerage (and treatment) scheme for the eastern part of this district.	The Medical Officer of Health for the district, in his report for 1920, stated that "the great sewerage scheme had been started." In the report for 1925, it is stated that a scheme comprising Hadston, Chevington, Widdrington and Ulgham was in process of being completed.
Norham and Islandshires Rural. The lack of proper means for the disposal of the sewage from Norham and Scremerston was referred to in the 1919 Report.	No indication is given in any of the subsequent Annual Reports of the district Medical Officer of Health that any sewage disposal schemes have been undertaken.

Maternity and Child Welfare.

Since the appointment of your Medical Officer in 1920 the whole scheme of Child Welfare has been remodelled. At present there are 24 Health Visitors and a Superintendent Health Visitor, who was appointed in 1921. The county has been divided into 24 areas, all visits to homes in the individual areas are carried out by a nurse allocated to that area. This arrangement holds good throughout the county with the exception of the Boroughs of Blyth and Wallsend and the Urban Districts of Hexham, Newburn, Gosforth, Longbenton, Bedlingtonshire and Ashington, in which areas the local council administers the Maternity and Child Welfare Acts themselves. There is little doubt, however, but that it would be to the advantage of the Urban Districts concerned if they relinquished their powers in favour of the County Council. It would tend to economy, efficiency and uniformity of purpose. Overlapping in these areas is unavoidable so long as they remain outside the County scheme. The scheme has worked exceedingly well. The Nurse in charge of a district,

having everything referred to her, has a variety of work, which is stimulating, and she herself obtains an intimate knowledge of the lives of the people amongst whom she works.

The qualifications asked for by the Council have been three years training in a general hospital, the certificate of the Central Midwives Board and the Health Visitors' or Sanitary Inspectors' certificate of the Royal Sanitary Institute. The Ministry of Health now demand that a Health Visitor shall receive some special training in Tuberculosis. Each year lectures are given to the Nurses upon this subject and clinical demonstrations are held periodically at the Sanatorium, which are well attended and very much appreciated. In addition, the Nurses attend the Tuberculosis Dispensaries as and when occasion requires, and are thus kept up to date in clinical matters. It may be stated that the staff is efficient and works enthusiastically, very often under stress of great physical difficulties. The districts are very large and in some cases extremely arduous to negotiate, requiring women of great physical strength and endurance. The Committee has endeavoured to utilise motor cycle transport as far as possible. In six areas Nurses used motor cycles during the year 1925; it has to be pointed out, however, that not every woman's temperament is suitable for the manipulation of these machines, and it does not infrequently happen that a very valuable Health Visitor is of no use whatever as a motor cyclist and is therefore lost to these districts. The choice of Health Visitors is becoming very limited; when one considers the arduous nature of the work and the limited number of years during which a women can work successfully at it, this is not surprising. It is becoming increasingly difficult to find suitable areas for women who have been engaged for say ten years in a difficult hilly country, and there is consequently a disposition for Health Visitors to move on to easier districts after one or two years' in the Council's service.

All births are visited and enquired into as soon after the tenth day as possible. It is to be regretted, however, that in some areas of the county births are not notified by medical practitioners, and no intimation is received at this office until the copies of births are received from the local Registrars, which may be three or four months later. Of 4,185 births registered during the year in the area administered by the County Council for Maternity and Child Welfare, only 2,966 were notified, leaving a deficiency of 1,219.

Population and number of births.—During the past five years the population and the number of births registered in the area administered by the County Council for Maternity and Child Welfare has been :—

Year.	Population.	Registered Births.	Notified Births.	% Notified.
1921	207,494	4,666	3,805	81
1922	209,437	4,337	3,288	76
1923	210,993	4,268	3,172	74
1924	214,301	4,241	3,043	72
1925	214,624	4,185	2,966	71

Maternity Service.

