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COUNTY COUNCIL OF NORTHUMBERLAND.

ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH,
for the Year 1939.

NEWCASTLE UPON TYNE :

R. WARD & SONS, LTD., PRINTERS AND PUBLISHERS, 23 TO 39, HIGH BRIDGE.

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NORTHUMBERLAND COUNTY COUNCIL.

REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH FOR THE YEAR ENDED 31ST DECEMBER, 1939.

TO THE CHAIRMAN AND MEMBERS OF THE COUNTY COUNCIL
OF NORTHUMBERLAND.

MR. CHAIRMAN, MY LORDS, LADIES AND GENTLEMEN,

I beg to present the annual report for the year 1939. The report has been drawn up on the lines indicated by the Minister of Health in his Circulars Nos. 1961 and 2067 relating to the contents and arrangements of the annual reports of medical officers of health for the year 1939 and is presented in slightly shortened form as indicated in the Circulars referred to above.

Vital and Mortality Statistics.—The vital and mortality statistics of the various county districts have been calculated and are included in the report. The variations 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 :—

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Live Birth rate (per 1,000 living)										
Administrative county	17.13	16.66	15.94	15.42	15.48	15.53	15.26	15.16	15.00	14.80
England and Wales	16.3	15.8	15.3	14.4	14.8	14.7	14.8	14.9	15.1	15.0
General death rate (per 1,000 living)										
Administrative county	11.02	12.24	11.33	11.93	11.78	11.62	12.02	12.67	11.76	11.84
England and Wales	11.4	12.3	12.0	12.3	11.8	11.7	12.1	12.4	11.6	12.1
Infant mortality rate (per 1,000 births)										
Administrative county	62	77	67	71	69	71	70	66	65	55
England and Wales	60	66	65	64	59	57	59	58	53	50
Zymotic death rate (per 1,000 living)										
Administrative county	0.23	0.41	0.25	0.31	0.43	0.32	0.30	0.26	0.31	0.20
England and Wales	0.37	0.32	0.33	0.29	0.34	0.24	0.30	0.23	0.23	0.10
Death rate from Respiratory Tuberculosis (per 1,000 living)										
Administrative county	0.78	0.75	0.68	0.65	0.60	0.53	0.55	0.54	0.40	0.52
England and Wales	0.74	0.74	0.69	0.69	0.63	0.60	0.58	0.58	0.53	

The birth rate again shewed a decline being the lowest ever recorded in the county ; it was also lower than that recorded for England and Wales.

The general death rate shewed a slight increase compared with that for the previous year.

The infant mortality rate shewed a further decline being the lowest ever recorded.

The death rate from zymotic diseases was less than that recorded for the previous year and was the lowest ever recorded in the county.

The death rate from respiratory tuberculosis (0.52 per 1,000 population) shewed a considerable increase compared with that of the previous year.

Administration.

The official, technical and administrative staff consisted of :—

County Medical Officer	...	...	W. F. J. Whitley M.D., D.P.H., F.R.S.E.
Assistant to the County Medical Officer	...	...	John B. Tilley, M.D., B.H.Y., D.P.H.
County Bacteriologist	...	...	Andrew I. Messer, M.A., M.B., CH.B., D.P.H.
Maternity and Child Welfare Officer and Chief Supervisor of Midwives	...	...	Janet M. Jamieson, M.B., CH.B., D.P.H.
County Tuberculosis Officer (Clinical)	...	...	Francis L. Moore, M.B., CH.B.
The Medical Superintendent of the Council's Sanatorium at Wooley, and Tuberculosis Officer	...	...	Robert Cunningham, M.B., CH.B., D.P.H.
Senior Assistant School Medical Officer	...	...	Wm. J. Pierce, M.B., CH.B., D.P.H.
Assistant County Medical Officer and Infant Welfare Centre M.O.	...	...	O'Connell O'Sullivan, M.C., M.B., CH.B., B.A.O.
Do.	do.	...	Mary W. Dewell, M.B., B.S.
Do.	do.	...	Anna M. Reid, M.B., CH.B., D.P.H.
Assistant County Medical Officer	...	...	*John A. Smail, M.B., CH.B.
Do.	...	...	*Grahame Patton, L.R.C.P. & S.I., D.P.H.
Assistant County Bacteriologist	...	...	Eleanor J. M. Anderson, PH.D.
Assistant Medical Superintendent of the Council's Sanatorium at Wooley	...	...	J. P. Parkinson, M.B., B.S.
Thoracic Surgeon	...	...	*Geo. Alex. Mason, M.B., B.S., F.R.C.S.

*Part-time.

Orthopaedic Surgeon	...	...	...	*William Mackenzie, F.R.C.S.E.
Ophthalmic Surgeon	...	...	...	*Alexander Macrae, M.B., CH.B., D.O.M.S.
Senior Dental Officer	...	...	...	Arnold E. Robinson, L.D.S.
Dental Officer	...	...	...	Catherine M. Anderson, L.D.S.
Do.	...	...	...	Frederick J. Gilbertson, L.D.S.
Do.	...	...	...	Thomas A. Ireland, L.D.S.
Do.	...	...	...	Wm. J. Irvine, L.D.S.
Do.	...	...	...	Ernest M. Pickering, L.D.S.
Do.	...	...	...	Frank E. Street, L.D.S.
Do.	...	...	...	Walter P. Neilson, L.D.S.
Do.	...	...	...	John Stewart, L.D.S.
Do.	...	...	...	M. N. Andrews Walker, L.D.S.
Do.	...	...	...	John L. Hayes, L.D.S.
Do.	...	...	...	James K. Christie, L.D.S.

Also seven female dental attendants.

County Health Inspectors	Chas. Ward, C.R.S. Inst., Cert. M. & F., M.S.I.A. James Atkinson, C.R.S. Inst., M.S.I.A.
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Chief Clerk	E. T. I'Anson.
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Acting County Analyst	*H. C. L. Bloxam, F.I.C.
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Matron of the Council's Sanatorium

at Wooley	Catherine Connor, S.R.N.
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Superintendent Health Visitor	...	Hannah Weir, M.B.E., S.R.N., S.C.M., H.V. Cert., R.S.I., S.I., Cert. R.S.I., Maternity and Child Welfare Cert.
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* Part-time.

I am, my Lords, Ladies and Gentlemen,

JOHN B. TILLEY,

Deputy County Medical Officer.

THE ADMINISTRATIVE COUNTY.

AREA.

The area of the County is 1,276,205 acres, divided as follows :—

Boroughs	...	...	...	...	...	18,346 acres.
Urban Districts	...	...	...	...	...	61,227 „
Rural Districts	...	...	...	...	...	1,196,632 „

POPULATION.

The *civil* population of Northumberland (exclusive of the county boroughs of Newcastle upon Tyne and Tynemouth) was estimated by the Registrar-General to be 412,240 at the middle of 1939.

The population on which the birth rate is calculated was estimated by the Registrar-General to be 409,640.

The population at the 1931 census, as revised through the changes in boundary was 404,608.

RATEABLE VALUE.

Rateable value of Administrative County, as at April 1st, 1939, £2,204,028. Produce of a 1d. rate for the year ended March 31st, 1940 (estimated), £8,858.

BOROUGH, URBAN AND RURAL DISTRICTS, AND PORT HEALTH AUTHORITIES.

The County at the *end* of 1939 was divided for the purpose of sanitary administration into 26 districts, four of which were municipal boroughs, twelve urban districts, and ten rural districts. There are also the Blyth and Tyne Port Health 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.

BOROUGH.

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

The civil population of the boroughs was estimated to be 100,864 at the middle of 1939.

URBAN DISTRICTS.

Alnwick, Amble, Ashington, Bedlingtonshire, Gosforth, Hexham, Longbenton, Newbiggin-by-the-Sea, Newburn, Prudhoe, Seaton Valley, and Whitley & Monkseaton.

The civil population of the urban districts was estimated to be 212,836 at the middle of 1939.

RURAL DISTRICTS.

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

The civil population of the rural districts was estimated to be 98,540 at the middle of 1939.

The area of each sanitary district in the administrative county will be found in a table opposite page 12 of this report.

SCHEME FOR WHOLE-TIME DISTRICT MEDICAL OFFICERS OF HEALTH.

As indicated in the Annual Report for 1938, it became possible, during that year, to make a whole-time appointment in the case of No. 2 Area under the Scheme, owing to the death of Dr. Wm. Hudson, Medical Officer of Health for Bedlingtonshire U.D. During the year under review Dr. James Angus, Medical Officer of Health for Ashington Urban District was appointed for the combined area which comprises the under-mentioned districts :—

Morpeth Borough,
Ashington Urban District,
Bedlingtonshire Urban District,
Newbiggin-by-the-Sea Urban District,
Morpeth Rural District.

Dr. Angus took up his whole-time appointment on October 1st, 1939.

BIRTHS.

Live Births.—According to the statistics supplied by the Registrar-General the net births belonging to the administrative county numbered 6,066—3,079 males and 2,987 females (4,824 of the births occurred in urban districts and 1,242 in rural districts).

Of the 6,066 births above-mentioned 221 (3.6%) were illegitimate.

The birth rate for the county was 14.8 (15.00 in 1938 and 15.16 in 1937).

Particulars of live births and still-births as regards each sanitary district in the administrative county are shown in a table opposite page 12 of this report.

DEATHS.

Net deaths.—According to information supplied by the Registrar-General the net deaths numbered 4,883—2,586 males and 2,287 females (3,710 in urban and 1,173 in rural districts).

The death rate for the County was 11.82 (11.76 in 1938 and 12.67 in 1937).

Details of the deaths and death rates in the several districts are given in the table opposite page 12 of this report.

The diseases causing the greatest mortality in the administrative county during 1939 were as follows :—

Disease.	No. of deaths.	Percentage of total deaths.
Heart Disease	1,252	25.64
Cancer... ..	646	13.23
Other circulatory diseases ..	329	6.74
Cerebral Hæmorrhage, etc. ..	344	7.04
Tuberculosis	274	5.61
Pneumonia (all forms)	174	3.56
Acute and Chronic Nephritis ...	157	3.22
Totals	3,176	65.04

The above-named seven diseases were responsible for more than half the deaths in the administrative county.

CANCER.

The following table indicates the proportion of deaths from Cancer to deaths from all causes during the five years 1934-38 inclusive. From this it would appear that in Northumberland there is a slight tendency towards an increase.

The regional radium centre in this area is at the Royal Victoria Infirmary, Newcastle-on-Tyne, which is a voluntary institution; the County Council has made arrangements for the treatment there of in-patients and also defrays the cost of travelling of both in-patients and out-patients attending the centre. The medical practitioners in the area have been informed of these facilities, but so far very little use has been made of them.

PERCENTAGE OF DEATHS FROM CANCER TO THE TOTAL DEATHS REGISTERED IN NORTHUMBERLAND DURING THE YEARS 1934-1938 INCLUSIVE.

Age Periods.	MALES.					FEMALES.					TOTALS.				
	Year.					Year.					Year.				
	1934	1935	1936	1937	1938	1934	1935	1936	1937	1938	1934	1935	1936	1937	1938
0-1 ...	—	—	—	—	—	—	0.5	—	0.5	—	—	0.2	—	0.2	—
1-2 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2-5 ...	1.9	2.2	2.7	1.9	3.5	1.4	3.0	—	—	—	1.6	2.5	1.5	—	—
5-15 ...	1.4	—	1.9	0.8	1.4	—	3.9	—	—	—	0.7	1.6	0.8	0.9	3.2
15-25 ...	3.1	1.0	2.5	6.5	2.9	3.7	—	1.6	3.6	2.6	3.4	0.5	2.1	2.0	1.4
25-35 ...	5.1	4.7	1.8	4.5	6.8	2.3	2.8	6.2	4.4	5.3	3.8	3.8	3.8	5.5	4.0
35-45 ...	9.6	9.0	7.5	4.5	6.8	14.9	20.2	15.6	18.4	16.3	12.3	13.7	11.2	10.8	11.2
45-55 ...	13.4	15.5	17.2	13.7	17.0	23.3	20.9	27.6	29.0	27.7	17.8	18.0	23.6	20.6	22.2
55-65 ...	20.6	20.9	19.1	17.7	20.8	21.7	19.0	20.9	22.8	24.5	21.1	20.0	19.9	20.1	22.8
65-75 ...	18.8	15.7	16.3	15.8	17.2	17.7	19.0	18.1	18.5	16.1	18.3	17.0	17.2	17.1	16.7
75 and upwards	9.0	8.3	11.4	10.9	10.9	9.4	9.1	8.6	10.8	9.8	9.2	8.7	9.9	10.9	13.6
All ages	11.9	11.0	12.1	11.2	12.4	12.7	12.8	13.4	14.8	14.0	12.2	11.8	12.7	12.9	13.2

INFANT MORTALITY.

