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COUNTY COUNCIL OF CUMBERLAND

Annual Report

ON THE

HEALTH SERVICES
OF THE COUNTY

For the Year 1956

W. H. P. MINTO, M.D., D.P.H.

COUNTY MEDICAL OFFICER

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HEALTH COMMITTEE

31st December, 1956

Chairman: R. F. Dickinson.

Vice-Chairman: Mrs. E. G. Cain.

Banham, G.	Mitchell, J.
Batey, Rev. H. T.	Nixon, W. G.
Bland, T. P.	Powers, J. E.
Broadbent, C. W.	Smith, Mrs. M.
Douglas, J.	Townsley, R.
Herdman, J. F.	Waddell, W.
McCann, Rev. F. K.	Walsh, J.
McCarron, J. H.	Wilson, D. G.
McKeating, Mrs. B. O.	Wright, T.
McPoland, Mrs. F.	Young, T.

Ex-Officio members

Edmonds, C.—Chairman Education Committee.
Gaskarth, F. G.—Chairman Finance Committee.
Roberts, C. H.—Chairman of County Council.

External members

Braithwaite, Dr. J.	Fletcher, Dr. A. F.
Brown, Mrs. J. Court	Graham, Miss E. R.
Chalmers, Dr. R. W.	Hasell, Mrs. G.
Curwen, Mrs. C. St. G.	Hodgson, Mrs. H. L.
Eves, A. J.	James, Mrs. E. L.
Faulds, Dr. J. S.	Jolly, Dr. G. M.
Ferguson, Dr. T. T.	McCowan, R. D.
Fisher, Miss M. C.	

MEDICAL, DENTAL AND ANCILLIARY STAFFS

County Medical Officer of Health and Principal School Medical Officer—

W. H. P. Minto, M.D., D.P.H., (Commenced 1/6/56).

Deputy County Medical Officer of Health and Deputy Principal School Medical Officer—

R. K. Machell, M.B., Ch.B., D.P.H. (Commenced 4/6/56).

Assistant County, School and District Medical Officers of Health—

J. L. Hunter, M.B., Ch.B., D.P.H. Senior Assistant County Medical Officer and Medical Officer of Health, Workington Borough.

J. N. Dobson, M.B., Ch.B., D.P.H. (Commenced 1/11/56). Medical Officer of Health Whitehaven Borough and Ennerdale Rural District.

J. R. Hassan, M.B., Ch.B., D.R.C.O.G. (part-time) Medical Officer of Health, Alston Rural District (also general practitioner).

I. S. Jones, M.R.C.S., L.R.C.P., D.P.H., Medical Officer of Health Wigton Rural District and Penrith Urban District.

J. Patterson, M.B., B.Ch., B.A.O., D.P.H., Medical Officer of Health Cockermouth Rural and Urban Districts and Keswick Urban District.

E. A. Perrott, M.D., B.S., D.P.H., Medical Officer of Health Millom Rural District.

K. J. Thomson, M.B., Ch.B., D.P.H., Medical Officer of Health Border Rural District and Penrith Rural District.

Assistant County and School Medical Officers—

E. M. O. Campbell, M.B., Ch.B., D.P.H., D.T.M. and H.

A. T. Harbison, M.B., B.Ch., B.A.O., D.P.H.

P. T. Regester, M.R.C.S., L.R.C.P., D.P.H. (Commenced 1/9/56).

Principal Dental Officer—

A. C. S. Martin, L.D.S.

Assistant Dental Officers—

I. R. C. Crabb, L.D.S.

D. H. Hayes, L.D.S.

M. Hayes, B.D.S.

F. H. Jacobs, L.D.S.

D. C. Lamond, L.D.S.

R. B. Neal, M.B.E., L.D.S.

A. R. Peck, L.D.S.

A. M. Scott, L.D.S. (Commenced 15/3/56).

Mental Health—

Consultant Psychiatrists—Part-time.

Seconded from Newcastle Regional Hospital Board.

J. Braithwaite, M.B., Ch.B., D.P.M.

J. R. Stuart, M.B., Ch.B., D.P.M.

T. T. Ferguson, L.R.C.P., L.R.C.S., L.R.F.P.S.

Mental Health Officer—

N. Froggatt.

Mental Health Workers—

E. F. Hall.

W. P. Buck (Commenced 3/9/56).

Psychiatric Social Workers—

2 Part-time, 1 of whom is seconded from Newcastle Regional Hospital Board.

NURSING STAFF**Superintendent Nursing Officer—**

Miss I. Mansbridge, S.R.N., S.C.M., Q.N., H.V.Cert.

Deputy Superintendent Nursing Officer—

Miss S. Keler, S.R.N., S.C.M., Q.N., H.V.Cert.

Assistant Superintendent Nursing Officers—

Miss E. M. Main, S.R.N., R.S.C.N., S.C.M., Q.N., H.V.Cert.
(Commenced 1/5/56).

Mrs. A. Steele, S.R.N., S.C.M., Q.N., H.V. Cert.

Health Visitors	...	...	...	...	...	19
District Nurse Midwives/Health Visitors	...	...	...	...	...	46
Midwives	...	...	...	...	...	8
District Nurse/Midwives	...	...	...	...	...	23
District Nurses	...	...	...	...	...	9

Orthopaedic Physiotherapists—

Miss J. M. Morris, M.C.S.P., M.E.

Miss J. A. Fraser, M.C.S.P., O.N.C. (Commenced 1/5/56).

Orthoptist—

Miss J. Hodson, D.B.O.

Speech Therapists—

Miss D. Chapman, L.C.S.T.

Miss U. M. Philp, L.C.S.T. (Commenced 3/9/56).

Miss E. M. Rawle, L.C.S.T. (Resigned 31/7/56).

Administrative Officer—

W. Butcher.

PREFACE

To the Chairman and Members of the Cumberland County Council

Mr. Chairman, My Lord, Ladies and Gentlemen,

I have the honour to present the Annual Report on the Health of the County of Cumberland for the year ended 31st December, 1956.

There have been several developments at the national level which are likely to affect local health authority services in the future.

The year 1956 may go down in history as that in which the first critical survey of the National Health Service was published. The *Guillebaud Committee Report* showed quite clearly that this service had proved generally satisfactory, but a minority report by one member should not be allowed to slip into the limbo of forgotten things. He suggested that some of the undoubted achievements may have taken place rather in spite than because of the new service and that first class co-operation may have masked lack of adequate co-ordination. In this connection it is of more than a little interest to note that following the Guillebaud Report the Cranbrook Committee has been instructed to report on the maternity services where many have felt, as with the tuberculosis service, the disadvantages of a tripartite health administration are the most apparent. The question of the employment of social workers in the National Health Service has also been under consideration and the report of the *Working Party on Health Visiting* should have far reaching effects. The *Younghusband Committee* took evidence during the year with the main object of finding whether there is a place for a general purpose social worker in the health field. The White Papers "*Areas and Status of Local Authorities in England and Wales*" and "*Functions of County Councils and County District Councils in England and Wales*" appear to be a prelude to local government reorganization. All this seems to make it clear that we must anticipate and plan

for changes, both in the kind of services to be administered by local authorities and in the best type of officer needed for present and future functions.

As far as future legislation is concerned the *National Assistance Act, 1948 (Amendment) Bill* stresses the need to keep old people at home by providing meals and attention, and additional powers to local authorities may well result. This is bound to make increased demands on the domiciliary health services, and in particular the nursing, health visiting and home help service.

It is customary to refer in an Annual Report only to matters which take place in the year under review, but the *Royal Commission Report on the Law Relating to Mental Illness and Mental Deficiency* published in May, 1957, is of such far reaching importance in what I believe constitutes the greatest single challenge to preventive medicine to-day—Mental Illness—that I have broken with established precedent to comment briefly on its implications as an introduction to my report on the work of the Mental Health Section under Section 51 of the National Health Service Act (page 49).

This year I have introduced comparative tables of *vital statistics*. For very many years the *infant mortality rate* and the *tuberculosis death rate* have been regarded as the best indices of the health of a population. Deaths from respiratory tuberculosis in 1956 were 18, the lowest ever recorded in Cumberland, and 262 cases of respiratory tuberculosis were notified. Tuberculosis is apparently acquiring the status of a minor health problem and the tuberculosis notification and death rates can no longer be taken as a sensitive index of the health of the Cumbrian population. The infant mortality rate is 30.4 compared with 23.8 for England and Wales. Too much regard should not be paid to fluctuations in an annual rate where a relatively small population is concerned and while the trend over the years is the more important the 1956 infant mortality rate in Cumberland cannot be regarded as wholly satisfactory. The reasons for this will bear

further investigation. Infant mortality generally has shown a remarkable decline over the years, but *perinatal mortality* (stillbirths plus deaths in the first week of life) which for a number of years has remained quite remarkably constant is now showing an increase. I have made a preliminary investigation into the considerable increase in prematurity and in premature stillbirths and in neo-natal deaths in 1956 and it does seem that the factors which are causing this are the main reason for increased infant mortality (page 14).

The only notable occurrence of infectious disease was an *outbreak of poliomyelitis* in West Cumberland and this has been fully dealt with in the body of the report (page 70). My thanks are due to Dr. J. L. Hunter, Senior Assistant County Medical Officer in West Cumberland, who played the major part in the control and investigation of this epidemic under unusually difficult circumstances.

The year saw the welcome introduction of a British *vaccine against poliomyelitis*, and vaccination against this disease which causes so much alarm was started in the county. The *B.C.G. vaccination* scheme which was started in 1955 again attracted a very satisfactory response. The figures for *diphtheria immunisation* were smaller than in previous years, mainly because this procedure had to be stopped for some months on account of the outbreak of poliomyelitis and the risk of provoking paralysis by continuing immunisation. The figures for *vaccination against smallpox* are far from satisfactory and real efforts must be made to alter this situation. The introduction of vaccination against this disease in local health authority clinics could do no harm and might secure the vaccination of a considerably larger number of infants.

I would draw attention to the need for more intensive *health education* (page 44). This is a very proper function of a local health authority under Section 28 of the National Health Service Act. There is a great public interest in matters of health and this is stimulated by feature programmes on television and reflected in the national press, some sections of which regard

the more sensational health topics as being not only news but headline news. The public I think is hungry for good information about matters varying from tranquilisers to poliomyelitis, from smoking and cancer of the lung to mental health, and from prevention of accidents in the home to the genetic risks of X-ray examination. It should be, I think, a first duty of all the staff of a health department to keep themselves informed on these and other health matters, and to disseminate accurate up-to-date information wherever possible in the community. When we come to the more formal specialised instruction it must be remembered that some people do this sort of thing better than others, but the others may often be the real experts and they will benefit greatly from in-service training in the methods of instruction. The health educators themselves, and I use this phrase in its widest sense, must be fully conversant with present day trends and developments, which means that not only should suitable courses be held in the county, but vacancies on courses elsewhere should be sought wherever possible.

In my last annual report I mentioned *research*, and as one deals with the vast number of statistics which flow into a health department it becomes increasingly obvious that with skilled handling they should produce evidence to provide a solution to many as yet unsolved problems. This material needs specialised handling by adequate properly trained staff. I have tried to present the picture of a developing health department working in changing conditions, and on the purely domestic front I should mention that if the best results are to be achieved it may be necessary to review the status and functions of many members of the health department staff and also to ensure, particularly in a county like Cumberland, adequate provision of in-service training.

I paid my tribute to my predecessor, Dr. Kenneth Fraser, in my preface last year, and I now record that his retirement became effective on 31st May, 1956.

Finally I wish to express my gratitude to the Chairman and members of the Health Committee for their

encouragement and interest, and my indebtedness to the staff of the health department who have had to shoulder a number of heavy and unforeseen burdens during the year.

I am, my Lord, Ladies and Gentlemen,

Your obedient Servant,

W. H. P. MINTO,
County Medical Officer.

County Health Department,
11, Portland Square,
Carlisle.
July, 1957.

STATISTICAL AND SOCIAL CONDITIONS OF THE AREA

Area in acres of Administrative County—967,054 acres.

Rateable Value (April 1st, 1956)—£1,795,545.

Estimated product of 1d. rate (April 1st, 1956)—£6,822.

Population (Census, 1951)—217,453.

Population (1956 Mid-year estimate)—217,450.

	Male.	Female.	Total.	Urban Districts.	Rural Districts.	Admin. County.	England & Wales.
LIVE BIRTHS—							
Legitimate	1781	1753	3534				
Illegitimate	63	82	145				
	1844	1835	3679				
Birth rate per 1,000 population ...	17.5	16.5	16.9	15.7			
STILL BIRTHS—							
Legitimate	56	48	104				
Illegitimate	4	3	7				
	60	51	111				
Still birth rate per 1,000 total births	32.1	27.3	29.3	23.0			
DEATHS—							
All causes ...	1364	1289	2653				
Death rate per 1,000 population ...	12.3	12.1	12.2	11.7			
DEATHS—							
From Pregnancy, Childbirth or Abortion	—	3	3				
Death rate per 1,000 total births ...	—	—	0.79	0.56			
DEATHS—							
All Infants under 1 year age.							
Legitimate	63	47	110				
Illegitimate	1	1	2				
	64	48	112				
Death rate all Infants per 1,000 live births ...	—	—	30.40	23.80			
Legitimate Infants per 1,000 legitimate live births ...	—	—	31.13	—			
Illegitimate Infants per 1,000 illegitimate live births ...	—	—	13.80	—			
DEATHS FROM—							
Cancer—							
All forms	202	183	385				
Rate per 1,000 population	2.1	1.6	1.8				
DEATHS FROM—							
Leukaemia and Aleukaemia	4	10	14				
Cancer—Lung, Bronchus	43	8	51				
Cancer—Uterus	—	26	26				

COMPARATIVE VITAL STATISTICS

TABLE I.

Year.	Estimated Mid-year Population.	Births		Deaths.			
				Under 1 year.		All ages.	
		No.	Rate.	No.	Rate.	No.	Rate.
1921	216691	5325	24.5	437	82	2703	12.5
1922	218499	4863	22.3	485	100	3218	14.7
1923	219720	4647	21.1	344	74	2793	12.7
1924	221010	4496	20.3	327	72	2875	13.0
1925	220030	4177	18.9	357	85	2961	13.4
1926	217400	4337	19.9	313	72	2753	12.6
1927	216230	3719	17.2	303	81	2958	13.6
1928	210600	3782	17.9	237	62	2597	12.3
1929	208720	3703	17.7	275	74	2879	13.3
1930	208720	3610	17.2	214	59	2551	12.2
1931	205270	3589	17.4	261	72	2813	13.7
1932	205550	3432	16.7	257	75	2792	13.6
1933	204010	3223	15.8	229	71	2806	13.7
1934	202400	3295	16.3	209	64	2725	12.9
1935	201000	3318	16.5	202	61	2671	12.8
1936	199590	3165	15.9	185	58	2574	12.4
1937	196080	3131	16.0	192	61	2806	13.8
1938	194900	3092	15.9	184	59.5	2638	13.0
1939	198940	3086	15.9	173	55.6	2668	12.9
1940	209930	3293	15.6	245	73	3209	14.8
1941	216230	3463	16.0	197	56	2726	12.6
1942	211030	3551	16.8	203	57	2578	12.2
1943	206230	3589	17.4	173	48	2556	12.3
1944	198780	3914	19.7	192	49	2441	12.3
1945	195120	3484	17.4	162	48	2477	12.7
1946	200660	3911	19.5	182	47	2522	12.6
1947	202460	4446	22.0	187	42	2788	13.8
1948	210020	4073	19.4	149	37	2442	11.7
1949	212170	3920	18.5	133	34	2711	12.8
1950	215900	3806	17.6	134	35	2716	12.6
1951	214700	3681	17.1	124	34	2827	13.2
1952	215050	3714	17.3	119	32	2603	12.1
1953	216100	3608	16.7	97	27	2571	11.9
1954	216600	3533	16.4	98	27.6	2567	11.9
1955	216700	3556	16.4	101	28.4	2653	12.2
1956	217450	3679	16.9	112	30.4	2653	12.2

TABLE II.

District.	BIRTHS.								DEATHS.				INFANTILE MORTALITY.				Estimated Mid-year Population
	Legitimate.	Illegitimate.	Total.	Births per 1000 of Population. (Crude)	Compara- bility Factor.	Still- births.	Total Deaths.	Deaths per 1000 of Population. (Crude)	Compara- bility Factor.	Legitimate.	Illegitimate.	Total.	Death of Infants under 1 yr. per 1000 live births.				
URBAN DISTRICTS—																	
Cockermouth	94	4	98	18.46	1.02	1	77	14.50	1.00	3	—	3	30.61	5310			
Keswick	39	1	40	8.46	1.00	1	71	15.01	0.86	1	—	1	25.00	4730			
Maryport	198	10	208	16.71	0.95	7	155	12.45	1.16	7	—	7	33.65	12450			
Penrith	161	13	174	16.48	1.02	3	153	14.49	0.88	4	2	6	34.48	10560			
Whitehaven	514	20	534	20.75	0.96	22	314	12.20	1.15	20	—	20	37.45	25730			
Workington	467	19	486	16.71	0.97	17	311	10.70	1.19	13	—	13	26.13	29070			
Aggregate	1473	67	1540	17.53	0.98	51	1081	12.30	1.10	48	2	50	32.47	87850			
RURAL DISTRICTS—																	
Alston	37	2	39	17.26	1.10	2	32	14.20	0.94	3	—	3	76.92	2260			
Border	398	22	420	14.01	1.13	11	404	13.48	0.87	13	—	13	30.95	29980			
Cockermouth	312	5	317	16.25	0.98	1	247	12.66	1.08	9	—	9	28.39	19510			
Ennerdale	532	26	557	19.30	1.02	18	335	11.60	1.21	16	—	16	28.73	28870			
Milom	238	10	248	17.61	1.05	14	140	9.94	1.10	4	—	4	16.13	14080			
Penrith	193	2	195	17.00	1.04	5	120	11.45	1.00	6	—	6	30.77	11480			
Wigton	351	12	363	15.50	1.03	9	294	12.55	1.06	11	—	11	30.30	23420			
Aggregate	2061	78	2139	16.50	1.04	60	1572	12.12	1.05	62	—	62	29.00	129600			
Administrative County ...	3534	145	3679	16.90	1.02	111	2653	12.2	1.07	110	2	112	30.40	217450			

N.B. Area Comparability Factors. In order to compare the statistics for birth and death rates in the county and county districts with the mortality and birth rates for England and Wales it is necessary to make a correction, to allow for the difference in age and sex distribution of the different populations. This is done by applying to the crude death rate and crude birth rate of the districts concerned "Area Comparability Factors" which have been estimated by the Registrar General and are shown on the table above.

CAUSES OF DEATH IN ADMINISTRATIVE AREAS.

TABLE III

Cause of Death	Administrative County	Cockmouth U.D.	Keywick U.D.	Marport U.D.	Penrith U.D.	Whitehaven M.B.	Workington M.B.	Aggregate of U.D.'s	Alston R.D.	Borlase R.D.	Cockmouth R.D.	Embsay R.D.	Millom R.D.	Penrith R.D.	Wigton R.D.	Aggregate of R.D.'s
All Causes	2653	77	71	155	153	314	311	1081	32	404	247	335	140	120	294	1572
1—Tuberculosis, Respiratory	18	—	—	1	—	2	2	5	—	6	—	5	1	1	—	13
2—Tuberculosis, other	3	—	—	1	—	—	—	1	—	—	1	—	—	—	—	2
3—Syphilitic Disease	4	—	—	—	—	—	1	1	—	1	—	—	1	1	—	3
4—Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5—Whooping Cough	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6—Meningococcal Infections	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7—Acute Poliomyelitis	1	—	—	—	—	2	—	2	—	—	—	—	—	—	—	—
8—Measles	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1
9—Other Infective and Parasitic Diseases	3	—	—	1	—	—	—	1	—	1	—	—	—	—	1	2
10—Malignant Neoplasm, Stomach	62	1	1	10	4	7	9	32	1	5	2	8	3	3	8	30
11—Malignant Neoplasm, Lung, Bronchus	51	1	2	4	1	10	10	28	—	3	5	8	2	2	3	23
12—Malignant Neoplasm, Breast	24	2	2	1	—	4	1	10	—	6	1	2	3	—	2	14
13—Malignant Neoplasm, Uterus	26	1	2	2	—	4	4	13	—	3	1	3	2	1	3	13
14—Other Malignant and Lymphatic Neoplasms	222	7	9	6	15	24	39	100	1	28	16	30	13	8	26	122
15—Leukaemia, Aleukaemia	14	2	1	—	—	—	—	3	—	1	2	2	2	2	2	11
16—Diabetes	16	—	—	2	1	3	2	8	—	1	2	4	1	—	—	8
17—Vascular Lesions of Nervous System	434	8	7	22	35	54	56	182	5	72	30	58	19	18	50	252
18—Coronary Disease, Angina	423	16	13	31	26	43	55	184	6	42	43	51	29	23	45	239
19—Hypertension with Heart Disease	52	1	1	4	3	5	4	18	—	12	6	4	5	2	5	34
20—Other Heart Disease	469	9	25	6	30	39	42	151	2	110	56	38	18	22	72	318
21—Other Circulatory Disease	97	2	—	15	4	11	10	42	—	13	9	21	1	3	8	55
22—Influenza	16	1	—	1	1	2	1	6	—	2	4	3	—	—	1	10
23—Pneumonia	83	2	—	3	2	12	8	27	2	16	10	11	5	5	7	56
24—Bronchitis	89	3	3	14	7	11	7	45	1	9	5	12	3	3	11	44
25—Other Diseases of Respiratory System	29	1	—	—	2	4	1	8	—	3	2	10	—	2	4	21
26—Ulcer of Stomach and Duodenum	18	1	1	1	2	2	3	10	—	3	3	1	—	1	—	8
27—Gastritis, Enteritis and Diarrhoea	11	1	—	1	—	—	3	5	—	1	2	—	—	—	3	6
28—Nephritis and Nephrosis	20	1	—	1	1	1	4	8	—	2	5	2	1	2	—	12
29—Hyperplasia of Prostate	10	—	1	—	—	—	2	3	—	—	3	1	—	3	—	7
30—Pregnancy, Childbirth and Abortion	3	—	—	—	—	1	1	2	—	2	—	—	1	—	—	1
31—Congenital Malformations	31	3	—	2	1	2	5	13	2	2	4	3	1	1	5	18
32—Other Defined and Ill-defined Diseases	311	11	2	16	16	57	31	133	8	44	22	46	28	10	20	178
33—Motor Vehicle Accidents	24	—	—	1	—	—	3	4	—	6	2	1	—	4	6	20
34—All other Accidents	64	3	1	3	1	14	5	27	2	11	7	7	1	1	8	37
35—Suicide	22	—	—	6	1	—	2	9	1	1	4	2	—	1	4	13
36—Homicide and Operations of War	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—

SECTION 22

Care of Mothers and Young Children

The broad principles governing the administration of the nursing and midwifery services, arising out of the Midwives Act, 1936, and the National Health Service Act, 1946, have been set out in detail in previous reports.

There were 3 deaths associated with childbirth, giving a *maternal mortality rate* for 1956 of 0.79, compared with 0.56 for England and Wales. In 1955 there were 2 maternal deaths in the county.

Under Section 203 (2) of the Public Health Act, 1936, all births within the administrative county must be notified within 36 hours to the County Medical Officer. Forty per cent. of these infants were born at home and 60 per cent. in hospitals or other institutions in the county. As soon as the birth of an infant is notified to the County Medical Officer this information is passed on to the health visitor for the area on a health visiting card. The health visitor visits the home of the baby between two to three weeks after birth to offer the mother any advice and guidance she may wish for. There is a separate procedure for premature births which is described below.

A *stillbirth* can be defined as any child born after the 28th week of pregnancy which did not at any time after being completely expelled from its mother breathe or show any other sign of life.

During the year 111 stillbirths were registered, 81 per cent. of which were born in hospital, giving a stillbirth rate per thousand total births of 29.3 compared with 23.0 for England and Wales.

The number of babies dying in the first 4 weeks of life, neonatal deaths, was 79 (71 in 1955). Sixty-three of these babies died before reaching the age of 1 week.

I set out below a table showing stillbirths and neonatal deaths in Cumberland for the last 7 years.

Stillbirths and Neonatal Deaths

Year		Stillbirths	Neonatal Deaths	Total
1950	...	105	79	184
1951	...	101	75	176
1952	...	94	70	164
1953	...	99	70	169
1954	...	106	63	169
1955	...	79	71	150
1956	...	111	79	190

Because many early neonatal deaths result from the same causes as stillbirths, deaths occurring during the first week of life are often considered with stillbirths, the combination being called *perinatal deaths*. Figures for perinatal deaths in Cumberland in past years are not available, but in 1956 there were 111 stillbirths and 63 infant deaths in the first week, giving a total of 174 perinatal deaths. It will be important to study the trend of the perinatal death rate in coming years as this is the best and most sensitive index for the future of the efficiency of the maternity services.

In 1956 there was an increase in the number of babies who died before reaching the first birthday, 112 compared with 101 last year. This gives an *infant mortality rate* of 30.4 per thousand live births. The rate for England and Wales is 23.8.

The following table shows the causes of these deaths:—

Cause of death	Age in weeks					Total
	1.	2.	3.	4.	5-52	
Whooping cough ...	—	—	—	—	1	1
Convulsions ...	—	—	—	—	1	1
Bronchitis and pneumonia ...	3	2	—	1	14	20
Enteritis and diarrhoea ...	—	—	—	—	1	1
Congenital malformations ...	10	1	1	3	6	21
Premature birth ...	30	2	—	—	—	32
Injury at birth ...	5	—	—	—	—	5
Asphyxia and atelectasis ...	8	—	—	—	1	9
Congenital debility ...	—	—	—	—	1	1
Haemolytic disease ...	2	—	—	—	—	2
Other causes ...	3	1	—	2	3	9
Congenital heart ...	2	3	—	—	3	8
Meningitis ...	—	—	—	—	2	2
TOTAL ...	63	9	1	6	33	112

PREMATURE LIVE BIRTHS

PREMATURE STILL-BIRTHS

Weight at Birth	*Born in Hospital			Born at home and nursed entirely at home.			Born at home and transferred to hospital on or before 28th day			Born in nursing home and nursed entirely there.			Born in nursing home and transferred to hospital on or before 28th day.			Born in hospital	Born at home.	Born in nursing home.
	Total	Died within 24 hours of birth.	Survived 28 days.	Total	Died within 24 hours of birth.	Survived 28 days.	Total	Died within 24 hours of birth.	Survived 28 days.	Total	Died within 24 hours of birth.	Survived 28 days.	Total	Died within 24 hours of birth.	Survived 28 days.			
(3) 3 lb. 4 oz. or less (1,500 gms. or less) ...	28	14	2	—	—	—	5	—	—	—	—	—	—	—	—	20	1	—
(b) Over 3 lb. 4 oz. up to and including 4 lb. 6 oz. (1,500—2,000 gms.) ...	39	1	33	4	—	3	7	—	5	—	—	—	—	—	—	12	3	—
(c) Over 4 lb. 6 oz. up to and including 4 lb. 15 oz. (2,000—2,250 gms.) ...	45	3	36	6	—	5	1	—	1	—	—	—	—	—	—	4	1	—
(d) Over 4 lb. 15 oz. up to and including 5 lb. 8 oz. (2,250—2,500 gms.) ...	84	—	83	43	—	42	3	—	3	1	—	—	—	—	—	12	—	—
TOTALS ...	196	18	154	53	—	50	16	—	9	1	—	—	—	—	—	48	5	—

*The group under this heading includes cases born in one hospital and transferred to another.

PREMATURE LIVE BIRTHS

Weight at Birth		Weight at Birth	
Under 1 lb.	1 lb. or over	Under 1 lb.	1 lb. or over
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100
TOTALS	TOTALS	TOTALS	TOTALS

Report of birth weight and length of infants born

It seems probable that *prematurity* is the crux of the problem of current wastage of infant life, and the tables above show its frequency in both neonatal deaths and stillbirths. It might be argued that to be premature gives one a bad start in life from which it is impossible to recover, but against this we must remember that Voltaire, Napoleon and Winston Churchill were all premature babies.

A premature birth is defined as one weighing 5½ lbs. or less irrespective of the period of gestation. Arrangements are made for the required information relating to birth weights, including stillbirths, to be entered on the birth notification cards. When the birth notification card is received a special card is made out for a premature birth and this is sent with the health visiting card to the health visitor who carries out a special investigation and returns the premature baby birth card with full details up to 28 days.

Statistics with regard to prematurity are shown in the table. It will be seen that in 1956, 266 children were born prematurely, 196 in hospital and 69 at home, of whom 16 were transferred to hospital. The remaining 1 was born and nursed in a nursing home. Of the 266 premature births, 52 infants died within 28 days. Apart from the foregoing figures 53 premature stillbirths occurred during the year.