Inspection of Midwives.—The County Council is the Local Supervising Authority under the Midwives Acts of 1902 and 1918 throughout the whole of the administrative county. The Superintendent Health Visitor is also the Inspector of Midwives practising independently, but under an arrangement with the County Nursing Association the Superintendent

of that Association inspects the Midwives in the service of the Association The following shows the number of inspections during the past five years :—

Year.	No. of inspections of Midwives.
1921	559
1922	525
1923	542
1924	740
1925	711

Further investigations are made as and when required, but more particularly in cases of Ophthalmia Neonatorum, Pemphigus Neonatorum, and liability to become a source of infection. All certified Midwives are required to notify the Council each year of their intention to practise. The number notifying their intention to practise during the past five years was :—

Year.	No. certificated by examination.	No. in bona fide practice.
1921	161	7
1922	169	6
1923	168	6
1924	195	5
1925	189	3

During the year 1925 three bona-fide Midwives gave notice of intention to practise, but only one took cases during the year. Under the rules of the Central Midwives Board, Midwives are required to summon medical help in certain specified emergencies and to notify the Local Supervising Authority that they have done so. The number of notifications received during the past five years was :—

Year.	Notifications received.
1921	325
1922	285
1923	259
1924	315
1925	245

The County Council is responsible for the payment of fees of practitioners so summoned but is entitled to recover these if satisfied that the circumstances of the patient permit. The amounts received during the past five years were :—

Year.	Amount received.
1921	Nil
1922	Nil
1923	£7
1924	£16
1925	£8

The numbers of still-births reported by Midwives since 1921 were :—

Year.	Still-births in the practice of certified midwives.	No. of cases taken by midwives.
1921	24	2,949
1922	25	2,767
1923	26	2,982
1924	58	2,692
1925	65	2,496

Ophthalmia Neonatorum.—The number of notifications received each year since 1921 was as follows :—

Year.	No. of times Medical Aid was sought by Midwives on account of Inflammation or discharge from the eyes.	Total cases of Ophthalmia Neonatorum notified in county.	Number of cases per 1000 births.
1921	11	69	6·8
1922	15	58	6·4
1923	23	46	5·0
1924	21	49	5·3
1925	15	41	4·7

No arrangements at present exist for the treatment of cases of Ophthalmia Neonatorum in hospitals.

Puerperal Sepsis.—The number of cases of Puerperal Sepsis in which the Midwife notified herself as liable to become a source of infection was as follows :—

Year.	Midwives' cases in which Medical help was summoned for Rise of Temperature.	Puerperal Sepsis.	Number of cases of Puerperal Fever notified in county.	Case rate of Puerperal Fever per 1000 births.	Deaths from Puerperal Fever.
1921	—	5	13	1·24	14
1922	—	4	12	1·32	10
1923	15	8	16	1·85	13
1924	15	10	10	1·09	6
1925	10	3	7	0·81	9

Training of Midwives.—For several years the County Education Committee made a grant of £300 per annum to the County Nursing Association for the training and supply of Midwives. This grant has now ceased and in its place the Council gives an annual grant of £17 in respect of each Midwife trained and appointed to the staff of the Association.

Year.	No. of women who			
	Began training	Completed the course of training.	Obtained Certificate of Central Midwives' Board.	Were in training at the end of the year.
1921	12	12	12	11
1922	14	12	12	13
1923	14	13	12	14
1924	18	16	16	16
1925	26	19	19	27

Provision for Unmarried Mothers.—The Council has allocated a sum of £100 per annum for the reception and training of unmarried mothers at the Hostel in Osborne Road, Newcastle-upon-Tyne, the object being to keep mother and child together and inculcate and develop the maternal spirit.

During the past five years the number of unmarried mothers admitted averaged five annually.

Maternity Homes.—The County Council have no Maternity Homes but by an arrangement with the Princess Mary Maternity Hospital in Newcastle

TABLE 1.

Table showing numbers of Births and numbers of Deaths under one year in Urban and Rural Districts and number of Deaths under one year investigated by the Health Visitor.