	Number of deaths.	Death rate per 1000 births	Increase since 1938.	Decrease since 1938.	Mean rate 1929-1938.
Administrative County ...	335	55	—	10	70
Urban districts ...	266	55	—	10	72
Rural districts ...	69	54	—	8	62

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 ...	318	54	17	77
Urban districts ...	254	54	12	75
Rural districts ...	64	53	5	85

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 ...	0.99	6.24
Urban districts ...	1.04	5.94
Rural districts ...	0.82	7.18

INFECTIOUS DISEASES.

Notifications of Infectious Diseases received during the year 1939 under Section 17 (3) of the Sanitary Officers (Outside London) Order, 1935.

SANITARY DISTRICTS.	Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Pneumonia.	Puerperal Pyrexia.	Erysipelas.	TOTALS.
MUNICIPAL BOROUGHES.								
Berwick-on-Tweed ...	—	41	61	—	2	—	5	109
Blyth ...	—	95	63	3	45	7	34	247
Morpeth ...	—	30	6	1	10	4	12	63
Wallsend ...	—	53	124	1	110	1	26	315
Carried forward ...	—	219	254	5	167	12	77	734

SANITARY DISTRICTS.			Small-pox.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Pneumonia.	Puerperal Pyrexia.	Erysipelas.	TOTALS.
<i>Brought forward ...</i>			—	219	254	5	167	12	77	734
URBAN DISTRICTS.										
Alnwick...	—	6	—	1	—	—	—	7
Amble	—	9	—	—	—	—	—	9
Ashington	—	53	177	1	12	4	10	257
Bedlington	—	26	79	2	23	2	7	139
Gosforth	—	66	24	1	17	6	9	123
Hexham	—	25	1	—	5	—	6	37
Longbenton	—	53	61	2	11	5	6	138
Newbiggin-by-Sea	—	39	18	1	33	2	6	99
Newburn	—	58	5	1	19	10	9	102
Prudhoe	—	18	2	—	12	—	11	43
Seaton Valley	—	103	151	2	10	4	14	284
Whitley & Monkseaton	—	41	58	2	23	—	15	139
RURAL DISTRICTS.										
Alnwick...	—	15	9	—	4	2	4	34
Belford	—	6	2	—	6	—	—	14
Bellingham	—	4	1	—	6	1	1	13
Castle Ward	—	51	34	1	9	2	4	101
Glendale	—	7	1	—	3	3	1	15
Haltwhistle	—	5	3	—	—	—	1	9
Hexham	—	62	28	2	15	2	8	117
Morpeth	—	18	17	1	17	2	8	63
Norham & Islandshire	—	17	10	—	1	—	1	29
Rothbury	—	15	12	—	18	3	9	57
			—	916	947	22	411	60	207	2,563

The attack rate per 1,000 population for the administrative county was 6.23, for boroughs and urban districts 6.72, and for rural districts 4.58.

ZYMOTIC DISEASES.

The Zymotic diseases which are generally notifiable are Small pox, Scarletina, Diphtheria, Fevers (Typhus, Typhoid, Paratyphoid and Continued & 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 Diarrhoea & Enteritis (under two years).

Eighty-five deaths were caused by the seven principal Zymotic diseases, being a decrease of 42 compared with the number registered in 1938. Of these 73 took place in the urban and 12 in the rural districts.

The Zymotic diseases which caused the greatest mortality were :—

Diseases.	Number of deaths.		
	1939.	1938.	1937.
Diphtheria... ..	43	42	21
Diarrhoea and Enteritis (under 2 years)	18	29	34
Whooping Cough... ..	15	28	22

As Diarrhoea and Enteritis is not generally notifiable, and as the Measles and Whooping Cough Regulations, 1939, which provide for the compulsory notification of these diseases, did not come into operation until November, 1939, no information can be given as to the number of cases which occurred.

Table showing death rates per 1,000 living, from each of the seven principal Zymotic diseases for the seven years ended December 31st, 1939.

Diseases.	1933.	1934.	1935.	1936.	1937.	1938.	1939.
Small-pox	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
Scarlatina	0·046	0·075	0·037	0·005	0·015	0·017	0·012
Diphtheria	0·015	0·073	0·108	0·093	0·051	0·103	0·104
Typhoid & Paratyphoid	0·012	0·004	Nil.	0·005	0·015	0·005	0·007
Measles	0·053	0·133	0·042	0·059	0·041	0·046	0·002
Whooping Cough	0·029	0·068	0·056	0·022	0·054	0·069	0·036
Diarrhoea & Enteritis (under 2 years)	0·154	0·084	0·081	0·118	0·083	0·071	0·043

Small-pox.—No cases were notified.

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

Cerebro-spinal Meningitis.—Five cases were notified; 3 deaths were reported.

Encephalitis Lethargica.—One case was notified; 13 deaths were reported.

Poliomyelitis.—No case was notified and no death was reported.

Polio-encephalitis.—Two cases were notified, one death was reported.

Chicken-pox was reported from 6 Sanitary districts.

Dysentery.—Fifty-four cases were reported from 9 Sanitary districts.

Measles.—Cases were reported from 12 Sanitary districts.

Malaria.—No case was reported.

Undulant Fever.—No case was reported.

Whooping Cough.—A few cases were reported from 10 districts.

SCARLET FEVER.

The notifications numbered 916 (716 from urban and 200 from rural districts). The mortality from this disease was 5 (all occurring in urban districts). In 1938, 6 deaths were reported, and in 1937, 6.

The district in which the greatest number of cases occurred was Wallsend Borough (315).

TYPHOID AND PARATYPHOID FEVERS.

Twenty-two cases (18 from urban and 4 from rural districts) were notified. Three deaths occurred. In 1938 there were 2 deaths from this disease, in 1937, 6.

DIPHTHERIA AND MEMBRANOUS CROUP.

The notifications numbered 947 (830 from urban and 117 from rural districts). The diseases (one or both) were notified from all districts except the urban districts of Alnwick and Amble.

Forty-three deaths occurred (42 in urban and 1 in rural districts); 42 deaths were reported in 1938 and 21 in 1937.

MEASLES.

One death occurred in a rural district; 19 deaths were reported in 1938 and 17 in 1937.

WHOOPING COUGH.

The deaths numbered 15 (8 in urban districts and 7 in rural districts); 28 deaths were reported in 1938 and 22 in 1937.

PUERPERAL SEPSIS.

This disease caused 3 deaths (all in urban districts), compared with 4 in 1938 and 6 in 1937.

The distribution of the deaths was as follows: Wallsend Borough, 1; Bedlingtonshire U.D., 1; Prudhoe U.D., 1.

DIARRHOEA AND ENTERITIS.

At all ages.

The number of deaths at all ages was 32 (30 in urban and 2 in rural districts). In 1938 57 deaths occurred, and in 1937, 53.

Under 2 years.

The deaths from this cause, under two years of age, numbered 18 (29 in 1938 and 34 in 1937); 16 occurred in urban and 2 in rural districts.

RESPIRATORY DISEASES.

Respiratory diseases (exclusive of Respiratory Tuberculosis) caused 337 deaths in the administrative county during the year; 267 occurred in urban and 70 in rural districts. 382 deaths were reported in 1938 and 484 during 1937.

INFLUENZA.

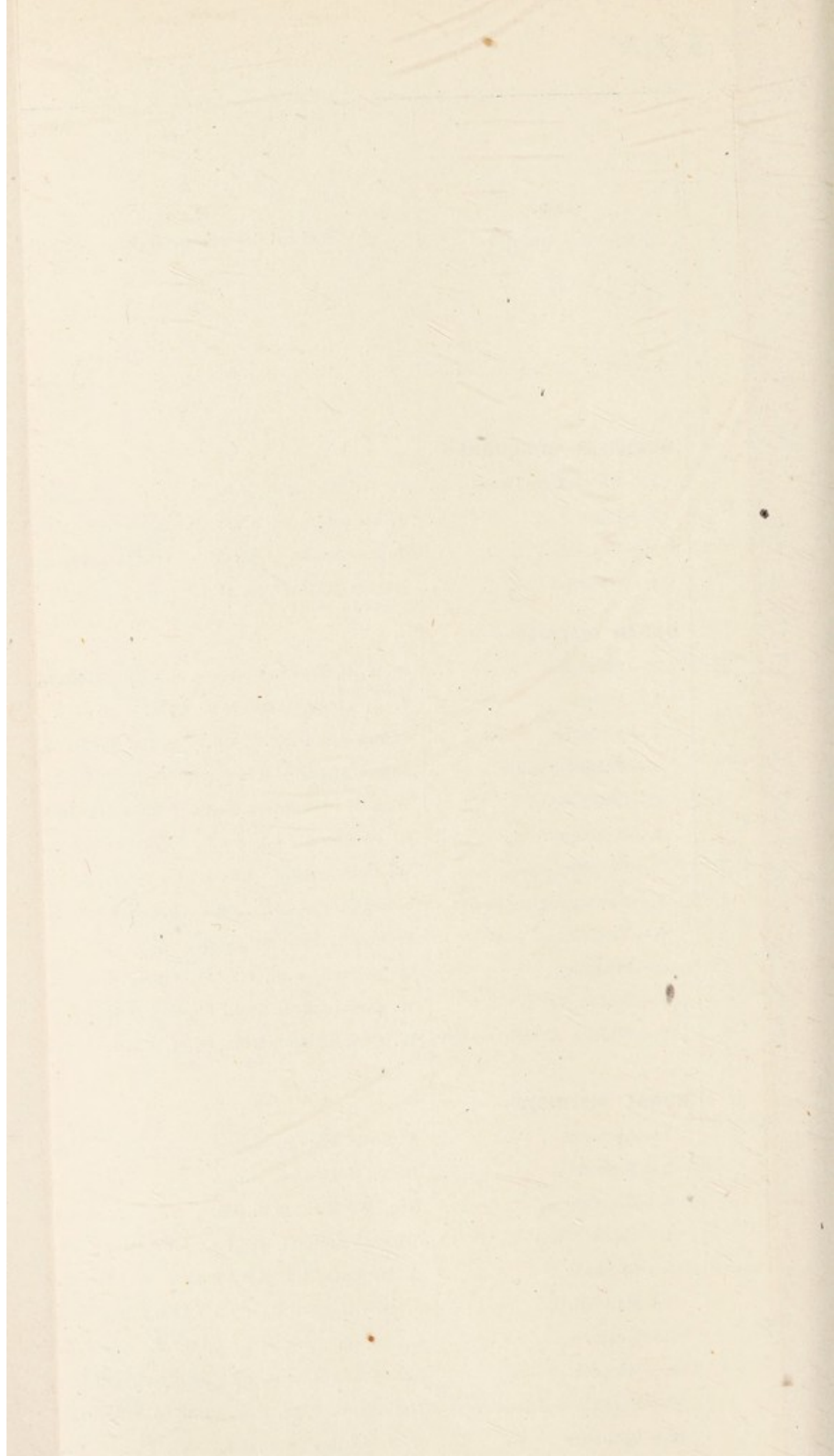
Forty-five deaths were recorded (30 in urban and 15 in rural districts), as directly attributable to this disease during the year. The deaths during 1938 numbered 60, and during 1937, 196.

Vital and Mortality Statistics.

The following table shows the principal vital and mortality rates for the years 1892-1939 (inclusive).