	1953	1954	1955	1956
Total of children born prematurely	213	209	213	266
Died with in 28 days	32	32	39	52
Premature stillbirths	45	45	32	53
Total stillbirths registered ...	99	106	79	111
Non-premature stillbirths ...	54	61	47	58

When the figures are compared with those for the previous 3 years we find a considerable increase in the number of children born prematurely and a corresponding increase in those who died within 28 days and those who were stillborn. These figures suggest that the increase in the stillbirth rate in 1956 and the increase in infant mortality is largely due to prematurity. In perhaps no other aspect of the health service is co-operation between hospital, general practitioner and local health authority more essential in the interests of the

patient. Indeed the inauguration of a single service may be the only adequate way of dealing with the problem. This, no doubt, will be considered by the Cranbrook Committee on the maternity services.

The position in *East Cumberland* has been closely investigated and it is planned to extend this survey to the whole county in 1957.

The figures for East Cumberland in 1956 are as follows:—

There were 35 stillbirths and the causes of these stillbirths in full time and premature babies were: —

	F.T.	Prem.	Total
Congenital abnormalities	4	6	10
Toxaemia	1	—	1
Hydrops foetalis	1	—	1
Macerated foetus	2	—	2
Intra-uterine anoxia	4	1	5
Concealed accidental haemorrhage ...	2	2	4
Prolapse of cord	—	2	2
Intra uterine death—no known cause	4	—	4
Prematurity—no other cause given ...	—	6	6

There were 109 premature births, 72 of which occurred in hospital and of the remaining 37 born at home 6 were transferred to hospital. 17 were stillbirths, 21 of the remaining 92 died in the first week of life, and 1 after the first week but within 28 days, and 70 survived more than 28 days. The causes of death of these premature babies during the first week were :—

Ante-partum haemorrhage	4
Ante-partum haemorrhage and placenta praevia	1
Toxaemia of pregnancy	4
Congenital abnormalities	3
Intra-cranial haemorrhage	2
Atelectasis	2
Hyaline membrane disease	1
Caesarian section—mother with acute heart disease	1
Broncho pneumonia	1
Prematurity	2

Ministry of Health Circular 9/56 introduced a memorandum from the Standing Maternity and Midwifery Advisory Committee of the Central Health Services Council on the subject of *ante-natal care*. The Advisory Committee concluded that toxæmia of pregnancy now constitutes the largest avoidable factor in maternal deaths, and is probably a major cause of perinatal mortality and prematurity.

An effective ante-natal service should ensure that the earliest sign of toxæmia is discovered as a matter of routine, but to be effective this discovery must, as in a tuberculosis scheme, be backed by adequate hospital in-patient accommodation, for while the local health authority can do a good deal by providing home helps to make a certain amount of rest at home possible, this can, in many cases, be only a very incomplete substitute for the complete rest and care of a hospital ante-natal ward.

It has been shown that there is a greater risk of stillbirth or neonatal death as well as maternal mortality in certain groups of mothers—women first pregnant over the age of 30, women over 40 of any parity, and women of any age having the fifth or higher pregnancy. The need for priority beds for these “high risk” mothers was stressed in 1951 in the Ministry of Health memorandum on the selection of maternity cases for admission to hospital. It will be seen from the table which shows a breakdown of figures for 1955 (figures for 1956 are not yet available in this form) that the percentage for hospital admission of “high risk” mothers in Cumberland was slightly below the national figure in all groups, and this when the availability of maternity beds in Cumberland was higher than the national average.

"High Risk" Mothers in Hospital—1955.

	Age 30 or over at first confinement		Age 40 or over second or higher confinement		All ages fifth or higher confinements		Fifth or higher confinements before the age of 30	
	Cumberland, England and Wales	England and Wales	Cumberland, England and Wales	England and Wales	Cumberland, England and Wales	England and Wales	Cumberland, England and Wales	England and Wales
a. Total births	216	50,046	107	19,675	309	53,342	69	11,230
b. No. of births in hospital	162	41,988	58	11,739	114	21,506	18	3,919
c. Percentage births in hospital (b of a)	75.00	83.90	54.20	59.66	36.89	40.32	26.08	34.90
d. Stillbirths in hospitals	12	1,652	3	689	8	1,230	—	175
e. Stillbirths at "home"	3	245	2	221	4	601	—	87

It is probable that the authorities concerned would wish to wait until the deliberations of the Cranbrook Committee on the maternity services are available before taking any dramatic action. However, certain essentials for an adequate service seem obvious, namely:—

1. The closest liaison between the domiciliary midwifery service, the general practitioner and the hospital service.

2. The ante-natal examination of mothers as early as possible in pregnancy and as a routine no later than the 30th to 32nd week, for by the time an examination at the 36th week is undertaken toxæmia may be well established if the pregnancy has not already terminated in a premature stillbirth or perinatal death.

3. The provision of adequate methods of resuscitation for premature babies born at home and also during their transport to hospital.

4. Adequate selection of cases with special attention to the "high risk" group, and the local health authority should play some part here.

5. Adequate hospital accommodation for premature babies and the provision of paediatric care from birth for all premature babies.

CHILD WELFARE CENTRES

No. of centres provided at end of year.	No. of Child Welfare Sessions now held per month.	No. of children who first attended a centre of this Local Health Authority during the year, and who at their first attendance were under 1 year of age	Number of children who attended during the year and who were born in		Total number of children who attended during the year.	Number of attendances during the year made by children who at the date of attendance were:		Total Attendances during the year.
			1956	1955		Under 1 year	1 but Under 2	
15	59	1,458	1,053	922	964	8,599	1,866	11,912

Child Welfare Centre Attendances

The figures for child welfare centres are set out in the table. The number of children under one year of age who attended a welfare centre for the first time during the year rose from 1,382 in 1955 to 1,458 in 1956. The total attendances all ages were 11,912 (11,734—1955). There has been a steady increase in the number of attendances under 1 year but rather fewer older children have attended. It is probable that this is in large part due to the unsatisfactory clinic premises in certain areas in the county, notably in Whitehaven and Wigton, where one is reluctant to encourage too strongly the attendance of older children. There has been, during the year an increasing demand for child welfare centre facilities in parts of the county where no provision has been made, notably in Keswick, Seascale and St. Bees.

Distribution of Welfare Foods

The distribution of welfare foods continued generally as set out in last year's annual report. There are now 115 distribution centres in the county, 97 of which, mostly in rural areas are run entirely by the Women's Voluntary Services. In most of the urban areas distribution has been arranged with private firms on an agency basis. There is no doubt that the Women's Voluntary Services make an invaluable contribution to this service in Cumberland.

I set out below the figures showing the welfare foods issued since distribution was taken over from the Ministry of Food by the County Council as the Local Health Authority in June, 1954, and once again it seems that the "take up" of National Dried Milk is fairly static but a larger quantity of the important vitamin supplements have been issued since the Local Health Authority took over.

I prefer to arrange distribution of Welfare foods where possible from the infant welfare centres during normal sessions, and this, I think, is desirable because one cannot be happy that those who need these foods

most will bother to locate and visit a "lay" distribution centre. It should be of interest to watch the trend of these figures in future years when one would hope to see an increase in the issues of vitamin supplements or at least a more selective issue to those younger children who need them most, with, if anything, a decrease in the amount of National Dried Milk issued as evidence of an increased awareness among mothers of the need for breast feeding and the importance of vitamins for them and for their young children.

	Total issues to beneficiaries and hospitals, etc.	National Dried Milk	Cod Liver Oil	Vitamins A. & D.	Orange Juice
1954 (half year)		74,348	11,782	2,169	45,478
1955		145,696	25,082	6,413	113,548
1956		151,101	23,669	7,274	124,212

Dental Services

The Principal Dental Officer makes the following comments on the dental service for 1956 :—

The figures given below do not call for any comment as they follow the usual pattern without much variation. Under present conditions it has not yet been considered advisable to make any move in relation to routine examination of pre-school children. At present the county is fortunate in that the dental staff is only one under establishment, but this is due to the fact that Mr. Lamond has consented to stay on for a further period, while Mr. Scott was appointed and took up duty on the 20th March, 1956. It is very doubtful if a successor will be found to Mr. Lamond when he finally retires and it would be most unfortunate if routine inspection were started and once more had to be discontinued. Actually the establishment figure is low if all responsibilities are to be met in a county like Cumberland, but there is no point in creating additional posts when present ones cannot be filled.

In relation to the point raised in last year's report with regard to thumb sucking, two cases that were dealt with during the year are of interest. Two children of the same family, one aged about six months and

the other four years, were both very persistent thumb suckers and various preventative measures were being tried, the infant having his hands rolled up in cloth, but with no result. A "dummy" was suggested for him and within six months he had forgotten his thumb and discarded his "dummy." For the older one an appliance was made to prevent the thumb fitting comfortably in the mouth and here too the habit is completely broken and the child delighted with herself, as she had been very ashamed of her habit. There is no doubt that much can be done in these cases with the intelligent co-operation of the parent and the advantage to the child does not need to be emphasised. In the case of the older child orthodontic treatment may be necessary later on, as a certain amount of deformity has been caused, but once the habit has been stopped nature can do a lot to rectify things.

Numbers Provided with Dental Care

	Examined	Needing Treatment	Treated	Made Dentally Fit
Expectant and Nursing Mothers	298	282	352	237
Children under five	247	224	224	120

Forms of Dental Treatment Provided

	Scalings and Gum Treatment	Fillings	Silver Nitrate treatment	Crowns or Inlays	Extractions	General Anaesthetics	Full Upper or Lower	Partial Upper or Lower	Provided Dentures	Radiographs
Expectant and Nursing Mothers	18	162	—	6	1442	116	182	60	31	
Children under five	—	50	67	—	476	165	—	—	—	

County Council Clinics

No new clinic premises were opened during the year. At the end of 1956 the new clinic at the Valley Estate, Whitehaven, which will also provide a flat for the health visitor for the district, was nearing completion.

As a result of restrictions on capital expenditure it was not possible to proceed with either the combined clinic and occupation centre at Wigton, or the much needed new clinic and office accommodation at Flatt Walks, Whitehaven. Representation was again made to the Ministry of Health for an early review of the situation regarding these much needed projects.

SECTION 23

Midwives Service

During the year 132 midwives notified their intention of practice. These notifications include 9 whole-time district midwives, 80 district nurse midwives, 41 midwives working in the maternity departments of hospitals in the administrative county, 4 midwives acting independently.

The number of domiciliary confinements undertaken during the year was 1,464.

Cases in which a doctor was booked and was present at the confinement	332
Cases in which a doctor was booked but was not present at the confinement	834
Cases in which a doctor was not booked	298
	<hr/> 1,464 <hr/>

In addition the domiciliary midwives attended the following cases which were delivered in hospital but discharged home before the fourteenth day of the puerperium	860
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The following short table shows the position in respect of ante-natal and post-natal visits by midwives covering midwifery and maternity work.

Home visits	11,880
Attendances at nurses' clinics	5,897
	<hr/> 17,777 <hr/>

During the year midwives sent for medical help in domiciliary cases on 395 occasions.

Gas and Air Analgesia

In 1954 the Ministry instituted an enquiry into the relief given to mothers confined at home, and the result of this has recently been published. The enquiry covered eight counties and eight county boroughs which had the highest proportion of home confinements receiving gas and air, the eight counties and eight county boroughs with the lowest proportion and the eight counties and eight county boroughs whose figures fell midway between these groups in 1952; in all 48 areas. In addition two counties and five county boroughs were included; these matched geographically and environmentally the high or low county boroughs but differed in the proportion of home confinements at which gas and air was given.

Each domiciliary midwife was asked to complete a questionnaire for all the births she attended during the three months, November and December, 1953 and January, 1954. Returns were received from 2,616 midwives relating to 22,457 confinements.

The following figures relate to the returns sent in by the Cumberland County midwives:—

Parity	No. of Confinements	No. who received Gas and Air
1	96	67
2	115	69
3	77	50
4+	86	39

The number of confinements in which gas and air apparatus was demonstrated during pregnancy was 178, and instruction in relaxation exercises was given in 203 cases.

Important conclusions to be drawn from the enquiry were as follows:—

“Where the frequency of administration of gas and air is less than average other forms of relief are also given with less than average frequency, which suggests that failure to give gas and air analgesia is not generally the result of a preference for some other form of

analgesia. On the other hand it appears that relief in various forms, other than gas and air, is commonly provided for patients at home and in a substantial proportion of cases relief is not given for perfectly valid reasons, for example, labour is too far advanced when the midwife arrives or relief may be offered and refused.

In the groups of counties and county boroughs which have the lowest proportion there is some evidence that midwives with *heavier* case loads give gas and air *less* frequently than those with lighter case loads."

There are only two midwives in the county who do not hold the gas and air certificate. During the year gas and air analgesia was employed in domiciliary midwifery or maternity by midwives to the extent of 1,031 cases. This figure shows a continued increase from the previous year, and, of course, it has to be remembered that the figure of 1,031 out of 1,464 domiciliary confinements is not the end of the story, because in many cases classifiable as doctors' cases, the practitioners themselves administer the analgesia.

SECTION 24

Health Visiting

At the end of the year the staff of whole time health visitors amounted to 19, including 2 vacancies. In the rural areas much of the health visiting is undertaken by 46 district nurses, 9 of whom hold the Health Visitor's Certificate. The remainder continue to be employed under a temporary arrangement from year to year by dispensation from the Ministry of Health.

During the year the staff mentioned above paid 28,393 visits to children under 1 year of age and 35,659 visits to children aged 1-5 years.

In recent years there has been much discussion about the proper field of work, training and recruitment of health visitors, and in September, 1956, the report of the working party formed in 1953 under the chairmanship of Sir Wilson Jamieson to study and report on the work of the health visitor in the national health service and the school health service was published. This report outlines a pattern for an ideal service, but this ideal can only be reached over a long period of years, and one wonders with the present womanpower available whether it will in fact ever be achieved. Financial considerations and conditions of service, although sometimes regarded as not quite proper for consideration where professional people are concerned, are I think of paramount importance here. In the meantime there can be no doubt that we have too few health visitors carrying too big a case load, and it is well to consider any method which will make more economic use of the health visitor's time. We must consider which are the most important functions which a health visitor undertakes and how some of her work can be delegated by her to other social workers.

Periodic routine home visiting has always, and rightly, been regarded as the most important part of the health visiting service, and it has been suggested that there might now be something to be said in the present circumstances for selective visiting. Such an alteration must not be undertaken lightly and I think the "cons" outweigh the "pros" because very often problems arise in even the best regulated families and one is particularly concerned that the health visitor should play her full part in the detection of the first signs of mental illness in an individual or in a family group. Furthermore, she is now being given new tasks as in the "screening" of young children in their homes for defective hearing and this can only be useful if at least one routine visit is undertaken.

In 1955 I reported on the special survey which health visitors were carrying out in Cumberland with the object of obtaining more accurate information about disabilities affecting children of school age.

During 1955 (the first year of their use) the forms for special reports on physically and mentally handicapped children were used either to check on cases already reported through pre-existing normal channels or to amplify the records of those cases. By the end of 1955 the back log had been dealt with and this accounts for the smaller number of cases specially reported during 1956.

This year the table analysing the special reports takes a slightly different form as it is meant to serve a different purpose. It shows the great benefit the health visiting service can confer by consistent visiting of the pre-school child. Forty per cent. of cases in the 0-5 year group were reported to the health department before treatment was initiated. In the majority of these it was acting on the health visitor's advice that the mother first brought her child to her own family doctor or to the child welfare centre. This is particularly so in cases of squint, minor orthopaedic defect or deformity, and mental retardation.

Health visitors working in child welfare centres are specially suitable for the discovery of motor or orthopaedic defects and mental handicap, for they and the medical officer at the centre, being concerned with giving advice on normal development, are readily able to diagnose delayed or defective physical or mental progress.

By these means it should be possible not only to more accurately construct a picture of the incidence of physical and mental handicaps (and also perhaps of hereditary disease) in the county, but also to take earlier measures to ameliorate these conditions—with of course a correspondingly greater hope of success.

HEALTH VISITOR'S SPECIAL REPORT Physically Handicapped.

Mentally Handicapped.

Age Group	Children neglected in their own homes	Squints.	Other Eye Conditions.	Deaf or Partially Deaf.	Speech Defects.	Orthopaedic Conditions	Heart Conditions.	Chest Conditions Bronchiectasis Asthma, T.B.)	Other Conditions.	Spasticity	Mongolism	Mental Deficiency or Retarded	Epileptic	Hydrocephalus	Totals.
0—5															
Cases brought to notice of Health Department but already under treatment (G.P. and hospital).	—	34	5	1	2	28	7	5	26	1	1	13	5	2	130
0—5															
Cases brought to notice of Health Dept. before the initiation of treatment	12	27	3	2	1	20	1	—	8	1	1	5	1	2	84
5—15															
Cases brought to notice of Health Department but already under treatment (G.P. and hospital).	—	3	2	—	2	7	2	9	3	1	—	—	—	—	29
5—15															
Cases brought to notice of Health Dept. before the initiation of treatment	2	2	—	—	—	2	—	—	—	—	—	—	1	—	7
Total	14	66	10	3	5	57	10	14	37	3	2	18	7	4	250

SECTION 25

Home Nursing

At 31st December, 1956, there were employed 59 Queen's or State Registered Nurses, 20 State Enrolled Assistant Nurses, all with the exception of one being State Certified Midwives.

					No. of cases nursed
Medical	...	...	...	...	5,178
Surgical	...	...	...	...	2,316
Tuberculosis	...	...	...	...	189
Infectious diseases	...	...	...	...	13
Maternal complications	...	...	...	...	94
Others	...	...	...	...	35
					7,825
Number of nursing visits paid					122,937
Number of casual visits paid					5,771
					128,708

The number of cases attended in 1956 was 7,825 and the total number of visits, excluding casual visits paid was 122,937. It is, I think, of interest to compare the home nursing figures for 1956 with those of 1953, 1954 and 1955.

		No. of cases nursed			
		1953	1954	1955	1956
Medical	...	4,843	5,218	5,371	5,178
Surgical	...	3,130	2,772	2,575	2,316
Infectious diseases	...	57	61	28	13
Tuberculosis	...	403	317	316	189
Maternal complications	...	142	87	71	94
Others	...	32	27	30	35
		8,607	8,482	8,391	7,825

No. of Nursing Visits to above cases

	1953	1954	1955	1956
Medical	83,061	86,832	87,983	86,372
Surgical	40,651	35,852	35,962	29,907
Infectious diseases .	387	498	581	84
Tuberculosis ...	10,605	8,338	8,859	5,289
Maternal complications ...	1,101	792	161	570
Others	285	168	212	715
Casual visits ...	4,943	5,005	4,782	5,771
	<hr/> 141,033	<hr/> 137,485	<hr/> 138,540	<hr/> 128,705

	1953	1954	1955	1956
No. of nursing visits to patients over the age of 65 years	49,294	59,256	63,570	57,384
No. of nursing visits to children under the age of 5 years	8,676	7,259	4,883	4,068

The 1956 figures are broken down in more detail in the next table and the trend in the type of work which home nurses are now being called upon to do becomes clearer.

- 1 44.60% that is nearly one-half of all nursing visits were made to persons over the age of 65 years, although the number of cases nursed was only 31.98%. An average of 23 visits were made to each such case.
- 2 The number of children nursed under 5 years of age accounted for 8.88% of the total with 3.3% of all nursing visits. An average number of 5.85 visits were made to each child.
- 3 To all other cases an average of 13.3 nursing visits were made. These visits, together with casual visits accounted for 52.1% of the total nursing visits.
- 4 The number of injections given accounted for 35.6% of all the nursing visits.

HOME NURSING — CASES NURSED AND TOTAL NURSING VISITS PAID

No. of cases nursed over 65 years of age:—	Percentage of total cases nursed	Total number of nursing visits to persons over 65 years of age	Percentage of total nursing visits paid
Acute ... 813)
Chronic ... 1,548)	31.98	57,384	44.60
Cancer ... 141)
No. of children nursed under 5 years of age
695	8.88	4,068	3.30
No. of cases of cancer nursed, age under 65 years
74	0.95	...	35.60
Remaining cases ...	58.19
4,554
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For 1956 the home nursing figures show a decrease on those for the previous year, but over the past 4 years a slight decline is noticeable in the total number of cases nursed and the total number of nursing visits paid, with the exception of 1955 when the number of nursing visits paid showed an increase on those of 1954. The most significant decrease over these 4 years is in the number of surgical cases nursed at home and the number of tuberculosis cases. The number of surgical cases has dropped from 3,130 in 1953 to 2,316 in 1956, with a corresponding fall in nursing visits from 40,651 to 29,907. The number of tuberculosis cases nursed at home has fallen from 403 in 1953 to 189 in 1956, with nursing visits from 10,605 to 5,289. These figures reflect a decline in tuberculosis in the county generally and in fact more attention is being paid to the nursing of fewer tuberculosis cases at home. The number of streptomycin injections given to patients at home decreased in 1956 by almost 2,000 from those given in 1955.

Although the nursing visits to patients over 65 years of age show a decrease of 6,186 compared with 1955, these visits account for 46.6% of all nursing visits, a decrease of 1.28%.

No special arrangements are made for the nursing of sick children at home, but children discharged from hospital are referred to the county nursing service by the hospital almoners for special supervision, especially after treatment for burns and scalds.

Housing

At the end of 1956 the houses occupied by district nurse midwives were as follows:—

Houses built by the County Council with garage and surgery	...	...	...	...	...	13
Houses brought from the District Associations						8
Houses built by the North Eastern Housing Association which are to be purchased by the County Council	...	...	...	...	...	6
Houses rented—North Eastern Housing Association	...	...	...	...	...	8
Local Housing Authorities	...					8

The house at Whitehaven (Valley Estate) was completed in November, 1956, and at the end of the year work was in progress both on houses at Langwathby and Lamplugh. Further houses are contemplated at:—

Seascale
Bransty
Longtown
Dearham
Kirkbride
Workington

Hayton
Scotby
Brigham
Greystoke
Millom

SECTION 26

Immunisation and Vaccination

(a) Diphtheria Immunisation

The number of children under school age immunised against diphtheria during the year was 1,953. School children receiving either a primary or reinforcing injection numbered 3,241. Reinforcing injections were given to 27 pre-school children. The total immunisations, primary or reinforcing during the year was 5,221. This total figure includes 1,868 reports of immunisation from general practitioners.

The following table shows the trend in respect of immunisation in Cumberland for the past 10 years.

1956	...	...	...	...	...	...	5,221
1955	...	...	...	...	...	...	9,463
1954	...	...	...	...	...	...	6,880
1953	...	...	...	...	...	...	6,658
1952	...	...	...	...	...	...	8,915
1951	...	...	...	...	...	...	6,489
1950	...	...	...	...	...	...	7,161
1949	...	...	...	...	...	...	10,409
1948	...	...	...	...	...	...	7,235
1947	...	...	...	...	...	...	5,491

At the end of 1956 the percentage figures for children regarded as fully immunised were:—

Under 5 years	...	...	...	...	...	46%
5-15 years	...	...	...	...	...	71.5%

No case of diphtheria has been notified in the county and there have been no notifications of diphtheria and no deaths from the disease in Cumberland since 1949.

The figures for diphtheria immunisation were smaller than in previous years, mainly because this procedure had to be stopped for some months on account of the outbreak of poliomyelitis and the risk of provoking paralysis by continuing immunisation. The Medical Research Council's report on this subject was published in 1956, and as a result guidance is to be expected shortly from the Ministry of Health on the vexed question of combined immunisation against diphtheria and whooping cough. This local health authority has not yet offered vaccination against whooping cough as part of the arrangements under Section 26 of the National Health Service Act, but now that the question of the use of a combined antigen and also the effectiveness of the plain whooping cough vaccine is likely to be settled it is to be hoped that vaccination against whooping cough may be introduced.

(b) Smallpox Vaccination

Smallpox vaccination is not undertaken by the local health authority staff in Cumberland. In 1956 1,275 reports of successful primary vaccinations were received from general practitioners, and 246 reports of revaccinations. Of the 1,275 primary vaccinations, 1,081 were in infants under 12 months.

The percentage figure for successful primary infant vaccinations in Cumberland is 30%. This figure is far too low to give adequate protection of the population, for which 75% of infants should be vaccinated.

(c) Poliomyelitis Vaccination

At the beginning of the year the Ministry of Health announced that a British vaccine against poliomyelitis was to be issued to local health authorities. The County Council resolved to take advantage of this offer and the councils scheme under Section 26 was amended for this purpose. It was forecast that a very limited quantity of vaccine would be available at the start of the scheme and it was decided at Ministry level to which groups of children registration should be offered. Parents were invited to register children born between 1947-1954,

both dates inclusive. In Cumberland the scheme was brought to the notice of the public by advertisement in the local press which indicated that registration forms were obtainable on application from the council's offices and clinics. It was felt in view of the small amount of vaccine available and the administrative difficulties in a scattered rural county that it would be best to register initially children of those parents who were likely to be very eager for vaccination and who would therefore be most likely to attend vaccination sessions at short notice. Children registered numbered 2,678, representing approximately 9% of the eligible population. The distribution by years of birth and sexes is shown in the table.

		Year of Birth								Total
		1947	1948	1949	1950	1951	1952	1953	1954	(all years)
Female	...	208	177	167	177	140	172	151	128	1320
Male	...	169	186	191	191	162	154	167	138	1358
TOTAL	...	377	363	358	368	302	326	318	266	2678

The method of vaccination is to give two injections at an interval of not less than 3 weeks, and instructions were issued that the vaccine was not to be used during what has been normally regarded as the poliomyelitis season, that is from 1st July until 31st October.

The first batch of vaccine received in May was sufficient to give a first injection to those registered children who were born in November in each of the years 1947-1954 and those born in March in each of the years 1951-1954. In the event of any material being left over, it was to be used for children born in August, 1947-1954.

The situation in Cumberland was complicated by the onset of an outbreak of poliomyelitis which coincided with the arrival of the first batch of vaccine. Vaccination in Whitehaven was deferred as long as possible and then as further cases developed and as it would by then have been impracticable to give the two injections recommended by the Ministry of Health within the stated period, that is up to the end of June,

the whole operation was cancelled for that Borough. In the Ennerdale district where a number of cases of poliomyelitis occurred later, those children who had received the first injection were given the second injection when the second batch of vaccine arrived. Second injections were then given to all those children who had had first injections in the rest of the county with the exception of course of Whitehaven.

This whole procedure, with the small number of children involved and a wide area to be covered, was most uneconomic in the use of staff and time, but I think it is to the credit of those members of my staff who handled this matter that when vaccine was again made available in November for the remaining second injections, there were in Cumberland only 6 children outstanding and these were duly vaccinated. The position at the end of the year is shown in the table below, and vaccination of the remaining registered children is proceeding at the present time under slightly different arrangements which will be described in my next annual report.

		Year of Birth								Total	
		1947	1948	1949	1950	1951	1952	1953	1954	(all years)	
Female	...	21	11	12	19	26	29	15	16	...	149
Male	...	17	16	18	16	18	22	23	17	...	147
<hr/>		<hr/>									
TOTAL	...	38	27	30	35	44	51	38	33	...	296

SECTION 27

Ambulance and Sitting Case Car Service

There has been no change in the administration of the ambulance service which has been described in previous reports. The statistical table which follows compares the essential items—numbers of journeys, patients carried, total mileage, as these items affect the three sections of the transport service (ambulances, sitting case cars, and hospital car service), with figures to 31st March, 1957.

One dual purpose vehicle was brought into service during the year as an additional vehicle in the Carlisle and district service, and 2 ambulances were disposed of. At the end of the financial year the fleet consisted of 19 ambulances, 5 dual purpose vehicles, and 5 ambulances transferred to civil defence.

Ambulance Section—Civil Defence

Both recruitment and training in the ambulance and casualty collecting section of the Civil Defence Corps have progressed favourably. In the first year of recruitment there were 98 volunteers for this section and at the end of 1956 there were 300 enrolled members. A full time staff instructor was appointed in March, 1956. Fourteen senior members of the St. John Ambulance Brigade among the volunteers have now qualified as locally trained instructors and these men are undertaking instruction at all the 9 training centres in the county.

Exercises and rehearsals for competitions do much to encourage new members and maintain the interest of volunteers. The ambulance section is now beginning to take part in exercises with other sections of the Civil Defence Corps, mobile first-aid units of the National Hospital Service Reserve, and military units of the Mobile Defence Corps.

Apart from war the training of personnel for ambulance duties may prove to be particularly valuable in this county where the ambulance service is operated at present on an agency basis, in that numbers of people should become interested in the ambulance service and provide a pool from which to recruit personnel for the whole-time service which seems likely to develop.