	Berwick-on-Tweed.		Haltwhistle Rural.		Newbiggin Urban.		Alnwick Urban.		Cramlington Urban.		Wetslade Urban.		Morpeth Rural.		Prudhoe Urban.		Seaton Delaval Urban.		Whitley & Monkseaton Urban.		Hexham Rural.		Morpeth Borough.		Castle Ward Rural.		Norham & Islandshires.		Earsdon Urban.		Alnwick Rural.		Bellingham Rural.		Rothbury Rural.		Glendale Rural.		Belford Rural.		Amble Urban.		Seghill Urban.		Rothbury Urban.		TOTAL.	
	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.	M.	F.
Number of Legitimate Births ...	134	103	84	86	99	93	74	59	121	114	112	76	194	191	108	115	75	75	152	158	179	160	89	73	94	103	44	46	141	130	101	103	52	32	33	35	66	66	35	34	40	47	12	19	11	9	2,050	1,947
Number of Illegitimate Births ...	8	5	6	6	4	5	4	2	5	3	2	1	11	8	6	5	6	2	7	6	12	5	4	7	3	7	2	1	5	2	9	4	2	2	...	4	3	3	3	1	2	2	1	2	...	...	105	83
Total Births	142	108	90	92	103	98	78	61	126	117	114	77	205	199	114	120	81	77	159	164	191	165	93	80	97	110	46	47	146	132	110	107	54	34	33	39	69	69	38	35	42	49	13	21	11	9	2,155	2,030
Number of Deaths of Legitimate Infants	9	8	9	8	11	4	10	10	8	2	10	13	14	7	6	8	8	6	10	3	8	3	7	3	8	6	2	3	10	14	2	7	1	3	1	...	3	3	2	2	5	2	2	4	1	1	147	120
Number of Deaths of Illegitimate Infants	2	...	1	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	1	...	2	...	1	3	2	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	15	5
Total number of Deaths...	11	8	10	8	11	4	10	10	8	2	10	13	15	8	7	9	8	6	11	3	10	3	8	6	10	6	2	3	10	14	3	7	2	3	1	...	3	3	3	2	6	2	2	4	1	1	162	125
Infantile Mortality Rates ...	76	.0	98	.9	74	.6	143	.8	41	.1	120	.0	56	.9	68	.37	88	.6	43	.6	36	.5	80	.9	77	.3	53	.7	86	.3	44	.0	56	.8	13	.8	43	.4	68	.5	87	.9	136	.3	100			
Number of Deaths investigated (Legitimate)	10	8	9	7	11	4	9	10	7	2	6	15	13	8	5	9	7	5	10	3	7	3	6	5	6	5	2	2	8	17	2	6	1	3	1	...	3	2	1	1	5	2	2	4	1	1	132	122
Number of Deaths investigated (Illegitimate)	1	...	1	...	...	...	...	...	1	...	...	...	...	1	1	1	...	1	...	...	1	...	1	2	1	...	...	...	...	...	1	...	1	...	1	...	...	...	1	...	1	...	...	...	...	...	11	6
Total number of Deaths (under 1 year) investigated	11	8	10	7	11	4	9	10	8	2	6	15	13	9	6	10	7	6	10	3	8	3	7	7	7	5	2	2	8	17	3	6	2	3	1	1	3	2	2	1	6	2	2	4	1	1	143	128
Causes of Death under one year in urban and rural districts.																																																
Prematurity	4	2	2	2	1	1	...	3	1	...	3	5	4	2	1	1	...	2	2	...	4	...	1	2	1	...	1	1	1	4	...	1	1	...	...	...	...	1	2	...	2	...	1	3	...	...	32	30
Congenital debility	...	...	1	1	3	...	1	1	4	1	...	1	2	1	...	3	1	2	...	1	1	1	1	2	2	3	...	...	3	3	2	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	22	21
Congenital defects...	1	...	...	1	1	...	...	...	...	1	1	1	1	1	2	...	1	1	...	...	...	...	1	...	...	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	7	11
Complications at birth	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	4	3
Inanition	...	...	1	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	3
Ascites	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Asthenia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3
Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	4
Marasmus	1	1	...	...	...	...	1	...	2	...	...	...	1	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	1	...	12	7
Enteritis	...	1	...	...	...	...	3	...	...	...	1	1	...	1	...	...	2	...	1	1	...	...	2	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	1	1	...	...	...	...	6	7
Convulsions	...	1	1	1	...	...	...	...	...	...	...	1	...	...	1	...	1	...	1	...	...	...	...	1	1	...	...	...	2	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...
Haemorrhage after Circumcision	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Haemorrhage from bowels ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Tubercular bowels	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1
Tuberculosis	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	6
Meningitis	...	...	...	1	3	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Periostitis	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	25	19
Respiratory diseases	4	1	3	...	2	2	1	3	...	...	1	3	4	1	2	1	1	1	1	...	1	...	1	...	...	1	...	1	1	2	...	1	...	...	1	...	1	...	...	...	...	1	...	1	...	...	10	8
Infectious diseases	...	1	1	1	...	...	2	...	...	...	...	...	...	...	2	1	1	1	2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Cellulitis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Accidental death	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Intestinal obstruction	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL																																																143	128

Table 2.

