[Report 1947] / Medical Officer of Health, Newcastle-upon-Tyne City & County.

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CITY AND COUNTY OF NEWCASTLE UPON TYNE

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1947

Co-operative Printing Society Ltd., Rutherford Street, Newcastle-on-Tyne.

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To the Lord Mayor, Aldermen and Councillors of the Newcastle upon Tyne City Council.

My Lord Mayor, Ladies and Gentlemen,

I have the honour to submit to you the 75th Annual Report of the Medical Officer of Health. The report has been prepared on the lines indicated to the Council by the Minister of Health in Circular 170/47 (England), dated the 31st December, 1947.

This, the 75th year of City Health Service Reports, might have proved a suitable occasion to review the progress of three-quarters of a century. In view, however, of the coming into operation of the National Health Service Act in 1948, with consequent changes in local health administration, the review will be left over until the report for next year. It will then be possible to sum up the progress and developments made under the Health Acts up to the commencement of operation of the National Health Service Act, in 1948, and it will also be possible to review the changes and the vast new services to be established by the Local Health Authority under the new Act.

The birth rate of 22·2 per thousand of the population was the highest rate recorded in the City since 1924. It is anticipated, however, that the number of births will decrease slightly during the next few years. There were 3,747 deaths, equivalent to a rate of 12·9 per thousand of the population. The extension of the use of cremation facilities was made evident by the return of 2,577 (830 Newcastle) cremations which had taken place at the City Crematorium.

During the year 1947, the infantile mortality rate (44) remained at a low level when compared with that of the average of the previous ten years (61). There was, nevertheless, a disappointment in noting that the figures of 40 for 1945 and 41 for 1946 were not maintained in 1947 and the main reason for the setback was the large number of infant deaths occurring from respiratory diseases during the severe wintry weather of the first quarter of the year. It would seem that in the investigation of the effect of changes and nature of climate upon the very young and the old there is a field for valuable and helpful research. A special survey into the health of children under

one year of age in the City, conducted by Professor Spence and the Child Health Department of the University and working in close conjunction with your Health Committee and Medical and Health Visiting Staff, was commenced in May.

The results of the domiciliary nursing service established in 1945 for premature babies are indeed good and very encouraging. There were 56 deaths from prematurity, compared with 84 in 1946. This service is greatly appreciated in the City and is doing valuable work in the saving of lives and in uniting the family, the doctor, the midwives and others in a team working in the homes of the people. Not so good is the progress in dealing with illegitimate children and the infant mortality amongst such children is nearly twice that of those born legitimately. A larger proportion of maternity work is falling to the City's midwives because of hospital overcrowding, and it is pleasing to observe that the Maternity Officer again records no deaths from puerperal infection in district cases.

The year passed, fortunately, without any major outbreak of serious infectious disease. Measles, Whooping Cough, Chickenpox and Pneumonia accounted for the greater part of all notifications. The national rise in the number of cases of Poliomyelitis was reflected in the City by the occurrence of 46 cases. Routine preventive measures were taken so far as the type of the disease demanded but closure of schools and of swimming baths was not ordered by the Department. Only 52 cases of Diphtheria, the lowest recorded (with 4 deaths) were notified during 1947. The immunisation of young children and of school children continued on a large scale.

Tuberculosis and its ravages amongst the City population remained a constant problem. The rate of incidence, while not increasing, has stayed at a higher level than in most other areas of the country during the last few years. There are signs of a slight improvement by virtue of a reduction in the number of cases notified and in a population which is numerically increasing, but the mortality rate for tuberculosis is higher than that obtaining in 14 large towns comparing with Newcastle. Shortage of available sanatorium bed accommodation, reluctance of patients suffering from advanced tuberculosis to enter sanatoria and the overcrowding and unhealthy state of many houses within the City where cases have to spend their lives, are all contributing causes of the failure to reduce materially a scourge which causes more than 500 new cases of a crippling pulmonary disease and an average of 240 deaths each year.

The roufine work of prevention and the abatement of nuisances and the inspection of food and food premises continued as in previous years to give the public a sound and protective service. Communal feeding brought additional risks to the general public and was watched very carefully. Analysis of some milk samples generally showed a slight falling away from the recognised standards and this matter is receiving the serious attention of the Department.