	AMBULANCES			SITTING CASE CARS			HOSPITAL CAR SERVICE			SUMMARY OF ALL SERVICES		
	Total No. of Journeys	Total No. of Pats. Carried	Total Mileage	Total No. of Journeys	Total No. of Pats. Carried	Total Mileage	Total No. of Journeys	Total No. of Pats. Carried	Total Mileage	Total No. of Journeys	Total No. of Pats. Carried	Total Mileage
Totals for year ended 31st March, 1956 ...	7,866	24,958	247,842	16,700	50,673	411,417	1,465	3,531	77,557	26,031	79,162	736,816
Totals for year ended 31st March, 1957 ...	*7,806	*26,032	*241,429	15,061	451,55	388,234	1,388	3,350	71,650	24,255	74,537	701,313
Increase for year ended 31st March, 1957 compared with 1955/56 ...	—	1,074	—	—	—	—	—	—	—	—	—	—
Decrease for year ended 31st March, 1957 compared with 1955/56 ...	60	—	6,413	1,639	5,518	23,183	77	181	5,907	1,776	4,625	35,503

(Excluding journeys undertaken by other local Health Authorities)

*Includes 430 journeys, 4,360 patients and 4,515 miles for the conveyance of children to occupation centres.

FINANCIAL POSITION—AMBULANCE SERVICE 1956/57.

Note by County Treasurer—

a. The figures which follow relate solely to vehicles owned by the County Council or operated on their behalf.

b. **Mileage and number of patients carried, viz.:**—

	1956/57	1955/56	
Ambulances (including dual purpose vehicles)			
Mileage	241,429	247,842	i.e., a decrease of 6,413 miles.
No. of patients carried	26,032	24,958	i.e., an increase of 1,074 patients.
Sitting Case Cars			
Mileage	459,884	488,974	i.e., a decrease of 29,090 miles.
No. of patients carried	48,505	54,204	i.e., a decrease of 5,699 patients.
Total—			
Mileage	701,313	736,816	i.e., a decrease of 35,503 miles.
No. of patients carried	74,537	79,162	i.e., a decrease of 4,625 patients.

c. **Cost**—including administration and depreciation and interest on vehicles—subject to recoveries from other County and County Borough Councils and subject to Ministry grant under the National Health Service Acts:—

	1956/57 Costs.			1955/56 Costs.		
	Amount	Per patient carried.	Per mile.	Per mile	Per patient carried.	Amount
	£	s. d.	s. d.	s. d.	s. d.	£
Ambulances (including dual purpose vehicles) ...	26,025	20 0	2 2	2 0	20 1	25,043
Sitting case cars	27,065	11 2	1 2	1 1	9 8	26,294
TOTAL	£53,090	14 3	1 6	1 5	13 0	£51,337

Points from the table are:—

1. **Expenditure**—in total, the amount increased by £1,753 i.e. from £51,337 (1955/56) to £53,090 (1956/57).

	Ambulances (including dual purpose vehicles).	Sitting Case Cars.	Whole Service.
2. Cost per mile— 1956/57 compared with 1955/56	Increase of 2d. to 2/2.	Increase of 1d. to 1/2.	Increase of 1d. to 1/6.
3. Cost per patient carried— 1956/57 compared with 1955/56	Decrease of 1d. to 20/-.	Increase of 1/6 to 11/2.	Increase of 1/3 to 14/3.

d. **Number of vehicles at 31st March, 1957—all county owned.**
19 ambulances and 5 dual purpose vehicles.
5 ambulances transferred to Civil Defence.

SECTION 28

Prevention of Illness, Care and After Care Tuberculosis

There has been no change in the administration of this service.

The reports from the chest physicians in East and West Cumberland are set out later in the report.

B.C.G. Vaccination of Contacts

Contacts of tuberculous cases and nurses received B.C.G. vaccination at the chest clinics in 1956 as follows:

Contacts	...	...	...	...	835
Nurses	...	...	...	...	22

B.C.G. Vaccination of 13 year old Children

The B.C.G. vaccination scheme described in detail in last year's report continued. Mantoux testing and B.C.G. vaccination where necessary were offered to all school children in their fourteenth year in the county. This involved 2,890 children (2,802), and the acceptance rate was 76% (80%) which, bearing in mind that some of the non-acceptors would have had B.C.G. vaccination under the contact scheme, may be considered a reasonably satisfactory response, and I believe is rather higher than that found generally in the country. Tests were actually completed on 2,142 (2,190) children, which represents 74% (78%), of the school child population in respect of whom the offer was made. Of these, 755 (667) gave a positive reaction, showing that they had at some time been exposed to tuberculosis infection. The percentage positive was 35.3% (30%). Of the 1,387 (1,523) negative children, 1,386 were given B.C.G. vaccination.

Note: Figures in parentheses refer to the year 1955.

Orthopaedic Treatment

General Statistics

Number on aftercare register, 1/1/56	622
New cases during 1956	194
New cases notified for physiotherapist only ...	38
Cases re-notified after previous discharge ...	5
Number of cases removed from register ...	191
Number remaining on register at 31/12/56 ...	668
Number of attendances at Surgeons' clinics ...	704
Number of attendances at aftercare clinics ...	1,312
X-ray examinations during 1956	100
Waiting for X-ray	53
Home visits	425
Plasters applied	73
Surgical boots and appliances supplied (including insoles)	277

Orthopaedic Conditions Affecting Children Under

Five Years Of Age

Bow legs and knock knee	191
Flat foot	76
Congenital defects of feet and otherwise ...	70
Poliomyelitis	7
Torticollis	5
Cerebral palsy	8
Congenital dislocation of the hip	3
Birth palsy	6
Scoliosis, lordosis and kyphosis	1
Postural defects, feet and otherwise	3
Hallux valgus and deformed toes	10
Pseudocoxalgia	1
Perthes and Coxa vara	2
Spina bifida	3
Osteomyelitis	1
Other conditions	31

418

Tuberculosis of Bones and Joints.

	Adults	School Children	Under 5 years.
Totals	73	22	1

Adult Non-Tubercular Cases

Poliomyelitis	21
Arthritis	15
Scoliosis, lordosis and kyphosis	11
Congenital dislocation of the hip	15
Slipped epiphysis	2
Flat foot	7
Osteomyelitis	9
Vertebral disc protrusion	27
Hallux valgus and deformed toes	11
Injuries including fractures	29
Cerebral palsy	12
Congenital defects	1
Postural defects, feet and otherwise	12
Spina bifida	2
Other conditions	2
	176

Hospital Admissions

Name of Hospital.	In hospital at 1/1/56.	Admitted during the year.	Discharged.	In at 31/12/56.
Ethel Hedley Hospital, Windermere ... (including school children).	15	50	49	16
Shropshire Orthopaedic Hospital, Oswestry ... (in addition to these long stay cases 11 patients were admitted and discharged after short-term review).	1	5	3	3
Cumberland Infirmary and City General Hospital, Carlisle ... (including school children).	1	25	23	3

The above figures refer only to patients admitted to hospital from the county clinic waiting lists.

The orthopaedic clinics have been well attended during the year and it is pleasing to note that the parents of small children are found to show an increasing anxiety over minor defects, especially when the baby begins to walk. Treatment and advice at this stage does much to avoid the more serious defects which in the past tended to be noticed only when the children reached school age. The number of adults being seen at the clinics increases and the physiotherapists are undertaking more domiciliary aftercare. In a county like Cumberland this service, which has been in being for many years, is particularly useful in that it enables frequent supervision of exercises and splints and avoids long and tiring journeys to the centres of population. Domiciliary physiotherapy is most valuable for the cerebral palsy patients as it is found that better co-operation and relaxation are obtained in the more familiar surroundings of home. The aftercare sisters frequently visit and give advice at home where there is a large family.

Prevention of Blindness and Care and After Care of Blind or Partially Sighted Persons

The welfare of the blind is dealt with each year in detail by the County Welfare Officer in his section of this report. No material change has taken place over the past year.

The following table shows the position in the county for 1956:—

A. Follow up of Registered Blind and Partially Sighted Persons

		Cause of Disability.						
		Cataract.	Glaucoma.	Retro- lental Fibroplasia.	Others.			
(i)	Number of cases Registered during the year in respect of which para (7c) of Forms B.D.8 re- commend:—							
	(a) No treatment ...	21	...	7	...	—	43	
	(b) Treatment (medical surgi- cal or optical) ...	22	...	5	...	—	18	
(ii)	Number of cases at (i) (b) above which on follow-up action have received treat- ment ...	2	...	3	...	—	8	

B. Ophthalmia Neonatorum

- (i) Total number of cases notified during the year ... 2
- (ii) Number of cases in which:—
- | | |
|---|-----|
| (a) Vision lost) | |
| (b) Vision impaired) | Nil |
| (c) Treatment continuing at end of year ...) | |

Cancer

I am indebted to Dr. J. Milligan, Consultant Radio-therapist to the Special Area Committee of the Newcastle Regional Hospital Board, for the report which follows:—

“It should be possible to obtain a reasonably accurate estimate of the number of cancer cases present in a given population at any particular period and to say how these cases were treated and eventually how good or bad were the results of treatment. The need for registration of all cancer cases and annual follow-up is readily apparent. Under present circumstances we can only attempt to register cancer cases referred to hospital though in some other areas the family doctor is invited to document cases which he does not so refer.

“It is estimated that the hospital services of East and West Cumberland are available to 330,000 persons in Cumberland and the adjacent counties. Statistics from other areas suggest that in a population of this size, about 1,040 new cases of malignant disease of all types will be diagnosed each year. Of these, about 20% for a variety of reasons, are unlikely to attend hospital. It would be expected, therefore, that if the registration by hospitals of all cases of cancer attending were perfect, we should have records of about 800 new cases each year.

“For 1955 the new case registrations were 573. For 1956 the cases totalled 693, sub-divided as follows:—

City	...	...	...	...	166
East Cumberland	...	...	...	...	106
West Cumberland	...	...	...	...	350
Westmorland	...	...	...	...	34
Northumberland	...	...	...	...	3
Lancashire	...	...	...	...	1
Dumfriesshire	...	...	...	...	29
Roxburghshire	...	...	...	...	4
					<hr/>
					693
					<hr/>

"This shows an increase of 120 in the number of new cases registered. It is by no means certain that these represent a greater incidence of disease; it is likely that registration has improved to this extent. Even so, the figure of 693 falls well short of the potential total of 800, suggesting various possibilities—either registration can be improved still further, or the cancer incidence is lower than elsewhere, or more than 20% of cancer patients are not seen at hospital. These questions, so far as Cumberland is concerned, may be answered in succeeding years."

Leukaemia

In 1956 a national survey organised by Dr. Alice Stewart of the Department of Social Medicine, Oxford, was undertaken. The investigation concerned young children who had died of leukaemia and other malignant disease, and the object was to elucidate the cause of a real increase in the incidence of this disease which has been noted in recent years among all ages but most particularly among children. Investigations in Cumberland were undertaken by Dr. Machell, Deputy County Medical Officer, and it is satisfactory to be able to report that the preliminary findings of the survey indicate that some of the causes of leukaemia are becoming clearer. A further survey which will include adults is contemplated in the coming year and once again we have agreed to participate.

Health Education

In 1956 there were further developments in the health education programme and more requests for "health talks" were received. It is impossible to assess the value of this type of work except over a long period of time and the results can never be spectacular. The people engaged in this work must have a firm conviction of the value of health teaching and they must retain their enthusiasm. Talks, lectures and discussions should be appropriate to the particular audience. Speakers have to have regard to the changing social structure and habits of the community, and they must be constantly reviewing their work and ready to change their opinions and techniques if need be.

About 30 members of the medical and nursing staff are now undertaking specialized health teaching. 250 lectures, talks and discussions took place in 1956. Visual aids and equipment are in constant use and these include projectors and film strip, flannelgraphs, demonstration materials, leaflets and posters.

Certain aspects of the more formal health teaching are of special interest.

Increased facilities are being made available for the expectant mother. In Maryport, Millom, Whitehaven and Workington the domiciliary midwives have started classes for the teaching of parentcraft and relaxation during the ante-natal period. The midwives conduct these classes in the County clinics. Evening sessions are held where necessary and all women booked for home confinement are invited to attend. The syllabus ranges from relaxation, with demonstration of gas and air apparatus, to subjects such as nutrition and mothercraft. The importance of the health and well-being of the whole family, including the place of the father in the home, is stressed. It is found that women who attend this type of instruction frequently approach the forthcoming labour with more confidence. Attendance at these classes has not been high but an improvement is hoped for when the classes are well established and better known.

A number of district nurses gave a course of five talks on home nursing to members of the Welfare Section of Civil Defence. Assistance has been given to the Women's Voluntary Services with their "One-in-Five" talks. Here the nurses give a talk on "How to care for a sick person at Home." Although the object of this talk is a preparation for atomic warfare it is, of course, most useful in civilian life in that it trains many members of the community in simple home nursing. This knowledge cannot be too widely disseminated in view of the increasing number of elderly people who should and can be nursed at home, thus to some extent relieving the pressure on chronic sick and Part III accommodation.

There were changes in health education in schools as far as the health department was concerned. In the

past health visitors have given informal talks to groups of children at the routine hygiene inspections but last year several head teachers asked for a series of talks on health subjects for older school children. Three series of talks were organized for older girls lasting for about forty minutes and given weekly or fortnightly to fit in with the school programme. This has proved popular and further requests have been received.

The administrative nursing staff lecture on the social aspects of diseases to student nurses at the hospitals, and fortnightly talks are given to girls on the pre-nursing course at the Wigton secondary modern school.

Women's Institutes and many other organizations ask for talks on various health matters. No request was refused in 1956, and the opportunity was taken on all these occasions to discuss topical health matters with special emphasis on mental health, particularly in regard to the home and family.

Prevention of Break-up of Families

I dealt fully with the arrangements in Cumberland under this heading in my report for 1955.

Since 1950 the Designated Officer (the Children's Officer) has called regular meetings of the representatives of the various services, which include the Children's Department, Health Department, Education Department, Welfare Department, Housing and Local Sanitary Departments, Mental Health, Moral Welfare, Probation Service, National Assistance Board, The National Society for the Prevention of Cruelty to Children, Women's Voluntary Services, and others. Four meetings were held annually, two in Whitehaven for the West and two in Carlisle for the East of Cumberland. Reports on each case to be discussed are sent to the Designated Officer from the social workers most particularly concerned with each case, and always from the Health Visitor. Each case is discussed by the Committee and a decision is reached as to what type of supervision is likely to be most effective for that particular family, and which worker, or workers, should exercise this supervision.

In 1956 the Designated Officer called three meetings to discuss new cases and cases under review. There was a new departure towards the end of the year in that, as an experiment, several case conferences were held to discuss two or three families presenting unusually difficult problems. These meetings were held in the area where the families lived and, apart from the Designated Officer and the County Medical Officer, only the District Medical Officer of Health and the local social workers directly concerned were in attendance. This appeared to be a very satisfactory method of dealing with the cases and it was suggested that in the coming year the two large committees should be split up into a larger number of area meetings, each covering the administrative area of one District Medical Officer of Health who is also, with one exception, Assistant County Medical Officer. The Health Visitor and other workers concerned with each family could then attend these smaller meetings, and a fewer number of cases would be considered. It was felt that this arrangement would encourage the local officers to take more interest in cases, allow fuller consideration of details, and make certain that each case would be discussed by those most intimately concerned.

At the time of writing the new arrangements have been in operation for six months and appear to be satisfactory, but it is too early to make detailed comment.

SECTION 29

Home Help Service

There has been no change in this service. The statistics are as follows, together with comparative figures for previous years.

Home Helps:—

No. of home helps accepted and enrolled on the register at 1st January, 1956	...	...	182
No. of home helps accepted during year	...		61
			<hr/> 243
No. of home helps resigned during year	...		45
No. of home helps at 31st December, 1956	...		<hr/> 198

Districts in which the home helps reside:—

	1956	1955	1954
Alston	8	10	7
Aspatria	17	15	16
Border Rural	37	35	37
Cockermouth	3	4	4
Ennerdale Rural	20	20	19
Keswick and Threlkeld	5	4	1
Maryport, Dearham and Gt. Broughton	16	15	19
Millom and district	10	6	8
Penrith and Penrith Rural	23	20	18
Silloth	11	11	11
Whitehaven, Distington and St. Bees	14	9	11
Workington	20	17	11
Wigton and Mealsgate	14	16	18
	<hr/> 198	<hr/> 182	<hr/> 180

Householders:—

No. of applications received for home helps	479	487	455
No. cancelled or not supplied	169	203	175
No. of new cases helped	296	258	265
No. of cases on books 1st January	317	252	236
Cases pending	14	25	36

Analysis of cases helped:—

Confinements	73	55	79
Tubercular cases	19	19	16
Old age and infirmity	304	230	190
Mental health	2	2	3
Cardiac	49	48	45
Blind	30	21	13
Cancer	2	2	3
Illness of long duration (cerebral haemorrhage, rheumatoid arthritis, etc.)	86	77	85
Illness of short duration (post operative, influenza, etco)	48	56	67
	<hr/> 613	<hr/> 510	<hr/> 501

In each area meetings of home helps are held at which problems are discussed. In addition visits have been paid as follows:—

To householders	1,253
home helps	702
	<hr/> 2,015

SECTION 51

Mental Health Service

The Royal Commission which was appointed in 1954 to enquire into the existing law and administrative machinery involving the certification, detention, care, discharge, supervision, etc., of patients who suffer from mental illness or mental defect, published its report and recommendations in May, 1957. The report extends to more than 300 pages, and it would obviously be impracticable to comment at any length on the recommendations, but the indications are that the mental health aspect of the local health authority's functions are to be modified and expanded to such an extent that I feel I must make specific reference to the possible impact which the report may have on the mental health services before submitting my comments on the work of the Mental Health Section during 1956.

The general tenor of public thought which has developed during recent years is that mental illness and mental defect should be regarded as coming more within the same sphere as physical illness. Very broadly, therefore, the Royal Commission recommends that wherever possible the existing law should be altered so that suitable care may be provided for mentally disordered patients with no more restriction of liberty or legal formality than for people who are under care because of other types of disability, and that compulsory powers (detention) should be used only when they are positively necessary to over-ride the patient's own unwillingness or the unwillingness of his relatives, for the patient's own care or for the protection of others.

It is refreshing and in keeping with modern development to know that changes in terminology are recommended (e.g., the terms idiot, imbecile, mental defectiveness would no longer be used) and that special provision is made for that group of mental disorders known as psychopathic states which are at present recognised medically but for which no special provision is made in the legislation.

If the recommendations of the Royal Commission are implemented by Parliament, the administrative organisation of the mental health services will be extended to such an extent as to constitute a challenge to progressive local health authorities for many years to come. It is pointed out that the mental hospitals should provide in-patient and out-patient services for patients who need specialised medical treatment or continual nursing attention, and that the aim of treatment should be to make the patient fit to live in the general community. The Royal Commission recommends that no patient should be retained as a hospital in-patient when he has reached a stage at which he could return home if he had a reasonably good home to go to, and at that stage the provision of residential care would become the responsibility of the local authority. This suggestion that the local health authorities should provide residential care for the mentally disordered is entirely new, and most people who have any knowledge of our present mental hospitals and mental deficiency colonies, will realise that a fair proportion of the present inmates no longer require or are unable to benefit from active medical treatment or training, and no longer require continuous or highly skilled nursing attention. This class of patients need only custodial care which may in the future result in their discharge from the specialist hospitals to hostels or homes which will have to be provided by the local authorities. Secondly, the Royal Commission recommends that the local authorities should be responsible for preventive services and for all types of community care for patients who do not require in-patient hospital services or who have had a period of treatment or training in hospital and are ready to return to the community. This may involve the provision of day or residential training centres for severely sub-normal children, training or occupation centres and social centres for adult severely sub-normal patients, psychopathic patients or patients with residual disabilities after a mental illness, residential accommodation for many types of patients including old people with mild mental infirmity and general social help and advice to patients of all types and ages and their relatives. Thirdly,

new arrangements are recommended for the diagnosis and periodical re-assessment of patients who are thought to be severely sub-normal or psychopathic. The Royal Commission recommends that diagnostic clinics should be organised which would deal with adults as well as children.

I must emphasise that what has been said above merely outlines the major changes which we can expect to develop from the Royal Commission's report, and no mention has been made of procedural details as applied to individual patients which will extend the work of the Mental Health Department, but this brief outline will serve to indicate the trend of the tremendous development of the local authority's responsibilities in the field of mental health as a result of this extensive and far-seeing report.

Administration

No change has been made in the administrative machinery by which the Local Health Authority's mental health services are carried out, details of which have been published in previous annual reports.

It is becoming increasingly difficult to secure the services of trained social workers. Until February, 1956, we considered ourselves fortunate in having at least the part-time services (for four days each week) of a psychiatric social worker of very considerable experience, but when she resigned for domestic reasons, it was impossible to fill the vacancy, even on a part-time basis, for twelve months. In February, 1957, a part-time worker who had basic training in social science, but who was not specifically qualified in mental health, was able to offer her services for approximately two days each week. The post of mental health worker in East Cumberland remained vacant until September, when Miss Buck took up the appointment on the completion of her degree course in social studies.

The Mackintosh Committee presented its report and recommendations on the supply and demand, training and qualifications of social workers in the mental

health service to Parliament in 1951, and now another Committee appointed by the Minister of Health is considering the proper field of work and the recruitment and training of social workers at all levels in the health and welfare services of local authorities.

We can confidently expect an enormous expansion of community services for mental health within the next few years in view of the Royal Commission's recommendations and since it has not been found possible to secure trained staff to carry out our present mental health commitments as adequately as could be desired, and as recruitment and training in any case take a considerable time, I suggest it would be wise to give consideration to a training system whereby suitable candidates could be given "in-service" training under the guidance of experienced officers.

Work Undertaken in the Community

(a) Under Section 28 National Health Service Act, 1946

This section of the National Health Service Act empowers local authorities to provide services for the prevention of mental illness and for the care and after-care of the mentally ill and defective, but the power is at present only permissive, as the Minister of Health has not so far issued a direction that such services shall be provided by the local authorities. It has often been pointed out previously that our inability to provide preventive and after-care services for the mentally disturbed is the weakest feature of our present mental health service. Once more this is entirely a question of staffing as repeated advertising and direct approaches to the training schools have failed to produce a single applicant with the necessary training for this specialised work. Only one out of every six local health authorities in England and Wales has a trained psychiatric social worker in its mental health team, so our position in Cumberland, where we could use-

fully use three such workers, is no worse than that of more than 80% of local health authorities.

Bearing in mind the trend towards a general re-orientation away from institutional care in its present form and towards community care, and the specific recommendation of the Royal Commission that the provision of preventive and after-care services for the mentally sick should be imposed as a duty by the local health authorities, the success of the mental health service of the future seems to hinge around the availability of trained staff. Here again I would suggest that we should carefully consider subsidising suitable candidates in their training for work as psychiatric social workers in similar fashion to the scheme which is at present in operation for the training of health visitors.

Although we cannot record specific services provided for the mentally ill or defective under Section 28 of the National Health Service Act, we must not forget the considerable extent of valuable work in this field which is carried out with the same end in view by a great variety of people and organisations. It is not generally realised what a wide variety of workers are engaged even very indirectly in the preventive and aftercare aspects of mental health, and it would be quite impossible to publish a comprehensive list of such people. Quite apart from those employed directly in mental health work, one's mind automatically springs to such people as the specialists in general medicine, general practitioners, health visitors, school nurses, children's officers, probation officers and the numerous officers of the national schemes of social services such as Labour, National Insurance and National Assistance, all of whom make valuable, albeit indirect contributions in the prevention and aftercare of mental illness.

*(b) Under the Lunacy and Mental Treatment Acts,
1890-1930*

During 1956, 419 Cumberland patients entered mental hospitals for treatment and of these all but 21 were admitted to Garlands Hospital. It is to be noted that nearly 84% of the patients requiring treatment for mental illness in the county entered hospital as voluntary patients, and that this proportion compares very favourably with the average for England and Wales as a whole. This reflects the rapidly changing attitude to mental disorder and results in a decreasing need for "certification" and "detention."

The Local Health Authority's officers whose duty it is to take official steps in providing care and treatment for patients suffering from mental illness are involved only in those cases in which a statutory process is invoked. Because the proportion of voluntary admissions to mental hospitals continues to increase, there is a corresponding decrease in the percentage of the total cases in which the services of a duly authorised officer are required.

There has been some criticism of the powers of this type of officer who is at present authorised, on his own initiative and without medical support, to admit mentally disturbed patients to designated hospitals, if necessary against the wishes of the patient and/or his relatives. It seems clear that there will be radical changes in the law relating to the powers and duties of "Duly Authorised Officers" as a result of the recommendation of the Royal Commission that no one who is not medically qualified should be required to state an opinion on the state of a patient's mind or his need for care on his own responsibility, nor to take action without medical advice.

(c) Under the Mental Deficiency Acts, 1913-38

(1) Ascertainment.

The following table analyses the new cases officially ascertained during 1956 as being defectives within the meaning of the Mental Deficiency Acts:—

Defectives "subject to be dealt with"

	Male	Female
(a) Reported by Education Authority as ineducable (Section 57 (3) and 57 (4) Education Act, 1944)	1	2
(b) Reported by Education Authority as requiring supervision on leaving school (Section 57 (5) Education Act, 1944)		
(i) on leaving special schools	1	1
(ii) on leaving ordinary schools	2	1
(c) Referred by Police or Courts	2	—
(d) Referred from other sources	5	5
	<hr/>	<hr/>
Total "subject to be dealt with"	11	9
Defectives not at present "subject to be dealt with"	1	5
	<hr/>	<hr/>
Total	12	14

During the year 266 cases were referred to the Mental Health Section for some form of investigation and/or treatment. Apart from those officially ascertained as defectives, 83 children were referred to Child Guidance Centres for further investigation and treatment of maladjustment or behaviour disorders, and 29 children were reported to the Education Authority as requiring some special form of educational treatment because of educational sub-normality.

(2) *Supervision and Guardianship*

For the first time since the National Health Service Act was implemented in 1948, the total number of defectives within the jurisdiction of the local health authority at the end of the year under review was smaller than that of the previous year (646 at the end of 1956 by comparison with 651 at the end of 1955). This overall decrease is accounted for by the quite exceptional number of patients discharged from Order (of detention in hospital), and my observations about this appear later in the report. The supervision of defectives living in the county whether under guardianship, statutory or voluntary supervision is primarily the task of the mental health field worker, and the year under review was particularly difficult from a staffing point of view. Mrs. Erskine, mental health worker for East Cumberland, resigned in January and the post

was vacant until September when Miss Buck took up the post. This meant that for eight months of the year there was no mental health worker for approximately half of the administrative county. By force of circumstances and since the only other social worker and the Mental Health Officer between them could cope only with really urgent matters arising in East Cumberland, the supervision of defectives in that part of the county was minimal for the greater part of 1956.

The following table shows the number of defectives under various forms of care in their own home (as distinct from hospitals or institutions) at the end of each year since 1948.

Year	Guardianship	Statutory Supervision	Voluntary Supervision	Total
1948	72	99	23	194
1949	66	119	52	237
1950	62	135	45	242
1951	60	152	42	254
1952	54	183	37	274
1953	49	207	36	292
1954	48	193	37	278
1955	47	219	34	300
1956	46	216	39	301

I should perhaps preface my observations on these figures by pointing out that it is the duty of the local health authority under the Mental Deficiency Acts to provide suitable supervision for ascertained mental defectives who are subject to be dealt with under the Acts or (alternatively) "if such supervision affords insufficient protection, to take steps for securing that they should be dealt with by being sent to institutions or placed under guardianship" For many years there has been a serious shortage of institutional accommodation for defectives throughout the country as is evidenced by the degree of present overcrowding in the mental deficiency hospitals (8.3% is the latest published figure) and the national waiting list for institutional care of nearly 7,000 patients. This unhappy state of affairs also means that at least since 1948 and in common with the rest of England and Wales, we

have been unable to carry out the duty which is imposed by law to arrange for the appropriate care in hospital of those defectives who could not be afforded adequate care, control or protection in their own homes.

From the table above, a steady increase in the total number of patients under the various forms of domiciliary care will be noted—indeed each year has shown an increase on the preceding year with the single exception of 1954, during which year we were able to transfer a number of patients from their homes to the hospital care which they so urgently required. This was only possible because a number of extra beds became available as a result of building at Dovenby Hall Hospital. The number of defectives subject to guardianship orders continues to decrease mainly because it is virtually impossible to find suitable persons to undertake the role of statutory guardian to a defective. A guardianship order can only be made when there is available a guardian who is able and willing to undertake the considerable legal responsibilities which the present Acts impose, and to observe the formalities laid down by the regulations. There is no legal provision to permit the placing of a defective under the guardianship of a local health authority itself, but only under the guardianship of an individual. It is noted that the Royal Commission has recommended that local health authorities as well as private individuals should be empowered to act as guardian to mentally disordered patients if necessary. The results of continued activity in the field of ascertainment are reflected in the number of cases under statutory supervision, which has more than doubled since the National Health Service Act.