Year.	Birth rate per 1,000 living.	General death rate per 1,000 living.	Infant mortality rate per 1,000 births.	Zymotic death rate per 1,000 living.	Death rate from Respiratory Tuberculosis per 1,000 living.
1892	33.25	18.41	130.00	1.42	1.67
1893	33.22	18.50	160.00	2.35	1.67
1894	31.76	16.12	131.73	1.51	1.56
1895	32.59	18.72	156.28	2.29	1.62
1896	31.75	15.87	136.74	1.46	1.43
1897	31.57	16.73	150.66	1.69	1.50
1898	30.88	17.44	169.80	1.99	1.32
1899	31.46	17.71	173.88	2.29	1.27
1900	31.24	17.53	160.31	1.73	1.38
1901	33.22	18.72	183.57	2.80	1.25
1902	32.76	16.63	126.90	1.40	1.25
1903	32.58	16.81	145.43	1.58	1.19
1904	29.42	17.12	168.69	1.99	1.17
1905	30.41	15.01	133.57	1.26	1.02
1906	29.09	14.52	136.28	1.51	1.04
1907	28.25	13.51	112.93	1.03	1.00
1908	29.46	14.82	146.41	1.28	0.95
1909	28.43	13.39	106.99	1.03	1.01
1910	26.91	12.99	114.73	1.01	0.93
1911	27.48	13.96	136.79	1.94	0.98
1912	27.05	12.98	93.80	1.02	0.86
1913	26.43	13.61	111.39	1.28	0.91
1914	26.61	13.31	113.78	1.33	0.91
1915	24.42	15.82	122.00	2.04	1.03
1916	21.91	13.75	101.00	0.84	1.10
1917	20.39	13.60	101.00	0.97	1.06
1918	21.54	17.26	101.00	1.07	1.22
1919	22.14	14.11	102.00	0.92	0.97
1920	28.30	12.89	90.00	0.76	0.92
1921	25.50	12.42	95.00	1.01	0.87
1922	22.54	12.72	87.00	0.41	0.88
1923	22.56	11.33	76.00	0.74	0.85
1924	22.18	12.06	83.00	0.40	0.82
1925	20.88	11.63	82.00	0.67	0.78
1926	20.02	11.37	77.00	0.53	0.73
1927	17.90	11.53	77.00	0.27	0.81
1928	18.37	11.39	67.00	0.28	0.68
1929	16.79	12.22	81.00	0.65	0.74
1930	17.13	11.02	62.00	0.23	0.78
1931	16.66	12.24	77.00	0.41	0.75
1932	15.94	11.33	67.00	0.25	0.68
1933	15.42	11.93	71.00	0.31	0.65
1934	15.48	11.78	69.00	0.43	0.60
1935	15.60	11.67	71.00	0.32	0.53
1936	15.26	12.02	70.00	0.30	0.55
1937	15.16	12.67	66.00	0.26	0.54
1938	15.00	11.76	64.00	0.31	0.40
1939	14.80	11.84	55.50	0.20	0.52

TABLE OF VITAL AND MORTALITY STATISTICS, &c., 1939



TUBERCULOSIS.

Table 1.

Deaths and death rates.

	Respiratory Tuberculosis.				Other Tuberculous diseases.				Tuberculosis (all forms).			
	Deaths.	Death rates per 100,000 living.	Increase in rates since 1938.	Decrease in rates since 1938.	Deaths.	Death rates per 100,000 living.	Increase in rates since 1938.	Decrease in rates since 1938.	Deaths.	Death rates per 100,000 living.	Increase in rates since 1938.	Decrease in rates since 1938.
Administrative County	216	52	12	—	58	14	—	2	274	66	10	—
Urban districts ...	177	56	13	—	50	15	—	2	227	72	13	—
Rural districts ...	39	39	7	—	8	8	—	8	47	47	—	1

Table 1 shows the number of deaths and the death rates per 100,000 living from all forms of Tuberculosis. It will be observed that in Respiratory Tuberculosis there is an increase of 12 in the Administrative County as a whole, 13 in the urban districts and 7 per 100,000 living persons in the rural districts.

In other forms of Tuberculosis the rate has decreased by 2 in the Administrative County, 2 in the urban districts and 8 per 100,000 of population in the rural districts.

As indicated above, the death rate from all forms of Tuberculosis in the Administrative County during 1939 was 66, being an increase of 10 per 100,000 of population on the rate of last year. Of the 274 deaths, 227 occurred in boroughs and urban districts (population 313,700) equivalent to a death rate of 72 per 100,000 living persons, and 47 in rural districts (population 98,540) corresponding with a death rate of 47 per 100,000 living.

It will be noted that the death rate from all forms of tuberculosis is 66 per 100,000 living persons, while in 1900 it was 200. The percentage of deaths from tuberculosis in 1900 was 11.4 against 5.8 in 1939. The total number of deaths from all causes in 1900 was 6,822, while in 1939 it was 4,873.

During the five years 1934-1938 the mean mortality rate from all forms of tuberculous diseases in the Administrative County was 70; respiratory tuberculosis 52; and other tuberculous diseases 18 per 100,000 living. In the preceding quinquennial period (1929-1933) the mean rates were: from tuberculosis (all forms) 95; respiratory 72, and other tuberculous diseases 23 per 100,000 persons living.

The following table shows notifications and mortality at specified age periods during the year 1939 :—

Table 3.

Age Periods.	*New Cases.				Deaths.			
	Respiratory.		Non-Respiratory.		Respiratory.		Non-Respiratory.	
	M.	F.	M.	F.	M.	F.	M.	F.
0—	1	—	3	—	1	—	1	—
1—	—	4	12	4	—	—	6	4
5—	15	16	31	30	1	2	7	9
15—	45	42	14	13	23	24	7	7
25—	33	67	3	6	23	34	4	4
35—	30	12	1	4	21	14	1	1
45—	19	9	2	3	18	12	—	3
55—	15	5	—	2	25	9	1	—
65 and upwards	1	2	—	2	4	5	—	3
	159	129	66	64	116	100	27	31

* Includes new cases coming to the knowledge of the County Medical Officer other than by formal notification under the Public Health (Tuberculosis) Regulations, 1930.

Eleven cases (9 pulmonary and 2 non-pulmonary) were not notified prior to death. Last year 36 cases were unnotified prior to death.

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.—Following upon an application by the County Council, authority for enforcing these Regulations, within the area of the administrative county, was given to the County Council through the medium of the County of Buckingham (Prevention of Tuberculosis) Order, 1926. It was not found necessary to take any action under the Regulations during the year.

Public Health Act, 1925, Section 62.—No action was found to be necessary during the year.

As already indicated, the mean death rate from Respiratory Tuberculosis in the administrative County during the previous five years (1934-1938) was 52 per 100,000; this rate is greater than that recorded from all the deaths arising from the seven principal Zymotic Diseases, which showed a mean rate of 30 per 100,000 during the same period.

RETURN SHOWING THE WORK OF THE DISPENSARIES DURING THE YEAR 1939.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY				TOTAL.				GRAND TOTAL.	
	Adults.		Children.		Adults.		Children.		Adults.		Children.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—NEW CASES examined during the year (excluding contacts):														
(a) Definitely tuberculous ...	88	75	11	16	5	9	17	16	93	84	28	32	237	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	18	11	4	6	39	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	162	168	70	63	463	
B.—CONTACTS examined during the year :—														
(a) Definitely tuberculous ...	4	7	1	5	—	—	2	1	4	7	3	6	20	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	2	7	1	6	16	
(c) Non-tuberculous ...	—	—	—	—	—	—	—	—	37	60	55	58	210	
C.—CASES written off the Dispensaries' Registers as :—														
(a) Recovered ...	35	27	27	20	—	2	10	14	35	29	37	34	135	
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensaries' Registers as tuberculous)...	—	—	—	—	—	—	—	—	202	237	132	118	689	
D.—NUMBER OF CASES on Dispensaries' Registers on December 31st :—														
(a) Definitely tuberculous ...	388	318	131	128	23	27	110	116	411	345	241	244	1,241	
(b) Diagnosis not completed ...	—	—	—	—	—	—	—	—	8	5	2	5	20	

1. Number of cases on Dispensaries' Registers on January 1st ... 1,328
2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years ... 45
3. Number of cases transferred to other areas, cases not desiring further assistance under the tuberculosis scheme, and cases "lost sight of" ... 171
4. Cases written off during the year as Dead (all causes) ... 102
5. Number of attendances at the Dispensaries (including Contacts) 3,143
6. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes ... 7,771
7. Number of :—
 - (a) Specimens of sputum, etc., examined... 591
 - (b) X-ray examinations made in connection with Dispensary work ... 1,050
8. Number of "Recovered" cases restored to Dispensaries' Registers, and included in A (a) and A (b) above... 7
9. Number of "T.B. plus" cases on Dispensaries' Registers on December 31st ... 409

REPORT OF THE MEDICAL SUPERINTENDENT, WOOLEY SANATORIUM,
FOR THE YEAR ENDED 31ST DECEMBER, 1939.

The figures for the year 1939 are not comparable with those of previous years, owing to the mass evacuation of patients at the outbreak of the war to provide beds for the emergency medical service.

The following table shows the number and classification of discharges up to the outbreak of war :—

Quiescent	...	...	...	...	...	41
Improved	...	...	...	...	...	54
No material improvement	...	...	...	...	...	38
Died	...	...	...	...	...	6
Non-tuberculous	...	...	...	...	...	39
Doubtful	...	...	...	...	...	1
						<hr/> 179 <hr/>

When the order came to "clear hospital," 155 patients were sent home, 99 males and 56 females—16 patients were retained for various reasons.

When the expected air raid casualties did not materialise, the Sanatorium was permitted to resume its normal function in October and a large proportion of the discharged patients were invited to return.

The following table indicates the disposal of the 155 patients who were evacuated :—

	Male.	Female.
Returned later	47	29
Did not wish to return	29	11
Left the district	2	—
Died	2	—
Not sent for	19	16
	<hr/> 99 <hr/>	<hr/> 56 <hr/>

The cases "not sent for" were considered by the Tuberculosis Officer as suitable for domiciliary treatment and Artificial Pneumothorax cases who were doing quite well on out-patient refills.

Both Medical Officers of the Sanatorium were mobilised with the Territorial Army.

Dr. M. W. Dewell, from the School Medical Service, took over the work, with the help of Dr. Dickinson, of Newcastle, as a visiting consultant.

Treatment.

Treatment was continued on the usual lines of bed-rest, graduated exercise and occupational therapy supplemented by "collapse therapy" in the widest meaning of the term, i.e., collapse by surgical methods.

Artificial Pneumothorax was induced in 45 cases.

1,121 Refills were given to in-patients,

104 Refills were given to out-patients,

from the Hexham Dispensary area.

The Pneumothorax was made bi-lateral in four cases.

Bed Rest.

It is generally agreed that a prolonged period of initial bed rest is a very important factor in successful treatment. The duration of this period varies greatly in different institutions. Some Authorities go so far as to recommend bed rest until the Tubercle Bacilli disappear from the sputum, a result which may take many months to accomplish and is frequently not achieved at all. As a certain proportion of patients admitted as recent new cases do not respond to treatment and have to be nursed in bed throughout their stay, the number of beds available for continuing for long periods "therapeutic bed rest," in cases who are afebrile and in good general condition, is limited. Promotion to the convalescent wards cannot be too long delayed and compromises have to be made to utilise the accommodation available to the best advantage.

With the progressive reduction in the numbers of new cases since the last war it has been possible to extend considerably during the last few years the period of rest in suitable cases.

Unfortunately, an increase in the incidence of the disease is to be expected as a result of war conditions. The "black-out," with the consequent closing of windows, air raid shelter life, and war strain are all factors that are likely to affect adversely the mortality and incidence rates.

Thoracoscopy.

It may be remembered that the first series of cases of "division of adhesions" in the North of England was carried out by Mr. G. A. Mason, F.R.C.S., on Wooley Sanatorium patients. Briefly, the idea is to divide, by electro-cautery, adhesions that are interfering with a satisfactory pneumothorax, particularly those cases where cavities are held out and prevented from healing by their presence.

A sufficient period has now elapsed since 1934, when the work was started to evaluate the ultimate results. A gratifying number of patients who had large cavities are well and working with X-ray pictures showing arrest of disease.

"Thoracolysis."

This term has been employed to describe a new operation which may well prove to be of great value in the treatment of Pulmonary Tuberculosis. The name was given to it by Mr. Laurence O'Shaughnessy, a graduate of Durham University, to whom most of the credit of the operation is due.

It is a more conservative and selective operation than the orthodox thoracoplasty, and it is especially suitable for cases where there are cavities in the middle or lower zones of one lung.

Briefly, the idea is to plan an operation of a limited nature over the diseased area. Carefully selected portions of rib are removed with the object of making the chest wall yielding in the vicinity of the disease so as to allow contraction and scarring, and possibly ultimate healing to take place in the underlying lung.

As the operation is limited, surgical shock is not great, and, in consequence, it may be employed in patients in poor general condition without any great risk. There is also a minimal amount of interference with the healthy lung, a factor of considerable importance where the opposite lung is not altogether free from disease. It allows also for the possibility of

further operative interference should the collapse prove insufficient, and it does not preclude any of the various therapeutic collapse measures being used on the other lung if the necessity should arise.

The operation was first tried on carefully selected patients at Preston Hall, Kent, by Mr. O'Shaughnessy, and at Wooley by Mr. G. A. Mason, in the year 1938. The results so far have been very promising.

Thoracic Surgery.

The following operations were performed on Sanatorium patients at the Hexham Hospital during the year by Mr. G. A. Mason, F.R.C.S. :—

Thoracoscopy and division of adhesions	20
Thoracoplasty Operations involving 9 patients ...	14
Thoracolysis	2
Phrenic Evulsion	1
Phrenic Crush... ..	2
Extra Pleural Pneumothorax	2
Drainage of Empyema	1
Appendicectomy	1
Abdominal obstruction	1
	<hr/>
	44
	<hr/>

X-ray.