Cause of death of infants under one year and of children aged 1-5 years, and age periods at which death occurred.

Age at Death.	Prematurity. M.	Prematurity. F.	Congenital debility. M.	Congenital debility. F.	Congenital defects. M.	Congenital defects. F.	Complications at birth. M.	Complications at birth. F.	Inanition. M.	Inanition. F.	Ascitis. M.	Ascitis. F.	Asthenia. M.	Asthenia. F.	Jaundice. M.	Jaundice. F.	Marasmus. M.	Marasmus. F.	Enteritis. M.	Enteritis. F.
Under 1 week ...	28	26	14	7	5	2	2	3	...	3	1	...	...	...	...	2	...	...	1	...
1 week to 4 weeks	3	3	6	5	...	4	1	...	2	...	...	...	...	...	1	...	2	...	...	...
4 weeks to 3 months	1	1	2	7	...	3	1	...	...	...	...	...	...	1	...	1	2	3	3	2
3 months to 6 months	...	...	...	1	2	2	...	...	...	...	...	...	...	...	...	...	2	1	4	5
6 months to 1 year	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	...	4	...
1 year to 2 years...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	3
2 years to 3 years	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
3 years to 4 years	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4 years to 5 years	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Age at Death.	Convulsion. M.	Convulsion. F.	Haemorrhage after Circumcision. M.	Haemorrhage after Circumcision. F.	Haemorrhage from bowels. M.	Haemorrhage from bowels. F.	Tubercular peritonitis. M.	Tubercular peritonitis. F.	Tuberculosis. M.	Tuberculosis. F.	Meningitis. M.	Meningitis. F.	Periostitis. M.	Periostitis. F.	Respiratory diseases. M.	Respiratory diseases. F.	Infectious diseases. M.	Infectious diseases. F.	Cellulitis. M.	Cellulitis. F.
Under 1 week ...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 week to 4 weeks	1	1	1	...	...	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...
4 weeks to 3 months	4	1	...	...	...	...	...	...	...	...	2	...	...	1	5	2	1	4	...	...
3 months to 6 months	...	3	...	...	...	...	...	...	1	...	2	4	...	...	6	5	3	1	1	...
6 months to 1 year	1	1	...	...	...	...	...	1	1	1	2	2	1	...	11	11	6	3	...	...
1 year to 2 years...	...	1	...	...	...	...	...	2	...	2	2	2	...	...	11	16	10	14	...	...
2 years to 3 years	1	1	...	...	...	...	...	...	...	...	2	...	...	...	4	3	7	3	...	...
3 years to 4 years	1	...	...	...	...	...	...	...	...	1	...	2	...	...	2	1	1	...	...	...
4 years to 5 years	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...

Age at Death.	Accidental death. M.	Accidental death. F.	Intestinal obstruction. M.	Intestinal obstruction. F.	Nephritis. M.	Nephritis. F.	Dentition. M.	Dentition. F.	Rickets. M.	Rickets. F.	Gangrene foot. M.	Gangrene foot. F.	Idiocy from birth. M.	Idiocy from birth. F.	Purpura haemorrhage. M.	Purpura haemorrhage. F.	Osteomyelitis. M.	Osteomyelitis. F.	Total Investigated. M.	Total Investigated. F.
Under 1 week ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	51	45
1 week to 4 weeks	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	14
4 weeks to 3 months	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21	27
3 months to 6 months	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	22
6 months to 1 year	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29	20
																			143	128
1 year to 2 years...	2	1	...	...	1	1	1	1	1	...	...	...	...	...	...	...	...	...	31	44
2 years to 3 years	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	18	9
3 years to 4 years	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	5
4 years to 5 years	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	4	3
TOTAL																			54	61

Table 3.