Contrary to popular belief, it is always our endeavour to retain mental defectives within the community if at all possible and we consider admission to institutional care only as a last resort. Hospitalisation is regarded as something akin to a confession of failure on the part of the local health authority to stimulate or provide conditions which would enable the patient to remain in his or her own home. At the same time it is inevitable that with the best will in the world it is

quite impossible in a private household to cope indefinitely with a severely handicapped defective. If, in addition to gross mental retardation the patient is also physically handicapped (e.g. by paralysis, epilepsy or blindness) or if he is persistently incontinent, noisy, destructive, aggressive or anti-social, then adequate care can only be afforded under hospital conditions. In considering the desirability of admission to hospital of a particular patient, we must bear in mind not only the adequacy of care which is available at home, but the toll taken in providing such care on the physical and mental wellbeing of the person upon whom the load falls most heavily (often the mother), and on the family unit as a whole.

Only those whose daily job it is to care for defectives at home know the social problems which are created by the enforced retention of certain types of defectives within the family, and because of the appalling deficiency of hospital accommodation, particularly for low grade defectives, the mental health worker, whose duty it is to "supervise," all too frequently must direct her efforts to making a little more tolerable the lot of those upon whom the burden falls.

The only break in the clouds which surround this unfortunate aspect of domiciliary mental health work is the comparative ease by which we are able to provide hospital care for a purely temporary period. The value of the scheme which was introduced by the Ministry of Health in 1952, has been the subject of most favourable comment in previous reports. By this relatively new provision, the local health authority was authorised to arrange for the short-term care of defectives in hospital without legal formality or implication to relieve critical situations in a defective's home. Administrative procedures, no matter how carefully prepared and water-tight in design, depend for their usefulness on the ability and willingness of all concerned to make the scheme work. I cannot, therefore, speak too highly of the generous help and willing co-operation we receive from the Medical Superintendent of Dovenby Hall Hospital (Dr. Ferguson) in this direction, and I am told on excellent authority that pro rata to its size,

Dovenby is used for this most necessary service to a greater extent than any other mental deficiency hospital in the country. As the scheme has developed during the last few years its scope has been broadened and its usefulness extended in consequence. Not only can we generally cope with the usual form of domestic crisis (such as the sudden illness of the person mainly responsible for the care of a defective at home, relatives being in urgent need of relief from the continual strain of looking after a troublesome patient, or the defectives themselves being in need of treatment which because of mental defect cannot conveniently be given in a general hospital), but we are able to relieve many other difficult situations which do not come strictly within the interpretation of "urgency" which is envisaged by the Ministry circular. One particularly valuable service which is now possible (but which was legally impossible before the introduction of Circular 5/52) is the admission of patients primarily for observation and diagnosis. Another unseen advantage of the scheme lies in the health publicity value of this form of admission as a result of which a colony for mental defectives is seen in its true light by an increasing number of people, not as a place where patients are "detained" for an indefinite period, but as a happy community devoted to the training and to the physical, social and mental welfare of the inmates.

(3) *Occupation and Training*

Of the three types of training which may be provided by local health authorities in carrying out their duties "to provide suitable training or occupation for defectives who are under supervision or guardianship," it has so far only been practicable in Cumberland to provide day training centres. In no part of the county is there yet a sufficient demand for the establishment of an industrial centre, but there is evidence that in the West Cumberland coastal area some provision will be required in the not too distant future for the sheltered occupation of mentally disordered adults (particularly men) who are unemployable under competitive conditions.

Home teaching of defectives who live too far away from day training centres, or who for physical reasons cannot attend such centres, has been tried on a small scale but has not proved to be satisfactory.

The following table gives details of the training position at the end of 1956:—

		Under 16		16 & over		Total	
		M	F	M	F	M	F
Number attending occupation centre	...	21	16	1	6	22	22
Refused available facilities	... ..	1	5	—	—	1	5
No occupation centre available	...	10	11	2	5	12	16
Total suitable for training in occupation centres	...	32	32	3	11	35	43
Number suitable for training in industrial centre	...	—	—	29	9	29	9
Number suitable for home training	... ..	—	—	3	21	3	21

The full-time day training centres which have been established at Whitehaven and Wigton continue to do most valuable work, and we are grateful to the City of Carlisle in accepting for training at the Kingstown Centre a limited number of children from the county area immediately surrounding Carlisle. Because of an increasing demand in West Cumberland, plans have been submitted for approval by the Ministry for an extension to the present Whitehaven Occupation Centre which will enable about 25 more children to be admitted. We also look forward to the building of a new centre at Wigton to replace the present inadequate (rented) accommodation.

Children from the Cockermouth, Maryport and Workington areas were excluded from attendance at the Whitehaven Occupation Centre from the 4th June, 1956, until the end of the summer term because it was thought undesirable for them to be travelling daily into and out of an area where a number of cases of poliomyelitis had occurred.

The difficulties of providing training facilities for all suitable candidates in a scattered rural area such as Cumberland are fairly obvious and have been outlined in previous reports, and one possible solution to the problem was suggested by my predecessor in the shape of residential training centres for those children living in the more remote parts of the county area. It is, therefore, refreshing to note that the Royal Commission has emphasized "the difficulty of organising training centres in sparsely populated rural areas where in order to collect a large enough group of children to justify the provision of a centre, it would be necessary to bring children from such long distances that to transport them to the centre every day would be bad for the children as well as very expensive." In such areas the report indicates that residential training centres may be needed or residential homes for boarders near centres which are also attended by day pupils, and goes on to suggest that some children might be weekly boarders returning home for weekends, and that others might stay for the equivalent of a school term.

Before concluding this paragraph, I feel that I must comment on the recommendations of the Royal Commission generally as regards occupation and training for all types of mentally disordered patients. At present we provide only day training facilities for rather more than half of the mental defectives in the community who are able to profit by such training. If the recommendations of the Royal Commission are implemented, the local health authority will also be required to provide occupational or training centres, sheltered workshops and social centres for adult severely sub-normal or psychopathic patients and for patients with residual disability following mental illness which cannot be catered for under the general rehabilitation services for disabled persons.

INSTITUTIONAL TREATMENT

At the end of 1956, 345 patients from the county were in mental deficiency institutions or on licence therefrom as follows:—

	1956	1955
In the area of the Newcastle Regional Hospital Board:—		
Dovenby Hall Hospital, Cockermouth ...	247	254
Durran Hill House, Carlisle ...	7	7
Aycliffe Hospital, Heighington, Darlington	6	6
Morpeth and Northgate District Hospital ...	4	4
Lemington Hall, Alnwick ...	2	2
General Hospital, West Hartlepool ...	2	2
Prudhoe and Monkton Hospital, Prudhoe	3	3
Bishop Auckland Institution, Durham ...	1	1
In Other Regions:—		
Milnthorpe Hospital, Kendal ...	30	30
Royal Albert Hospital, Lancaster ...	17	17
Lisieux Hall, Chorley ...	4	3
St. Mary's Home, Alton, Hants ...	2	2
Hortham Colony, Almondsbury, Bristol ...	2	2
Coleshill Hall, Birmingham ...	—	1
Monyhull Hall, Birmingham ...	2	2
Totterdown Hall, Walton-on-Thames ...	1	1
St. Raphael's, Barwin Park, Herts ...	1	1
House of Help, Bath ...	1	1
Stanley Hospital, Ulverston ...	1	1
Leavesden Hospital, Watford, Herts ...	1	1
Clarefield Court Hospital, Maidstone ...	1	—
Under the jurisdiction of the Board of Control:—		
Rampton Hospital, Retford, Notts ...	4	4
Moss Side Hospital, Maghull, Liverpool ...	6	6
	<hr/> 345	<hr/> 351

This total represents a decrease of six by comparison with the previous year, and is the result of fourteen new admissions (all but one to Dovenby Hall Hospital), fourteen discharges from Order, and six deaths. One patient was transferred from Dovenby to the statutory guardianship of his mother, and one female defective was transferred to Dovenby from guardianship.

Throughout the country the year has been marked by the number of patients discharged from Orders of detention in hospital, and there seem to be a number of reasons for the changed attitude of the Board of Control in the exercise of its power of discharge. Some

doubt arose as a result of a decision in the High Court as to the legality of Orders of detention made on the grounds of "neglect" at a time when the patient was resident in a public institution, children's home, etc. All such cases were specially reviewed on the instructions of the Board of Control and a number of patients discharged as a result. Secondly the Board of Control amended the procedure for the periodic review of patients on licence from institutions and advised hospital management committees and the superintendents of institutions as follows :—

"Patients should, of course, be discharged as soon as this is warranted, and the Board of Control are concerned about the number of mental defectives who continue to be kept on licence for long periods. They appreciate that the circumstances of patients and the periods of trial they may need before discharge vary considerably, but they would normally expect that a patient *should be discharged after a trial on licence for twelve months at most unless there are overwhelming reasons to the contrary*. They would, therefore, ask that Superintendents and Hospital Management Committees should review specially all the circumstances of patients at the end of one year on licence with a view to discharge, if suitable."

I think it is true and fair to comment that in the opinion of most local health authorities, who after all have the responsibility of the community care of defectives and who have very wide experience of the social problem which the defective presents in the community, many patients have been prematurely discharged from the control which an Order imposes, and that this in many cases has not proved to be in the best interests either of the patient or the community. Many mental defectives are able to leave the hospitals on licence to take up sheltered employment under good working and domestic conditions, and indeed this is surely one of the objects of admitting the higher grade patients to the training and stabilisation which is afforded by the mental deficiency colonies. At the same time, the granting of licence to carefully selected employment giving adequate guidance and supervision

to the defective, does not necessarily mean that at the end of twelve months the patient is able to maintain himself without external support. All too frequently it is found that although a defective may be able to leave hospital on licence (and incidentally vacate a hospital bed which is always needed) he or she may have no relative who is able and willing to afford support and help when needed, and even more frequently, the defective has no home to which he can be discharged. It has been our experience that defectives who have been absent from the hospital and living in the community for lengthy periods on licence, often working in resident posts, have been discharged from Order when they have neither a settled home nor relatives. Under these circumstances, as completely free agents, it may happen that defectives on being informed of their discharge from Order will leave the employment in which they have both worked and lived quite successfully for what may be a lengthy period, to find themselves without a home, without relatives to guide them and competing in an increasingly competitive labour market.

Turning now to the waiting list position for institutional care, the following table shows the situation as it was at the end of 1956. Corresponding figures for 1955 are given in brackets.

	Under 16	16 years and over.	Total
1. In urgent need of institutional care			
(a) Cot and chair cases	2 (2)	— (—)	2 (2)
(b) Ambulant low grade cases	2 (5)	1 (—)	3 (5)
(c) Medium grade cases	1 (2)	2 (3)	3 (5)
(d) High grade cases ...	— (—)	1 (—)	1 (—)
	5 (9)	4 (3)	9 (12)
2. Not in urgent need of institutional care			
(a) Cot and chair cases	3 (2)	— (—)	3 (2)
(b) Ambulant low grade cases	2 (—)	4 (3)	6 (3)
(c) Medium grade cases	8 (13)	9 (6)	17 (19)
(d) High grade cases...	— (—)	2 (3)	2 (3)
	13 (15)	15 (12)	28 (27)

Whilst it is to be noted that our total waiting list is no bigger than it was last year and contains fewer names than at any time since 1950, I cannot foresee that even the present undesirable position will be maintained. There is an ever increasing demand for the hospital care of defectives and the rate of hospital building, coupled with staffing difficulties and the overcrowding of existing accommodation, suggests that the waiting list must inevitably lengthen. It is also unfortunate that because of the total insufficiency of hospital accommodation, the tendency is to offer any available bed to the patient on the waiting list who is most urgently in need of hospital care. All too often this means a low grade defective who needs a good deal of nursing care and whose chances of being trained to be able to fend for himself in the community are small. In consequence, the hospitals tend to cater in increasing measure for the lower grade of patient to the detriment of trainable defectives of higher grade who could within a relatively short period be trained to become socially acceptable and efficient members of the community.

REPORTS AND NOTES ON INDIVIDUAL SERVICES AND OTHER MATTERS

Infectious Diseases

Inspection and Supervision of Food

Pasteurised Milk

Housing

Water and Sewerage

REPORTS AND NOTES ON INDIVIDUAL
SERVICES AND OTHER MATTERS

Intentional Diseases
Inspection and Supervision of Food
Pasteurized Milk
Housing
Water and Sewerage

NOTIFICATION OF CASES OF INFECTIOUS AND OTHER NOTIFIABLE DISEASES

	Scarlet Fever	Whooping Cough	Acute Poliomyelitis, Paralytic	Non-paralytic	Measles	Diphtheria	Dysentery	Meningococcal Infection	Ac. Pneumonia	Smallpox	Acute Encephalitis, Infective	Post Infectious	Enteric or Typhoid Fever	Paratyphoid Fever	Erysipelas	Food Poisoning	Tuberculosis, Respiratory	Meninges & C.N.S.	Other	Puerperal Pyrexia	Ophthalmia Neonatorum
Urban Districts—																					
Cockermouth	1	11	—	—	140	—	—	—	—	—	—	—	—	—	—	2	7	—	2	—	—
Keswick	—	—	—	—	34	—	—	—	—	—	—	—	—	—	—	—	5	2	—	—	—
Maryport	1	21	1	—	230	—	1	—	1	—	—	—	—	—	1	—	26	—	1	1	—
Penrith	4	1	—	—	3	—	3	—	5	—	—	—	—	1	3	—	3	—	2	—	—
Whitehaven	3	90	19	3	638	—	—	1	33	—	—	—	1	1	1	—	40	—	2	4	—
Workington	6	254	2	2	221	—	2	3	12	—	—	—	—	—	6	—	30	—	7	3	—
Rural Districts—																					
Alston	—	11	—	—	1	—	—	—	2	—	—	—	—	—	—	—	1	—	—	—	—
Border	3	31	4	—	24	—	16	—	17	—	—	—	—	—	—	4	16	—	2	—	—
Cockermouth	2	25	2	—	136	—	—	—	7	—	—	—	—	—	—	—	16	—	1	—	—
Ennerdale	2	51	17	4	421	—	5	1	14	—	—	—	—	—	3	—	64	—	5	5	—
Millom	9	63	1	2	385	—	1	—	9	—	—	2	—	—	3	—	23	—	3	2	—
Penrith	—	14	—	—	1	—	19	—	25	—	—	—	—	—	3	8	7	—	1	1	—
Wigton	9	53	—	—	22	—	—	—	10	—	—	—	—	—	5	2	22	—	1	—	—
TOTAL FOR	40	625	46	11	2256	—	47	5	135	—	—	2	1	2	25	16	260	2	27	16	2
YEAR	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1955	69	207	4	3	834	—	165	7	78	—	—	2	—	—	21	3	298*	—	24	48	1
1953	204	702	9	21	2846	—	5	11	130	—	1	—	—	—	41	4	262*	—	26	—	—
1954	134	746	5	4	2890	—	23	12	105	—	1	—	—	—	45	13	256*	—	44	—	—

*Not available

Infectious Diseases

Details of all cases of infectious disease are set out in the table. Once again no cases of smallpox or diphtheria were notified and apart from an outbreak of polimyelitis (which is reported fully below) there was no epidemic of important infectious disease in the county. There were a large number of measles cases in the Whitehaven and Ennerdale districts.

Poliomyelitis — 1956

General

The notable feature of the year 1956 in the realm of infectious diseases was an outbreak of poliomyelitis. The heaviest incidence was in West Cumberland, and in two sanitary districts (Whitehaven Borough and Ennerdale Rural District) of that area, with a total of 53 cases notified during the year—52 in the main outbreak between May and August, and one fatal case in the early part of the year. In East Cumberland 5 cases occurred in one sanitary district (Border Rural) later in the year, with no known connection to the series in West Cumberland. In one female case age 29 years, the commencement of illness was on 3rd January, 1957, but for completeness this case has been included with those occurring in 1956. No cases were notified in the City of Carlisle.

The diagnosis was not confirmed in one notified and two suspected cases admitted to hospital. The notified cases in West Cumberland included an American visitor who probably acquired the infection outside and who had travelled in Eire and Scotland during the incubation period. She was isolated in hospital soon after arrival in Cumberland and is not likely to have added to the pool of infection.

At least two cases notified in other parts of the country acquired the infection during their stay in Cumberland, one being the first notified case of the year in her home town. In addition, one Cumbrian schoolboy travelled away from his home during the early stage of the disease and became a notified case in Lancashire.

Starting in the 18th week of the year (i.e., week ending May 5) the numbers notified in West Cumberland in consecutive weeks were 3, 3, 3, 4, 6, 7, 2, 4, 2, 7, 3, 3, 4, 1—a total of 52 cases. There were thus two peaks of incidence in early June and early July. The 5 cases in East Cumberland were notified in August (1), December (3 in the third week) and January, 1957 (1).

By sanitary district *all* cases notified during the year fell as follows:—

TABLE 1.

Poliomyelitis—Cumberland—1956 Cases notified by District

District					
Whitehaven M.B.					
Old Town	...	...	...	...	6
Mirehouse	...	...	...	...	11
Other parts	...	...	...	...	5
				—	22
Ennerdale R.D.					
Cleator Moor	...	...	...	...	5
Frizington	...	...	...	...	5
*Egremont	...	...	...	...	7
Other parts	...	...	...	...	4
				—	21
Millom R.D.	...	...	...	...	3
Workington M.B.	...	...	...	...	4
Cockermouth R.D.	...	...	...	...	2
Maryport U.D.	...	...	...	...	1
Border R.D.	...	...	...	...	4
(An additional case in this outbreak ...					—
was notified on 10/1/57) ...					57
					—

*Includes fatal adult case notified in January.

The incidence per 100,000 population in Whitehaven was 87.00 as compared to the figure 62.67 for the City of Manchester (to the 42nd week of the year). This city experienced an epidemic starting at a slightly later date but continuing to smoulder with a few cases weekly to the end of the year. The only comparable figure higher in incidence than Whitehaven was that for Guildford—96.36 per 100,000 population, but in this outbreak the proportion of non-paralytic cases to paralytic cases was much higher than the corresponding ratio for Whitehaven.

It should be noted also that in a proportion of the Manchester non-paralytic cases the causal virus was

not the polio-virus but the one named Cocksackie, which may produce a condition closely resembling the non-paralytic form of poliomyelitis. Although the polio-virus was isolated in some non-paralytic cases in the Cumberland series, in no case was the Cocksackie virus reported.

In West Cumberland, during the main outbreak, there were 36 paralytic and 16 non-paralytic cases notified or reported from hospital. In East Cumberland there were four definite paralytic cases and one with retention of urine and some equivocal weakness of the muscles of the buttocks, which has been regarded as paralytic poliomyelitis.

Clinical features.

(a) The virus responsible for the cases in Cumberland was the polio-virus Type I. This type was isolated from first specimens of faeces in eleven cases, including three non-paralytic. Specimens were negative in some typical paralytic cases including the most severely affected case of all. In East Cumberland tissue culture from faeces were positive for Type I virus in three cases, and in 7 of the contacts of 3 families. Where pharyngeal washings were taken these were all reported negative both in cases and in contacts. No virus was isolated from the drainage system of the school attended by the children of these families.

(b) Severity

The severity of the disease ranged through the non-paralytic form to varying degrees of paralytic illness including two in which respiratory paralysis ensued quickly. One adult case died of this overwhelming infection in January; the second case was admitted to orthopaedic hospital and was making a slow but hopeful recovery from extensive paralysis, when she developed a very severe respiratory infection and died in February, 1957.

An enduring assessment of the degree of paralysis is not possible in the early stages of the disease. An acutely ill patient with widespread flaccidity of muscles may in the end have little residual paralysis or permanent weakness. Again, the initial range of presenting

signs and symptoms in the pre-paralytic stages of illness and these may be very many and varied, is no certain guide to even the length of the acute stage of the disease.

However provisional assessment of severity was attempted for each case as soon as a reasonable period had elapsed after the acute stage (taking that also partly into account) and at a time when there were positive signs of damage to the neuro-muscular system.

Table 2 shows the distribution of cases by age, sex and severity in the main West Cumberland outbreak.

Severity is indicated in six degrees—from non-paralytic (N.P.) through mild paralysis of a single limb or equivalent (degree "a") to very severe involvement, including respiratory paralysis (degree "e"). In the column labelled "Severity" the letter "o" denotes other diagnosis (one female case in which the final diagnosis was in fact osteomyelitis of the spine).

TABLE 2.
Pol.omyelitis—Cumberland—1956, Age, Sex and Severity

Sex	Severity		Age in years							Total
			—1	1-2	3-4	5-9	10-14	15-24	25+	
Male	N.P.	...	—	—	1	6	—	—	—	7
	a	...	—	3	1	1(1)	1	—(1)	—	6(2)
	b	...	—	—	1	1	—	—	6	8
	c	...	1	—	—	2	—	—	1	4
	d	...	—	—	—	—	—	—	—	—
	e	...	—	—	—	1	—	1	—	2
	o	...	—	—	—	—	—	—	—	—
Total Male			1	3	3	11(1)	1	1(1)	7	27(2)
Female	N.P.	...	—	—	1	2	2	1	3	9
	a	...	—	2	2	2	—	3	—	9
	b	...	—	1	1	—	—	1	—	3
	c	...	—	—	—	—(1)	1	—	—(1)	1(2)
	d	...	—	—	—	—	—	—	1	1
	e	...	—	—(1)	—	1	—	—	—	1(1)
	o	...	—	—	—	1	—	—	—	1
Total Female			—	3(1)	4	6(1)	3	5	4(1)	25(3)
Total Cases			1	6(1)	7	17(2)	4	6(1)	11(1)	52(5)

N.B. Figures in brackets relate to East Cumberland.

On the whole males were more severely affected than females. More than half of the males had paralysis of moderate or marked degree whilst more than half the females had a non-paralytic or mildly paralytic attack.

The ratio of paralytic to non-paralytic was high—3:1 in the Whitehaven cases, and 2.3:1 over the whole year for all cases notified in West Cumberland. In Guildford, with a high incidence rate, the ratio of paralytic to non-paralytic was reversed—approximately 1:4.

(c) Age and Sex

Table 2 also gives the distribution of cases by age and sex. By sex the numbers were fairly even. By age more boys under 10 years of age were affected than girls. The age-group 5-9 years contained the greatest number of cases (total 17). The incidence in persons over 21 years was also high. Of the 17 persons in the two oldest age groups shown in Table 2 twelve were over 21 years of age and all but four suffered from the paralytic form of the disease. No severe case appeared in children under five years of age. It is interesting to note that the range of age chosen for preventive inoculation covers those in pre-school life, i.e., those growing up into the susceptible ages, and those of infant-school age, i.e., those who produce a large proportion of notified cases.

(d) Clinical signs and symptoms

Many cases conformed to the classical descriptions of the disease given in text-books of medicine. In some the bi-phasic character of the illness was clearly recognisable; in others diagnosis might have been difficult in the absence of a known outbreak. On the whole the family doctors were quick in establishing a diagnosis so that little time was lost in starting treatment. Prompt bed-rest at home for suspect cases of febrile illness may also have prevented the sequel of paralysis in some instances.

Throughout the series of cases, malaise, nausea and vomiting were common initial symptoms in the early stages of the outbreak; sore throat was a more regularly recurring feature in cases of the middle and end periods. Pyrexia, or continuing pyrexia, headache, drowsiness, irritability or listlessness were the main signs indicating generalised illness following the initial symptoms. In the last phase before paralysis (where such supervened) fever continued with pains in the neck, back and limbs, stiffness, headache and muscle weakness. Insomnia, irritability, hyperaesthesia, photophobia and retention of urine were rarer symptoms. The paradoxical, but typical, state of alertness occurred in nearly one third of the cases.

It was interesting to compare the symptoms in many cases of family illnesses occurring around the notified cases. Many of these are likely to have been manifestations of the disease but much more confirmatory work would have been desirable by tissue culture of throat washings and faecal specimens.

In these family cases sore throat was common; pains and stiffness in muscles were experienced and in two, mild, but not permanent, paralysis occurred. Depression, coryza and sneezing were found in some of these cases—not features of the notified group.

(e) Site of Paralysis.

The sites of selection in the 36 paralytic cases in West Cumberland, and the frequency of the appearance of paralysis in the sites were as follows:—

Right lower limb	...	...	...	20 cases (56%)
Left lower limb	...	...	...	15 cases (42%)
Right upper limb	...	...	...	7 cases (19%)
Fascial muscles	...	...	...	5 cases (14%)
Muscles of respiration	...	...	...	2 cases (6%)
Muscles of the spine	...	...	...	2 cases (6%)
Muscles of swallowing	...	...	...	1 case (3%)

The total number of areas of the body involved was 52—i.e., a number of cases were affected in more than one group of muscles. Distribution of paralysis in the 5 East Cumberland cases was as follows:—

Right upper limb	...	...	...	...	2 cases
Left upper limb	...	...	...	...	3 cases
Right lower limb	...	...	...	...	2 cases
Left lower limb	...	...	...	...	2 cases
Respiratory	...	...	...	...	1 case
Spinal	...	...	...	...	1 case
Retention of urine + gluteal weakness	...	...	...	...	1 case

(f) Incubation Period

From the point of view of prevention the incubation period in many diseases is most important. The difficulty in fixing this time in poliomyelitis is very great as it is not common for two notified cases to occur in the same family, and even so it would not necessarily follow that one case infected the second. A wide range of incubating period is given by many authorities—4 to 35 days. In the West Cumberland series a direct computation was attempted in a limited number of cases, giving a range of 5-14 days. A consideration of the period in relation to intra-family illness, i.e., on the likely assumption that infection was widespread in the family, gave a wider range of 2-29 days. If in fact the family illnesses were manifestations of poliomyelitis and if the infection was intra-familial, then the incubation period was short, very short, in many cases particularly in those in whom the pharyngeal element was pronounced and in the middle period of the epidemic.

(g) Case Mortality.

There were no deaths in the main outbreak, but for the year as a whole with two fatal cases, the case mortality rate was between 3% and 4% as compared to an expected, or often quoted, rate of 5% to 10%.

Course of the Outbreak.

The outbreak most probably started in the town of Whitehaven and spread peripherally from there although in actual fact by date of onset, the first six cases were fairly widely distributed in three parts of the town and in Frizington, Cleator Moor and Maryport. The main rush of cases was in the Valley Estate of Mirehouse, which had the highest number of notified cases of any sub-district.

Cases remained limited to these six sub-districts for nearly a month when Egremont and Hensingham became involved. There was no second case in Maryport; the first was probably infected in Whitehaven.

The ninth of June marked the middle of the epidemic with some 27 cases notified. During the second half of the outbreak 10 further cases occurred in sub-districts earlier affected, and 9 other sub-districts were involved with a further 15 cases. Most of these 15 would appear to have been infected from or in Whitehaven. One of two cases in Cockermouth Rural District was, however, a visitor from abroad who obviously acquired the infection outside Cumberland.

The last case of the season in West Cumberland came at the end of July. No further cases occurred in this division of the county before the end of the year. In East Cumberland a polio-like illness occurred in August in a male aged 20, causing retention of urine and gluteal weakness, but with no other characteristic signs of poliomyelitis. It was not until December 1st, 9th, and 12th that the next 3 cases occurred. In sequence these were a boy of 6 and a girl of 8, both attending the same school, and a baby girl of 1 year. The last case, also paralytic, which occurred in the first few days of the new year was a woman of 29, the mother of a child at the school.

Epidemiology.

1. THE VIRUS

The infecting agent in poliomyelitis is a very minute virus measured in terms of millionths of a millimetre, being in fact some 13 to 20 such units in diameter. It is among the smallest of known viruses and is the same close range of size as the virus of foot and mouth disease and the Coxsackie virus. There are three main types of the polio-virus—Type 1 (Brunhilde), Type 2 (Lansing) and Type 3 (Leon). All three types have been demonstrated in this country but so far in Cumberland only Type 1 has appeared and was in fact isolated in tissue culture from specimens in eight paralytic and three non-paralytic cases in the West Cumber-

land series, and three of the five paralytic cases in East Cumberland. Although the virus is most readily recoverable from the gastrointestinal tract its presence has also been established in the throat, and, on a few occasions, in the blood stream at an early stage of infection. It has also been recovered from lymphatic glands, in particular from those draining the intestinal tract.

2. The origin of this disease is not known but it would appear to have afflicted man for many centuries. Its presence in endemic form is being increasingly demonstrated among so-called backward or more primitive people in many parts of the world and is not limited, as formerly thought, to the temperate zones of the earth. In primitive communities much hidden infection is at work producing immunity in children at an early age (although infantile deaths from early infection might pass unrecorded). In communities of a higher standard of living and of better sanitation, immunity to infection is acquired later and with less surety, and clinical cases appear among the older age-groups. In fact the term "Infantile Paralysis" is now a misnomer. Greater cognizance is also now taken of the vast amount of intermediate forms of infection covering inapparent infection and mild non-paralytic type of the disease, and perhaps also a carrier state.