588 X-ray photographs of the chest were taken.

The usual routine screening of Artificial Pneumothorax cases was carried out, and out-patients were screened as they attended for refills.

Laboratory.

865 Microscopic examinations of the sputum were made.

I have the honour to be,
Ladies and Gentlemen,
Your obedient servant,
(Signed) R. CUNNINGHAM,
Medical Superintendent.

COUNTY LABORATORY, 1939.

The total number of reports furnished on specimens submitted for examination during the year was 30,503.

The following table indicates the nature of the pathological specimens dealt with and a summary of the results.

TABLE 1.

I.—Tuberculosis.

(i) Microscopical examinations.

1,547 specimens of sputum	... 198 positive.
40 ,, pus	... 2 ,,
11 ,, urine	... 1 ,,

(ii) Biological tests.

16	specimens of	sputum	...	2	positive.
25	„	pus	...	6	„
13	„	urine	...	2	„
1	„	stomach washing	...	1	„
5	„	pleural fluid	...	1	„
1	„	ankle fluid	...	1	„
2	„	gastric juice.			
1	„	scraping from tongue ulcer.			

II.—*Diphtheria, etc.*

11,000 Swabs from throat, nose, etc., were examined for *B. diphtheriae*, 2,504 being positive.

1,505 Swabs were examined for Haemolytic Streptococci, 641 being positive.

7 Swabs were examined by direct smear for Vincent's organisms.

192 Swabs or cultures were submitted for isolation of *B. diphtheriae* and virulence test. Of the organisms isolated 138 proved to be virulent *B. diphtheriae*.

4 Swabs for serological grouping tests of streptococci.

III.—*Enteric Fevers, Dysentery, etc.*

134 Specimens of blood were submitted for agglutination reactions with organisms of the enteric group; 23 gave positive reactions with *B. typhosus* and 10 with *B. paratyphosus*, 3 *B. dysenteriae* Flexner and 1 *Salmonella* Gaertner. The practice of testing all specimens against *Br. abortus* has been continued and 8 positive reactions with this organism were obtained.

183 Specimens of faeces and 34 of urine were examined for organisms of the enteric-dysentery group and the following organisms were isolated :—

<i>B. typhosus</i> 1.	<i>B. paratyphosus</i> B. 12.
<i>B. dysenteriae</i> Flexner 6.	<i>B. dysenteriae</i> Sonne, 2.
<i>B. aertrycke</i> , 5.	<i>S. Newport</i> , 1.

IV.—*Meningitis.*

19 Specimens of cerebro-spinal fluid and 11 post-nasal swabs were submitted from cases of suspected meningitis. *B. tuberculosis* was found in 1 of the spinal fluids and meningococci in 3.

V.—*Venereal Diseases.*

11,841 Specimens were submitted for examination. The examinations comprised :—

(a) *Syphilis.*

1 Specimen of serum for micro examination for *Sp. pallida*.

6,720 Specimens of blood for Wassermann Reaction.

2,314 „ blood for Flocculation test (MKR. II).

369 „ cerebro-spinal fluid for Wassermann Reaction.

75 „ cerebro-spinal fluid for Colloidal gold test, etc.

(b) *Gonorrhoea.*

156 Microscopic examinations of films for gonococci.

2,206 Specimens of blood for complement fixation test.

Of the total examinations 8,602 were carried out on behalf of the Joint Committee's Clinic, 2,500 for hospitals and other institutions (included among which were 610 specimens from blood donors), and 739 for private practitioners.

A detailed distribution of the specimens is shown in the following table.

TABLE II.

	COUNTY.			CITY.		
	Joint Committee's Clinic.	Hosp. and Inst.	Private Practitioner.	Joint Committee's Clinic.	Hosp. and Inst.	Private Practitioner.
Micro. <i>Sp.pallida</i> ...	—	—	—	—	—	1
Micro. <i>Gonococci</i> ...	—	4	57	—	—	95
Blood Wassermann ...	1,510	864	244	2,468	1,359	275
Blood MKR II ...	914	8	3	1,368	16	5
C.S.F. Wassermann ...	68	104	—	72	122	3
C.S.F. Goldsol, etc. ...	68	—	—	5	1	1
Blood G.C.F.T. ...	781	5	17	1,348	17	38
TOTAL ...	3,341	985	321	5,261	1,515	418

VI.—*Miscellaneous pathological specimens.*

The following examinations, not classified above, have also been carried out :—

(i) For general bacteriological examination :—

32 Urine, 26 pleural fluid, 1 ascitis fluid, 6 samples of shellfish, 1 milk, 7 swabs from various sources, 7 blood cultures.

(ii) Others :—

8 Faeces for occult blood, 6 blood for urea, 13 milk for *Br.abortus*, 3 blood films for parasites, 2 blood, 1 water, and 3 rats for *leptospira*, 1 blood and 1 pus for *B.anthraxis*, 1 faeces for worms, 2 seminal fluids for spermatozoa, 2 sputum and 3 pus for *Streptothrix*.

VII.—*Milk.*

(a) Samples for cleanliness test.

(Methylene blue reduction test and *B.coli.*)... 1,760

(b) Samples for *B.tuberculosis* 1,769VIII.—*Water.*

252 Samples were examined for bacterial count and *B.coli.*

4 Samples of sewage effluent were examined for bacterial content.

7,679 of the foregoing examinations have been carried out on behalf of Newcastle upon Tyne Corporation.

Table III shows the number of certain pathological specimens received from the various administrative districts in the County.

TABLE III.

District.	Sputa for B. Tuberculosis.			Swabs for B. Diphtheriae.			Bloods for Agglutination.			Miscellaneous.	TOTAL.
	+	—	Total.	+	—	Total.	+	—	Total.		
<i>Boroughs.</i>											
Berwick	2	17	19	187	471	658	...	...	...	16	693
Blyth	33	172	205	65	434	499	7	8	15	100	819
Morpeth	2	21	23	14	57	71	1	1	2	36	132
Wallsend	45	185	230	42	200	242	2	5	7	99	578
<i>Urban Districts.</i>											
Alnwick	5	19	24	7	35	42	1	2	3	26	95
Amble ... ..	...	1	1	...	8	8	...	...	...	3	12
Ashington	14	114	128	703	1,041	1,744	...	7	7	547	2,426
Bedlington	16	136	152	369	1,396	1,765	3	12	15	84	2,016
Gosforth	6	50	56	49	234	283	3	2	5	38	382
Hexham	6	30	36	...	37	37	1	5	6	13	92
Longbenton ... ..	...	60	60	22	282	304	4	2	6	25	395
Newbiggin	3	89	92	21	78	99	1	2	3	53	247
Newburn	10	74	84	6	40	46	1	...	1	23	154
Prudhoe	3	23	26	...	21	21	...	4	4	8	59
Seaton Valley	8	57	65	56	465	521	2	2	4	45	635
Whitley & Monkseaton	15	127	142	30	482	512	2	7	9	87	750
<i>Rural Districts.</i>											
Alnwick	4	35	39	45	96	141	4	2	6	31	217
Belford	1	14	15	2	9	11	...	2	2	8	36
Bellingham	3	8	11	1	9	10	...	...	...	9	30
Castle Ward	2	16	18	54	426	480	...	6	6	417	921
Glendale ... ..	...	9	9	5	25	30	...	1	1	29	69
Haltwhistle	4	14	18	...	4	4	1	...	1	3	26
Hexham	6	29	35	45	539	584	5	12	17	131	767
Morpeth	4	27	31	20	131	151	1	2	3	69	254
Norham & Islandshires	...	3	3	1	13	14	...	3	3	7	27
Rothbury	6	5	11	14	126	140	...	...	...	20	171
Forest Hall Hosp. ... ..	...	...	...	292	982	1,274	6	...	6	78	1,358
Lemington Hosp. ... ..	...	...	...	188	261	449	...	...	...	5	454
Wallsend Hospital ... ..	...	...	...	262	565	827	...	...	...	27	854
Others ... ..	...	14	14	4	29	33	...	2	2	20	69
Newcastle C.B.C. ... ..	...	...	...	...	...	...	...	...	...	117	117
TOTALS	198	1,349	1,547	2,504	8,496	11,000	45	89	134	2,174	14,855

Milk Samples for B. Tuberculosis.

A total of 1,769 samples were submitted for examination, 1,583 were samples of bulk milk collected by various authorities. All were examined by biological test, the results being as follows:—Positive, 69 (4.4%); negative, 1,471; inconclusive, 43.

The following were included among the bulk samples:—

	Number.	Number Positive.
Tuberculin Tested	12	2
Accredited	497	11
Pasteurised	8	—
Sterilised	2	—
School Milks	39	2

The districts in which the various samples were collected are shown in Table IV below.

TABLE IV.

District.	Inconclusive.	Positive.	Negative.	TOTAL.
County Health Department ...	15	15	539	569
Blyth ... ..	...	...	8	8
Morpeth ... ..	...	...	7	7
Wallsend ... ..	...	...	9	9
Amble ... ..	...	...	3	3
Ashington	1	2	42	45
Bedlington	2	3	27	32
Longbenton ... ..	...	...	36	36
Newbiggin ... ..	...	1	33	34
Newburn	3	2	47	52
Seaton Valley	2	1	102	105
Whitley and Monkseaton ...	7	9	165	181
Bellingham ... ..	...	1	18	19
Hexham	3	6	54	63
Morpeth	2	5	45	52
Newcastle C.B.C.	8	24	336	368
Ministry of Agriculture ...	2	35	149	186
TOTALS	45	104	1,620	1,769

186 Samples were submitted by the Ministry of Agriculture and Fisheries and were examined by biological test. Of these, 44 were single samples, 15 being found to be positive; 142 bulk samples, 20 being found to be positive.

Milk Samples examined by the Methylene Blue Reduction and B.coli Tests.

The total number examined was 1,760; 656 were ordinary milks, 1,096 were "designated" milks and the remaining 8 were described as "sterilised."

Table V shows the districts from which the samples were received.

TABLE V.

Milk Samples for Methylene Blue Reduction Test and B.coli.

District.	Ordinary.	Tuberculin Tested.	Accredited.	Pasteurised.	Sterilised.	TOTAL.
County Health Department	53	105	785	12	...	955
Blyth	25	1	...	...	...	26
Wallsend	14	...	...	2	...	16
Amble	3	...	3	...	...	6
Ashington	47	3	...	46	...	96
Bedlington	37	...	...	...	...	37
Gosforth	26	...	5	1	...	32
Longbenton	33	2	2	3	...	40
Newbiggin	29	...	...	2	...	31
Newburn	69	2	1	4	8	84
Seaton Valley	104	...	58	...	...	162
Whitley and Monkseaton ...	150	9	18	6	...	183
Alnwick	1	...	...	...	...	1
Bellingham	20	...	...	...	...	20
Hexham ... ..	...	...	...	21	...	21
Morpeth	45	...	5	...	...	50
TOTALS	656	122	877	97	8	1,760

The results of the examinations of the samples were as follows :—

Classification.	Complied with standard.	Did not comply.		TOTAL.
		Number.	Per cent.	
Tuberculin Tested	90	32	26.2	122
Accredited	703	174	19.8	877
Pasteurised	88	9	9.3	97
Ordinary	*397	259	39.4	656
	1,278	474	27.05	1,752
School Milks included among the above	*58	44	43.1	102

*With standard for accredited milk.

With regard to the 8 samples of "sterilised" milk, the bacterial count of 7 samples was recorded as Nil and 1 contained 136,000 bacteria per ml.

Water Samples.

252 Samples were submitted for examination. The results are shown in the following table.

Sample submitted by	Number of Samples.	Classification.		
		I.	II.	III.
County Health Department	12	4	4	4
Blyth	1	...	...	1
Morpeth Borough	4	(Sewage Effluent)	...	...
Morpeth Do.	86	35	27	24
Ashington	12	7	3	2
Bedlington	3	2	1	...
Hexham	36	25	10	1
Newbiggin	5	5	...	...
Newburn	7	3	...	4
Prudhoe	12	10	2	...
Alnwick	13	11	...	2
Belford	2	1	...	1
Bellingham	15	6	6	3
Castle Ward	14	7	2	5
Glendale	1	...	1	...
Hexham	11	5	3	3
Morpeth	9	3	3	3
Rothbury	12	8	...	4
Private	1	...	...	1
TOTALS	252	132	62	58

(Signed) A. I. MESSER.

FOOD INSPECTION.

The examination of milk samples from dairy herds for the detection of Tuberculosis has been continued during the year.

The total number of samples tested was 1,157. Tubercle bacilli being found in 44 (3.8%), and 38 animals were destroyed after being proved to be affected.