Cause of Death of Illegitimate Children under the age of one year, arranged in districts.

	Berwick-on Tweed. M.	Berwick-on Tweed. F.	Haltwhistle Rural. M.	Haltwhistle Rural. F.	Newbiggin Urban. M.	Newbiggin Urban. F.	Alnwick Urban. M.	Alnwick Urban. F.	Cramlington Urban. M.	Cramlington Urban. F.	Wetslade Urban. M.	Wetslade Urban. F.	Morpeth Rural. M.	Morpeth Rural. F.	Prudhoe Urban. M.	Prudhoe Urban. F.	Seaton Delaval Urban. M.	Seaton Delaval Urban. F.	Whitley & Monkseaton Urban. M.	Whitley & Monkseaton Urban. F.	Hexham Rural. M.	Hexham Rural. F.	Morpeth Boro'. M.	Morpeth Boro'. F.
Number of Illegitimate Births in Administrative County ...	8	5	6	6	4	5	4	2	5	3	2	1	11	8	6	5	6	2	7	6	12	5	4	7
Number of Illegitimate Deaths under 1 year	2	...	1	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	1	...	2	...	1	3
Number of Illegitimate Deaths investigated	1	...	1	...	...	...	...	...	1	...	...	...	...	1	1	1	...	1	...	...	1	...	1	2
Prematurity	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital debility	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Congenital defects...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Complications at birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Ascitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Marasmus	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Pneumonia...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Infectious diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1

	Castle Ward Rural. M.	Castle Ward Rural. F.	Norham & Islandshires. M.	Norham & Islandshires. F.	Earsdon Urban. M.	Earsdon Urban. F.	Alnwick Rural. M.	Alnwick Rural. F.	Bellingham Rural. M.	Bellingham Rural. F.	Rothbury Rural. M.	Rothbury Rural. F.	Glendale Rural. M.	Glendale Rural. F.	Belford Rural. M.	Belford Rural. F.	Amble Urban. M.	Amble Urban. F.	Seghill Urban. M.	Seghill Urban. F.	Rothbury Urban. M.	Rothbury Urban. F.	Total deaths and investigations. M.	Total deaths and investigations. F.
Number of Illegitimate Births in Administrative County ...	3	7	2	1	5	2	9	4	2	2	...	4	3	3	3	1	2	2	1	2	...	...	105	83
Number of Illegitimate Deaths under 1 year	2	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	15	5
Number of Illegitimate Deaths investigated	1	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	1	...	...	...	...	1	11	6
Prematurity	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	4	...
Congenital debility	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Congenital defects...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Complications at birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Ascitis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Marasmus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1
Pneumonia...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Infectious diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2
TOTAL																							11	6

patients from the various districts of the county are admitted as and when the necessity arises. The number of cases admitted under the County scheme was :—

Year.	Number of cases admitted.
1925	77

Penal Cases.—The number of penal cases reported to the Central Midwives Board during the past five years has been very small.

Practice of Unqualified Women.—There is little doubt that illegal practice of midwifery by uncertificated women has taken place in some districts. The women concerned were warned and a circular letter was addressed to every medical practitioner in the county pointing out the danger and unfairness of this practice. The County Medical Officer also met the practitioners in some of the districts and this illegal practice has considerably diminished.

Ante-natal work.—Ante-natal work is carried out generally under the auspices of the County Nursing Association. The Council's Health Visitors do as much of this work as they can, but it is evident that the time is fast approaching when a whole-time Child Welfare Officer should be appointed. At the present moment two of the Assistant County Medical Officers undertake work at Child Welfare Clinics. Whilst this is all to the good, there is very urgent need for the services of some recognised and experienced obstetrician who would visit the centres of the county say once per month. This could be done at comparatively little cost and the gain to the mothers of the county would be out of all proportion to the money expended.

In the part of Northumberland for which the County Council is responsible under the Maternity and Child Welfare Act, there were 287 deaths of infants under the age of one year ; 271 of these deaths have been investigated and tabulated. (See Table 1.)