Last year I drew your attention to the distressing effect on the health and well-being of many of the citizens who have to live and exist among conditions of serious overcrowding and unhealthy houses. Up to the end of 1947, the Housing Committee had completed 548 permanent and 773 temporary houses since the War, and the Committee had also in hand the building of a further 1,462 permanent and 617 temporary houses. This was most excellent progress having regard to the difficulties facing the Housing Authority and the officials. Nevertheless, there remains the urgent large task of completing as soon as ever possible the original programme of provision of 15,000 houses within the ten year period following the War.

It is the duty of the Medical Officer of Health to advise his Authority how knowledge of Public Health and Preventive Medicine can be made available and utilised for the benefit of the community. He should carry out periodical inspection of his area as well as inspections of special places (including houses) as the result of complaints. Many of these housing inspections have been carried out and as a result of this rather sad experience, I would advise that every opportunity be taken in representing to higher national authority that the City housing programme be accelerated. The health, well-being and mental happiness of the population depend upon a good home and housing environment and we cannot say that the knowledge of Public Health and Preventive Medicine is being applied efficiently in the City—no matter how excellent our hospital, nursing, maternity, child health, infectious diseases, food inspection and other services may be—if a sufficient number of " fit " dwelling houses is not provided for ordinary daily living purposes. It will indeed prove a tragedy if history has to report that during this decade " they planned and put into operation a national health and hospitals service, made great strides in new drug therapy and in treatment, improved general nutrition of the young population and advanced on many fronts in preventive and social medicine—but by leaving a very large number of people living under conditions not conducive to good health and

family happiness, a fundamental principle of preventive medicine was not implemented so fully as it should have been."

Staff changes during the year included the resignation of Dr. F. J. W. Miller, Senior Child Welfare Medical Officer, in February, 1947. Fortunately the City was able to retain Dr. Miller's services in a part-time consultant appointment whereby he continued his work with the premature babies scheme and the young children's tuberculosis clinic.

Miss A. Fenwick, after 18 years' excellent service in the Department, resigned in February, 1947.

Alderman Sir Walter Thompson resigned the Chairmanship of the Health Committee on the 24th September, 1947, after holding that office for 11 years. An appreciation of Sir Walter's services to the City was recorded by the City Council at the meeting held on the 4th February, 1948. There was thus brought to an end 26 years of association with the Health Department. Under his skilful and courteous guidance much had been accomplished by the Health Committee and the loss to the City was the gain of the Regional Hospital Board in the acquisition of a chairman of wide experience, acceptability and well-earned popularity. Alderman John Chapman, previously Vice-Chairman, was appointed Chairman of the Health Committee in October, 1947, and Councillor W. G. Benn succeeded Alderman Chapman to the Vice-Chairmanship.

The grateful thanks of the Department are due to the Chairmen and members of the Health Committee for a pleasant year of working with a committee always interested and helpful in the work carried out. A sincere tribute is certainly due to the medical, nursing, administrative and clerical staffs for the hard work which they all contributed to the Local Health Services during the year.

I am,

My Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

W. S. WALTON,

Medical Officer of Health.

Health Department,
Town Hall,
Newcastle upon Tyne, 1.
14*th October*, 1948.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

Health Report 1947.

I—GENERAL

MORTALITY TABLES,
SOCIAL CONDITIONS, CLIMATOLOGY,
WATER SUPPLY, DISPOSAL OF REFUSE.

Population, Birth Rate, and Special Mortality Rates during the period of the Notification of Infectious Diseases.

GENERAL STATISTICS.

POPULATION.—As estimated by the Registrar General at the middle of the year 1947—**290,470.**

INHABITED HOUSES.—**81,939** inhabited houses, which, on the estimated population, shows an average of 3.54 persons per dwelling.

RATEABLE VALUE.— **£2,783,196.** A penny rate produced £11,116 14s. 1d.

SOCIAL CONDITIONS.—The principal **Trades and Occupations** are of a healthy nature, and include extensive heavy and light engineering and ancillary industries ; shipbuilding and repair, etc., with related seafaring and harbour work ; machine making, coal mining, food and tobacco factories, brewing, hotels, etc. It is a big commercial and business centre.

The amount of **Public Assistance** granted during the year ended 31st March, 1947, was £128,600 for out-door relief, and £77,130 for indoor maintenance, making a total of £205,730, as compared with £165,182 in the previous year.

The number of registered male and female unemployed at the beginning and end of the year is shown in the following table supplied by Ministry of Labour and National Service.