3. Poliomyelitis presents some of the features of other diseases that occur most frequently in the summer months, such as dysentery, in that the infection may be chiefly of a gastro-intestinal nature. It might be expected because of this that the spread of the disease was dependent on common factors such as a water-supply contaminated in a period of low level.

However, no pool of infection outside the human body has so far been incriminated and the virus has only rarely been isolated from fluid elements destined for human consumption. It may be that the hibernal gap between epidemic times is bridged by the human

carrier in whom the disease lies dormant in the colder months of the year. The difficulties of examining water supplies for the presence of the polio-virus are very great and a negative result of soaked swabs does not necessarily mean freedom from contamination. Great care should be exercised in relation to an adequate dose of chlorine being applied that will, among other things, allow of much deviation by organic matter in times of sparse or intermittently heavy rainfall.

4. THE HOST

The only natural host of the polio-virus is man, although it is possible to infect related species with all types of the virus and certain smaller animals with individual strains. More recently it has also been possible to grow the virus on isolated tissues and cells which facility has greatly promoted diagnosis and the preparation of vaccines.

The incidence by *age* of the cases in Cumberland probably indicates that immunity is not acquired early in life with the corollary that sanitary conditions of the people are of a reasonably high standard. During the investigation this latter point was well upheld—the homes were of an excellent degree of cleanliness and the training of children in personal hygiene left little to be desired in the majority of cases.

In like manner, too, to cleanliness is the restriction of variety of contact. It was noted that half the cases came from homes with a small number of household contacts and having restricted contact outside the home. This group also contained cases of a lower average age, although that of course parallels the fact that smaller households have younger members. However it is on the whole reasonable to suppose that where the disease is endemic, an epidemic outburst falls more heavily on young susceptibles having restricted lives.

The disease is on the increase in Cumberland, as elsewhere in England and in other countries. The earliest record of cases in Cumberland was in 1910 in which year 33 cases occurred in Carlisle and 13

in Maryport. From then on, cases cropped up each year in different parts of the county, although it is now difficult to find straight records of the annual number of cases before 1936. The disease became notifiable in 1912. The number of cases each year since 1937 in East and West Cumberland is given in Table 3.

Table 3.
Poliomyelitis—Cumberland, 1956

Year	West Cumb. Urban Districts.	Cumb. Rural Districts.	East Cumb. Urban Districts.	Cumb. Rural Districts.	Admin. County Urban Districts.	Rural Districts.	Total
1937	—	1	3	5	3	6	9
1938	1	1	—	4	1	5	6
1939	—	—	—	—	—	—	—
1940	—	—	—	—	—	—	—
1941	—	—	—	—	—	—	—
1942	—	—	—	—	—	—	—
1943	1	3	1	—	2	3	5
1944	—	—	—	1	—	1	1
1945	1	—	—	1	1	1	2
1946	1	—	1	1	2	1	3
1947	16	25	15	18	31	43	74
1948	2	2	1	2	3	4	7
1949	1	8	3	17	4	25	29
1950	8	9	2	9	10	18	28
1951	10	19	—	5	10	24	34
1952	1	5	—	9	1	14	15
1953	6	2	1	21	7	23	30
1954	6	1	—	2	6	3	9
1955	4	2	—	1	4	3	7
1956	27	26	—	4	27	30	57
Total	85	104	27	100	112	204	316

Although the disease has been notifiable since 1912 differentiation into paralytic and non-paralytic cases was not requested until 1950. The ratio of paralytic to non-paralytic cases during and since 1950 has been 1.6 to 1.

The highest incidence in Cumberland was in 1947 with a total of 74 cases and the second highest in 1956 with a total of 57. The differentiation into urban and rural districts is perhaps more of a convenience from the point of view of actual notification than significance, and in any case the two divisions of Cumberland are not strictly comparable from this point of view as West Cumberland contains proportionately more people in

built-up areas. Again, although in West Cumberland there is a trend at present to heavier incidence in *urban* parts it should be remembered that large sections of the people live on the periphery of towns, enjoying both the amenities of the countryside and the advantage of good water-borne sanitation.

The legacy of past incidence through the years since 1910 is still with us in the form of crippling of varying degree in many members of the community. How much herd immunity against the disease as a whole has been acquired especially when so far only one type of the virus has been experienced, is at present speculative.

5. TRANSMISSION OF THE DISEASE

Just as the continuing pool of infection is a mystery so does the precise mode of transmission present a perplexing problem. The earlier theory of droplet infection from case to case with the passage within the human body of the virus from the nasopharynx to the brain has been largely given up in the increasing knowledge of the part played by the intestinal tract in the holding and passing of large quantities of infective material. And, granted transmission by the gastro-intestinal route, the question of the passage of the virus to the central nervous system still remains unsolved. Whether or not the bloodstream is a channel linking the original site of infection to all other parts of the body also requires elucidation; the virus has been only rarely isolated from the bloodstream (in the early stages of infection).

The possibility of direct transmission through the skin has also to be considered.

6. There were some indications in the outbreak in West Cumberland of the early and late predominance of gastro-intestinal site of election and of throat manifestation being to the fore in the middle period. It may be indeed that at the start of an epidemic, and in the more ill-defined family cases of latent or inapparent infection *prior* to the epidemic, infection is

mainly of a gastro-intestinal character, but that in the active epidemic middle period of an outbreak, droplet infection from the pharynx plays an active part in the quick spread of the disease.

It is generally accepted that for every overt case, paralytic or non-paralytic, there are very many hidden cases in the family and in close contacts or neighbours. It is also generally agreed that the disease is highly infectious but often selective in incidence to closely or nearby associated groups. In one subdistrict of Whitehaven in particular there were a limited foci of infection by close neighbourhood relationship in which histories of mild infection (mainly gastro-intestinal early and pharyngeal later) and histories of likely abortive attacks of the disease and notified cases occurred. In some such groups the infection appeared to hurry (that is, with a short incubation period) through the family. In a number of instances, too, both father and mother were concurrently ill with a pharyngeal or tonsillar infection.

It was easy to demonstrate a logical sequence of the discrimination of the disease in all its forms within the family and in close neighbourhoods but more difficult often to trace direct connections between cases at some distance from one another in the same subdistrict although the work and varied contact of the father, and the common meeting place of children in school probably played a part in spread. It was also difficult to link certain isolated cases with known centres of infection but such an association was logical enough in the two most far-flung cases—although in one a pharyngeal type of transmission would have to be admitted.

7. PREDISPOSING FACTORS

It may well be that, although the virus has gained access to the body and is free to multiply therein, disease in a clinical, especially paralytic, form would not develop but for certain predisposing or precipitating factors. Many such are postulated and some nearly, if not quite, proven. Under a general heading are genetic

pre-disposition, hormonal influences and debilitating conditions; particular factors cover strain, tiredness and tissue damage (e.g., tonsillectomy and intra-muscular injections).

In nine of the West Cumberland cases a clear history of strain or excessive tiredness was obtained; in none had recent tonsillectomy or intra-muscular injections been given.

8. OTHER EPIDEMIOLOGICAL FACTORS

It is not possible here to cover all possible items of epidemiological importance or interest. Insects and rodents were not numerous; the ordinary house fly, which is reported to be a *mechanical* carrier of the disease was not much in evidence in any of the houses visited. Atmospheric pollution by works was particularly heavy in the valley estate of Whitehaven during the long, hot and comparatively windless days between April and June. Water sewers have been mentioned above. There was a bewildering variety and number of food supplies. There was no major breakdown or hold-up in the disposal of waste matters or of sewage during the outbreak.

9. FURTHER INVESTIGATION

Although it cannot be claimed that anything of importance was added to the knowledge of the natural history of the disease as a result of the investigations carried out, the occurrence of this severe outbreak draws attention to the need for further investigation in this and other virus diseases, some of which are only now becoming known as separate entities. The fact, too, that the outbreak involved at least seven sanitary districts is a pointer towards the need for a scheme wherein all the constituent authorities and the local health authority could combine in investigation—with the two other branches of the health service—the general practitioners and the hospital service. It should be possible so to combine the best elements of the three—sanitary practice, personal and social medicine, and the clinical and pathological background and resources of the hospital service. The local health

authority would appear to be in an advantageous position by virtue of its powers as a health authority and through its relationship with the sanitary authorities in respect of the prevention in infectious disease, to act as a correlating body in this suggested sphere of research.

Inspection and Supervision of Food

I am indebted to the Chief Inspector of Weights and Measures for the report which follows :—

Food and Drugs Act, 1955

Summary of work done under the above Act during the year ended 31st March, 1957

	Total Samples Obtained		Genuine.	Unsatisfactory	
	Milk	Other Foods		Milk.	Other Foods.
Submitted to Public Analyst	43	220	237	23	3
Tested by Inspectors	... 583	—	487	96	—
	<hr/> 846		<hr/> 724	<hr/> 122	

Milk

The presumptive standard for milk, laid down in the Sale of Milk Regulations, 1939, is 8.5% solids-not-fat and 3% fat. The average quality of the samples of milk tested by the Inspectors by means of Gerber apparatus was 8.63% solids-not-fat and 3.58% fat. This average quality was slightly lower than that of the previous year, the figures for that period being 8.68% and 3.59%. These averages do not include the results of analyses of milk samples submitted to the Public Analyst.

It will be noted that 96 of the milk samples tested by the Inspectors were unsatisfactory. The deficiencies of solids-not-fat and/or fat were small and in each case the producer was noted for further sampling. In the majority of instances, further samples showed an improvement in the standard. It is noticeable each year that the number of these unsatisfactory samples increases during the January/March period, which is probably due to the feeding of the cattle. It will be

interesting to note if this difficulty is overcome when the quality payment scheme comes into operation next year.

In the case of milk samples tested by Gerber apparatus and showing serious deficiencies, or of doubtful quality, the relevant formal samples are immediately forwarded to the Public Analyst.

The 43 samples of milk submitted to the Public Analyst included "Appeal to Cow" samples. A number of the samples were certified by the Analyst to be "genuine but below standard," but these have been included in the table above as "genuine." In such cases the producer is notified and advised to take steps to improve the quality of the milk. The Ministry of Agriculture, Fisheries and Food are also notified of such cases.

The 23 milk samples certified by the Public Analyst as unsatisfactory were dealt with as under :—

Two, from the same source of supply, contained added water. The farmer concerned was prosecuted and fined £3 plus £2/2/- costs.

Four contained small amounts of added water. This appeared to be a case of carelessness and the farmer was cautioned. Further samples from the same sources have since been found to be genuine.

Four were below standard in solids-not-fat, including two "Appeal to Cow" samples. The farmer concerned was advised to consult the Advisory Department of the Cumberland Agricultural Executive Committee with a view to improving the quality of milk produced by her herd.

Four were found to contain small amounts of added water and one of these samples was also deficient in fat. An "Appeal to Cow" sample was "genuine but below standard in solids-not-fat." The deficiency in fat was apparently due to the milk in that particular churn not being stirred before the sale and the importance of stirring was stressed upon the farmer concerned. He was unable to offer

any explanation concerning the extraneous water, but no action was possible in view of the result of the "Appeal to Cow" sample. This matter is being kept under observation.

Two samples were of "doubtful" quality, although "Appeal to Cow" samples were found to be genuine. Further samples taken at a later date, from the same source, were genuine.

One sample of milk, purchased at a milk-bar, was slightly below standard in solids-not-fat, but with a very high fat content. Abnormal result was apparently due to the milk not being stirred and the vendor was cautioned.

One sample of hot milk, from a snack-bar, was deficient in fat content. The container was fitted with an agitator to ensure the milk was kept properly mixed, but proper use was not made of this by the staff concerned. The proprietor was cautioned.

Four samples, from different sources, were only slightly below standard and further samples have since proved to be genuine.

One bottle of milk was submitted to the Public Analyst due to the apparent presence of dirt in the milk. This was confirmed by the Analyst who stated that the organic matter consisted largely of vegetable debris, but there was no evidence that the milk was contaminated by dung. The dairyman concerned was cautioned.

One other matter connected with milk gives us concern, that is the presence of broken glass in bottles. Although there have been no prosecutions during the year, two instances have been brought to our notice. It should be stressed that any member of the public, or school authority, finding glass in milk should immediately contact the Inspector of Weights and Measures for the district.

The Milk (Special Designations) (Specified Areas) Order, 1956.

This Order, which took effect early in the year, requires all milk sold in certain areas to be designated

Tuberculin Tested, Pasteurised or Sterilized. The areas concerned cover a large part of the County, the exception being Alston and part of the Western area (Whitehaven and Millom). The Order produced various difficulties, particularly in the rural areas, producers being unwilling to spend money on bottling milk in the prescribed form for a few customers. Many of these difficulties were overcome by Consents granted to various farmers by the Area Milk Officer of the Ministry of Agriculture, Fisheries and Food, while in other cases alternative suppliers were found. In very isolated areas there were a few real hardships which have been investigated and in many cases overcome.

Foodstuffs Other Than Milk

These samples comprise a varied assortment of food and drugs and care is taken to try and avoid duplication, particular attention being paid to the more common foodstuffs. Sampling is carried out with a view to proving that any claim made by the manufacturers is substantiated, both as regards quality and quantity of the ingredients used.

It is pleasing to note that of the 220 samples of foodstuffs and drugs submitted to the Analyst, only three samples were the subject of adverse reports and details are given below :—

A sample of "Rhum Butter Sweets" was certified by the Analyst to be deficient in butter fat content and that the word "rhum" was misleading as there was only a slight trace of alcohol. The manufacturers agreed to amend the labelling on the sweets to read "Rum Butter Flavoured."

A sample of "Pork Sausage" was stated to be deficient in meat content. Although there is no official standard for sausage, the Public Analyst bases his analysis on the standard meat content which used to apply. The manufacturer's attention was drawn to the result of analysis.

A purchaser of a glass of lemonade complained that the liquid tasted of oil and petrol and that it had made him ill. The remainder of the lemonade

in the bottle, which had been retained by the seller, was submitted to the Analyst. He reported that the quantity was too small for a correct analysis, but there was a distinct odour of paraffin or petrol and on distillation a few oily drops were recovered. He was of the opinion that unless there was a very large amount of paraffin or petrol present in the bottle when the contents were consumed, the illness could not be attributed to the lemonade. A formal sample taken from the same consignment of lemonade was found to be genuine. The manufacturers were informed of the matter and stated that they take every precaution to see that the bottles are clean. Unfortunately, members of the public sometimes use the bottles for storing paraffin, etc., and consequently when the bottles are returned it is difficult to entirely remove the residue.

Similar to the above case concerning the lemonade, there is a tendency for foreign articles to find their way into foodstuffs, such as flies, string, nails, etc. During the year two instances were brought to our notice. One case was that of dead flies adhering to the tops of two scones and the second instance was that of a large nail embedded in a packet of dates. In neither case was it possible to institute legal proceedings and the baker concerned was cautioned in respect of the scones; the firm packing the dates also being cautioned. With regard to the dates it was remarkable to find that the dates had passed from the packers through the hands of three wholesalers before reaching the retailer.

116 samples of milk and other foodstuffs have been taken at schools, canteens and other institutions in the County, with very satisfactory results.

During the year 6 samples of ice cream were taken and found to be of genuine quality.

Pasteurised Milk

Licences were issued during 1956 to four plants for the pasteurisation of milk, two being in Millom R.D.C., one in Ennerdale R.D.C., and the fourth one in Wigton R.D.C.

Sampling duties are carried out in three of these plants through the co-operation of the public health inspectors of the district councils concerned. No sampling duty is carried out in one of the plants as pasteurisation is not done at this plant.

During the year 52 samples were taken and submitted to the phosphatase and methylene blue test. Of these, 44 were satisfactory to both tests, and 8 were unsatisfactory (4 to the phosphatase test, and 4 to the methylene blue test).

Housing

The schedule which follows sets out the general housing situation in the administrative county.

With regard to the provision of houses for County Council employees, I am indebted to the County Architect for the notes which follow :—

“ Houses for Police Officers, Nurses, the Chief Fire Officer and a School Caretaker have been completed during the year.

“ Costs have continued to increase somewhat due to the increased cost of wages and materials. The cost of erecting houses on isolated sites is also higher than for houses forming part of a compact housing estate.

“ The labour position generally has been easier this year than in previous years and the development schemes of the Atomic Energy Authority do not appear to have affected progress on other building to any great extent.

FIRE SERVICE

“ A house for the Chief Fire Officer at Cockermouth was completed and occupied during the year.

NURSING SERVICE

“ Four houses have been completed but none were commenced, although it is expected that a number will be started during 1957.

POLICE SERVICE

"Eighteen houses have been completed, this number includes the group at Headquarters at Carleton Hall. Nine other houses were in course of erection at the end of the year.

EDUCATION

"A house for the Caretaker at St. Cuthbert's School, Cleator Moor, was almost complete at the end of the year.

"Two staff houses at Newton Rigg Farm School were in course of erection."

**HOUSING RETURNS FOR THE COUNTY OF CUMBERLAND
FOR
YEAR ENDED 31st DECEMBER, 1956.**
(N.B.—Corresponding figures for 1955 are shown in parentheses.)

	Alston R.D.C.	Barder R.D.C.	Cockermouth R.D.C.	Esmaedale R.D.C.	Millom R.D.C.	Penrith R.D.C.	Wigton R.D.C.	Total for R.D.C.s in County	Whitehaven Borough	Workington Borough	Cockermouth U.D.C.	Keswick U.D.C.	Maryport U.D.C.	Penrith U.D.C.
Population 1931 ...	2678	26049	21250	28235	12582	12016	22058	124868	23254	24601	4784	4635	10190	9065
1951 ...	2327	29848	19560	25631	13428	11720	23733	130247	24624	28620	5300	4660	12180	10490
A. 1—Total number of occupied dwelling houses in the district ...														
	882	7975	6071	8790	4216	3615	6944	38493	7349	8733	1943	1650	4041	3249
	(881)	(7806)	(6050)	(8837)	(4341)	(3555)	(7204)	(38674)	(7228)	(8511)	(1977)	(1620)	(4021)	(3150)
2—Total number of occupied dwelling houses subject to Demolition Orders, Closing Orders or Undertakings ...														
	—	32	31	137	—	36	36	272	106	72	13	5	148	41
	(1)	(33)	(31)	(59)	(—)	(11)	(44)	(179)	(90)	(35)	(95)	(1)	(147)	(22)
3—Estimated number of houses (exclusive of above) which are unfit for habitation and cannot be made fit at a reasonable cost ...														
	140	599	65	1552	124	196	316	2992	450	200	290	20	242	216
	(140)	(630)	(109)	(1779)	(124)	(212)	(325)	(3391)	(620)	(270)	(226)	(20)	(254)	(232)
4—Estimated number of sub-standard houses (exclusive of above) which could be repaired and made fit ...														
	370	870	N.A.	2476	401	605	1394	6116	Few	—	18	100	151	87
	(375)	(900)	(N.A.)	(3073)	(466)	(613)	(1435)	(6862)	(—)	(—)	(N.K.)	(100)	(153)	(150)
5—Number of houses found to be overcrowded ...														
	27	31	8	20	11	76	9	182	Nil	5	Nil	Nil	—	10
	(30)	(34)	(2)	(22)	(13)	(100)	(10)	(211)	(N.A.)	(—)	(N.K.)	(—)	(—)	(12)
B. WAITING LISTS.														
Total number of valid applicants on Council's waiting list exclusive of those living in houses under A 2 and 3 above ...														
	33	165	370	547	86	—	299	1500	—	955	83	109	256	119
	(15)	(220)	(330)	(427)	(70)	(—)	(411)	(1473)	(—)	(1150)	(189)	(150)	(238)	(100)
C. NEW HOUSES COMPLETED DURING THE YEAR														
1—By or for the Council—														
For aged persons ...														
	—	4	2	—	8	—	—	14	2	—	—	—	—	—
	(24)	(3)	(5)	(4)	(—)	(—)	(—)	(38)	disabled (18)	(—)	(—)	(—)	(—)	(—)
For agricultural workers ...														
	—	—	—	—	—	—	2	2	—	—	—	—	—	—
	(—)	(—)	(—)	(—)	(—)	(—)	(1)	(1)	(—)	(—)	(—)	(—)	(—)	(—)
Flats ...														
	—	16	—	—	—	—	—	16	—	—	—	—	—	—
	(12)	(—)	(—)	(12)	(—)	(—)	(—)	(12)	(—)	(—)	(32)	(—)	(—)	(—)
General Purposes Houses ...														
	—	56	16	50	19	17	29	199	194	160	—	22	20	112
	(3)	(76)	(69)	(37)	(26)	(27)	(21)	(259)	(152)	(120)	(—)	(18)	(66)	(20)
2—Private building ...														
	—	52	20	9	19	8	14	122	7	—	8	2	8	12
	(—)	(60)	(26)	(9)	(5)	(18)	(17)	(135)	(3)	(58)	(11)	(8)	(3)	(5)
Total ...														
	12	128	38	59	46	25	45	353	203	160	8	24	28	124
	(27)	(139)	(100)	(50)	(43)	(45)	(39)	(443)	(173)	(178)	(43)	(26)	(69)	(25)
D. 1—Number of houses for which application was made by private persons for Improvement Grants under the Housing Act, 1949 ...														
	13	24	32	21	42	39	29	200	—	—	5	2	—	23
	(7)	(47)	(34)	(26)	(45)	(52)	(42)	(253)	(—)	(6)	(8)	(2)	(—)	(10)
2—Number of houses for which grants were approved ...														
	13	24	32	19	40	39	25	192	—	—	5	—	—	16
	(7)	(44)	(33)	(23)	(42)	(50)	(41)	(240)	(—)	(—)	(8)	(—)	(—)	(9)
3—Number of houses where improvements were carried out and grants paid ...														
	10	42	38	12	28	47	42	219	—	—	4	—	—	8
	(—)	(32)	(23)	(2)	(29)	(19)	(31)	(136)	(—)	(—)	(4)	(—)	(—)	(5)
4—Number of houses purchased or taken over by the Council with a view to improvement or conversion ...														
	—	—	—	—	16	1	2	19	—	—	—	—	—	12
	(—)	(—)	(—)	(—)	(1)	(—)	(—)	(1)	(—)	(—)	(—)	(11)	(—)	(—)
5—Number of houses improved by the Council—														
(i) With grant ...														
	—	6	6	—	—	—	—	12	—	—	—	—	—	—
	(—)	(1)	(5)	(—)	(—)	(—)	(—)	(6)	(—)	(—)	(—)	(—)	(—)	(—)
(ii) Without grant ...														
	—	—	—	—	—	—	5	—	—	—	—	—	—	2
	(—)	(—)	(—)	(—)	(1)	(—)	(—)	(1)	(—)	(—)	(—)	(—)	(—)	(—)
E. TEMPORARY ACCOMMODATION.														
Number of families occupying camps and temporary buildings ...														
	—	41	—	—	—	—	41	82	—	—	8	—	—	37
	(—)	(56)	(—)	(—)	(—)	(—)	(41)	(97)	(3)	(—)	(8)	(—)	(—)	(65)
F. HOUSING PROGRAMME.														
Estimated number of houses to be built during the ensuing year														
(i) Private ...														
	1	N.K.	20	12	3	20	12	68	20	—	8	6	—	10
	(1)	(N.K.)	(20)	(10)	(9)	(20)	(22)	(82)	(5)	(30)	(13)	(10)	(10)	(20)
(ii) Council ...														
	8	57	42	200	—	20	50	377	120	60	25	—	Not decided	100
	(12)	(80)	(50)	(100)	(27)	(20)	(67)	(356)	(260)	(222)	(20)	(—)	(20)	(134)

THE ACT OF 1949

THE ACT OF 1949

(N.B. - The Act of 1949 is not yet in force)

Year	1949	1950	1951	1952	1953
Total number of houses in the district	1,234	1,345	1,456	1,567	1,678
Total number of houses in the district	1,234	1,345	1,456	1,567	1,678

A. 1- Total number of occupied dwelling houses in the district

2- Total number of occupied dwelling houses and flats in the district

3- Estimated number of houses (exclusive of flats) which are unfit for habitation and cannot be made fit at a reasonable cost

4- Estimated number of sub-standard houses (exclusive of flats) which could be repaired and made fit

5- Number of houses found to be overcrowded

B. WAITING LISTS

Total number of valid applicants on Council's waiting lists exclusive of those living in houses under A. 2 and 3 above

C. NEW HOUSES COMPLETED DURING THE YEAR

1- By or for the Council

For aged persons

For agricultural workers

Flats

General Purpose Houses

2- Private building

(a) Council

(b) Private

Total

D. 1- Number of houses for which application was received by the Council during the year

2- Number of houses for which grants were approved

Water and Sewerage Schemes

The progress with sewerage and water supply schemes throughout the county was affected by the restriction of capital expenditure and many schemes which might otherwise have been completed during the year still await Ministry authority to proceed. The restriction still operates, but in the meantime throughout the county, consideration is being given at the request of the Ministry to schemes for the regrouping of water supplies based on the recommendations contained in the Spens Report.

The North Cumberland Water Board has decided to liquidate. Other schemes for areas which would have been served from the Caldew Head source have had to be carried out. The question of supplies over wider areas, will be considered under the regrouping proposals now favoured by the Ministry.

The Workington Borough Council, the Urban District Councils of Cockermouth, Keswick and Maryport and the Rural District Council of Cockermouth have considered the formation of a joint undertaking. The proposal under consideration was for the setting up of an all-purpose water board, i.e., a board which would be responsible both for the distribution of water within this area of supply as well as the large trunk mains from selected sources of supply.

Proposals are also under consideration whereby part of the Border Rural District Council area at Gilsland would be supplied from Northumberland.

In addition to the Carlisle Water Order 1955, which gives the Carlisle Corporation powers to abstract up to 4 million gallons per day from the River Eden at Wetheral, a further Order is being sought by Carlisle Corporation to enable them to abstract an additional one million gallons per day from the upper reaches of the Gelt. This further Order, as now agreed subject to confirmation will operate only until the Carlisle City Council's Scheme for the abstraction of water from the River Eden at Wetheral or the Scheme for water distribution by the Border Rural District Council is completed, whichever is the later. Such provision is, how-

ever, without prejudice to the right of Carlisle Corporation at some future date to seek a further Order if they deem it necessary or desirable so to do.

The Workington Waterworks Order 1955, which, at the time of my report last year awaited the Minister's decision, was not approved.

The Comprehensive Water Scheme of the Wigton Rural District Council made further progress during the year. In particular the Parish of Thursby was connected to the new sources of supply, thus dealing with the recurring problems of drought which have arisen in this parish for some years past.

The Wigton Rural District Sewerage Scheme for Wigton town was substantially completed during the year and should be in operation by the end of the summer of 1957. Apart from this major scheme, however, there have been very few sewerage schemes put forward for consideration. The position at High and Low Hesket still remains to be resolved and it is a matter for regret that these villages should still lack the facility of waterborne sewerage. A further Public Inquiry was held in June, 1956, into the Penrith Rural District Council's application for consent to borrow £17,500 to carry out the scheme and a site for the disposal works is being negotiated. It is not always the remote parts of the county where the greatest difficulty arises.

The appendices which follow give some details of the Water Supply and Sewerage Schemes considered by the Council during the year.

APPENDIX "A"

Scheme submitted by	Name of Scheme	General Outline	Estimated or Final Cost	Ministry	Grants	County	Stage at 31st March, 1957
Alston-with-Garrigill R.D.C.	Garrigill Water Scheme	Augmentation of supplies to add 9,000 galls. per day to present yield of 11,000 galls. per day.	£1,062	Nil.	Nil.	Nil.	No grant as Scheme does not provide additional piped supplies but only improved supplies.
Border R.D.C.	(a) Hethersgill and Longtown Water Supply.	Augmentation of supply to:— (a) Longtown	(a) £34,900	£110 half yearly for 30 years from both Ministry and County.			Approaching completion.
do.	(b) Link Mains to Scaleby Hill and Wide-Open-Dykes.	(b) Scaleby Hill and Wide-Open-Dykes.	(b) £7,550				
do.	(c) Raughton Gill Water Scheme.	Extension to Cotehill Station.	£2,550	No grant forthcoming in view of small additional burden on rates.			Approved by the County Council as sound and adequate on engineering grounds.
do.	(d) do.	Extension to Wetheral Shields.	£1,800	Not yet determined.			do.
Cockermouth R.D.C.	Comprehensive Loan Scheme	(a) Extension to Water Main, Bothel. (b) Supplies to Wellington and Scales Farms. (c) Supplies to 6 farms at Greysouthen. (d) Grange Water Scheme. (e) High Nook Extension to Holme Beck.	£1,011 £2,118 £4,675 £3,371 £10,368	Not yet determined.			(a) to (d) approved as sound and adequate on engineering grounds.
Wigton R.D.C.	Aspatria and Silloth Water Scheme.	Comprehensive Scheme for whole area.	Entire Scheme Estimate £395,000 (June, 1956)	£3,000 per annum for 30 years from both Ministry and County within which amount payment in respect of various stages as they proceed to be met on same basis as Ministry.			(e) approved subject to consideration of ultimate demand of 140,000 g.p.d. Parts I, II, and III. in progress.