Table 1.—It will be noticed that the highest rate is in the Alnwick Urban District with 143.8 deaths per 1,000 children born, 5 being the result of prematurity and congenital weakness, 4 from respiratory troubles, 3 from enteritis, and 3 from zymotic complaints. The next highest mortality is in Seghill, with 136.3. This figure, though very high, is compiled from small numbers and to that extent is somewhat misleading. Of the 6 deaths recorded here, 4 were due to prematurity. Infant death rates of over 100 per 1,000 births were recorded in Weetslade and Rothbury Urban. In Weetslade again the principal cause of death was prematurity and congenital defect. Out of 10 deaths 7 were due to these causes. The lowest rate is that in Rothbury Rural, with 13.8 per 1,000 births.

Of the total of 271 deaths investigated, congenital troubles and prematurity was responsible for 123, and respiratory diseases (bronchitis and pneumonia) for 44, and 45 were probably due to errors in feeding. Thus 212 out of 271 deaths were due to ante-natal defects, improper feeding, bronchitis and pneumonia.

Table 2.—In this table the cause and age at which death occurs is given. Of the 271 deaths it will be seen that 96 occur during the first week of life, whilst 130 infants do not live to the end of the first month. A further 48 die between the age of 1 and 3 months, so that 178 infants out of 4,185 born are not possessed of sufficient vitality to live more than 3 months.

Table 3.—This shows no marked difference in the causes of death amongst illegitimate infants. The rate is very much higher, deaths numbering 20 out of 170 infants born. The investigations show that 8 deaths were due to prematurity and congenital causes, and 7 to wasting and zymotic diseases and respiratory troubles.

Table 4.

Infant Welfare Centres.

Report on Work for the Year ending December 31st, 1925.

		Prudhoe.	Stocksfield.	Backworth.	Seaton Delaval.	Newbiggin.	Morpeth.	Alnwick.	Berwick.	Whitley Bay.	Totals.
Number of children transferred from 1924 Register to 1925 Register	aged under 1 year	6	27	88	67	52	42	34	24	45	385
	aged 1—5 years	8	71	13	14	33	17	28	16	33	233
Number of children who made their first attendance during 1925	aged under 1 year	59	48	114	94	143	126	54	74	72	784
	aged 1—5 years	12	6	27	20	15	12	13	30	13	148
Total attendances made ...	by mothers	456	327	2,112	1,700	2,065	973	836	1,410	2,407	12,286
	by children	481	358	1,507	1,563	1,658	995	832	731	2,536	10,661
Number of Ante-Natal mothers attending Centres for advice	1st visits	...	7	...	...	...	...	2	...	6	15
	subsequent visits	...	26	...	...	...	...	8	...	6	40
Number of Sessions each Centre was opened	half-days	51	23	24	49	50	48	46	52	47	390
	whole days	...	...	26	...	...	...	...	...	...	26
Number of attendances made	by Medical men	28	23	13	13	37	39	22	21	42	238
	by Nurses	51	23	49	49	50	44	46	47	44	399
Number of deaths of infants attending the Welfare Centres	aged under 1 year	1	...	3	3	3	...	2	...	1	13
	aged 1—5 years	1	...	...	...	...	...	...	1	1	3

Child Welfare Centres.—There are nine Child Welfare Centres in the county, five of which are administered by the County Council, and four are conducted by voluntary committees.

County Council Centres.

Name of Centre.	Time of Session.	Medical Officer attending.
Alnwick	...Monday, 2—4 p.m.	...Dr. Stephens, on alternate weeks.
Berwick	...Tuesday, 2—4 p.m.	...Dr. McLagan do.
Newbiggin	...Monday, 2—4 p.m.	...Dr. Jackson do.
Prudhoe	...Wednesday, 2—4 p.m.	....Dr. Gabriel do.
Seaton Delaval	Thursday, 2—4 p.m.	...Dr. Anderson do.

Voluntary Centres.

Backworth	...1st & 3rd Tuesdays, all day Other Tuesdays, 2—4 p.m.	...Dr. Glen Davidson, 1st & 3rd Tuesdays, 10—12 a.m.
Morpeth	...Monday, 2—4 p.m. ...	...Dr. Dickie, weekly.
Stocksfield	...Wednesday, 2—4 p.m.	...Dr Spence, on alternate weeks.
Whitley Bay	...Monday, 2—4 p.m. ...	...Dr. Patterson, weekly.