STATEMENT OF NUMBERS OF INSURED PERSONS REGISTERED AS UNEMPLOYED AT LOCAL OFFICES SITUATED IN NEWCASTLE COUNTY BOROUGH.

Date.	Males (aged 14-64).	Females (aged 14-59)	TOTAL.
13th January, 1947	5,153	2,166	7,319
8th December, 1947	3,558	1,086	4,644

NOTE :—Persons classified as not suitable for ordinary employment are excluded.

The City contains many Hospitals and other medical charities, but since wide surrounding districts are also served by them, figures as to patients treated are not of local value.

MARRIAGES.—2,771 marriages took place during the year, as compared with 2,832 in 1946, and 2,935 in 1945.

BIRTHS.—6,449 equivalent to a rate of 22.2 per 1,000 population.

DEATHS.—(All causes)—4,726 equivalent to a gross rate of 16.3 per 1,000 population, and, after deduction of the deaths of 1,190 non-citizens and addition of 211 Newcastle residents who died elsewhere, to a net rate of 12.9 per 1,000 population. In 1946 the net death rate was 12.4.

Four Orders for Burial (Newcastle upon Tyne Improvement Act, 1882 Sec. 47) were made, two being in respect of bodies lying in inhabited rooms, and two being cases from hospitals.

CREMATION ACT, 1902.

The following table shows the number of cremations up to the 31st December, 1947 :—

	Newcastle Residents.	From Outside of the City.	Total.
*1934	11	15	26
1935	84	104	188
1936	109	161	270
1937	142	235	377
1938	206	279	485
1939	261	376	637
1940	304	412	716
1941	340	583	923
1942	354	643	997
1943	403	784	1,187
1944	512	1,027	1,539
1945	566	1,152	1,718
1946	645	1,414	2,059
1947	830	1,747	2,577
TOTAL	4,767	8,932	13,699

* 22nd Oct.—31st Dec., 1934.

During the year 9 applications were authorised after a post-mortem internal examination had been carried out and in only one case was authority for cremation refused where the requirements of the Act had been correctly completed otherwise.

Total deaths during recent years from certain classes of disease.

Classification in Table III. of Ministry of Health.

	Nervous System.	Circulatory.	Respiratory.	Digestive.	External Causes.
1927 ...	328	751	615	204	123
1928 ...	331	796	480	247	153
1929 ...	311	893	577	226	148
1930 ...	256	874	469	227	137
1931 ...	250	991	509	195	158
1932 ...	232	976	413	201	161
1933 ...	237	1,003	362	213	151
1934 ...	266	935	405	215	134
1935 ...	243	1,107	391	223	130
1936 ...	276	1,283	408	266	154
1937 ...	231	1,316	470	207	139
1938 ...	233	1,216	388	205	157
1939 ...	289	1,278	307	171	189
1940 ...	420	1,115	405	154	211
1941 ...	496	972	530	157	302
1942 ...	474	847	444	130	177
1943 ...	475	915	572	138	150
1944 ...	446	987	418	136	128
1945 ...	476	994	416	115	208
1946 ...	511	996	461	105	106
1947 ...	544	983	505	139	151

Cancer Deaths in Ages (Male and Female), 1947.

Site.	Sex.	Under 1 Year	1—2 Years	2—5 Years	5–15 Years	15–25 Years	25–45 Years	45–65 Years	65 Years and over.	Total.
Cancer of the buccal cavity and pharynx	M.	..	..	..	..	..	..	5	11	16
	F.	..	..	..	..	..	..	..	1	1
Cancer of the digestive system ..	M.	..	..	..	..	1	4	52	90	147
	F.	..	..	..	..	..	4	44	74	122
Cancer of the respiratory organs ..	M.	..	..	..	..	..	4	43	21	68
	F.	..	..	..	..	..	..	10	9	19
Cancer of the Uterus	F.	..	..	..	..	..	2	13	10	25
Cancer of other female genital organs	F.	..	..	..	..	..	..	7	3	10
Cancer of the breast	M.	..	..	..	..	..	..	..	..	..
	F.	..	..	..	..	..	3	23	10	36
Cancer of the male genital organs ..	M.	..	..	..	..	..	..	5	7	12
Cancer of the urinary organs ..	M.	..	..	..	..	..	..	14	6	20
	F.	..	..	..	..	..	1	1	8	10
Cancer of the skin ..	M.	..	..	..	..	..	..	..	1	1
	F.	..	..	..	..	..	1	..	2	3
Cancer of other or unspecified organs .	M.	..	..	..	..	..	2	7	6	15
	F.	..	..	..	..	..	2	3	4	9
	M.	..	..	..	..	1	10	126	142	279
	F.	..	..	..	..	..	13	101	121	235
TOTAL		..	..	..	..	1	23	227	263	514

The average age at death for males was 64 and females 65.