Since the inception of this scheme (October, 1927) no less than 8,656 samples have been taken of which 432 (5%) were found to contain tubercle bacilli, resulting in an ultimate slaughtering of 267 animals.

The following table shews the progress of this scheme.

FOOD AND DRUGS ACT, 1938. (MILK AND DAIRIES ORDER, 1926. PART IV.)
ROUTINE MILK SAMPLING—1927 (Oct.) to 1939 (Dec.).

Sanitary Districts.	Latest available Figures.		1927 to 1938 (inclusive).			1939.			TOTAL.	
	No. of Cow-keepers.	No. of Cows kept.	No. of Samples.	No. found to contain Tub. Bac.	No. of Cows slaughtered.	No. of Samples.	No. found to contain Tub. Bac.	No. of Cows slaughtered.	No. found to contain Tub. Bac.	No. of Cows slaughtered.
<i>Municipal Boroughs.</i>										
1. Berwick-on-Tweed	26	154	67	2	2	4	...	...	2	2
2. Blyth	18	252	61	1	1	11	...	...	1	1
3. Morpeth	8	154	20	...	...	9	1	...	1	...
4. Wallsend	9	134	41	4	11	8	...	...	4	11
<i>Urban Districts.</i>										
5. Alnwick	16	120	51	1	...	5	1	1	2	1
6. Amble	7	132	56	1	2	8	...	...	1	2
7. Ashington	9	178	316	19	6	42	2	1	21	7
8. Bedlington	40	430	399	27	19	46	4	3	31	22
9. Gosforth	4	140	47	1	1	3	...	...	1	1
10. Hexham	26	445	82	2	2	16	...	...	2	2
11. Longbenton	18	410	313	28	10	46	...	...	28	10
12. Newbiggin-by-Sea	16	129	184	13	8	37	1	...	14	8
13. Newburn	11	243	518	35	24	55	2	1	37	25
14. Prudhoe	26	80	45	3	1	2	...	...	3	1
15. Seaton Valley	34	315	562	55	32	135	2	1	57	33
16. Whitley and Monkseaton	8	100	975	48	13	158	9	...	57	13
<i>Rural Districts.</i>										
17. Alnwick	118	1,100	297	9	8	66	1	2	10	10
18. Belford	24	325	86	1	2	12	...	...	1	2
19. Bellingham	35	156	45	...	...	19	1	1	1	1
20. Castle Ward	110	2,300	566	28	20	98	3	3	31	23
21. Glendale	25	190	113	2	...	14	...	...	2	...
22. Haltwhistle	230	1,620	77	2	1	3	...	...	2	1
23. Hexham	643	8,450	1,749	68	46	206	10	4	78	50
24. Morpeth	98	1,420	678	37	32	133	7	9	44	41
25. Northam and Island.	30	233	87	...	...	7	...	...	...	...
26. Rothbury	10	145	64	1	...	14	...	...	1	...
Total	1,599	19,355	7,499	388	241	1,157	44	26	432	267
YEAR 1938	...	...	...	...	...	1,550	52	38	...	...

Milk (Special Designations) Order, 1936.

The number of licences issued during the year under the provisions of the above Order were as follows :—

"Tuberculin Tested" (Certified)	15
"Tuberculin Tested" (Bulk)	9
"Accredited"	199

Of these eleven hold a certificate of attestation from the Ministry of Agriculture.

ISOLATION HOSPITALS, INSTITUTION HOSPITALS AND
VOLUNTARY HOSPITALS.

These remained as shown in the Annual Report for 1938. There was no important change.

PUBLIC ASSISTANCE.

A full review of the Domiciliary Medical Services was given in the Annual Report for 1937, when reference was made to the introduction of a panel system at Gosforth and Haydon. This system was sufficiently successful to warrant its extension to Blyth, Bedlington, Corbridge, Ponteland and Whitley and Monkseaton during the course of 1939.

PUBLIC VACCINATION.

The latest completed figures available are those for the year ended December 31st, 1938. These indicate that of 5,609 births registered, 1,537 or 27 per cent. were successfully vaccinated.

There are in some areas of the County defaulting parents who have not obtained exemption on conscientious grounds, etc. It is the duty of Vaccination Officers to prosecute such persons, but proceedings have not been taken in any of the cases concerned.

VENEREAL DISEASE REGULATIONS.

The treatment centre provided by the County Council for County patients, under the scheme undertaken by the County Council in conjunction with the neighbouring Authorities of the County Borough Councils of Gateshead and Newcastle upon Tyne, is at the clinic of the Joint Committee of the three Councils concerned, which is situate at the Newcastle General Hospital.

In the following table particulars are given relating to treatment during the year 1939 and (for comparison) during 1938.

	1938.			1939.		
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
1. Under treatment or observation at beginning of year	284	184	468	328	242	570
2. Returned for treatment after having ceased to attend during any previous year... ..	...	...	...	7	2	9
3. Dealt with for the first time	385	249	634	409	245	654
4. Number of cases dealt with for the first time known to have received treatment at other Centres	40	14	54	48	11	59
5. Discharged after completion of treatment	264	145	409	351	197	548
6. Ceased to attend before completion of treatment	50	22	72	62	24	86
7. Number of cases which ceased to attend after completion of treatment but before final tests of cure	10	4	14	20	2	22
8. Transferred to other Centres, etc.	57	34	91	72	44	116
9. Under treatment or observation at end of year	328	242	570	...	...	...
10. Total number of attendances	13,938	6,906	20,844	14,027	7,168	21,195
11A. Total number of in-patients admitted for treatment during year	27	36	63	17	42	59
11B. Aggregate number of in-patient days of treatment given	924	1,014	1,938	689	1,165	1,854
12. Number of cases of congenital syphilis (included in Item 3 above)	8	14	22	6	7	13

AIR RAID PRECAUTIONS.

On January 4th, 1939, the personnel requirements for Air Raid Precautions were laid down by the Home Office, and the Casualty Services establishments are shewn below :—

- A. Area comprising the Boroughs of Blyth and Wallsend, together with the Urban Districts of Ashington, Bedlingtonshire, Gosforth, Longbenton, Newbiggin-by-the-Sea, Newburn, Prudhoe, Seaton Valley and Whitley and Monkseaton.

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
First Aid Parties (90)	900	—	900
First Aid Posts	160	800	960
Drivers and attendants for 135 ambulances	—	810	810
Drivers of 90 cars for sitting casualties	—	270	270
Totals *	1,060	1,880	2,940

- B. Area comprising the remainder of the County, including the Boroughs of Berwick-upon-Tweed and Morpeth, the Urban Districts of Alnwick, Amble, and Hexham, and all Rural Districts.

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
First Aid Parties (35)	175	—	175
First Aid Posts	56	276	332
Drivers and attendants for 52 ambulances	—	153	153
Drivers of 35 cars for sitting casualties	—	42	42
Totals	231	471	702

The County Air Raids Precautions Committee arranged that the selection and enrolment of volunteers for the Civil Defence Services should be undertaken by the local Borough and District Councils, who were each informed of their establishment. The Home Office later laid down in A.R.P. Department Circular No. 14/1939, the allotment of whole-time personnel in war on the following basis :—

<i>Area A.</i>	First Aid Parties	...	...	...	100%	of establishment.
	Ambulance drivers and attendants	...	...	...	75%	do.
	Drivers of cars for sitting casualties	...	...	...	75%	do.
<i>Area B.</i>	First Aid Parties	...	...	...	50%	do.
	Ambulance drivers and attendants	...	...	...	50%	do.
	Drivers of cars for sitting casualties	...	...	...	50%	do.

In this latter area the authority to employ paid personnel was extended only to the Boroughs of Berwick and Morpeth. The proportion of paid personnel authorised for First Aid Posts was not then fixed for either area.

The transfer to the Ministry of Health of the responsibility of approving the sections of Air Raid Precautions Schemes which relate to First Aid Posts, First Aid Points, and Ambulance Services took place in January, and Circular 1764 placed upon the scheme-making authority the responsibility for organising an Emergency Ambulance Service. As a result, a County Ambulance Officer was appointed to organise and control this Service under the direction of the County Medical Officer.

First Aid Posts.

The scheme for the establishment of First Aid Posts, which had been approved by the Home Office and put into effect in the September crisis in 1938, comprised 38 Fixed Aid Posts. The scheme was reviewed in conjunction with the Regional Hospital Officer of the Ministry of Health, and in certain instances arrangements were made to transfer Posts to existing medical premises. The Minister's approval was obtained to the 38 Fixed Aid Posts, and 7 Mobile Aid Posts were added to the scheme. Medical Officers were appointed to these Posts to take charge of the collective training of the personnel, after consultation with the Local Medical War Committees.

First Aid Parties.

The number of First Aid Parties for the County was established at 125, of which 90 were allocated to the more congested areas, and 35 to the rural areas. These parties were based on depots which were set up in most cases in or near the First Aid Posts.

First Aid Points.

The Home Office recommended the establishment of First Aid Points in rural areas in 1938, and the scheme which was then prepared was approved by the Minister of Health. The First Aid Point consists of a box of first aid equipment placed in the charge of a trained person. The scheme comprised 41 First Aid Points.

Medical Stores.

By arrangement with the Committee of Visitors of St. George's Hospital, Morpeth, the medical stores for air raid precautions purposes were transferred to that Hospital under the control of the Clerk-Steward.

Ambulance Services.

A total of 187 ambulances was authorised in the war establishment for the County area. In order to obtain this number, arrangements were made with the Traffic Commissioners to earmark existing vehicles for use as ambulances in an emergency.

In October, 1939, the Ministry of Health issued Circular 1893, authorising the purchase of second-hand cars for conversion into ambulances at a total cost, including adaptation, of £50. The purchase of 61 vehicles was authorised, and later authority was received for 4 additional ambulances in Wallsend.

Cars for First Aid Parties and Sitting Casualties.

At the outbreak of war the cars required for First Aid Parties and for the transport of sitting casualties were all obtained on a voluntary basis. Difficulties arose in certain districts, and later the authority contained in the Ministry of Home Security Circular No. 288/1939 was utilised to purchase cars for 50 per cent. of the full-time First Aid Parties. A total of 22 cars were obtained for this purpose.

Similarly, the Ministry of Health authorised the purchase of cars for sitting casualties. A total of 12 cars was authorised, and at the end of the year 6 cars had been obtained.

Emergency Hospital Scheme.

The Emergency Hospital Organisation set up by the Ministry of Health divided all the general hospitals and institutions in the country into three classes, as follows :—

Class 1.A.—In this class are included all the larger hospitals which have or can, without very great difficulty, be given facilities for dealing with casualties, both medical and surgical. The class includes the more modern public assistance institutions and special hospitals which have facilities for general work.

Class 1.B.—Small hospitals and certain special hospitals which would be used principally for giving treatment to the less seriously injured. All such hospitals would have some surgical-operative facilities.

Class 2.—The hospitals of this class are those which are not suitable for the initial reception of casualties, and those without any surgical facilities.

The hospitals in the county area were reviewed by the Ministry of Health, who classified them as shewn in the following table, which also gives the available beds :—

Name of Hospital.	Normal Capacity.	Additional Beds.	Maximum Capacity.
<i>Class 1.A.</i> —			
Gosforth, Sanderson Orthopaedic Hospital	134	115	249
Hexham Public Assistance Institution	129	96	225
<i>Class 1.B.</i> —			
Alnwick Infirmary	24	—	24
Ashington Hospital	44	—	44
Berwick Dispensary and Infirmary	36	10	46

Name of Hospital.	Normal Capacity.	Additional Beds.	Maximum Capacity.
Blyth, Knight Memorial Hospital	36	—	36
Corbridge Cottage Hospital ...	18	—	18
Morpeth Cottage Hospital ...	13	—	13
Wallsend Infirmary ...	20	—	20
<i>Class 2.—</i>			
Ponteland Public Assistance Institution	81	50	131
Stannington Children's Sanatorium	312	218	530
Alnwick Public Assistance Institution	109	59	168
Berwick Public Assistance Institution	87	40	127
Haltwhistle War Memorial Hospital	18	—	18
Wylam Convalescent Home ...	100	15	115
Rothbury Cottage Hospital ...	17	—	17
Rothbury (Whitton Tower) Convalescent Home	30	—	30
Barrasford Sanatorium ...	95	37	132
Wooley Sanatorium ...	184	40	224

In addition, the Gateshead Mental Hospital, Stannington, was included in Class 1.A and St. George's Mental Hospital, Morpeth, in Class 2. At a later stage Stannington Sanatorium was re-graded as Class 1.A.