The voluntary centres are co-ordinated with the County Council in every instance. The Health Visitor attending each of these centres is supplied by the County Council. As and when financial circumstances permit it is proposed to establish further centres at Amble, Annitsford, Cramlington, Haltwhistle, Haydon Bridge, Lynemouth and Seghill.

Below is a statement of the year's work at the various centres. Dried milk is sold at each of these centres; this part of the work, however, whilst convenient and economical for many of the mothers, is regarded as a secondary consideration, one of the principal objects of the centre being to encourage breast feeding. During the year 14,797 lbs. of dried milk and 1,861 lbs. of Virol were sold in the various centres under the Council's control. It is of interest to note, however, that the sale of dried milk now is much less than it was four years ago. In some of the centres a voluntary fund has been organised for the supply of food in necessitous cases. In no case has free food been distributed in the centres under the control of the County Council.

No definite arrangements have been made for orthopaedic treatment of children under five years of age. The matter has frequently been discussed and attempts to do something on voluntary lines have been made. The need is thoroughly realised but the unfortunate trade depression which has prevailed in the Council's area has really prohibited developments upon any scale. The Council's Maternity and Child Welfare scheme is dovetailed directly into the School Medical Service and the aim is to supervise every child from birth to the end of school life. The records have been so organised as to permit this.

Table 5.

Death rate of Legitimate and Illegitimate Children during 1925, *for comparison.*

No. of Legitimate births in Council's area	3,997	
No. of Illegitimate births in Council's area	188	
Total births ...	4,185	
No. of deaths of Legitimate Infants	267	=66.8 per 1,000 Legitimate births.
No. of deaths of Illegitimate Infants	20	=106.38 per 1,000 Illegitimate births.
	287	=68.5 per 1,000 births.

Table 5.—A comparison of the Legitimate and Illegitimate Infant Mortality is given here, the latter being considerably higher than the former. The combined infant death rate for the area administered by the County Council for the year 1925 is 68.5 per 1,000 births, the infant mortality for England and Wales during the same period being 75 per 1,000 births.

In reviewing the causes of death and the length of life of these children (which may be counted in days) the outstanding feature is disclosed that with proper instruction and care before and after confinement, a very considerable portion (if not the greater portion) of deaths could

have been prevented. Within the first month of life 130 children died simply because they were too weak to live. This number having been disposed of, it may be assumed that the remainder, given a fair chance, would have lived, but we notice that from one month to six months children perish from wasting diseases, inflammation of the bowels, convulsions, tuberculosis, meningitis, bronchitis, pneumonia and infectious diseases, all of which may be said to be due to improper nutrition and causes which could have been prevented.

Venereal Diseases Regulations.

The main features of the County Council's scheme for the treatment of venereal diseases (undertaken in conjunction with neighbouring authorities) are the provision of facilities for treatment at the clinics and the arrangements for the bacteriological examination of material submitted from the clinics and from private practitioners. The clinic provided for county patients is at the Royal Victoria Infirmary, Newcastle; a fair proportion of out-patients attending the clinic at the Preston Hospital, Tynemouth, are, however, residents of the administrative county.

The pathological examinations under the scheme are carried out at the Durham University College of Medicine, Newcastle-on-Tyne.

No marked development of the scheme has been made during recent years, and the provision made appears to be adequate.

Irrigation stations are open, morning and evening, for gonorrhoea patients, independently of the clinics.

The following statement relating to county patients at the clinic at the Royal Victoria Infirmary, Newcastle, indicates a diminishing number of applicants since 1919 :—

	1919	1920	1921	1922	1923	1924	1925
New patients	582	566	435	320	353	343	279
Attendances of out-door patients ...	4,931	9,279	9,431	7,567	7,062	7,320	6,760

The following table relates to treatment at the clinic at the Royal Victoria Infirmary, Newcastle, during 1925. (The figures for 1924 are given for comparison.)