INFANTILE MORTALITY.—286 infants died before completing the first year of life, representing a rate of 44 deaths per 1,000 live births.

ZYMOTIC DEATH RATE.—There were 49 deaths from the "Chief Zymotic Diseases"—smallpox, measles, scarlet fever, diphtheria, whooping cough, fever (typhus, simple continued, and enteric) and diarrhœa (all ages)—equivalent to 0.16 deaths per 1,000 population.

TUBERCULOSIS—298 persons died from various forms of tuberculosis, 259 being from pulmonary, and 39 from non-pulmonary. The equivalent death rates are: *all forms* 1.02, *pulmonary* 0.89, and *non-pulmonary* 0.13, per 1,000 population.

For comparison of death rates with previous years see large table, page 7A.

For particulars of deaths as to site of disease, age, etc., see table, page 10A.

RETURN OF DEATHS FROM "ALL CAUSES" DURING THE 52 WEEKS ENDED 27TH DECEMBER, 1947.

Cause of Death.	Age Periods. Gross. Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	Total (Gross).	Age Periods. Net. Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	Total (Net).	Wards—Net Deaths. St. Nicholas'	Kenton	Scotswood	Stephenson	Armstrong	Elswick	Westgate	Arthur's Hill	Benwell	Fenham	Sandyford	Jesmond	Dene	Heaton	Byker	St. Lawrence	St. Anthony's	Walker	Walkergate	Transferable Deaths Inward.	Transferable Deaths Outward.	Deaths in the City of Persons not Residents.
I.—EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.																																						
Enteric Fever					1				1											1												1					1	1
Measles																																						
Scarlet Fever																																				3	14	
Whooping Cough	11	3	1						14	8	3	1						11		1	3		1	2						1	1		1			1	5	
Diphtheria	1					4			5	1	1							4																				
Influenza	4					1	10	8	23	4					1	10	8	23		4		1	1	2								1	1					
Dysentery																																						
Erysipelas																																				1	1	
Tetanus					1				1																									1				
Acute Poliomyelitis and Polioencephalitis		2	1	5	2	2			12		2			1				3																	9	12	
Encephalitis Lethargica						1	3	4	8						3	3	4	10	2		1	1						2	1	1							
Other Diseases due to Viruses								1	1								1	1				1														6	7	
Cerebro-Spinal Fever	2	2	2			1			7	2	2				1			5																				
Tuberculosis of the Respiratory System	2	4			2	62	109	67	17	263	2	2			3	59	109	68	16	259	12	21	13	27	15	13	13	10	17	5	14	7	12	15	14	13	11	21	8	12	16	113
Tuberculosis of the Central Nervous System	3	14	13	17	16	5	1		69	1	6	1	9	8	1	1		26	1	4		6	3			1	3	1		1	1	1	1	2		1	1		45	66
Tuberculosis of the Peritoneum and Intestines		1	2	1	3		1		8			1		2	1			4				1															4	7
Tuberculosis of the Vertebral Column						1			1						1			1																				1
Tuberculosis of the Bones and Joints																																						
Tuberculosis of the Skin and Subcutaneous Cellular Tissue																																						
Tuberculosis of the Lymphatic System								1	1								1	1	1																	2	4	
Tuberculosis of Genito Urinary System						3	2	1	6						2	1	1	4										1	1			1				8	9	
Disseminated Tuberculosis	2	2	2	1	2	1	1		11					1	1	1		3						1				1			1					2	2	
Tuberculosis of other Organs	1					1			2																													
Total Tuberculosis	8	21	17	21	83	120	72	19	361	3	8	2	12	70	114	71	18	298	14	25	13	34	16	13	15	11	20	7	15	10	14	16	17	14	12	22	10	14	77	202
Syphilis	2					2	19	9	32	1					2	17	8	28	1	1	1		3	3	4	3	1		3	1	1	1		1	1	1	2	4	8	22