On September 1st, 1939, instructions were received from the Ministry of Health to "clear hospitals." These instructions were conveyed to all hospitals in the Emergency Scheme, and the pre-arranged plans for the discharge of suitable patients and the transfer of others from the urban areas to hospitals in the rural districts were put into operation.

CIVIL NURSING RESERVE.

The Minister of Health announced in February, 1939, his intention of enrolling a Civil Nursing Reserve for war service in hospitals, first aid posts and reception areas, and set up the Central Emergency Committee for the Nursing Profession.

Scheme-making authorities were requested to arrange for the formation of Local Emergency Committees to undertake the work of organising the Reserve, and were also asked to meet the expenditure of such committees, subject to re-imbursement in full.

The Northumberland Emergency Committee for the Nursing Profession was set up, and consisted of representatives of the medical profession in the area, the British Red Cross Society, the Order of St. John, the Women's Voluntary Services, Matrons of Hospitals in the County, and representatives of the Health Department, under the Chairmanship of the County Medical Officer.

The duties of the local organisations were to arrange for the enrolment of trained and assistant nurses with the Civil Nursing Reserve, and to arrange the recruitment and training of a new class of nursing personnel, the Nursing Auxiliaries. A course of training in first aid and home nursing, together

with a period of 50 hours' training in hospital was arranged for each nursing auxiliary. All nursing auxiliaries were interviewed before acceptance by representatives of the Committee.

At the outbreak of war the members of the Reserve who were enrolled in the County were called up for duty at hospitals and aid posts as required.

At the end of 1939 the registered members of the Reserve numbered 386, made up as follows :—

Trained Nurses ...	122
Assistant Nurses ...	56
Nursing Auxiliaries ...	208

BLIND PERSONS ACT COMMITTEE.

Administration.

The Blind Persons Acts continue to be directly administered by the County Council.

There were 510 blind persons on the register on January 1st, 1939, as compared with 482 the preceding January. During the year 72 persons were registered, 10 de-certified, 44 deaths occurred, whilst 15 blind persons left the County. There were 513 names on the register on December 31st, an increase of 3 during the year.

Applicants for registration are examined by the Council's Ophthalmic Surgeon, who is in charge of beds at the Newcastle upon Tyne Eye Hospital (this service being in accordance with the recommendation contained in Circular 1353 of the Ministry of Health). A fee of 25/- is paid for each examination and certification, Form B.D.8. being used. The arrangements in force during previous years for the examination of senile and bedfast patients continued to operate, the patients either being brought to the Ophthalmic Surgeon's consulting rooms in Newcastle by car by a Home Visitor, or visited by him in their own homes.

During the year 126 persons were examined, 66 being certified to be blind and 60 not blind. Of those certified to be blind, the names of 62 were added to the register, 4 having been registered prior to examination. Two of those certified to be not blind had hitherto been regarded as blind, and their names were removed from the register.

Domiciliary Assistance.

The Blind Persons Act Committee continues to be responsible for the provision of domiciliary assistance to unemployable and other necessitous blind persons ordinarily resident in the administrative County, and their sighted dependants. The scales which were approved by the Council in 1938 were in operation during 1939, but to meet the higher cost of living, an increase of 8 per cent. on the scale allowance was approved as from November 12th.

In December 219 blind persons were in receipt of domiciliary assistance as compared with 218 at the beginning of the year. The total sum distributed during the year amounted to £5,825 16s. 3d.

Home Visitors.

Three Home Visitors were employed during the early part of the year, but to meet the increased amount of work the Council appointed a fourth

Home Visitor, Miss M. I. Rumney, who took up duty in June. Miss D. L. Shannon resigned her appointment on marriage in October, being replaced by Miss H. G. Loten. Two of the Home Visitors had hitherto been provided with cars, and the purchase of a third car was approved during the year.

All blind persons are visited regularly by the Home Visitors, who supervise their welfare and render assistance in a variety of ways. Those in receipt of domiciliary assistance require to be visited more frequently as it is necessary to make a periodical review of their circumstances.

Patients on the Prevention of Blindness Register are also kept under supervision by the Home Visitors to ensure that the necessary treatment is being carried out.

During the year the following visits were paid by the Home Visitors :—

For welfare purposes	...	...	...	...	6,036
To supervise home workers	...	...	...	...	112
To give lessons	...	...	...	...	110
To investigate new cases	...	...	...	...	316
<i>Re</i> Prevention of Blindness	...	...	...	...	258
<i>Re</i> provision of spectacles	...	...	...	...	734
To convey blind persons to the Eye Hospital, etc.	...	...	...	...	41
<i>Re</i> collection and delivery of wireless sets, etc.	...	...	...	...	86
					<hr/> 7,693 <hr/>

Prevention of Blindness.

Ten patients were admitted to the Newcastle upon Tyne Eye Hospital or the Royal Victoria Infirmary, Newcastle, for operative treatment under the Council's scheme for the prevention of blindness. Eight of these patients were registered blind persons, whilst the names of two were on the Prevention of Blindness Register. Only one person remained blind after treatment.

Under the scheme travelling vouchers are issued to necessitous patients attending the Out-patients' Department of the Eye Hospital or the Royal Victoria Infirmary, and a fee of 2/- is paid by the Council to the Hospital Authorities in respect of each such attendance. On the recommendation of the Ophthalmic Surgeon spectacles are provided gratuitously, whilst diabetic patients receive insulin at cost price or free of charge.

Notification of Persons Threatened with Blindness.

The Council pays a fee of 2/6 to medical practitioners for the notification of persons threatened with blindness. During the year 11 such notifications were received. Nine of these patients were subsequently examined by the Ophthalmic Surgeon, three being certified to be blind, whilst four were kept under observation under the Prevention of Blindness Scheme.

Provision of Spectacles for Adults.

The agreement entered into between the Council and two ophthalmic surgeons in Newcastle to hold Refraction Clinics for Adults in various parts of the County, as and when required, continued to operate. The scheme was inaugurated to prevent the purchase of spectacles from multiple stores and peddling opticians without previous clinical examination of the patient, and for the benefit of persons in necessitous circumstances who are not entitled to ophthalmic benefit under the National Health Insurance Acts, and are unable to avail themselves of the facilities offered by the National Ophthalmic Treatment Board.

Enquiries are made into the financial circumstances of the household, and if the application is justified an appointment is made for the patient to attend a Refraction Clinic; applicants living in the area adjacent to Newcastle are asked to attend the Eye Hospital, a fee of 2/- being paid by the Council to the Hospital Authorities in respect of each attendance.

The Council's agreement with the Northumberland and North Durham Local Association of Ophthalmic Opticians to supply spectacles in nickel frames at 5/-, 6/- or 7/- according to the lenses prescribed, operated during the year. Applicants in receipt of Public Assistance allowances, Widows' Pensions, Army Allowances, etc., were provided with spectacles free of charge by the Council.

It is difficult to place an accurate estimate on the benefits conferred by this portion of the Council's services. As the facilities become more widely known, it is obvious that they are much appreciated both by patients and doctors. Cases of incipient disease are discovered and followed up under the Prevention of Blindness Scheme. A good deal of education of the general public still requires to be undertaken; the fact that it is possible for an individual, who may be suffering from cataract or glaucoma, to go into a multiple store, pick up a pair of spectacles and decide upon their suitability for himself simply because he is able to read better with them, cannot be viewed with indifference.

Home and Casual Workers.

In January, 1939, there were 3 Approved Home Workers in the County. During the year one of these, who had been previously employed as a piano-tuner, obtained work as a Braille Copyist for the National Library for the Blind at Manchester. In December there were two Approved Home Workers—a piano-tuner who received, in addition to his earnings, a subsidy of 10/- per week, and a machine-knitter paid on a piece-work basis, who received a subsidy equal to her earnings.

In December there were 16 Casual Workers, four of whom were paid wages at piece-work rates; the remaining twelve were in receipt of domiciliary assistance.

Sales of Goods.

During the year sales of goods made by Home Workers were held at Gosforth and Whitley Bay, whilst a stall was arranged at the Annual Show of the Glendale Agricultural Society at Wooler. In collaboration with the Newcastle and Gateshead Home Teaching Society, the National Institute for the Blind, and the Newcastle Workshops, a joint stand was set up at the Annual Show of the County Agricultural Society at Newcastle, which lasted for three days.

Throughout the year many private orders were sent to the Department, and a number of socks and stockings were made for Public Assistance Institutions in the County, by contract with the Public Assistance Committee.

Workshops for the Adult Blind.

In January 19 men and 6 women from the County were employed in the Workshops at Newcastle. Two persons were admitted during the year, and two women terminated their employment on marriage.

Education.

Training was provided for 12 adults (6 women and 6 men), 9 receiving training at the Royal Victoria School for the Blind, Newcastle upon Tyne. Two men continued their studies at the Royal Normal College, London, and one man completed a matriculation course at the Worcester College for the Blind. During the year one woman completed her training and commenced employment at the Newcastle Workshops. Two women and one man were withdrawn from the School following a probationary period, during which it was realised that they were not likely to become efficient. In December two men and three women were under training at the School.

Every applicant for training is examined by a Medical Officer on the staff of the Council before the application is considered, special attention being given to the candidate's physique and intellectual capacity. Any necessary dental treatment is provided at the Council's Dental Clinics.

Nine blind children and two partially-sighted children received elementary education at the Royal Victoria School for the Blind, the Wallsend Education Committee being responsible for one blind child. On the outbreak of War, the elementary section of the School was evacuated to Westmorland. Five children left the School during the year, and in December four blind children and two partially-sighted children were in attendance.

Wireless for the Blind.

Under Section 1 of the Wireless Telegraphy (Blind Persons Facilities) Act, 1926, 61 certificates enabling blind persons to obtain free wireless licences were issued.

The Department continues to distribute sets on behalf of the British "Wireless for the Blind" Fund, and during the year 54 loud-speaker sets were allocated.

Some difficulty was experienced in arranging for the overhaul of the sets and it became necessary to have them kept in repair by local dealers.

Homes for the Blind.

The Council is responsible for the maintenance of four blind persons, who are accommodated permanently in Homes for the Blind at Glasgow, Halifax, Leatherhead and Harrogate.

Social Welfare.

Six Voluntary Societies functioned in the County during 1939 at Ashington, Bedlington, Blyth, Seaton Valley, Morpeth and Wallsend. These Societies organise concerts and musical evenings in the winter, and pic-nics and other outings during the summer; owing to the war, however, they have been compelled to restrict their activities. During the summer Mr. and Mrs. J. T. Thompson, of Hartford Hall, again entertained the blind persons connected with the various Voluntary Societies (and their guides) in the grounds of their home. This outing is very much appreciated by all the participants.

Cheques amounting to £423 19s. 10d. were received from the National Institute for the Blind, being the sum allocated to the Northumberland Blind Persons Trust Fund from collections made in the area. In addition, the Council makes a grant to bring the total receipts up to an amount which is equivalent to £1 per blind person on the register at the end of the financial year.

Library for the Blind.

Books continue to be supplied by the National Library for the Blind at Manchester. During the year 51 readers borrowed 1,294 volumes; compared with 1938 the number of books borrowed has increased by 244, and the number of readers by four. In addition, 16 readers obtained books through the Tynemouth Library.

Dental Treatment.

The Dental Surgeons continue to give treatment to blind persons at the Council's Clinics and in the Dental Vans, the Blind Persons Act Committee being responsible for the cost. During the year 16 blind persons received such treatment. Artificial dentures are supplied when necessary at special rates or free of charge.

MATERNITY AND CHILD WELFARE AND MIDWIVES.

MIDWIVES ACTS, 1902-1936.

The scheme formulated by the County Council in accordance with the provisions of the Midwives Act, 1936, continued to function satisfactorily during the year 1939. The major portion of the domiciliary service of midwives in Northumberland is provided by District Nursing Associations affiliated to the Northumberland County Nursing Association.

District nurse-midwives, or midwives employed by District Nursing Associations, undertake domiciliary midwifery or maternity nursing in all areas of the County except the Borough of Wallsend, the Urban District of Gosforth, and the parishes of Kirkhaugh and Knaresdale. In the latter areas arrangements have been made for the service to be provided by the Nursing Association in Alston, and County midwives are employed in Wallsend and Gosforth.

Under the terms of the agreement between the Northumberland County Nursing Association and the County Council the number of certified midwives to be employed by the County Nursing Association is 127, plus such number as may be necessary to provide an adequate service in each of three Registered Districts. A service of Relief Nurses is also maintained to provide for holidays and emergencies such as illness of a midwife or suspension for any reason. At the end of 1939 the number of nurse-midwives on the relief staff was 59. The regular relief staff numbers approximately 40, the remainder being emergency nurse-midwives.

Provisions as to Fees.

No change was made in the arrangements concerning fees during the year.