APPENDIX "B"

Scheme submitted by	Name of Scheme	General Outline	Estimated or Final Cost	Ministry	Grants	County	Stage at 31st March, 1957
Border R.D.C.	Houghton Sewerage and Sewage Disposal Scheme.	Sewering of Houghton Village.	£10,200	£1,800	£1,800	£1,800	Completed.
Cockermouth R.D.C.	(a) Branthwaite Sewerage and Sewage Disposal Scheme.	Sewering of Branthwaite Village.	£10,680	£180 per annum for 30 years from both Ministry and County.			Awaiting Ministry sanction to proceed.
do.	(b) Bullgill Sewerage and Sewage Disposal Scheme.	Sewering of Bullgill Village.	£975 (in 1951)	Nil.	Nil.	Nil.	do.
Ennerdale R.D.C.	Egremont—Braystones Outfall Sewer.	Storm Relief Sewers.	£11,000				*Observations of County Council submitted to R.D.C. for transmission to Ministry
Penrith R.D.C.	High and Low Hesketh Sewerage and Sewage Disposal Scheme.	Scheme to serve 96 houses.	£17,500				Negotiations proceeding for site for disposal works and Ministry approval to consent to borrow awaited.
Wigton R.D.C.	Wigton Town Sewerage and Sewage Disposal Scheme.	Extensive new disposal works and replacement of existing sewer.	£192,460	£50,000	£50,000	£50,000	Approaching completion.

* A third revision of this scheme, costing £31,364 has been submitted and awaits County Council's observations.

APPENDIX A

Name of Scheme submitted by

1. *Water R.D. for the purpose of supplying water to the town of ...*

2. *Water R.D. for the purpose of supplying water to the town of ...*

3. *Water R.D. for the purpose of supplying water to the town of ...*

4. *Water R.D. for the purpose of supplying water to the town of ...*

APPENDIX B

Name of Scheme submitted by

1. *Water R.D. for the purpose of supplying water to the town of ...*

2. *Water R.D. for the purpose of supplying water to the town of ...*

3. *Water R.D. for the purpose of supplying water to the town of ...*

4. *Water R.D. for the purpose of supplying water to the town of ...*

Tuberculosis

Deaths from respiratory tuberculosis for 1955 and 1956 are listed in Table 1. The highest rates occurred in 1955 and 1956, the years of respiratory tuberculosis epidemic. The fact that the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 is not surprising. In fact, the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group. The fact that the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group is not surprising. In fact, the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group. The fact that the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group is not surprising. In fact, the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group.

PULMONARY TUBERCULOSIS

AND

DISEASES OF THE CHEST

Statistics

The following table shows the notification of pulmonary tuberculosis and diseases of the chest for 1955 and the preceding years.

Year	Pulmonary tuberculosis	Diseases of the chest
1955	1,200	1,200
1954	1,100	1,100
1953	1,000	1,000
1952	900	900
1951	800	800
1950	700	700
1949	600	600
1948	500	500
1947	400	400
1946	300	300
1945	200	200

Deaths

Deaths from pulmonary tuberculosis for 1955 and 1956 are listed in Table 2. The highest rates occurred in 1955 and 1956, the years of respiratory tuberculosis epidemic. The fact that the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 is not surprising. In fact, the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group. The fact that the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group is not surprising. In fact, the rate of deaths from tuberculosis in 1955 and 1956 was higher than in 1954 in every age group.

The following table shows the deaths from pulmonary tuberculosis and diseases of the chest for 1955 and the preceding years.

PULMONARY TUBERCULOSIS

AND

DISEASES OF THE CHEST

Tuberculosis

Deaths from respiratory tuberculosis in 1956 were 18, the lowest ever recorded in Cumberland, and 262 cases of respiratory tuberculosis were notified. This does not mean that our efforts to reduce the incidence of tuberculosis in Cumberland should be in any way abated. In fact they should be reinforced by further tuberculin surveys of school entrants, more intensive contact tracing and the introduction of a "live" register of infectious cases. It does mean, however, that tuberculosis is apparently acquiring the status of a minor health problem. I would, however, draw attention to Dr. Morton's report in which he says very rightly, that chest clinics of perhaps increasing size will be required over the years and the need for hospital beds for tuberculosis will also remain.

As a preamble to the reports from the Consultant Chest Physicians which follow, it will be useful to give certain figures for the whole county.

Notifications

The following table shows the notifications in Cumberland for 1956 and the preceding years:—

Year	Pulmonary	Non-Pulmonary
1949	222	32
1950	231	48
1951	267	46
1952	259	45
1953	286	46
1954	262	57
1955	298	33
1956	262	27

Deaths

Deaths from pulmonary tuberculosis for 1956 amounted to 18, which is the lowest figure ever recorded. Deaths from non-pulmonary tuberculosis amounted to 3.

The following table shows the deaths from pulmonary and non-pulmonary tuberculosis in Cumberland for 1956 and preceding years:—

Year					Pulmonary	Non-Pulmonary	
1949	...	...	...	...	107	...	25
1950	...	...	...	...	101	...	15
1951	...	...	...	...	80	...	11
1952	...	...	...	...	43	...	9
1953	...	...	...	...	44	...	4
1954	...	...	...	...	26	...	3
1955	...	...	...	...	24	...	2
1956	...	...	...	...	18	...	3

Distribution

The distribution of deaths from pulmonary tuberculosis by areas has been received from the Registrar General as follows:—

Urban Districts					Deaths	Death Rate
Cockermouth	...	...	...	...	Nil	Nil
Keswick	...	...	...	...	Nil	Nil
Maryport	...	...	...	...	1	.08
Penrith	...	...	...	...	Nil	Nil
Whitehaven	...	...	...	...	2	.08
Workington	...	...	...	...	2	.07
Aggregate of Urban Districts					5	.06
Rural Districts					Deaths	Death Rate
Alston	...	...	...	...	Nil	Nil
Border	...	...	...	...	6	.2
Cockermouth	...	...	...	...	Nil	Nil
Ennerdale	...	...	...	...	5	.17
Millom	...	...	...	...	1	.07
Penrith	...	...	...	...	1	.09
Wigton	...	...	...	...	Nil	Nil
Aggregate of Rural Districts					13	.1
Total for administrative County					18	.08

It may of interest to compare the deaths from pulmonary tuberculosis in East and West Cumberland for the past few years, and these figures are set out in the table which follows:—

Year	Total	East Cumberland		West Cumberland	
		Total	Percentage	Total	Percentage
1949	107	36	33.6%	71	66.4%
1950	101	22	21.8%	79	78.2%
1951	80	18	22.5%	62	77.5%
1952	43	7	16.3%	36	83.7%
1953	44	7	15.9%	37	84.1%
1954	26	4	15.4%	22	84.6%
1955	24	8	33.3%	16	66.6%
1956	18	7	38.9%	11	61.1%

The percentages given in the above table represent the percentage proportion of the total deaths occurring in the county during these years, allocated between East and West Cumberland. The actual figures of deaths, apart from the percentages have, of course, to be read in conjunction with the population figures of the two areas of the county which are as follows:—

East Cumberland	...	...	82,430
West Cumberland	...	...	135,020
			<hr/>
			217,450
			<hr/>

These population figures are the Registrar General's estimated mid-1956 figures.

Expressed as a rate per 1,000 population the deaths from pulmonary tuberculosis during 1956 are as follows:—

East Cumberland	...	...	...	.08
West Cumberland	...	...	...	.08

The percentages given in the above table represent the percentage proportion of the total deaths occurring in the county during these years allocated between East and West Cumberland. The actual figures of deaths apart from the percentages have of course to be read in conjunction with the population figures of the two areas of the county which are as follows:-

East Cumberland	62,430
West Cumberland	135,000

These population figures are the Registrar General's estimated mid-1956 figures.

Expressed as a rate per 1,000 population the death rate from pulmonary tuberculosis during 1955-56 was as follows:-

East Cumberland	10.5
West Cumberland	10.5

Age Group	East Cumberland	West Cumberland
Under 15	0.5	0.5
15-24	1.0	1.0
25-34	1.5	1.5
35-44	2.0	2.0
45-54	3.0	3.0
55-64	4.0	4.0
65-74	5.0	5.0
75 and over	6.0	6.0

It will be seen that the death rate from tuberculosis is highest in the 75 and over age group.

The following table shows the percentage of deaths from tuberculosis in the two areas of the county during the years 1955-56.

Year	East Cumberland	West Cumberland
1955	10.5	10.5
1956	10.5	10.5
1957	10.5	10.5
1958	10.5	10.5
1959	10.5	10.5
1960	10.5	10.5
1961	10.5	10.5
1962	10.5	10.5
1963	10.5	10.5
1964	10.5	10.5
1965	10.5	10.5

EAST CUMBERLAND

Dr. Hugh Morton, Consultant

Chest Physician

EAST CUMBERLAND

Dr. Hugh Morris, Consultant
Chest Physician

Introduction

Our statistics for 1956 reveal that it is in the field of treatment that we have most grounds for satisfaction.

The number of cases remaining at the end of the year who are in an infectious state again shows an appreciable decrease.

The decrease in the number of new cases of pulmonary tuberculosis noted in previous years has been halted, and statistics for 1957, up to the time of writing this report, even suggest that this figure will again rise.

Tuberculosis as a problem is not yet solved. It is merely wishful thinking to believe that the disease is at last fully controlled and the view of some Regional Hospital Boards that the disease has ceased to be a problem of the future, and that no money should be spent on further developments in the chest service must be strongly condemned. The new problems facing us are such that, if we are to cope with these satisfactorily, the chest centre facilities will have to be increased.

Whilst waiting lists for admission to hospital of cases of tuberculosis remain at a low level, the small number of beds available for the investigation and treatment of non-tuberculous pulmonary conditions becomes more acute from year to year. The demand for urgent admissions for acute non-tuberculous pulmonary disease is very much greater than it is for tuberculosis itself.

As in previous years a short section on non-tuberculous diseases of the chest is appended but the brevity of this section must not be interpreted as an indication of its relative unimportance. Chest disease, other than tuberculosis, is responsible for both a higher morbidity and a higher mortality in the community than tuberculosis, and the investigation and treatment of these diseases continues to take up the biggest proportion of our time and facilities.

Notifications

In the East Cumberland area in 1956 notifications for the pulmonary type of the disease dropped from 139 to 125, and the notifications of non-pulmonary disease dropped from 31 to 19. This decrease was general throughout the area; in the County of Cumberland area the new pulmonary cases fell from 56 to 54, whilst in the City of Carlisle the corresponding figures were 74 and 63, and in North Westmorland 9 and 8.

It will be noted that this decrease is much less than noted previously in 1954, when the total number of new pulmonary cases for the whole area was 170. At the time of writing this report, May, the number of new cases seen to date during 1957 shows an appreciable increase on any similar period during the past five years; and one indeed wonders whether one has not reached the position of stalemate as far as this figure goes. There is no doubt but that many of our new cases have failed to avail themselves in the past of either consulting their own doctors, or of visiting the mass radiography unit, and we all know that there is a considerable infective pool in the community still undetected and unrecognised.

The mass radiography unit allotted to the Special Area has continued its operation throughout the year. One short period was spent in co-operation with other Newcastle units in the Gateshead area in the Spring and somewhat interrupted our programme locally, but its value as a case-finding measure remains unimpaired. Regular and intensive factory and public session surveys have continued and have contributed much to allaying the fears of patients and to breaking down their hospital complex. Many of our new cases would have otherwise remained undetected had they not passed through the unit.

Now that therapeutic methods of greater efficacy are known, the obligation to detect tuberculosis wherever it may be, whether in the lungs, or in the bones, or in the cervical glands, and to restore the diseased person to health, and thus prevent infection

to other people is more binding than ever. Much of this obligation is borne by our profession. Where a patient does not consult his doctor and fails to take advantage of a mass radiography examination, the disease will spread. There is still much ignorance amongst the general public about tuberculosis. In spite of quite extensive propaganda many sections of the public, particularly in the older age groups, remain largely apathetic.

There is still a considerable unknown pool of infectious disease in the community. Although modern diagnostic methods have contributed largely to the finding of early disease, experienced chest physicians, particularly those concerned in the running of a mass radiography unit, cannot fail to be impressed by the frequency with which one finds cases of extensive chronic disease previously unrecognised. There is no doubt that the value of any mass miniature radiography survey lies partly in offering all such persons prompt and adequate therapy, and removing them as a source of infection from the local community. In spite of all our efforts the number of new cases remains at much too high a level. In this area a graphic record of these cases over the past five years suggests that this level will remain stationary unless there is re-orientation of outlook in responsible quarters.

The assessment of cases of pulmonary tuberculosis as active continues to be a major part of our chest centre work. When asymptomatic bacteriologically negative lesions are detected by x-ray examination, and when the x-ray appearances are consistent with inactive disease the clinician cannot dismiss the findings as of no consequence. A formal schedule of periodic examination must be carried out and continued so long as a lesion remains which is thought to be capable of re-activation.

Pleurisy with effusion is in many cases of tuberculous aetiology even though a parenchymal lesion cannot be demonstrated after the effusion has disappeared. As pulmonary tuberculosis is now appearing more often in the older age groups, thorough investiga-

tion of all pleural effusions, including paracentesis, is more necessary than ever, so as to distinguish those of tuberculous aetiology, particularly from the increasing number of effusions associated with neoplasms. A certain number of cases of erythema nodosum are regarded in this country as evidence of a tuberculous infection. Probably the most frequent cause of this condition is sarcoidosis, but whether the aetiology be tuberculous or sarcoid, full investigation of the chest is required. Diabetes Melitus definitely predisposes to tuberculosis—hence special care to exclude tuberculosis in all such patients is necessary. The administration of Cortisone and its derivatives, especially for prolonged periods is an important item of history, because such treatment may re-activate a latent lesion.

I must, unfortunately, again stress the importance of notifying cases of active non-pulmonary tuberculosis when these are first seen. I called attention to this in 1954 and again last year, but cases of pulmonary tuberculosis still crop up where we find a relative with a non-notified non-pulmonary tuberculosis lesion who has been already under treatment. Bone and joint tuberculosis must in this area be largely due to the human type of bacillus, and when we have no knowledge of such a case we are unable to track down the person responsible for the infection.

Table 1 gives the number of notifications throughout England and Wales for the years 1951 to 1956 :—

Table 1.
Notifications in England and Wales

Year							No. of Notifications
1951	...	...	...	...	...	...	49,440
1952	...	...	...	...	...	...	41,904
1953	...	...	...	...	...	...	40,917
1954	...	...	...	...	...	...	36,973
1955	...	...	...	...	...	...	34,209
1956	...	...	...	...	...	...	35,815

Table 2 shows the notifications in East Cumberland for 1952, 1953, 1954, and 1955 and 1956, and for the whole of the county for the preceding year :—

Table 2.

Year				Pulmonary				Non-pulmonary
1951	...	...	...	267	...	...	...	46
1952	...	...	...	79	...	...	...	20
1953	...	...	...	63	...	...	...	18
1954	...	...	...	66	...	...	...	19
1955	...	...	...	56	...	...	...	20
1956	...	...	...	54	...	...	...	10

The sex and age distribution of cases seen in 1956 are set out in Table 3 and apply to the county area only the figures in parenthesis being the number of cases from the whole of the East Cumberland Hospital Management Committee area, including the county, City of Carlisle and North Westmorland.

Table 3.**RESPIRATORY**

		Under							
Age		5	5-15	15-25	25-35	35-45	45-55	55-65	65+
Males		2(3)	2(3)	5(9)	1(11)	6(17)	4(15)	5(15)	7(9)
Females		—(—)	—(2)	5(11)	7(15)	4(5)	5(8)	—(1)	1(1)

NON-RESPIRATORY

Males	—(—)	—(1)	—(—)	—(—)	—(—)	—(—)	—(—)	—(—)	—(—)
Females	1(1)	—(3)	2(4)	1(3)	2(2)	2(3)	—(—)	2(2)	

Once again the number of new female cases of tuberculosis in the whole area has dropped and this has involved all age groups, except the 45-55 group. The incidence of the disease in elderly males has, however, risen, a fact which raises new problems, particularly in therapy.

No less than 8 new cases were found in the under 15 age group and one expects to continue to find cases in this group unless the serious gaps in our preventative service—mentioned elsewhere in this report—are corrected.

Recent new cases of tuberculosis have included two school teachers, one nursery assistant and two industrial canteen workers. All staff associated with schools, both teaching and non-teaching should have at least one annual x-ray examination, and it is depressing to

repeat this year after year. Surely the staff themselves would be the first to appreciate the value of such an examination. The danger to the largely unprotected groups of our child population is very great, and such an annual examination should be an integral and compulsory requirement for anyone coming in close contact with infants and children in schools and nurseries.

Today the prevalence of active and infectious tuberculosis has so diminished that many people reach adult life without being infected, and the Mantoux test assumes very great significance. A positive test in children merits very careful observation for years. If an infant is found to be Mantoux positive, then there is undoubtedly a strong argument for notification and for recommending a course of specific chemotherapy, even in the absence of recognisable tuberculous disease.

Table 4 gives the pulmonary notifications for 1956 and these are further classified as to whether they are infectious or non-infectious and also the extent of the disease which they have on first examination. The figures given apply to the county area whilst the figures in paranthesis again refer to the whole of the East Cumberland area.

Table 4.

RESPIRATORY

	R.A. 1	R.A. 2	R.A. 3	R.B. 1	R.B. 2	R.B. 3
Males ...	14(32)	9(18)	4(7)	—(1)	2(10)	3(14)
Females ...	10(16)	4(9)	2(4)	1(1)	3(5)	2(8)
No. of above respiratory cases re- ferred by M.M.R.						
Males ...	6(14)	5(8)	1(2)	—(1)	1(3)	—(2)
Females ...	5(6)	1(2)	—(—)	—(—)	1(1)	—(—)

Deaths

The number of people whose names were on the Tuberculosis register for the Eastern Division of Cumberland, and who have died during the year are as set out in Table 5; the figures for the years 1951 and 1952 relate to the number of deaths in the whole of the county.

Table 5.

Year				Pulmonary				Non-pulmonary
1951	...	...	...	80	...	...	...	11
1952	...	...	...	43	...	...	...	9
1953	...	...	...	7	...	...	...	1
1954	...	...	...	4	...	...	...	—
1955	...	...	...	13	...	...	...	1
1956	...	...	...	7	...	...	...	—

Table 6 gives the number of deaths from tuberculosis throughout England and Wales from 1951 to 1956:—

Table 6.

Year						No. of deaths
1951	...	...	...	...	...	12,031
1952	...	...	...	...	...	9,335
1953	...	...	...	...	...	7,911
1954	...	...	...	...	...	7,069
1955	...	...	...	...	...	5,838
1956	...	...	...	...	...	5,368

As I have indicated in previous years, these tables only give the number of people dying whose names were on the Tuberculosis register, and do not indicate that they actually died from the disease. Most of our cases did in fact die from conditions other than their tuberculosis, and detailed analysis of the 26 deaths which occurred in 1956 shows that only five out of the 26 died from their tuberculosis. By far the most common cause of death was emphysema with cor pulmonale; in three cases congestive cardiac failure was the actual cause of death; two cases died from carcinoma, one of which was in the colon; two others died from cerebral embolism and two from non-tuberculosis pneumonia.

Table 5a shows the number of deaths of patients on the Tuberculosis register in 1956 divided into age groups:—

Table 5a.

Under	5	5-15	15-25	25-35	35-45	45-55	55-65	65+
—	—	—	3	3	4	7	9	9

As the older age groups account for an increasing percentage of the new cases seen each year it is only to be expected that in a majority of such cases these patients will die from some condition other than their tuberculosis.

The problem is indeed a very acute one. Active disease in elderly people does often result from the breaking down of a lesion contracted many years earlier, a lesion perhaps which may have been fully investigated and found to be healed and inactive. In other cases, however, there is a strong suspicion that the positive Mantoux test associated with a healed adolescent primary complex has reverted to negative and suggests that in a certain and probably increasing proportion of cases in elderly people active disease may be in the nature of an entirely new infection from without.

Chest Centre Statistics

Table 7 gives the number of cases of pulmonary and non-pulmonary tuberculosis on the East Cumberland register for 1956. The figures in parenthesis in the grand total relate to the corresponding figures for 1955.

Table 7.
CLINIC REGISTER AS AT THE END OF 1956—COUNTY OF CUMBERLAND—EASTERN DIVISION.

	Respiratory.			Non-Respiratory.			Totals.			Grand Total				
	M.	W.	Ch.	M.	W.	Ch.	M.	W.	Ch.					
Cases on Clinic Register on 1st January, 1956 ...	231	235	11	...	20	50	21	...	251	285	32	...	568	(520)
Additions to Register dur- ing 1956 ...	38	31	4	..	—	9	1	...	38	40	5	...	83	(98)
Removals from Register during 1956 ...	269	266	15	...	20	59	22	...	289	325	37	...	651	(618)
Number of cases on Register on 31st December, 1956	17	18	—	...	3	4	—	...	20	22	—	...	42	(50)
Number known to have had a positive sputum within the preceding 6 months	252	249	14	...	19	59	16	...	271	308	30	...	609	(568)
	14	3	—	...	—	—	—	...	14	3	—	...	17	(25)

One should note the steady increase in the number of cases of tuberculosis which are under regular supervision. The number of cases with a positive sputum, and therefore infectious, has reached a new low level. It is very satisfying to know that this decrease of infectivity has also occurred in the Carlisle City area and in the North Westmorland area. Out of a total number of 1,306 cases on the Tuberculosis register at the end of the year, only 47 had a positive sputum within the previous six months.

Table 8 gives the statistical summary of the work done at the chest centre during the year.

Table 8.

CHEST CENTRE STATISTICS.

	East Cumberland		Carlisle City		North Westmorland		Total		Total figures for 1955
	R.	N.R.	R.	N.R.	R.	N.R.	R.	N.R.	
1—No. of NEW CASES seen:—									
Adult Male	385	—	432	—	58	—	875	—	1927
" Female	329	12	450	5	48	—	827	17	
Male child	72	1	74	5	9	—	155	6	
Female child	72	1	64	1	2	1	138	3	
2—No. of OLD CASES seen:—									
Adult Male	830	18	1081	16	120	10	2031	44	5076
" Female	911	89	1282	80	96	17	2289	186	
Male child	160	7	264	1	28	9	452	17	
Female child	125	4	162	12	6	5	293	21	
3—No. of NEW CONTACTS seen:—									
Adult Male	233	—	267	—	44	—	544	—	2705
" Female	263	—	334	—	63	—	660	—	
Male child	240	—	283	—	39	—	562	—	
Female child	184	—	296	—	34	—	514	—	
4—No. of OLD CONTACTS seen:—									
Adult Male	29	—	50	—	4	—	83	—	1555
" Female	60	—	82	—	13	—	155	—	
Male child	141	—	242	—	11	—	394	—	
Female child	134	—	286	—	17	—	437	—	
5—No. of cases seen by physiotherapist:—									
Adult Male	225	—	418	—	1	—	644	—	2313
" Female	202	—	307	—	14	—	523	—	
Male child	215	—	445	—	10	—	670	—	
Female child	180	—	296	—	—	—	476	—	
6—No. of A.P. refills given	*169	—	268	—	1	—	438	—	854
7—No. of P.P. refills given	961	—	1533	—	62	—	2556	—	1635
8—No. of E.P. refills given	179	—	251	—	50	—	480	—	4280
9—Screenings only	70	—	149	—	3	—	222	—	481
10—Aspirations	6	10	3	16	2	3	11	29	376
11—Domiciliary visits	...	...	...	...	...	...	292	...	99
12—TOTAL ATTENDANCES	6375	142	9319	137	735	44	16721	323	314
	...	...	...	...	...	...	...	...	19302

*Includes Blencathra out-patients refills—32.

These statistics show that there has been an increase in both the number of new cases seen and the number of old cases examined. The drop shown last year in the number of cases attending for collapse therapy has continued. As indicated last year the number of new cases requiring this form of treatment has greatly diminished; on the other hand the number of cases attending for physiotherapy has greatly increased. The smaller number of contacts examined was largely due to our inability to make use of the mass radiography unit for their examination, owing to its stay for one month in Gateshead.

Contact Examinations

Contact work has been carried out at the chest centre on the same lines as in previous years, and the net continues to be spread as widely as possible. In the cases of working patients we have been able to examine their fellow workers and we have received very considerable help from employers and welfare personnel of the works concerned.

The number of contacts found to be tuberculous in the whole of the East Cumberland area, and notified during the year total 8, compared to 7 in 1955.

All Mantoux negative contacts are offered B.C.G. vaccination and once again no case of active tuberculous disease has occurred in a contact who had been vaccinated.

Hospital Facilities and Waiting Lists

Table 9 gives the number of beds available for the treatment of tuberculosis.

Table 9

Institution	No. of beds
Blencathra	74
City General Hospital	19
Longtown Hospital	24
Ormside Sanatorium	22

Table 10 gives the number of cases from the Eastern Division of the county admitted to institutions for treatment during 1956.

Table 10

Institution	Adults	Children
Blencathra	45	—
Longtown	29	—
City General Hospital ...	32	5
Cumberland Infirmary ...	12	—
Ormside Sanatorium ...	30	—

As from the middle of December the bed situation in the Carlisle area further deteriorated; we had to give up Ward 18, a ward of 10 beds in the Cumberland Infirmary, to the geriatric department, and as a result the pressure on our beds locally has been, and continues to be, very great. The waiting lists at the end of the year for all of the chest diseases is set out in Table 11.

Waiting Lists as at 31.12.56

	Males.	Females.	Total.
(a) For admission to hospital or sanatorium	3	12	15
(b) For admission to Thoracic Units	7	0	7
(c) Non-tuberculous conditions	26	18	44

This lack of beds in the Carlisle area does seriously handicap our work, both in tuberculosis and in non-tuberculous diseases. Indeed, pulmonary disease other than tuberculosis usually calls for more urgent admission and it is a sad reflection on our hospital service when we are unable to admit such patients.

In tuberculosis the extent of the pulmonary lesion, whether minimal, intermediate or advanced, is not as important as the age of the lesion when contemplating treatment. Old lesions, large or small, are likely to have produced destructive changes, whereas a lesion of recent origin, even if extensive, may be reversible. Frequent histological appraisal of the results of treatment following resection makes it clear that destructive lesions are likely to require surgery, whereas non-destructive lesions may be arrested and often cured by medical means alone. It is therefore of vital importance in making a diagnosis of active pulmonary tuberculosis to determine which pulmonary segments are diseased and what is the nature of the disease in each. It is much easier to determine this early in the

course of the disease while the radiological appearances are prominent. One has to have in mind the probability of resolution of an area of disease, whether collapse therapy can profitably be employed along with chemotherapy; or whether final pulmonary resection may be required later.

Having determined this, the programme of treatment is designed not merely to relieve symptoms, if these are present, but also to protect a patient from the eventualities of progressive tuberculosis for a life time.

Few clinical problems are so complicated, and in former decades few diseases were so illusive and frustrating; now the outlook has altered—there are few diseases which can be treated by so many and varied approaches successfully, when these are combined wisely. We still regard bed rest as necessary during the period of active disease, but since adequate chemotherapy shortens the period of activity, rest therapy can also often be abbreviated and modified in many cases. The amount of bed rest required is determined as the minimum amount needed for a particular patient and this will of necessity vary.

Hospital treatment continues to be recommended for the initial phase of treatment in all cases. Not only does this allow a better opportunity to institute the therapeutic programme, but—and this is most important—it allows for the examination of all home contacts and their protection with B.C.G. vaccine. All patients with active tuberculosis receive specific drug therapy. We prefer Streptomycin along with Isoniazid. However successful the early results of drug therapy may seem we now recommend that it must be continued for a comparatively long period to ensure its full bacteriostatic use. As far as chronic disease is concerned, this will necessitate drug therapy in some form or other for at least 12 months after the sputum has been converted.

The programme of drug therapy as used in pulmonary tuberculosis is in general carried out also in extra-pulmonary tuberculosis. Enlarged tuberculous

cervical glands are still common, and relapses following treatment have occurred in one or two cases, and we now feel that therapy in the past has been of too short duration.

We have seen little new non-pulmonary tuberculosis during 1956. Here too specific drug therapy has revolutionised treatment, and indeed the treatment of such lesions as renal tuberculosis, endometrial tuberculosis, salpingitis, etc., has become largely medical, the surgeon being called in just as in pulmonary disease when gross residual cavitating disease, or abscess, remains after drug therapy.