	1924.			1925.		
	Males.	Females.	Total.	Males.	Females.	Total.
1. Under treatment or observation at beginning of year...	190	89	279	151	61	212
1B. Returned for treatment after having ceased to attend during the previous year...	—	—	—	26	4	30
2. Dealt with for the first time	256	87	343	194	85	279
3. Ceased to attend before completion of treatment and observation	164	87	251	127	61	188
4. Transferred to other centres	12	2	14	12	1	13
5. Discharged after completion of treatment and observation	119	26	145	101	33	134
6. Under treatment or observation at end of year... ...	151	61	212	131	55	186
7. Total attendances at out-patient clinic	5,729	1,491	7,320	5,362	1,398	6,760
8. Aggregate number of in-patient days	46	161	207	165	414	579

The following table indicates the districts in which the 279 new cases during 1925 were resident.

District.	Months.												Total.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Municipal boroughs													
Berwick	3	–	–	–	–	–	1	–	–	–	2	–	6
Blyth	1	1	2	3	4	1	2	4	3	3	4	1	29
Morpeth	–	–	1	1	1	1	–	2	–	–	2	–	8
Wallsend	10	11	4	7	9	3	7	7	7	8	12	6	91
Urban districts													
Ashington	1	2	1	4	1	1	–	–	1	2	2	2	17
Bedlingtonshire ...	4	2	2	–	1	1	3	3	–	2	–	–	18
Cramlington ...	–	–	–	–	1	–	–	–	1	–	–	–	2
Earsdon	–	1	–	–	–	2	1	–	–	–	–	–	4
Gosforth	2	3	1	–	2	1	1	–	1	1	–	1	13
Hexham	1	–	1	1	–	–	–	–	–	–	1	–	4
Longbenton ...	1	2	1	–	–	1	1	5	1	1	–	1	14
Newbiggin	1	–	1	1	–	2	–	–	1	1	–	–	7
Newburn	3	1	1	1	–	–	1	4	–	1	–	1	13
Prudhoe	–	–	–	–	–	1	–	1	2	1	1	1	7
Seaton Delaval ...	1	1	1	1	–	–	–	–	1	–	–	–	5
Seghill	–	–	–	–	–	–	–	–	1	–	–	1	2
Weetslade	–	1	–	1	–	1	–	–	–	3	1	–	7
Whitley and Monkseaton ...	–	1	1	2	1	–	2	3	1	1	–	2	14
Rural districts													
Belford	–	–	–	–	–	–	–	–	–	–	2	–	2
Bellingham... ...	–	–	–	1	–	–	–	–	–	–	–	–	1
Castle Ward ...	–	1	1	–	2	–	–	–	–	1	2	–	7
Haltwhistle ...	–	–	–	–	1	–	–	–	–	–	–	–	1
Hexham	–	–	–	–	–	–	–	1	–	–	–	–	1
Morpeth	1	–	–	–	–	–	–	1	1	3	–	–	6
Total ...	29	27	18	23	23	15	19	31	21	28	29	16	279

The railway fares of necessitous patients, to and from the clinic, are borne by the County Council.

At the inception of the scheme medical practitioners in the area were informed of the facilities afforded both in regard to bacteriological examinations and to opportunities for consultation with the Medical Officer at the treatment centre, and their co-operation was invited. They still occasionally attend the clinics.

The following statement giving the number and kind of tests carried out at the pathological laboratory during 1925, indicates also the extent to which medical practitioners availed themselves of the facilities afforded by the Council for such examinations.

Nature of Test.	For Treatment Centre.	For Practioners.
For detection of spirochaetes	—	—
For detection of gonococci...	—	7
For Wassermann reaction	600	264
Other examinations—C.S. Fluid for Wassermann reaction	—	11
Total	600	282

Twenty-five medical practitioners in the county area were on the list, during 1925, of those qualified to receive free supplies of arsenobenzol compounds. The compounds are supplied at the instance of the Chief Medical Officer at the treatment centre and it is difficult to ascertain the number of cases for whose treatment they were given.

The River Port Authorities are supplied with literature for distribution among seamen, indicating that free treatment may be obtained under conditions of absolute privacy, and giving the address of the nearest clinics. In 1919 and 1920 a publicity campaign was conducted in the county by the Council for Combatting Venereal Diseases, and lectures and other propaganda work carried out in the more populous centres.

Venereal Diseases Act, 1917.—No action has hitherto been taken by the County Council under this Act.