Malaria																1		1																		1	1		
Other Venereal Diseases																	1	1																			4	6	
Pyæmia, Septicæmia	3					1	1	1	6	1								1										1											
Mycoses																																						
Other Infectious or Parasitic Diseases					1	2	6	1	10					1	2	4	1	8	1		1				1				2		1	1			1		2	6	
Weil's Disease																																						
II.—CANCER AND OTHER TUMOURS.																																						
Cancer of the Buccal Cavity							4	13	17							5	12	17	1				3	1		1		1				2			1	1	1	11	
Cancer of the Digestive Organs and Peritoneum				1	1	25	160	219	406					1	8	98	164	269	12	14	12	17	20	13	22	12	20	5	16	21	11	7	22	9	12	15	9	8	145	254
Cancer of the Respiratory Organs						3	60	28	91						4	53	30	87	7	2	3	7	8	4	1	3	3	3	8	6	4	1	8	4	2	4	9	9	13	44	
Cancer of the Uterus						3	17	11	31						2	13	10	25	1		1	4	1		3	1			2		2	3	1		4	2		6	17	
Cancer of the Female Genital Organs						2	11	3	16							7	3	10				3				2		2			1		1		1	1	7	10	
Cancer of the Breast						3	24	13	40						3	23	10	36	1	2	3	2	1	3	1	4	2	1	3	2	1	1	1	1	2	2	3		4	6	
Cancer of the Male Genital Organs					1		9	13	23							5	7	12	1	2	1		1			1					1	1	1				11	17	
Cancer of the Urinary Organs						1	21	21	43						1	19	19	39	2	3		2	1	1	1	1		2		1	3	4	4	2		2	1	13	30	
Cancer of the Skin								2	3						1		3	4											1	1					1		1	1	
Cancer of the Brain and other parts of the Nervous System						3	6	1	10						1	4		5		1	1									1							5	7	
Cancer of other or unspecified Organs		1			1	4	9	10	25						3	6	10	19	2		3			1	1		2	1	1	1	1		1	2	2			2	19	
Tumours (not malignant)		1	1	3	4	14	30	3	56						5	6	1	14		2	1	1	2		1	2	1				1							42	53	
Tumours of undetermined nature		1					3	4	8							3	3	6						1		2			1	1							2	4	
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.																																						
Rheumatic Fever				3	6	6	3		18				2	5	4	4		15		2	1		4			1	2				1	2	1			1	4	11	
Chronic Rheumatism						1	2	2	5						1	2	2	5			1							1	1						1		1	1	
Diabetes					1	5	21	22	49					1	3	11	15	30	2	1		2	2	2	2		2		2	2	1	4	3	1		3	1	1	20	35	
Diseases of the Pituitary Gland								1	1																												1	1	
Diseases of the Thyroid and Parathyroid Glands							6	2	8							3	1	4								1			1	1							4	8	
Exophthalmic Goitre							4		4							2		2					1		1				1								2	3	
Disease of Thymus																																						
Diseases of the Adrenals	1				1	1	1		4	1								1						1													3	3	
Other General Diseases	4	1	1			1	1	1	9	2					1	1	1	5				1			1				1		1	1				4	6	
Scurvy																																						
Other Vitamin Deficiency Diseases																																						
IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.																																						
Hæmorrhagic Conditions	2	2				2	1	1	8							1	1	2			1															1	6	6	
Anæmia, Chlorosis				1			6	13	20							4	10	14			3	2				1		1	2				2			1	6	11	
Leukæmia, Aleukæmia			1	2	2	3	8	8	24				1	1	1	3	5	11	1		3		1			2	2	2									13	19	
Diseases of the Spleen						4	2	1	7						1		1	2																1	2			5	7	
Other Diseases of the Blood and Blood-forming Organs						2		1	3																												3	3	
V.—CHRONIC POISONING.																																						
Alcoholism						1	1		2						1	1		2						1				1										1	
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																																						
Encephalitis				1		2	2		5							1		1									1										4	5	