I would comment briefly on the diminishing numbers of patients who attended at the chest centre for collapse therapy refills. Collapse therapy is essentially a means of providing additional rest to the diseased lung, and in choosing the type of collapse therapy needed one takes the method which (a) entails the least risk of complication; (b) which compromises the pulmonary function to the least degree; and (c) which will lead to the desired goal, either a final lasting result in itself, or as an intermediate step towards eventual pulmonary resection. One of the principal objects of collapse therapy has been, and is, the closure of cavities. A good pneumothorax will only collapse the diseased segment, and if it has not attained the object of cavity closure and a negative sputum one would consider pulmonary resection or another type of collapse therapy for a patient still not fit for surgery. Now that we have excellent surgical facilities we recognise that in many cases resection will be necessary, and therefore the number of cases for which we would consider pneumothorax therapy has diminished. Pneumoperitoneum is a relatively safe operation, and whilst it is often used as the only form of collapse to be maintained until a cure is obtained, we still carry it out as a temporary expedient when the pulmonary disease is considered too acute for pulmonary resection—the latter being anticipated at a later date.

We do not now continue a pneumothorax for longer than 12 months and indeed many of our recent inductions have only been continued for half this period.

We also no longer have the phrenic nerve crushed after the induction of a pneumoperitoneum, as we now recognise that although we get a spectacular "collapse" result there is considerable loss of respiratory function and pulmonary resection yields results which are more predictable. The complete reversibility and control of a pneumoperitoneum permits its use in patients with marginal respiratory function, whether due to previous collapse, resection, or extensive destructive lesions. One advantage of a pneumoperitoneum is that a patient with an effective pneumoperitoneum can tolerate more physical capacity than if he had none, and can in fact remain at work.

One should also mention the treatment of the persistent chronic cavities by postural retention. Unfortunately, this type of treatment takes many months. In one case a patient was in our ward for $2\frac{1}{2}$ years on this treatment before she was fit for resection.

The operation of thoracoplasty has markedly declined in popularity and it is very infrequently used today. This operation produces a considerable permanent reduction in the respiratory capacity and we now recognise that any procedure designed purely and simply to reduce respiratory movement is bad treatment.

Selective collapse on an upper lobe lesion by extra-pleural pneumothorax has been done on several of our cases. Minimal impairment of pulmonary function is produced and it is usually selected for patients with limited respiratory reserve. There is no difficulty in continuing such a pneumothorax, but the difficulties arise when termination is considered advisable. The decision to terminate in such a case is not an easy one and the question of further surgery is likely to arise. Our view is that one individual patient should only have one major thoracic operation in his life time, and hence we seldom now recommend an extra-pleural pneumothorax.

Chemotherapy alone, chemotherapy with collapse therapy, or chemotherapy with pulmonary resection, depending on the stage of the disease, offers the nearest

approach to complete cure. Careful evaluation of the respiratory and circulatory functions is necessary beforehand. The prospective life span during which relapses occur is so long in young persons that radical treatment should be undertaken. A patient of 65 years of age not only faces a shorter life expectancy than one of 20 but he often faces a more secure leisurely existence. Chronological age and physiological age are not consistent in many patients, and in diabetics every effort is made to remove destructive lesions.

Whenever pulmonary resection is contemplated one has to remember that in most cases the disease has been more widespread initially than can be demonstrated radiologically at the time of operation. The value, therefore, of radiological examination, especially in relation to the individual pulmonary segments at the start of treatment will therefore be appreciated. Although clinically the disease may be confined to one area of the lung, tuberculosis is a generalised infection, and one cannot disregard foci which may be present elsewhere in the lungs and in other organs. Following operation therefore, medical treatment adequate enough to deal with any residual disease and consisting of bed rest, specific drug therapy, and sometimes even collapse therapy, is essential to consolidate the spectacular gains of pulmonary resection. Inadequate medical treatment following operation may have permanent disastrous results.

Rehabilitation

Rehabilitation Panels continue to be held monthly at the chest centre. This problem exists for many of our patients and we must assist our patients in procuring any advice and training for a life free from stress and strain, yet adequately productive.

The need for rehabilitation is in direct proportion, not so much to the extent of the disease which a patient has, but to the length of time that patient has had the disease, and successful rehabilitation depends largely, therefore, on early diagnosis.

Modern treatment today often continues after a patient has been discharged from hospital, and indeed,

even after he is considered fit to resume work. In some cases we would consider it inadequate if we did not insist on drug therapy for 12 months after a patient's discharge from hospital. Some patients too attend for collapse therapy at weekly intervals, thus allowing them to return to work with a greater margin of safety than if they had no artificial collapse. All patients are re-examined at approximately three monthly intervals, and in this way an attempt is made to detect any relapse as early as possible.

During the first five years after discharge from hospital energy expenditures of patients are carefully budgetted and adequate physical rest advised. Placing a patient in suitable employment is undoubtedly one method of minimising any tendency to relapse.

The vast majority of our patients who have recovered from tuberculosis are so comparatively slightly handicapped physically that they are able to return to their previous employment, if that employment is considered by us as suitable. To a patient who has been in hospital for some months, return to work acts as a vigorous tonic, and if he can return to his old job there is much less stress and strain associated with it. It is most important, however, that the nature of the work a patient does fits in with his physical condition. His old job may be entirely suited to his mental and physical capacity, but long daily 'bus journeys to and from work may not only lengthen his working day but may make serious inroads into the daily food budget, so much so that alternative employment has to be considered. In a few cases work previously carried out by a patient is quite unsuitable, as, for example, heavy manual work, or underground work in dusty conditions.

It is therefore only in a comparatively small number of cases in which the necessity arises for us to advise a complete change of employment. The choice of alternative work appears to be much easier for women than for men. During the last six years a large number of female patients have been successfully recruited to the nursing staffs of our hospitals

and many of these girls have acquitted themselves with distinction. Some women, however, have no bent for nursing and in these cases training for a commercial career in shorthand, typing and book-keeping has often proved attractive.

In men, however, the problem is much more difficult. Although we have had many male patients trained in alternative occupations it would appear to be becoming increasingly difficult to give such patients a reasonable guarantee that jobs will be found for them locally after their period of training has been completed. For many of the older type of patients, not suitable because of age for training, but all able to, and eager to work, no work is available on the open market because their physical condition cannot cope and keep up with the pressure of industry. In some cases where the intelligence quotient is low the prospects of employment are greatly determined by the mental condition of the patient and less by his physical capacity.

One must emphasise that the health of patients is governed not only by the working conditions within the factory or store, but also by his living conditions outside the factory. In this area every effort is made by the responsible local authorities to secure better housing for our patients, and indeed, one has the impression that a larger percentage of the new housing has been allotted to our patients than in any other chest area.

Other Chest Diseases

The number of cases of pulmonary cancer seen and investigated during 1956 increased by 40% compared to 1955. This increase has been steady since 1951, and as our diagnostic facilities in 1956 were exactly as they were in 1951 one must accept it that this is a true increase in the incidence of neoplasm. The number of cases considered fit for surgery was 31%.

Many of the cases when first seen presented evidence of an extensive lesion, often associated with

abscess and sometimes with disease in the peripheral glands, making it impossible for surgery to be carried out. In the vast majority of cases, however, surgery was contra-indicated because of evidence of gross cardio-vascular degeneration. Indeed, one has the impression that at least in the over 40 age group the incidence of gross cardio-vascular degeneration is higher in persons with pulmonary neoplasm than in patients attending the chest centre with other pulmonary conditions.

Unfortunately, a large number of patients with neoplasms only consult their doctors after symptoms have been present for some considerable time. In this area there would appear to be a high incidence of bronchitis and emphysema, particularly in the over 50 male population, and any exacerbation of pulmonary symptoms is attributed by the patient to these conditions.

Our patients seen for the first time in 1956 can be divided into two distinct categories as far as medical history is concerned. First, in slightly over half of our cases the average length of symptoms before being first seen at the chest centre was three weeks, and in these cases the most common symptoms necessitating their seeking medical advice was undoubtedly haemoptysis. Two of this group were mass radiography pickups and had no symptoms, and the longest period with symptoms was seven months, which referred to one patient. The second group involved rather less than half of our total number of cases, and symptoms varied in duration from a minimum of eighteen months to two or more years, the average being $3\frac{1}{2}$ years. Most of these cases had a history of chronic bronchitis, and is no less than eight of this group there was a minimal history lasting ten years. In this second group there is no question but that exacerbation of symptoms which had been present for some considerable time, or even a change in their character, often leads a patient to feel that it is only his bronchitis which is the cause and he fails to secure medical advice.

In 1956, 18% of the total number of new cases were discovered on routine mass radiography examination,

and 20% of these were considered fit for surgery. The number discovered by mass radiography would be greater still if persons over 45 submitted to an annual x-ray examination as a matter of routine. Many of our cases gave a history of having passed through the mass radiography unit three years previously but had not bothered to go again.

The age of the patients seen vary from 34 to 71, the overall average being 57. The average age of the male patients was 59, but in the female patients it was 48. The proportion of males to females in the whole group was rather less than 6 to 1, an incidence approximately the same as for the previous year. At the time of writing this report, however, 1957 figures suggest that the incidence in women has increased. In four cases, all men, definite neoplasm was accompanied by definite evidence of active tuberculous disease.

In the East Cumberland area there does not appear to be any significant statistical relationship between the incidence of neoplasm and industry. Carlisle is a railway town and although 20% of our cases were railwaymen, the nature of their work in each case varied enormously—clerks, engine drivers, firemen, joiners, etc.

As before, all cases seen are dealt with promptly and have complete investigations, including bronchoscopic examination, carried out usually within ten days of being first seen. The most common type of growth found is the squamous cell carcinoma; this type undoubtedly carries a better prognosis, as regards survival than any of the others, but unfortunately in women the other types predominate and hence the outlook in women is much worse than in men.

A case considered suitable for surgery is invariably transferred to the thoracic unit within two weeks of first being seen. I mention these facts specifically as there has quite recently been considerable criticism in the London area of the average delay between the first attendance of a patient at the chest centre and his being seen by the thoracic surgeon; indeed, one surgeon, whose article has received wide publicity, puts

the average delay in his unit at three to eight months and expresses the opinion that "although these delays are not really a matter of surprise, they are a matter of great concern." I thoroughly agree that an average delay of three to eight months would be of great concern to us, if this occurred in this area. I would say, however, that this particular surgeon is most unfortunate in the chest clinic facilities available in his area.

The diagnosis of pulmonary neoplasm is not an easy matter and often demands time consuming and concentrated investigations. Whilst bronchoscopic examination with biopsy will confirm the diagnosis in a large percentage of cases, other investigations such as tomography, bronchography and examination of sputum for malignant cells are carried out at the same time.

I would particularly draw attention to the laboratory examinations of specimens of sputum for malignant cells. This type of investigation demands a very high degree of technical skill and the interpretation of the microscopic appearances of any cells found requires very special training. Indeed, in some parts of the world, for example in the United States, special laboratories have been set up which only undertake this type of work. We are particularly fortunate in our laboratory facilities in this area and the increasing number of sputums positive for malignant cells in doubtful cases of pulmonary neoplasm which we are getting is undoubtedly an index of the very expert investigation of these specimens in the laboratory. Too often are we inclined to take sputum examinations for granted, and it is a pleasure to be able to pay this tribute to our colleagues in the laboratory.

Where surgical treatment has been contra-indicated, radiotherapy has been used, chiefly to relieve symptoms. Lung tumours show wide variation in their sensitivity to radiotherapy and only in a few is this treatment justified by the relief afforded. There is, unfortunately, no evidence that even with radiotherapy the duration of life is prolonged.

The number of cases of neoplasm surviving the three year period after diagnosis remains very small.

Pneumonectomy affords the only reasonable hope of survival. We must continue to emphasise to the general public the necessity to consult their doctors at the earliest opportunity after warning symptoms appear. Such symptoms are unaccustomed cough, increasing dyspnoea, haemoptysis, pain in the chest and loss of weight, all of which merit immediate investigation.

Bronchiectasis, etc.

The following table shows the number of cases of bronchiectasis on our active register at the end of 1956 :—

	East Cumberland				Carlisle City				North Westmorland		
	M.	F.	Ch.		F.	M.	Ch.		M.	F.	Ch.
Cases on Register											
31/12/55	41	31	28	...	51	30	25	...	16	5	4
New cases during											
1956	6	7	6	...	10	3	5	...	—	1	—
Total on Register											
31/12/56	47	38	32	...	54	32	27	...	15	6	4
No. of attendances											
for											
physiotherapy	225	202	395	...	418	307	741	...	1	14	10

Treatment consists of physiotherapy and antibiotics, and in general, provided we have full co-operation of the patient, or in the case of a child of his parents, the results have been good. In only a few cases have we submitted a patient to the thoracic surgeon for surgical treatment.

Pulmonary atelectasis is of frequent occurrence in children apart from bronchiectasis, and is often associated with the exanthemata, particularly measles and whooping cough. It is also found frequently with upper respiratory catarrhal infections, and here again full use is made of our physiotherapy facilities. Four cases occurred in one week of atelectasis following the inhalation of a peanut in a young child. As distinct from the first type of atelectasis mentioned, peanut atelectasis means immediate bronchoscopy with removal of the foreign body, and these children were transferred immediately to the thoracic unit for this.

Many young children have asthma and bronchitis; these children are all greatly benefited by breathing

exercises. Altogether our demands on the physiotherapist have greatly increased; we have now six sessions per week, and the pressure of work is such that a full-time appointment cannot long be delayed.

Chronic bronchitis and emphysema is a disease of the older age groups and causes considerable morbidity in this area. Considerable investigation is necessary, and in the small number of patients we have been able to admit for investigation and treatment some alleviation of their symptoms has been obtained.

In this area bronchial infection is possibly the biggest factor in the development of chronic bronchitis, and unlike the larger cities atmospheric pollution must be relatively unimportant. It should be noted that smoking exerts a very irritant effect on the bronchi in these cases, and abstinence does help.

Sarcoidosis

An increasing number of cases of sarcoidosis have been seen during the past year. The aetiology of this disease is still doubtful but in most cases the primary site of the disease is found either in the lungs or in the mediastinal lymph nodes. The disease often affects the eye and an increasing number of cases of erythema nodosum have been found to be associated with it.

Mass Radiography

(NOTE: Figures given in brackets throughout the report relate to the corresponding figures for 1955).

Our programme in 1956 was arranged so that rather more time would be spent in West Cumberland than in East Cumberland. It was also intended because of shortage of technical staff that we would close down the Unit for a full month in July/August to allow of the necessary holiday leave to the staff. Unfortunately, however, our local programme was seriously interrupted when our Unit was taken across to take part in a survey in Gateshead in May. As this period of four weeks was a vital period so far as our own programme was concerned we decided to continue operations throughout the summer but even so the programme in

West Cumberland had to be drastically curtailed. This was unfortunate but the current programme in 1957 will largely correct this.

Groups Examined

In addition to carrying out surveys at works and factories, surveys of the general public were carried out on 30 occasions. 2,675 (3,814) contact cases were x-rayed, 1,545 from the East Cumberland area and 1,130 from West Cumberland.

Facilities for x-ray examination were again made available for all school children over the age of 13, these examinations being complementary to the Mantoux testing and B.C.G. vaccination schemes of the local authorities. 8,775 (9,757) children of these age groups passed through the Unit.

Sessions were held for members of the general public in 24 (29) towns and villages in the Special Area and 20,397 (20,125) persons passed through the Unit.

The full co-operation of the general practitioners was again invited in the areas visited as in previous years. The number of persons referred directly by general medical practitioners did, however, diminish as did also the number of ante-natal cases referred.

During the survey in Gateshead 2,014 persons were x-rayed by the Unit and 9 persons were found to be suffering from active tuberculosis. These figures are not included in the tables which follow.

Results

Excluding the Gateshead survey 48,420 (49,629) persons were examined by the Unit during the year. These included 1,223 (1,177) inmates of Dovenby Hall and Garlands Hospital. Excluding the mental patients 47,197 (48,452) civilians were examined.

Number recalled for full sized X-ray film—

2-236—4.62% of total examined.
(2,214—4.46%)

Number referred for clinical examination—

550—1.14% of total examined.
(521—1.05%)

Number failing to attend for full sized film—

170— 7.6% of those recalled,
(193—8.72%)

The number recalled for clinical examination included all persons presenting radiological evidence of possible active pulmonary tuberculosis, cases of bronchiectasis, particularly those in the under 35 age groups, all neoplasms, many cases of cardio-vascular abnormality, cases of pneumoconiosis and other cases where the radiological picture suggested sarcoidosis or one of the collagen diseases.

It will be noted that the number of persons failing to attend for large film examination at the Unit has decreased. The vast majority of these non-attenders have taken advantage of further appointments at the local chest centres. In the East Cumberland area, for example, 93% actually attended at the chest centre after failing to attend at the mass radiography unit. In practically all such cases the person recalled had been unable to keep the first appointment because of difficulties at work or some domestic incident or more often because he had been on holiday.

The detailed results of the x-ray examination are shown in Table 1.

Table 1.

	No. of cases found.	Percentgae of total examined.
ABNORMALITIES REVEALED		
(1) Non-tuberculous conditions:		
(a) Bronchiectasis	52 (63) ...	.10 (.13)
(b) Pneumoconiosis	64 (83) ...	.13 (.17)
(c) Neoplasms	10 (11) ...	.02 (.02)
(d) Cardiovascular conditions	413(433) ...	.82 (.87)
(e) Miscellaneous	822(398) ...	1.69 (.80)
(2) Pulmonary Tuberculosis		
(a) Active	82 (94) ...	.17 (.19)
(b) Inactive	596(757) ...	1.23(1.53)
(c) Active (Previously known)	20 (17) ...	.04 (.03)

Table 2 gives a detailed analysis of the work of the Unit divided into the East and West Cumberland areas.

Table 2.

EAST CUMBERLAND								WEST CUMBERLAND										
Miniature Films.	Large Films.	Clinical Exams	Active T.B.	Inactive T.B.	Bronchiectasis.	Neoplasms.	Pneumoconiosis.	Cardiac Conditions.	Source of examination.	Miniature Films.	Large Films.	Clinical Exams.	Active T.B.	Inactive T.B.	Bronchiectasis.	Neoplasms.	Pneumoconiosis.	Cardiac Conditions.
146	38	10	2	6	2	1	—	9	Doctors' cases ...	106	13	7	2	3	1	—	1	1
94	3	1	—	1	—	—	—	—	Ante-natal cases ...	17	1	1	—	—	—	—	—	—
1,545	83	18	2	32	3	—	—	19	Contact cases ...	1,130	58	17	5	46	—	—	7	1
5,209	161	18	—	12	2	—	—	2	Scholars ...	3,566	78	23	3	20	3	—	—	4
351	19	2	—	6	—	—	—	4	School Staff ...	—	—	—	—	—	—	—	—	—
13,559	833	192	25	165	19	5	3	235	General Public	6,838	275	100	22	105	6	—	48	32
6,889	325	80	3	77	9	2	—	57	Surveys ...	7,747	253	75	21	81	4	2	5	15
884	77	—	14	39	2	—	—	34	Mentally defective patients ...	339	19	6	3	3	1	—	—	—
28,677	1,539	321	46	338	37	8	3	360	TOTALS ...	19,743	697	229	56	258	15	2	61	53

Disposal

1. *Pulmonary Tuberculosis*

Mass radiography surveys are essentially part of the case finding measures in a properly instituted tuberculosis control scheme. This elementary fact is often lost sight of by those who appear to regard a survey as an end in itself. To be complete, surveys should list the final number of true positive cases identified and also the effectiveness of the tuberculosis programme in terms of cure or control at the end of a 5 or 10 year period. Even when a finding of pulmonary tuberculosis has been made on radiological grounds, deciding whether a lesion is active or inactive is often a more difficult problem. Frequent large film and clinical examinations may be necessary, sometimes over a period of months. In borderline cases there may often be considerable variation recorded in the findings of individual observers. One should, therefore in Table 2, note not only the figures for new cases of active tuberculosis but also those where an inactive lesion was found. Added together, in East Cumberland there were 384 cases of active and inactive tuberculosis and in West Cumberland there were 314 cases. It is suggested that these composite figures give a truer picture of the tuberculosis problem as it exists in both areas.

The final number of sputum positive cases identified is also most important and Table 3, which refers solely to East Cumberland shows this as a percentage since the unit started operating in 1951. The only comparable figures I have seen relating to West Cumberland refer to 1955, when the new cases of pulmonary tuberculosis discovered numbered 214, and of these 14% had a positive sputum.

Table 3

Year	Total number of new cases of Pulmonary Tuberculosis	Total No. with positive sputum	Percentage of new cases with positive sputum	Percentage positive sputum cases found by M.M.R.
1951	148	57	39%	23%
1952	221	91	41%	22%
1953	140	45	32%	20%
1954	170	56	33%	13%
1955	139	42	30%	21%
1956	125	39	31%	18%

2. *Bronchiectasis*

All cases of bronchiectasis were fully investigated at the chest centres. Full use was made of the physiotherapy facilities and in suitable cases treatment is tried out in collaboration with the thoracic surgeon.

3. *Cardiovascular conditions*

The investigation of cardiovascular abnormalities takes up an increasing quota of the time spent in investigating pulmonary disease. The vast majority of these cases are associated with hypertension but an increasing number of congenital cardiac defects have been found during the year.

4. *Neoplasms*

The number of pulmonary neoplasms discovered by the mass radiography unit remains steady, the total being 10 with 8 in East Cumbreland and 2 in West Cumberland. In East Cumberland a total of 29 cases were seen at the chest centre and investigated. There is no delay either in their investigation or in their treatment and admission to Shotley Bridge Hospital in operable cases usually takes place within 10 days of the patient first being seen.

5. *Pneumoconiosis*

As in previous years practically all the cases found are located in the West Cumberland area and most of these are in iron ore industry. The three cases seen in East Cumberland were in coal miners.

6. *Other conditions*

Many other abnormal conditions were discovered, some of which merited considerable investigation either at the chest centres or in other departments of the hospital service.

Comments

As already indicated, the four weeks spent in Gateshead disorganised our programme in the Special Area. Survey timetables require to be prepared many months in advance and it is not an easy matter to alter a

timetable at comparatively short notice, particularly in factory surveys. Some factories can only co-operate in our surveys during their slack periods. Contact examinations require considerable planning beforehand in order to avoid any duplication of work either at the unit or the chest centre. The Gateshead survey interfered particularly with these two groups.

It is generally agreed that mass radiography surveys are not now of significant value as a case finding measure in children but we have continued these surveys of school children as we have felt that their educational value is important. It is too, particularly valuable as a concomitant part of the measures leading to B.C.G. vaccination in school leavers. The position as far as school staff is concerned is still most unsatisfactory, the only local authority which appears to give any encouragement to school staff passing through the unit is the City of Carlisle. As I have indicated in previous reports I feel very strongly that all school staff, both teaching and non-teaching, should avail themselves of regular mass x-ray examinations and pass through the unit at the same time as the pupils, so that the latter are impressed with the importance of such an examination.

The tuberculosis problem in this area is not yet solved. 82 new cases of active pulmonary tuberculosis were discovered by the mass radiography unit in this area out of approximately 50,000 examinations, and as long as this high rate continues we must continue our mass radiography surveys regularly and persistently. In the United States of America a mass radiography survey is considered well worthwhile if 40 cases of tuberculosis are found per 100,000 examinations.

The incidence of pulmonary cancer has again risen during the year as it has done throughout the country, and it is vitally important that all adults avail themselves of annual x-ray facilities so that as early a diagnosis as possible is made.

We had provisionally arranged to carry out an extensive survey in one of the biggest housing estates in the area during the current summer, but have been

unable to plan this in detail and will probably have to cancel the whole idea for this year, at any rate, because of a likely shortage of technical staff.

The technical staff problem becomes more acute from year to year. There is a very marked shortage of radiographers throughout the country, and it is becoming increasingly difficult to fill vacant posts.

The driver technician of the unit has also resigned on being appointed to a better paid post, and at the time of writing this report the applicants interviewed have all turned down the post because of the low salary. It does appear to be ridiculous that one can only offer a man who must have considerable skill in vehicle driving and maintenance and also in darkroom work a wage amounting to less than £7 a week.

Acknowledgments.

Once again it is a pleasure to acknowledge the valuable help received in the chest centre work as a whole from the staff of the County Public Health Department, and particularly I would express my sincere thanks to Dr. Minto, the County Medical Officer, for his continued valuable co-operation.

WEST CUMBERLAND

Dr. R. Hambridge, Consultant
Chest Physician

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The past year has seen no major change in Chest Clinic work although minor variations in the established order have been made.

The volume of work at Egremont and Workington Clinics has been roughly equal, while Millom again has required only a limited number of sessions to cover its requirements.

Owing to an outbreak of poliomyelitis, contact sessions were suspended in Egremont and Workington for fourteen weeks in all, which despite increased attendances per session subsequently and additional sessions in the later part of 1956, resulted in an overall decrease in new patients seen and contact attendances for the year.

There has again been a fall in mortality, while the morbidity rate remains constant. One case of tuberculosis meningitis occurred during the year; the child was a contact of a previously known recalcitrant case who in earlier years had lost her own two children with the same disease.

Observation of a large number of pneumoconiotic patients has continued and a high proportion of cases of active tuberculosis in this group was again found. An extremely common intra-pulmonary cause of death in this group is bronchial carcinoma, which, arising usually in patients of advanced age, is usually untreatable when diagnosed.

Emphasis in the place of treatment of tuberculosis cases continued to rest on Ellerbeck and Galemire, with a decreasing rate of admission to Blencathra and other more remote institutions. This year marks the end of Ellerbeck's use as a tuberculosis annexe, for with the opening of Homewood early in January, 1957, most of the local needs for hospital accommodation will be served there.

Details of the various aspects of Chest Clinic work follow.

New Cases

New cases of tuberculosis known to arise in this area in 1956 totalled 204. As in former years, there were more adult males than any other group, the proportions being shown in Table I below.

Table 1

	Respiratory.		Non-Respiratory.		Total.
Men	95	...	10	...	105
Women	58	...	14	...	72
Children	16	...	11	...	27
Total	169	...	35	...	204

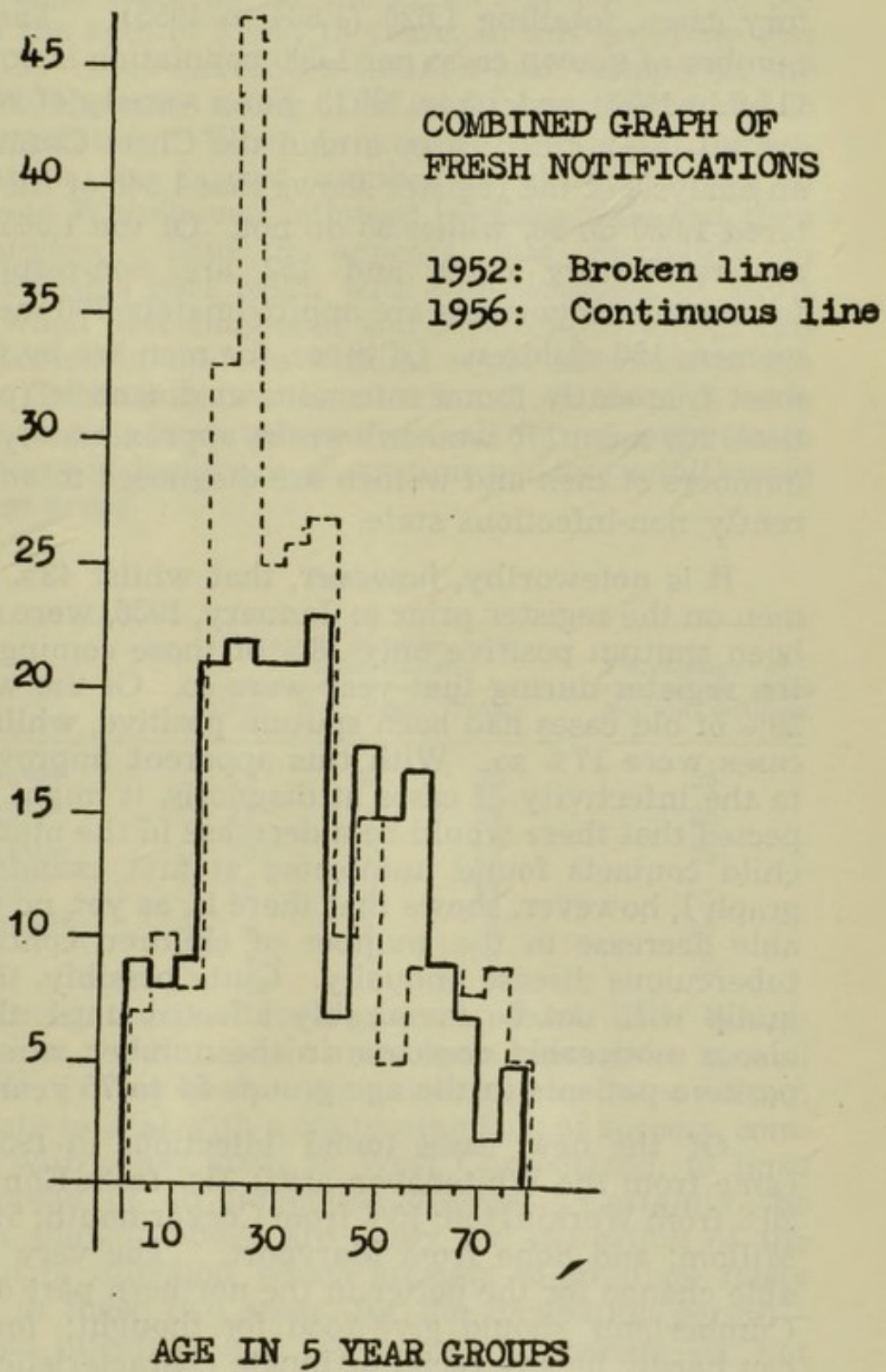
There is again a reduction in the total number of cases, as has been noted since 1953; there does not appear to be any decrease in non-respiratory forms however. The trends are shown in Table 2.