Arrangements for Areas not included in the Agreement with the County Nursing Association.

At the beginning of the year six midwives were employed directly by the County Council—four in the Borough of Wallsend, and two in the Urban District of Gosforth. These midwives attended 340 cases as midwife, and 139 cases as maternity nurse, during the year.

No change was made in the arrangements concerning fees during the year.

Midwives Employed in Institutions.

At the end of 1939 a total of thirteen midwives was employed on the staff of the Maternity Hospitals at Willington Quay and Corbridge and the War Memorial Hospital, Haltwhistle. In addition there were five midwives employed in Public Assistance Institutions, and four at the Maternity Hospital, The Green, Wallsend.

Midwives Engaged in Independent Practice.

At the end of 1939 there were 14 midwives engaged in independent practice in the County including two who are employed in a registered nursing home.

During the year 33 midwives left the County and 5 surrendered their Certificates and claimed compensation.

Inspection of Midwives.

The total number of visits of Inspection made by Inspectors of Midwives and Assistants was 1,344.

*Cases attended by Midwives in the Homes.**A.—Employed by Northumberland County Nursing Association.*

Total number of births attended.	Midwife.	Maternity Nurse.
4,838	1,765	3,073

B.—Employed by County Council.

Total number of births attended.	Midwife.	Maternity Nurse.
479	340	139

C.—Others—i.e., midwives practising independently and those employed in registered maternity homes.

Total number of births attended.	Midwife.	Maternity Nurse.
442	336	106

Requests by Midwives for Medical Aid.

A midwife is required by the Rules of the Central Midwives Board to send for medical aid in all cases of illness of the patient or child, or of any abnormality occurring during pregnancy, labour or lying-in. A copy of the medical aid form must be sent to the Local Supervising Authority.

In the 2,441 cases attended by midwives there were 490 notices that such attendance by a doctor was necessary.

Claims for Fees.

During the year, the total fees paid to doctors amounted to £575 9s. 7d., of which £157 8s. 2d. was afterwards recovered from the patients.

Training of Midwives.

In order to maintain the supply of midwives in the County, a training scheme is administered by the Northumberland County Nursing Association. Candidates receive free training and are provided with uniform and a cash allowance. They are required to enter into an agreement to serve the Association for a definite period on completion of their training.

The Council undertake responsibility for one-half of the expenditure incurred in training students whose course of training extends over one year, and two-thirds of the expenditure involved in training students whose course of training extends over two years provided that the number trained does not exceed twelve state registered nurses, and twelve untrained students in any one year.

The County Nursing Association is approved as a training authority in respect of the second period of training for the Certificate of the Central Midwives Board. Hospital training is undertaken at the Willington Quay Maternity Hospital.

Two of the Council's midwives at Wallsend have been approved as instructors in the conduct of district cases, and their services have been placed at the disposal of the Association for this purpose. Pupils attend for instruction in the conduct of a Child Welfare Centre at the Centre at Forest Hall, and the Maternity and Child Welfare Officer has been approved as Lecturer on Social Legislation, Voluntary Agencies in Maternity and Child Welfare, and National Health Insurance.

County of Northumberland (Midwifery—Prohibition of Unqualified Persons) Order, 1939.

The above Order, to take effect from 1st August, 1939, was issued by the Minister of Health, he having been satisfied that the services of domiciliary midwives established under the provisions of the Midwives Act, 1936, was adequate for the needs of the area. Under its provisions, unqualified persons are prohibited from acting as maternity nurses for gain in the whole area of the County. Unqualified women are those who do not possess any of the following qualifications:—

- Certificate of the Central Midwives Board;
- State Registration Certificate (General);
- Certificate of Training in Obstetric Nursing in a hospital or other institution to which the Minister of Health has by order applied proviso (c) of Section 6 (1) of the Midwives Act, 1936.

The provisions of the Order do not apply to medical students. No male person except a medical student may act as a maternity nurse. In addition, the provisions of the Order do not apply to any person who acts as maternity nurse in any registered nursing home, or any nursing home which is exempt from registration.

General Supervision of Midwives.

The supervision of midwives is carried out by the County Medical Officer and his assistants. The Superintendent of Health Visitors and the Superintendent of the County Nursing Association are both Inspectors of Midwives. The Maternity and Child Welfare Officer acts as Chief Supervisor of Midwives and reports directly to the County Medical Officer.

PUBLIC HEALTH (NOTIFICATION OF PUERPERAL FEVER AND
PUERPERAL PYREXIA) REGULATIONS, 1926.

Public Health Act, 1936.

Under these Regulations the County Council are empowered to make provision for the special treatment of any lying-in woman living within the Maternity and Child Welfare area of the County who may be suffering from any Puerperal infection.

Puerperal Pyrexia is defined as any febrile condition occurring within 21 days after childbirth or miscarriage, in which a temperature of 100.4°F. or more has been sustained during a period of 24 hours, or has recurred during that period.

The medical practitioner is required to notify the District Medical Officer of Health when he first becomes aware that a woman upon whom he is in attendance is suffering from puerperal pyrexia. The District Medical Officer forwards a copy of all such notifications to the County Medical Officer.

The midwife is also obliged under the Rules of the Central Midwives Board to notify the Local Supervising Authority (this being the County Council) of any case in which there is a rise in temperature above 99.4°F. on three successive days or where a temperature of 100.4°F. has been sustained during a period of 24 hours or has recurred within that period.

The Schedule requires that medical practitioners should be able to obtain any or all of the following :—

- (i) a second opinion on the case ;
- (ii) a bacteriological examination of (a) lochia ; (b) blood ;
- (iii) admission of patient to hospital ;
- (iv) provision of a trained nurse.

The services of the Consultants were utilised in 21 cases. The following statement indicates the nature of the cases encountered during the year.

Puerperal Pyrexia.

Cases delivered by Midwives as such.	Total cases notified.	Treatment at		Deaths.
		Home.	Hospital.	
2,441	31	18	13	Nil.

Provision for Complicated Cases of Midwifery.

In complicated or difficult cases of midwifery the medical attendant may call for the assistance of one of the Consultant Obstetricians who, if necessary, may deliver the woman in her own home. If institutional treatment is imperative the patient can be removed to the Princess Mary Maternity Hospital by ambulance. In necessitous cases this is provided free.

MATERNAL MORTALITY.—MEDICAL PRACTITIONERS CALLED IN BY
MIDWIVES.

Ministry of Health Circular 1705.

Owing to the advent of hostilities it was not found to be possible to proceed further with the arrangements.

Maternal Mortality.

The following statement shows the Maternal Mortality rates classified under the headings of Puerperal Sepsis, and other causes, and, for the purpose of comparison, figures are also included below for the whole of England and Wales for the year 1938.

Year.	Puerperal Sepsis.		Other Puerperal Causes.		Total Deaths.	Rate per 1,000 Births.	Total Births (live and still).
	Deaths.	Rate per 1,000 Births.	Deaths.	Rate per 1,000 Births.			
1930	17	2.41	22	3.13	39	5.55	7,025
1931	11	1.62	18	2.64	29	4.26	6,801
1932	22	3.22	24	3.51	46	6.73	6,838
1933	20	3.04	22	3.34	42	6.38	6,578
1934	15	2.25	21	3.16	36	5.42	6,642
1935	9	1.36	14	2.11	23	3.47	6,612
1936	10	1.54	16	2.47	26	4.01	6,477
1937	6	0.93	20	3.11	26	4.04	6,430
1938	4	0.63	14	2.20	18	2.83	6,350
1939	3	0.47	17	2.68	20	3.15	6,356

England and Wales :—

Puerperal Sepsis...	...	0.74
Other Puerperal Causes	...	2.08
		<u>2.82</u>

PUBLIC HEALTH (OPHTHALMIA NEONATORUM) REGULATIONS, 1926-1937.

The following statement indicates the number of cases notified during the year and the results of treatment :—

No. of Births attended by Midwives as such.	Total cases Notified.	Total admitted to Hospital.	Nursed at Home.	Total Recovered.
2,441	7	3	4	7

PUBLIC HEALTH ACT, 1936.

MATERNITY AND CHILD WELFARE.

Notification of Births.

During the year 3,168 live births (3,039 legitimate and 129 illegitimate) and 123 still-births (116 legitimate and 7 illegitimate) occurred in the

administrative county. Under the above Act the obligation to notify a birth is placed upon

- (a) The father of the child if he is actually residing in the house where the birth occurs ;
- (b) any person in attendance upon the mother, up to six hours after the birth.

The following shows the number notified and registered :—

	<i>Notified.</i>				<i>Registered.</i>			
Live	2,421	...	...	...	3,168
Still	52	...	...	...	123
				<u>2,473</u>				<u>3,291</u>

Failure to notify is chiefly due to ignorance of the Law or to the belief that the birth would be notified by some other person.

Infantile Mortality.

The rates of Infant Mortality per 1,000 live births for the whole of the administrative county, for the county area for Maternity and Child Welfare purposes, and for England and Wales, are shewn below :—

Whole County ... ..	...	...	...	...	55.49
Maternity and Child Welfare County ... ..	...	...	...	...	55.24
England and Wales ... ..	...	...	...	...	50

Death Rate for Illegitimate Children.

Of the 129 live illegitimate children born, 15 died before they reached the age of one year. The following table gives the comparison with children born in wedlock :—

Number of Legitimate live births in Council's area ... ..	...	...	...	3,039
Do. Illegitimate live births do. do. ... ..	...	...	...	129
Total live births ... ..	...	...	...	<u>3,168</u>

Number of deaths of legitimate infants	160	=52.64 deaths per 1,000 legitimate births.
Do. illegitimate infants	15	=116.28 deaths per 1,000 illegitimate births.
Total deaths	<u>175</u>	<u>=55.24 deaths per 1,000 births.</u>

Neo-natal Deaths.

Of the 175 deaths of infants under the age of one year 73 died before they reached the age of one week, and a further 26 before they reached the age of four weeks. An analysis shows the principal causes of these deaths to be :—

Prematurity ... ..	...	...	...	...	30
Congenital defects and injuries at birth ... ..	...	...	...	...	15
Congenital debility ... ..	...	...	...	...	6
Bronchitis and pneumonia ... ..	...	...	...	...	6

Infantile Deaths.

Between the ages of four weeks and one year analysis shows the principal causes of death to be :—

Prematurity	6
Congenital defects and injuries at birth	8
Congenital debility	3
Bronchitis and pneumonia	30

HEALTH VISITING SERVICE.

The following is a summary of the number of visits made by the staff for Maternity and Child Welfare ; other work is recorded elsewhere under the appropriate headings.

Live Births registered in Administrative County.	First Visits to Infants.	Re-visits to Infants under the age of 1 year.	Visits to Children, age 1—5 yrs.	Ante-Natal Visits.	
				First Visits.	Re-Visits.
3,168	3,224	20,161	41,147	619	611

Ante-natal Care of Mothers.

At the end of 1939, there were 12 special ante-natal clinics in the county. In addition, ante-natal consultations were being carried out at a time set aside during the ordinary session at 6 other centres.

The total number of expectant mothers attending the clinics was 802 representing 21 per cent. of the births in the administrative county for Maternity and Child Welfare purposes.

In remote areas, where there is no convenient clinic, a rural ante-natal scheme has been established. During the year 28 mothers received ante-natal care under this scheme.

In rural areas the midwife usually acts as maternity nurse only. The doctor is booked for the case and is, therefore, responsible for the ante-natal examination of the mother in her home.

Ante-natal Consultant Service.

Women who have been examined either at the Council's Clinics or by their own medical attendants and who are considered to require Specialist examination may be sent by appointment to Newcastle to be seen by one of a Panel of Obstetric Consultants appointed by the County Council. Consultation fees and travelling expenses of the patient and a woman friend are paid by the Council. In the event of the woman being unable to travel, the Consultant visits the patient in her own home.

During the year 20 women were sent for Consultation under this scheme.

Maternity Hospitals.

The County Council does not maintain any maternity hospitals directly. Difficult and complicated cases or those in which the medical practitioner cannot safely deliver the woman in her own home are admitted to the Preston Hospital, North Shields, and the Princess Mary Maternity Hospital. In the former, cases are paid for at the Public Assistance Committee's rate ; in the latter, the County Council by arrangement pay the whole of the fee in necessitous cases, or the balance of any sum which the patient cannot afford. During the year 307 such cases were admitted to the Princess Mary Maternity Hospital at a cost to the County Council of £476 7s. 11d.

In the following hospitals beds are available and medical practitioners may send their patients there :—

Princess Mary Maternity Hospital, Newcastle.

The War Memorial Hospital, Haltwhistle.

The Tynedale Maternity Hospital, Corbridge.