Meningitis	8	1				2	2		13	5					1			6				1			1	2				1			1				7	12	
Diseases of the Medulla and Spinal Cord							2	2	4							2	1	3		1		1															1	3	
Cerebral Hæmorrhage, Apoplexy	1			1	2	15	133	381	533	1					5	107	376	489	23	22	19	44	32	21	24	33	26	16	34	35	10	27	34	21	24	19	25	20	64	229	
Hemiplegia and other paralysis								10	10								10	10		1	1		1	2			1		1				1		2			2	
Mental Disorders and Deficiency	1		2				1		4	1		1				2		4		1			1													1	1	2	
Epilepsy					2	3	3		8					2	5	2		9				3	1		2		1		1				1			2	1	4	
Infantile Convulsions (under 5 years)	5								5	5								5				1		1								1	1					
Other Diseases of the Nervous System						1	6	6	13						1	6	6	13	1	1		2	1		1		1	3	1	1				1			2	2	8	
Diseases of the Organs of Vision								1	1										1																		1	1	
Diseases of the Ear and of the Mastoid Sinus	3		1	2	3	4	3	2	18	1			1		2			4		1					2									1		14	18	
VII.—DISEASES OF THE CIRCULATORY SYSTEM.																																						
Pericarditis					1				1					1			1	2						1											1	1	1	
Acute Endocarditis					1	1	1		3					1		1		2																			1	3	
Chronic Endocarditis, Valvular Disease				1	2	28	34	45	110					1	16	35	42	94	11	5	2	2	6	9	6	6	8	2	4	7	3	6	6	2	1	5	3	10	26	60	
Diseases of the Myocardium						2	41	314	357						5	42	326	373	10	14	7	27	48	23	22	33	13	16	17	32	17	16	32	11	13	10	12	24	8	68	
Angina Pectoris						17	136	265	358						14	123	196	333	21	14	23	21	14	23	18	21	10	17	20	18	25	16	11	12	12	17	20	13	38	87	
Other Diseases of the Heart						3	5	14	22						1	4	12	17						2			2					1	1	1	1			5	13	
Aneurysm (except of the Heart and Aorta)						1		1	2								1	1					1														1	2	
Arterio-Sclerosis							6	99	105							7	98	105	7	5	8	3	8	5	1	11		3	9	3	2	10	8	8	7	2	5	3	3	32	
Gangrene								5	5								5	5				1		1		1										1	1	3	
Other Diseases of the Arteries					1	1	3		5																													5	4	
Diseases of the Veins						2	3	5	10						1	4	4	9	1									2	1	1	1		1			1	2	6	
Diseases of the Lymphatic System																																						
High Blood Pressure (Idiopathic)						3	27	27	57						1	19	22	42	2	3	4	5	3	3	2	3	3	1		2	2	2		3	2	2			15	37	
Other Diseases of the Circulatory System																																						
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.																																						
Diseases of the Nasal Fosse and Annexa																																						
Diseases of the Larynx	1	1							2																												2	2	
Bronchitis	21	1				6	103	152	283	19	1				5	97	152	274	17	10	8	28	24	11	14	9	5	8	12	12	12	13	17	24	12	12	15	10	19	67	
Broncho-Pneumonia	58		2	2		4	19	55	140	39	2	2		1	1	14	51	110	5	5	10	12	13	6	7	5	6	3	6	4		3	4	6	8	6	2	5	35	92	
Lobar Pneumonia	3		1	2	1	3	8	11	29	3			1	1	3	6	10	24			2	1	3	2	1	1	1	1		1			2	5	4		1	2	7	13	
Pneumonia (not otherwise defined)	8		1				1	3	13	3		1				1	3	8	1	1													1	1		1		5	11	
Pleurisy							1	1	2							1	1	3							1												1	1	
Congestion and Hæmorrhagic Infarct. of Lung							3	12	15							2	12	14							3	7		1	1	1	2	1					1	7	
Asthma					1	7	32	25	65						1	6	30	61	2	1	3	3	9	4	3	8	4	1	1	4	2	4	1	5	3	2	1		4	20	
Pulmonary Emphysema							2	2	4							2	2	4		1	1		1														2	
Other Diseases of the Respiratory System	2					1	3	1	7	2						1	1	4	1		1				1	2							1	1				3	
Carried forward	151	38	32	45	119	321	1101	1815	3622	102	16	8	20	89	230	886	1700	3051	151	152	142	243	231	166	165	190	147	108	173	177	123	146	188	144	126	146	135	142	713	1684