Table 2.

Year.		Respiratory.		Non-Respiratory.		Total.
1952	...	261	...	26	...	287
1953	...	262	...	19	...	281
1954	...	245	...	32	...	277
1955	...	193	...	21	...	214
1956	...	169	...	35	...	204

Although there has been this decrease of 10 cases for 1956 the case rate for all forms remains at 1.5 per thousand population. The case rate for respiratory disease has fallen markedly in the past three years, however, the present rate being only 64% of that for 1953. As stated in this report last year, "the rising case rates in the years 1949-1953 inclusive, are more probably attributable to much wider and more intensive diagnostic procedures than to a true increase in the number of cases occurring annually." Graph I, which depicts notifications in 1952 and 1956 shows clearly that the reduction in new cases has occurred almost entirely in young adults aged between 15 to 40 years. Whilst there may be many influences producing this reduction in the apparent attack rate, one explanation may be that the continued Mass X-Ray surveys have in previous years removed from this group, cases in an early stage of disease, loading the notifications in those age groups in 1952, 1953 and 1954. Other explanations are equally tenable; and certainly include the possibility that preventive measures amongst contacts during the past five years are contributing to a now lower morbidity rate in adolescents and young adults.

NUMBER OF NEW CASES



Tuberculosis Register.

At the 31st December, 1956, the register contained 1,464 cases of respiratory disease and 156 non-respiratory cases, totalling 1,620 (1,604 in 1955). The total number of known cases per 1,000 population is now 12.0 (11.9 in 1955) and 7.5 in 1952. For a variety of reasons not all the notified cases attend the Chest Clinics and an analysis of the register shows that 1,565 of the registered 1,620 do so, whilst 55 do not. Of the 1,565, 1,413 are respiratory cases and 152 are non-respiratory forms; the proportions are approximately 700 men; 650 women; 150 children. Of these, the men are by far the most frequently found infectious at diagnosis (proportions 260 men; 170 women) whilst approximately equal numbers of men and women are diagnosed in an apparently non-infectious state.

It is noteworthy, however, that whilst 43% of the men on the register prior to January, 1956, were or had been sputum positive only 18% of those coming on to the register during that year were so. Of the women, 29% of old cases had been sputum positive, whilst new cases were 17% so. With this apparent improvement in the infectivity of cases at diagnosis, it might be expected that there would be a decrease in the number of child contacts found uninfected at first examination; graph I, however, shows that there is, as yet, no noticeable decrease in the number of children contracting tuberculous disease annually. Quite possibly, this age group will not be favourably affected until there is also a noticeable decrease in the number of sputum positive patients in the age groups 55 to 75 years.

Of the new cases found infectious in 1956 35% came from the Whitehaven area; 25% from Ennerdale; 20% from Workington; 15% from Cockermouth; 5% from Millom; and none from Maryport. The very noticeable change for the better in the northern part of West Cumberland should give food for thought; for there can hardly be any racial or innate characteristic of the population that makes for more rapidly advancing disease in areas south of Distington.

As a corollary to the infectiousness of adult cases at diagnosis, a separate study of children (aged below 15 years) on the register has been made. These total 151; and of these by far the greater proportion lie between the ages of 5 and 13 years; in this group no less than 106 cases have been notified and remain on the register, the cases being 61 of respiratory forms and 45 non-respiratory. When broken up into their residential areas, the largest number of children diseased occurs in Whitehaven followed by Ennerdale and then Workington. Thus it appears that morbidity in children runs *pari passu* with infectiousness of adult cases when first diagnosed and little improvement can be expected in the one without equal advances in the other. Table 3 shows the number of children in each area suffering from tuberculosis, all forms, and relates the observed incidence of sputum positive adult cases in these areas.

Table 3.

Area.	No. of children with tuberculosis.				Percentage of new adult cases sputum positive.
	Resp.	Non-Resp.	Total.		
Whitehaven	13	22	35	...	35
Ennerdale	21	4	25	...	25
Workington	12	10	22	...	20
Maryport	12	2	14	...	—
Cockermouth	4	1	5	...	15
Millom	3	2	5	...	5

During the past four years at least, both Whitehaven and the Ennerdale areas have been given special control. It may be thought existing procedures are not adequate to deal with a continuing lack of success, compared with other areas in West Cumberland, to limit the spread of an infectious disease. Certainly the figures shown above are only an indication of the amount of infection which appears to circulate fairly freely in these two areas; for the incubation period—between infection and appearance of disease—is not completely expressed by the age groups studied in the table.

Mortality and Case Rates.

There has again been a drop in the death rate from tuberculosis: respiratory forms caused 11 deaths and non-respiratory, 3 (16 and 3 respectively in 1955). For an estimated population of 135,050, the rates are 0.08 and 0.02, the combined rate (all forms) being 0.10. About 10 cases in 1946 were fatal for every 1 case in 1956.

The case rate remains at 1.5/1000 as in 1955; the trends of these two rates are shown in Graph II.

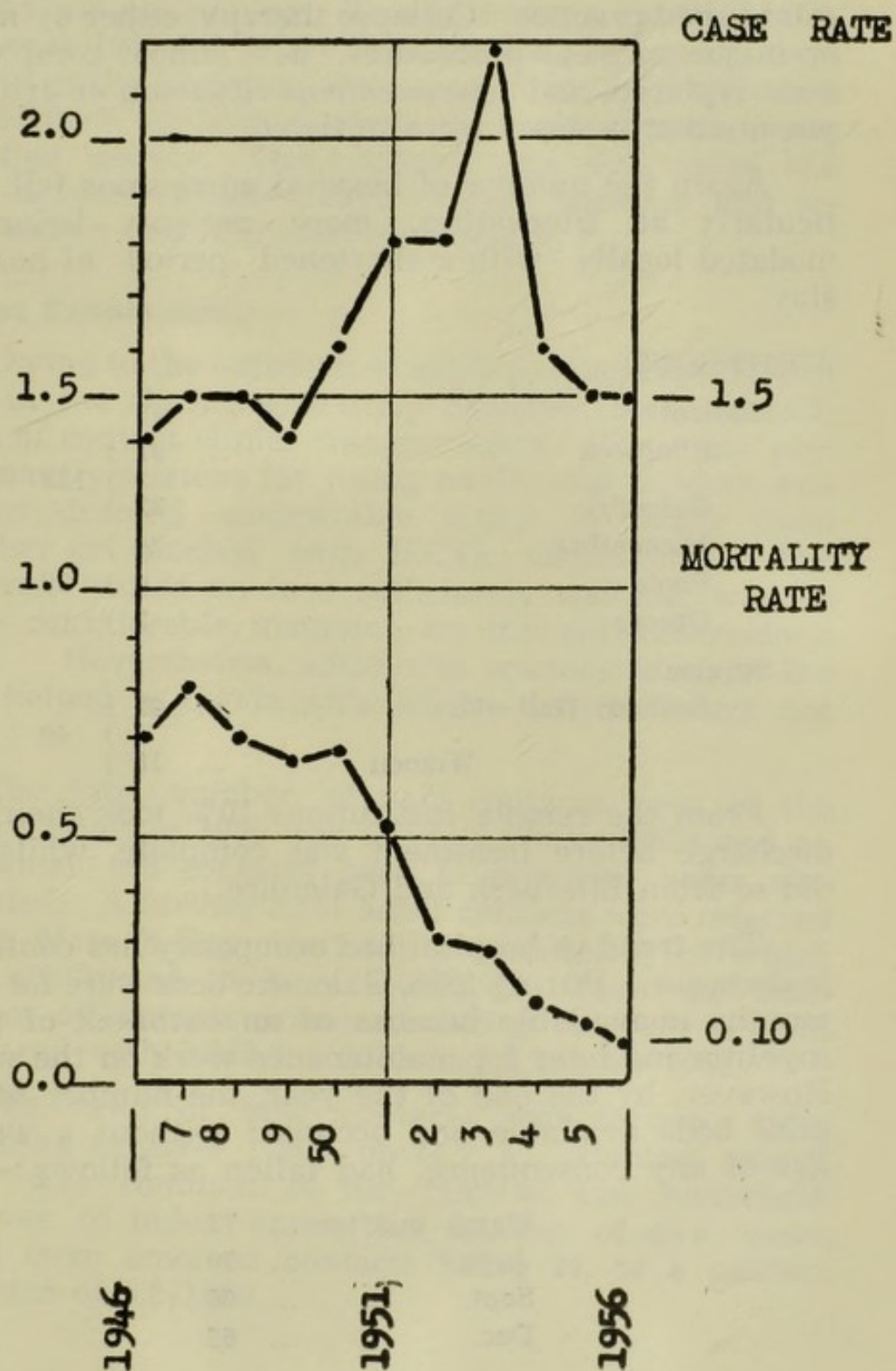
COMBINED GRAPH SHOWING ANNUAL CASE AND DEATH RATES.

TUBERCULOSIS:

ALL FORMS:

1946-1956

PER THOUSAND POPULATION



Treatment.

During 1956 the same pattern of treatment as outlined in 1955 continued. Bed-rest with chemotherapy either at home or in hospital, depending on the individual circumstances of each case, combined with excision of part of the lung, where feasible, is now well established practice. Collapse therapy, either by minor or major surgical procedures, has almost completely been replaced, and few pneumoperitoneum or artificial pneumothorax cases were initiated.

Again the number of hospital admissions fell, particularly at Blencathra, more patients being accommodated locally with a shortened period of hospital stay.

ADMISSIONS:

Medical:

Ellerbeck	...	...	...	...	91)		
						)	123	(97)
Galemire	...	...	...	...	32)		
Blencathra	...	...	...	...	24)		
Poole	...	...	...	...	4	)	30	(95)
Others	...	...	...	...	2)		

Surgical:

Seaham Hall—Men	...	...	...	22)			
					)	40	(43)	
Women	...	...	...	18)			

From the remote institutions 10% took their own discharge before treatment was complete, whilst 7% did so from Ellerbeck and Galemire.

The trend in hospital bed occupancy has continued to decrease. During 1956, Galemire beds were for some months unavailable because of an outbreak of poliomyelitis and later for maintenance work on the wards. However, by the end of the year, the number of hospital beds available and occupied without a waiting list of any consequence, had fallen as follows:—

March quarter	...	73
June	..	70
Sept.	..	66
Dec.	..	62

Out-Patient Treatment.

Refill clinic attendances continued to fall, as voluntary abandonment of these measures was not made good with new inductions. But the end of the year the Refill Clinic Register had fallen to 65, the average weekly attendance being 34.5, conducted in one session for the last six months. This is in sharp contrast with the years 1953/54 before Seaham Hall had made such impact on the Register, when approximately three times the number of both patients and attendances were recorded weekly. The sessional time thus saved has been devoted to additional contact sessions and rehabilitation and after-care procedures.

Contact Examinations.

Owing to the outbreak of acute poliomyelitis in this area in the Spring and early Summer, some curtailment of contact clinics was necessary. These are predominantly sessions for young adults and children and it was deemed undesirable either to bring them together or proceed with B.C.G. vaccination. The epidemic trailed on in a sufficiently sporadic way to cause considerable incursion on the anti-tuberculosis work. Nevertheless, additional sessions later in the year helped to regain some of the deficit, though not all.

The total number of new contacts seen at the Chest Clinics in 1956 was 1,753 (1,376 in 1955) and an additional 695 contacts seen in previous years also attended. A further 3,161 adult contacts were referred to the Mass X-Ray Unit for examination, of which 1,131 are known to have attended. Thus the total number of contacts examined during the year is 3,579 compared with 3,047 for 1955 and 2,788 for 1954.

The ratio of new contacts seen to new cases diagnosed is, 3,579 : 204, or 17 : 1. Contact search again was confined to the familial and household relatives of index cases, the number of new cases found from amongst contacts being 24, or a contact case rate of 6.8/1000.

Throughout West Cumberland the reactor rates to 1/1000 O.T. of contacts seen were :—

Age.	Rate Percentage.		
0— 4 years.	4.0
5— 9 years	13.7
10—14 years	35.4

Of a total of 838 children who were non-reactors 751 were vaccinated with B.C.G. (687 in 1955, 564 in 1954 and 87 in 1952), 43 being new born infants. Table 4 following shows the reactor rates of young contacts seen in West Cumberland by age groups for the three main clinical areas. It is worth comment that between 5 and 9 years of age in Whitehaven is a time in life when a child's chance of sustaining infection appears to be twice as high as in any other area at this age.

Table 4.

Reactor Rate Percentage.

Age.	Workington.	Whitehaven.	Egremont.
0— 4 years ...	4.2(187) ...	4.0(124) ...	3.3(109)
5— 9 years ...	12.5(144) ...	24.3(107) ...	13.0 (62)
10—14 years ...	28.4 (74) ...	36.7 (98) ...	40.8 (49)

Figures in brackets refer to total tuberculin tested.

These figures read in conjunction with the earlier data on the age groups in childhood showing an enhanced incidence of disease, indicate clearly that B.C.G. vaccination at age five is a more logical time to try and forestall disease than at age thirteen. By the time a young contact—whether known or unknown—has the thirteenth birthday in West Cumberland, he or she has already had about an even money chance of being infected. A much wider basis for prophylaxis is required, and at the time of beginning school—aged 5—appears late enough.

Chest Clinic Attendances.

Some variation in attendances occurred during 1956, due to closure of clinics for public health precautions between April and July: and due to the changing pattern in treatment. Both matters have already been referred to: the relevant figures with the 1955 equivalents are set out below.

Table 5.

Summary of Chest Service Statistics								
	Clinic Sessions.		New Patients.		Total Attendances.			
	1956	1955	1956	1955	1956	1955	1956	1955
Workington ...	193	247	957	1,111	5,140	7,867		
Egremont	187	137	1,212	1,127	4,469	3,145		
Millom	17	17	106	77	371	338		
	397	401	2,275	2,315	9,980	11,350		

The average attendance/session was slightly higher at two of the three clinics this year, Workington being 23.4 (22), Egremont 23 (23) and Millom 21.8 (20). Total attendances at the Refill Clinic fell by 1,704 to 2,898 (figures in brackets refer to 1955).

Case Finding Procedures.

Throughout 1956 the Mass X-Ray Unit operated again in this area in common with East Cumberland and North Westmorland. A summary of its findings in the West is set out below; there was a slightly lower attendance than in 1955, 19,743 in 1956 and 19,934 in 1955. Nevertheless, as in previous years, a higher proportion of fresh cases both active and inactive were disclosed in the West than in the East. As an example, the general public in East Cumberland contained 25 new active cases in 13,559; in the West 22 such cases were contained in 6,838. There is no doubt that a further allocation of time spent in West Cumberland by the Unit has in the past produced both an increased attendance and an increased yield of fresh active cases, as the following summary shows:—

Year.	Total Attendances.	Fresh Active Cases.
1952 ...	15,628	80
1953 ...	15,360	78
1954 ...	20,533	100

In this year an extended programme in the West was conducted, but for varying reasons a similar proportion of time has not been allotted for the next two years.

Year	Total Attendances	Fresh Active Cases.
1955 ...	19,934	60
1956 ...	19,743	56

These figures should be read in the light of an observed fall in morbidity—or attack rate—and whilst it is satisfactory to note this improvement since 1954, it cannot be denied that a further increase in Mass X-Ray activities in this area would produce again a year of increased find, followed by an acceleration in lowering of morbidity. It cannot be overstressed that a reduction in infection can only be achieved by diagnosing cases before they become infectious and in this context, earlier comments in this Annual Report relating to the infectiousness of cases at diagnosis in Whitehaven and Ennerdale—with that data indicating the degree to which children in those areas develop disease—indicate the areas where a prolonged and intensive Mass X-Ray campaign could produce the most fruitful results.

Table 6.
Mass X-Ray Summary, West Cumberland, 1956.

Source of Examination.	Miniature Films.	Large Films.	Clinical Exams.	Active T.B.	Inactive T.B.	Bronchiectasis	Neoplasms.	Pneumoconiosis.	Cardiac Condition.
Doctor's cases ...	106	13	7	2	3	1	—	1	1
Ante-natal cases	17	1	1	—	—	—	—	—	—
Contact cases ...	1,130	58	17	5	46	—	—	7	1
Scholars ...	3,566	78	23	3	20	3	—	—	4
School staff ...	—	—	—	—	—	—	—	—	—
General Public	6,838	275	100	22	105	6	—	48	32
Surveys ...	7,747	253	75	21	81	4	2	5	15
Mentally defective patients ...	339	19	6	3	3	1	—	—	—
TOTALS ...	19,743	697	229	56	258	15	2	61	53

It is believed that routine ante-natal chest X-rays throughout this area continued during the year. In April, the double reading of these films by consultant radiologists and chest physicians was discontinued and the records of ante-natal attendances at the hospitals for chest X-ray ceased to be sent to the Chest Clinics. No figures to compare with the work in 1955 are available. At the same time referrals by general practitioners for ante-natal X-rays at the Chest Clinics, stopped. These changes in a comparatively recently established procedure have resulted in a limitation of preventive work by the Chest Clinics; it is hoped the original arrangements may be re-introduced.

THE WELFARE SERVICES

I am indebted to the County Welfare Officer (Mr. Walker) for the following report on the Welfare Services, the administration of which is in the hands of the Welfare Sub-Committee of the Health Committee.

THE WELFARE SERVICES

I am pleased to be able to report to the County Welfare Officer (Mr. [Name]) for the following report on the Welfare Services and management of which is in the hands of the Welfare Sub-Committee of the Health Com-

mittee.

National Assistance Act 1948

As a departure this year from the usual practice of including, in these yearly supplements, notes on the advancement and day to day administration of individual sections of the Welfare Services for aged and handicapped persons, and in view of (a) the limitation on capital expenditure which is holding up developments in the erection of new homes and the social and recreational centre in Workington for handicapped persons, and (b) not being able to offer comment on the advantages gained by such improved provisions and services, it seems to me that for this year one might limit comment to matters of general interest with say a full and comprehensive report every second or third year outlining in greater detail and with appropriate contrasts, where possible, by way of individual improvements and advances in the services—section by section.

The various services are now so firmly established on well defined lines that there is little change to record from year to year, and such a policy would avoid repetition of features and administrative issues which have been mentioned in reports which have been the subject of individual consideration and direction by the County Welfare Sub-Committee.

During the year 1956/57 there has been no new legislation as affecting local authority functions under the Act, although it may be mentioned that the House of Commons have given a second reading to the National Assistance Act 1948 (Amendment) Bill, which is designed to give local authorities powers (not at present possessed by them) to make their own arrangements for old people to have meals, domiciliary services and recreational facilities in their own homes. Sec. 31 of the Act of 1948 does empower a local authority to make contributions to the funds of Voluntary Organisations whose activities consist in or include the provision of recreation or meals for old people, and whilst the promoters of the Bill do not suggest that the work of Voluntary Organisations should be in any way prejudiced by the proposals, they say there are some areas

where old people could not be helped by Voluntary Organisations because such organisations were either non-existent, or where they did exist were not functioning to the extent of providing such services as (a) regular visitation (b) meals on wheels (c) Chiropody, etc., as being essential services if elderly people are to be encouraged to live in their own homes for as long as possible. Accordingly the Bill seeks to empower local authorities to provide such services.

There is an extensive domiciliary field to be covered and it is realized that there must be many elderly people, perhaps not in need of financial assistance, but who, yet on account of age, have urgent needs and disabilities for which they are unable to find an adequate source of help. Troubles or physical disabilities to a person in secure financial circumstances can in many circumstances justify local authority or voluntary assistance as much as poverty.

In connection with the health and welfare of handicapped persons it may also be mentioned that the Minister of Health has appointed an Advisory Committee which has been linked with the Central Health Services Council and the advisory machinery of the National Health Service. The view of the Minister is that this Advisory Committee could greatly contribute to the knowledge of aims and methods which was necessary to avoid waste and improve standards by reviewing some of the basic principles on which welfare schemes had been framed and suggest improvements in organisation and techniques of co-operation particularly between those concerned with aspects of Welfare and Health. In referring to the value of a real public understanding of what welfare services were trying to do, the Minister expressed the hope that this would be stimulated by the work of the Advisory Committee.

Welfare Conference

As a further variation in this year's condensed report I thought it would be of interest to members of the Council if reference was made to the 1957 Welfare Conference which was honoured with a visit by, and

a stimulating address from, the Minister of Health (Mr. Dennis Vosper) who said he was sure such conferences served a very useful purpose.

In the course of his address the Minister said that not the least of his problems was the ever increasing cost of the health service. He estimated that in 1957/8 some 57% of the total cost of the health services would be devoted to hospitals; about 30% would go to the general medical, dental, opthalmic and pharmaceutical services; but that only 8.3% would go to the local authority health services. He added that the amount allocated to the local health authority services was not commensurate with their importance. The importance of preventative health measures and their welfare partners as a means of limiting the cost of the rest of the health services had often been rightly stressed, and whilst the Minister feared that the demands of the other partners of the health service would in no way diminish, it would be his endeavour to encourage the local authority health and welfare services, not only because their object was to keep people happy and well in their own homes, but because he believed that in the long run it would be to our financial advantage.

Turning to the relationship between the health and welfare services of local authorities the Minister stressed that there must be an increasingly real and an equal partnership in the true sense of the word between the two services and where both partners are active. The Piercy Committee of Rehabilitation emphasised all through the need for close links between the welfare department, the hospitals, and the local authority health service, and between the general practitioner and the welfare department.

The Minister referred to the problems of the old which was an increasing problem. In 20 years' time the number of people beyond retirement age would be almost exactly double the number to-day, and they would have to be maintained by a working population of approximately the same size as the working population to-day. It would, he said, be more than ever important that the available resources should be utilised

to keep old people in their own homes as long as possible. Ninety per cent of the people of retirement age were being cared for in their own homes to-day and the Minister hoped that, in the course of time and with improved techniques, the proportion would increase.

One of the principal housing priorities now and in the years ahead must be the provision of suitable accommodation for old people and if that policy is to be successful there must be increasing co-operation between the Housing Authority and the Welfare Authority. The Minister said it was clear from the figures submitted to him that an increasing number of old people would have to be accommodated in residential homes. Since the war local authorities had provided 850 new homes for old people and voluntary bodies had provided 600.

[N.B. Hereon it may be stated that this important principle of encouraging old people to continue to reside in their own homes for as long as possible, has over the past 9 years, been repeatedly stressed to the Cumberland Old Peoples' Welfare Committee (a Voluntary Organisation) and to Housing Authorities as being of vital importance not only to, and in the interests of the old people themselves but to the County Council's Welfare Services in general. In addition, the County Council approved of the establishment of a short-stay home at The Towers, Skinburness—now in course of adaption for the purpose—where aged persons in need of care and attention and normally cared for by relatives, can be accommodated for three or four weeks whilst the relatives are given a little respite from the many trying conditions which often prevail, and thereby avoid applications which might otherwise be made for admission permanently to Part III. Accommodation of the aged persons in question].

Provision of Homes—General

According to the report of the Ministry of Health for the year ended 1955, new homes opened by Local Authorities in England and Wales for the aged and infirm in need of care and attention numbered 57, bring-

ing the total number of homes opened since the war up to 855, with accommodation for over 25,000 residents. Homes provided especially for blind people increased by two to 42. Fifty-six of the 855 homes were of new construction. In all, 149 schemes of new construction had been approved during the past seven years, 39 of them in the year to 31st December, 1955.

In the 1953 Report it was stated that for future provision of residential accommodation under Part III. of the Act, more reliance would have to be placed on works of new construction since existing buildings capable of conversion were becoming less easy to obtain. The relatively low number of homes opened in 1955—fewer than in either of the two preceding years—bore out the estimate of the situation then made. Schemes of new construction take between 18 months and two years to complete, almost double the normal time required for schemes of conversion.

The Ministry pointed out that so long as it was necessary to continue the limitation on the volume of capital investment available for building schemes there was bound to be some reduction in the rate at which additional beds could be provided, even though the number of beds in each new purpose-built home is on average considerably higher than in a converted building.

Officers of the Ministry who have visited homes, both large and small, confirmed the trend towards an increasing degree of infirmity and higher age ranges in the residents; that the extra care that now has in many cases to be given is accentuating staffing problems and that there is evidence that it is becoming more difficult to recruit suitable resident staff.

In the preamble to the various sections of the Report the Minister stated that in his view the three main priorities in the Health Service were :—

First—to bring existing hospitals to a satisfactory standard and to provide, as far as possible, new accommodation as and where it is needed.

Second—to ensure that the mental health services, with their high proportion of out-buildings, receive a proper share of the new construction and the resources available, and

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Thirdly—to tackle the problem of making adequate provision for the care of old people.

Cumberland

The various services for the aged and handicapped as administered by the Welfare Sub-Committee and consisting of :—

- (a) Part III. Residential and Temporary Accommodation.
- (b) Medical attention.
- (c) Old Peoples Welfare and Voluntary effort.
- (d) Services for the blind, deaf and dumb—Agency arrangements.
- (e) Other handicapped persons—local authority services in conjunction with the Ministry of Labour and National Service.
- (f) Reception Centres for persons without a settled way of living

have continued on well defined lines of policy and in close co-operation with other Committees of the County Council and National Services. Day to day administrative arrangements have proceeded smoothly and efficiently, notwithstanding the fact that these social services, unlike those of a non personal nature, call for close and careful attention individually, and immediately, if the best interests of the individuals are to be provided for, which must be, and is, the one and primary object of the various Welfare Sections.

Calthwaite Reception Centre

Persons Without a Settled Way of Living.

As a comparative new addition to the responsibilities of the Welfare Sub-Committee and as a matter of interest one may refer to the above Centre—formerly known as the Merrythought Scheme — which was opened on the 7th December, 1955, when the Centres or Casual Wards at Station View House, Penrith, and the City General Hospital, Carlisle, were closed. The Centre provides accommodation for 40 males, 4 females and one child. Responsibility for running the Centre rests with the County Council, the day to day management being vested in the Northern Area House Committee.

The following statistics are given for the twelve months to 6th December, 1956 :—

	M.	F.	C.	Total.
Admissions	2803	75	—	2878
Transfers to Part III. Accommodation	5	—	—	5
Transfers to Hospitals ...	2	—	—	2
Returned to families	10	—	—	10
Placed in employment—				
(a) Directly by Warden ...	53	1	—	54
(b) Through M. of L. and N.A.B.	58	—	—	58
Wanted persons found in Centre	4	—	—	4
Discharged and left for the road	2667	74	—	2741
Remaining in Centre (6/12/56)	4	—	—	4

At the request of the National Assistance Board, reports covering the two half yearly periods have been prepared and sent to the Board.

The Board state they are much impressed by the work which has been done during the year, and in particular by the constructive policy of paying special attention to the resettlement of casuals. They consider the number of placings to be very good in view of the remote situation of the Centre, and received with much interest particulars of certain cases of men placed in employment. One of these cases recorded in the Board's annual report (1956) is referred to as another example of rewarding results from most unpromising material, the case being that of a 40-year-old man with a criminal record which included a number of convictions and prison sentences.

It is my opinion that the establishment of the Calthwaite Centre has been more than justified, if for no other reason than that it has removed casual wayfarers from the precincts of the County Council's and Hospital Board's Establishments at Station View House, Penrith, and the Hospital Board's premises in Carlisle.

Civil Defence

Issues connected with Civil Defence and in particular those relating to the Welfare Section continue to receive considerable attention. During the past year much progress has been made in the training of local instructors (12 of whom are now qualified to give instruction) and volunteers, and the most harmonious relations exist with the Women's Voluntary Services. Efforts are being made to weed out "dead wood" in the register of volunteers so that a more realistic picture of available volunteers can be obtained, and the building up of Rest Centre Teams to adequately cover the administrative County in any emergency, is proceeding.

General

Whilst, as mentioned at the outset of this report, it is proposed, subject to the concurrence of the County Council, that full and comprehensive reports commenting in detail upon the development of individual services should be issued every two or three years, I would, in concluding this report, like to express my grateful thanks to members of the County Council, and especially to the Chairman and members of the Health and Welfare Committees and the various House Management Committees, for their great interest and help in the advancement and expansion of the Welfare Services as a whole, and to record my appreciation of the efficient co-operation and help from other departments, and particularly so by members of my staff, throughout the year.