The Willington Quay Maternity Hospital.

(This Hospital was evacuated at the end of 1939 to Stagshaw House, Corbridge.)

The Wallsend Maternity Hospital, The Green, Wallsend.

Dilston Hall Emergency Maternity Home, Corbridge.

Substantial grants are made by the County Council to the Willington Quay and Corbridge Maternity Hospitals.

Proposed Maternity Hospital at Berwick.

Owing to the outbreak of war, it has not been found possible to proceed with the proposals for the erection of a Maternity Hospital at Berwick.

Haltwhistle and District War Memorial Hospital New Maternity Wing.

The erection of the new maternity block at the Haltwhistle and District War Memorial Hospital was commenced at the end of 1939.

The block has accommodation for six patients—two in private wards and four in a large public ward—and staff.

The total cost is estimated to be approximately £8,000, to be allocated as follows :—

Haltwhistle Committee	...	...	...£1,200 or 15%.
County Council	...	...	...£2,200 or 27½%.
Commissioner for Special Areas	...	...	...£4,600 or 57½%.

Service of Home Helps.

The scheme for the provision of home helps, which was established in selected areas in the county in 1938, continued to operate successfully during the year. It is expected that as the benefits of the scheme become more widely known and appreciated, fuller advantage will be taken of the facilities provided.

Twenty mothers were provided with home helps during the year.

Child Welfare Centres.

At the end of the year there were 40 Child Welfare Centres under the control of and financed by the County Council. Four of these were staffed by the Council's Assistant Medical Officers and the remainder by local practitioners acting as part-time officers. One new centre was opened.

In addition, medical officers were appointed to two existing milk sales centres.

These centres are held in premises as shewn below. They are rented for the specific purpose but many of them are very unsuitable.

Church and Chapel rooms	...	...	...	14
Institutes or Village Halls	...	...	...	16
Offices rented from Local Authorities	...	...	...	2
Council house	...	...	...	1
Rooms attached to Hospital	...	...	...	2
Nurses' Home...	...	...	...	1
Specially erected Centres	...	...	...	4

*Supply of Milk to Expectant and Nursing Mothers and Children
under the age of five years.*

The arrangements already in force for the provision of dried milk and extra nourishment to expectant and nursing mothers and children under the age of 5 years, continued to operate successfully during the year 1939.

Dental Treatment.

There was no change during the year in the scheme for the provision of dental treatment for expectant and nursing mothers and children under the age of five years.

The following indicates the work done :—

		Attendances made.	Extractions.	Scalings.	Fillings.	Other Operations.	Repairs and adjust- ments.	Impressions.	Try-ins.	Bites.	Local anaesthetics.	General anaesthetics.	Dentures fitted.
Mothers	...	1,492	2,881	47	89	227	34	455	222	166	2,841	1	186
Children	...	121	348	1	2	34	—	—	—	—	144	28	—

The sum of £178 9s. 9d. was collected in fees.

Ophthalmic Treatment.

The scheme for the provision of ophthalmic treatment for expectant and nursing mothers and children under the age of five years was continued.

Prevention of Deafness.

Under this scheme 49 children received treatment during the year.

Diphtheria Immunisation of Pre-school Children.

Facilities for immunisation of pre-school children against diphtheria were provided for the first time at Child Welfare Centres in the County in 1936. Leaflets pointing out the value of preventive measures against diphtheria were distributed at the Centres. The response was not encouraging in the first instance but progress has been made since then.

Parents who wish their children to be immunised are required to complete the consent card and special sessions are arranged when sufficient numbers of these have been received. The immunisation is done by Medical Officers in attendance at the Centres, who, in the majority of instances are the Medical Practitioners in practice in the district. During the year 1939 a total of 113 children under the age of 5 years was immunised at the Child Welfare Centres. Records are kept of the dates of injection and dosage for each child on individual record cards, and these are available for the School Medical Service when the child reaches the age of 5 years.

Detection, Prevention and Treatment of Crippling in Infants.

The County Council's Maternity and Child Welfare Scheme provides for the diagnosis and treatment of orthopaedic defects at the Clinics established at six Centres, or, if necessary, at the home of the patient. When hospital treatment is indicated the child is received into the W. J. Sanderson Orthopaedic Hospital School for Crippled Children,

Gosforth. Four cases were treated in hospital, one of which was admitted during the year. Cases requiring treatment are usually referred by medical practitioners, district nurses, and midwives to the Clinics established below :—

Orthopaedic Clinic.	No. of cases attending.	
	Old.	New.
Ashington	55	8
Bedlington and Cramlington	14	3
Gosforth	36	14
Hexham and Prudhoe	52	38
Morpeth and Rothbury	55	36
Alnwick	52	21

Convalescent Treatment of Mothers.

Owing to war conditions mothers appear reluctant to leave their homes and families for convalescence following their confinements.

Only two mothers availed themselves of this Service during the year. They were sent to the Convalescent Home, Cottage Hospital, Rothbury.

Babies' Hospital, West Parade, Newcastle upon Tyne.

This hospital admits babies suffering from congenital defects, infantile ailments and tuberculosis. Patients are admitted on the recommendation of their own medical attendants and during the year 43 children were treated. A grant of £300 was made to the hospital.

Public Health Act.—Child Life Protection.

At the beginning of the year, twenty women were registered, each having one child in her care. During the year a further five foster-mothers were registered, each of whom received one child. One child was legally adopted, one removed by her parents; three reached the age of nine years.

At the end of the year there were twenty women registered as foster-mothers, each having one child.

Health Visitors made 81 visits during the year.

Registration of Nursing Homes.

It is one of the duties of a Local Supervising Authority to ensure that all nursing homes in the area are registered unless exemption is granted for any reason.

When application is made to the Authority for registration the home must be inspected and approved before this is granted.

One new application was received during 1939, making a total of eight in the County. All the homes were inspected regularly and complied with the conditions required.

*Evacuation of Expectant Mothers.**Dilston Hall Emergency Maternity Home.*

In August, arrangements were completed to put into execution the proposals contained in Circular 1841 of the Ministry of Health, dealing with the accommodation and care of expectant mothers to be evacuated from dangerous areas in the event of a national emergency.

A scheme was formulated for the reception of mothers from Newcastle, Wallsend and Tynemouth, which provided for half of the total number being received into an area in Northumberland.

Corbridge Maternity Home was selected as the most suitable Maternity Home in the County for the reception of abnormal cases and it was proposed to billet evacuated expectant mothers in the Corbridge area, and endeavour to find suitable premises to be used as an improvised Maternity Home in which normal cases could be confined.

Dilston Hall, which was situated conveniently near to Corbridge Maternity Home, was lent by Lord Allendale for the purpose. The loan was conditional on the observation of certain points which were embodied in an agreement drawn up between Lord Allendale and the County Council, and work on the adaptation and equipment of the premises was proceeded with immediately on the outbreak of hostilities.

Willington Quay Maternity Hospital was evacuated to Stagshaw House, Corbridge, and arrangements were made for normal cases to be accommodated there until the work on Dilston Hall was completed. The adaptation was carried out as rapidly as possible. Certain structural alterations were necessary and addition to the hot water and central heating systems were made. Sluices were installed and four labour wards and three nurseries were equipped. As it was felt that it would probably be found necessary to undertake some operative work, a small theatre was provided. The domestic arrangements were modernised, and an Aga cooker was installed. The caretaker's cottage was adapted for use as an observation unit and the gardener's cottage as a nurses' home.

The hospital was opened early in October, complete with accommodation for forty patients, and nursing and domestic staff. The rapid adaptation of the premises was facilitated by the transfer of equipment kindly loaned for the duration of hostilities by the Hospital Committee of the Princess Mary Maternity Hospital, and the valuable assistance rendered by Miss Tannahill, the Matron of that Hospital, and by Professor Farquhar Murray, is gratefully acknowledged.

The nucleus of the nursing staff was also transferred from Princess Mary Maternity Hospital. Three of the sisters who were transferred are still acting in their original capacities at Dilston Hall, and have rendered valuable service.

Professor Farquhar Murray was appointed Honorary Obstetric Consultant for the area. It was originally intended that the obstetric work involved in the scheme should be under the clinical supervision of the obstetric consultants for the area, and that a house-surgeon should be appointed for Dilston Hall. However, this arrangement was found to be impracticable and it was found necessary to appoint a resident medical officer of registrar status capable of dealing with obstetric emergencies. It was agreed that Professor Farquhar Murray should act in a consultative capacity.

Mr. Donald S. Greig, M.D., M.R.C.O.G., was appointed as resident medical officer and took up residence early in November. It was arranged that he should call in Dr. S. Basham, of Corbridge, when he required the services of an anaesthetist or assistant.

The Ministry of Health agreed that whilst patients from evacuable areas should have a primary claim to admission to the hospital, patients from other areas could be admitted in the event of beds being vacant after applications from patients from the evacuable areas had been dealt with. Provision was made for two classes of patients :—

- (a) In large public wards accommodating approximately 10—15 patients.
- (b) In small semi-private wards.

The fee for patients in class (a) is 35/- per week, and that for class (b) three guineas per week.

The Maternity and Child Welfare Committee arranged for remission of fees according to financial circumstances for patients from their own area. The amount to be paid is assessed in accordance with the following scale :—

Income after deducting rent and rates.	Number in family dependent on income, exclusive of the child.						
	2	3	4	5	6	7	8
Not over 30/- ...	2/7ths	1/7th	—	—	—	—	—
„ „ 35/- ...	3/7ths	2/7ths	1/7th	—	—	—	—
„ „ 40/- ...	4/7ths	3/7ths	2/7ths	1/7th	—	—	—
„ „ 45/- ...	5/7ths	4/7ths	3/7ths	2/7ths	1/7th	—	—
„ „ 50/- ...	6/7ths	5/7ths	4/7ths	3/7ths	2/7ths	1/7th	—
„ „ 55/- ...	Whole	6/7ths	5/7ths	4/7ths	3/7ths	2/7ths	1/7th
„ „ 60/- ...	Whole	Whole	6/7ths	5/7ths	4/7ths	3/7ths	2/7ths
„ „ 65/- ...	Whole	Whole	Whole	6/7ths	5/7ths	4/7ths	3/7ths
„ „ 70/- ...	Whole	Whole	Whole	Whole	6/7ths	5/7ths	4/7ths

The Committee are, of course, responsible to the Ministry of Health for the full fee.

The anticipated large numbers of expectant mothers did not materialise and the accommodation provided was not fully occupied for some time. At the time of writing, however, there is a steady demand for accommodation, and the hospital has fully justified the expenditure involved in its establishment.

Willington Quay Maternity Hospital.

Shortly after the outbreak of war, Willington Quay Maternity Hospital, situated in what was considered to be an extremely vulnerable area, was evacuated to Stagshaw House, Corbridge. The County Council agreed to pay the usual grant, subject to the condition that the normal services would be maintained. There is accommodation for fifteen patients and staff at Stagshaw, and in spite of many inconveniences, the conduct of the hospital has been satisfactorily maintained.

MENTALLY DEFECTIVE CASES.

The home visiting of the mentally defective under guardianship was transferred in 1938 to the Health Visiting Staff.

The following table indicates the work done during 1939.

Number of Cases at 1st January, 1939	...	...	...	93
Number of New Cases during the year	...	...	...	15
Number of Cases removed from Guardianship, admitted to Institutions or died during the year	...	...	...	3
Number of Cases at 31st December, 1939	...	...	...	105
Number of Visits made by Health Visitors during the year				380

ORTHOPAEDIC TREATMENT.

Provision continued to be made during the year for the treatment of patients of all ages suffering from Orthopaedic defects, with the exception of adults showing active tubercular symptoms. Institutional treatment was provided at the W. J. Sanderson Home, Gosforth, for children, and at the Shropshire Orthopaedic Hospital, Oswestry, for adults; during the year two adults received treatment at this Hospital.

The following Clinics were in operation at the end of the year :—

- Alnwick—Church Hall.
- Ashington—The School Clinic, Lintonville Terrace.
- Bedlington—Welfare Centre, Guide Post.
- Cramlington—26, Hawthorn Villas.
- Gosforth—War Memorial Child Welfare Centre.
- Hexham—War Memorial Hospital.
- Morpeth—Church Hall.
- Prudhoe—Child Welfare Centre.
- Rothbury—Cottage Hospital.

Those Authorities which are autonomous for Maternity and Child Welfare purposes make their own arrangements for institutional treatment; the County Council Orthopaedic Clinics, however, are available for patients resident in these areas and the respective Authorities pay 2/6d. per attendance for each case received and treated; this charge covers massage, the application of plaster bandages and examination by the Orthopaedic Surgeon, but does not include the provision of splints or any medical treatment outside the Clinic.

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