CAUSE OF DEATH	AGE PERIODS. GROSS. Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	TOTAL (GROSS).	AGE PERIODS. NET. Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above.	TOTAL (NET).	WARDS—NET DEATHS. St. Nicholas'.	Kenton.	Scotswood.	Stephenson.	Armstrong.	Elswick.	Westgate.	Arthur's Hill.	Benwell.	Fenham.	Sandyford.	Jesmond.	Dene.	Heaton.	Byker.	St. Lawrence.	St. Anthony's.	Walker.	Walkergate.	TRANSFERABLE DEATHS. Inward.	Outward.	Deaths in the Institutions in the City of Residents of Non-Residents.
Brought forward	151	38	32	45	119	321	1101	1815	3622	102	16	8	20	89	230	886	1700	3051	151	152	142	243	231	166	165	190	147	108	173	177	121	146	188	144	126	146	135	142	713	1684
IX.—DISEASES OF THE DIGESTIVE SYSTEM.																																							
Diseases of the Buccal Cavity, Pharynx, etc.	1	1	..	2	..	1	..	1	6	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6
Diseases of the Œsophagus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ulcer of the Stomach or Duodenum	..	..	..	..	1	17	36	26	80	..	..	..	..	..	6	18	14	38	4	..	..	3	1	3	..	2	1	1	4	4	3	3	5	1	1	1	1	1	43	72
Other Diseases of the Stomach	..	..	..	..	..	2	1	3	6	..	..	..	..	..	2	..	2	4	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	1	..	..	1	3	5
Diarrhœa and Enteritis (under 2 years)	49	1	..	..	..	..	..	..	50	26	1	..	..	..	..	..	..	27	1	..	..	4	..	..	1	..	1	..	..	1	..	..	4	3	1	7	3	..	23	34
Diarrhœa and Enteritis (over 2 years)	..	..	..	..	1	2	3	2	8	..	..	..	..	1	1	2	1	5	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	4	6
Ulceration of the Intestines	..	..	..	..	1	3	1	..	5	..	..	..	..	1	2	1	..	4	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	3
Appendicitis	23	1	1	3	3	3	10	1	24	..	1	..	..	2	..	4	..	7	1	1	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	17	22
Hernia, Intestinal Obstruction	7	1	..	1	..	8	18	39	65	2	1	..	..	1	3	9	11	26	3	..	1	2	4	3	1	..	1	1	1	4	..	2	1	1	1	..	3	42	61
Other Diseases of the Intestines	..	..	..	..	1	2	3	3	11	..	..	..	..	1	..	..	2	3	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	8	11
Cirrhosis of the Liver (Alcoholic)	..	..	..	..	..	2	3	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Cirrhosis of the Liver (Non-Alcoholic)	..	..	..	..	..	2	3	..	5	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	1	4
Other Diseases of the Liver	..	..	..	..	1	2	3	1	7	..	..	..	..	1	2	3	1	7	..	1	..	1	..	..	1	1	..	..	..	1	1	..	..	..	1	..	1	..	1	6
Biliary Calculi	..	..	..	..	..	1	6	11	18	..	..	..	..	..	..	1	8	9	..	1	..	1	..	..	..	..	..	1	2	..	..	..	..	..	..	1	..	..	9	17
Other Diseases of the Gall Bladder and Ducts	..	..	..	..	..	..	1	7	8	..	..	..	..	..	..	..	2	2	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	6	7
Diseases of the Pancreas	..	..	..	..	..	1	2	2	5	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5
Peritonitis without stated cause	..	..	..	..	1	1	1	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4
X.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																																							
Acute Nephritis	..	..	..	..	..	2	3	2	7	..	..	..	..	..	1	3	3	7	..	..	..	..	..	..	1	2	..	..	..	1	1	..	..	..	..	..	..	1	1	4
Chronic Nephritis	..	..	1	1	3	13	31	50	99	..	..	..	..	1	6	24	45	76	3	3	4	1	4	3	3	2	1	8	4	10	2	4	3	8	2	3	1	5	28	52
Nephritis (not stated to be acute or chronic)	..	..	..	..	1	1	3	8	13	..	..	..	..	1	..	1	7	9	1	..	..	..	1	..	..	..	..	2	..	2	..	..	..	..	1	2	..	..	4	8
Other Diseases of the Kidney and Annexa	2	1	..	..	..	3	11	10	27	1	1	..	..	..	3	9	6	20	..	..	..	3	..	3	1	1	..	2	2	4	..	..	1	1	2	..	2	..	7	21
Calculi of the Urinary Passages	..	..	..	..	..	..	3	..	3	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	3
Diseases of the Bladder	..	..	..	..	..	..	..	7	7	..	..	..	..	..	..	..	5	5	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	1	..	1	..	..	2	6
Diseases of the Urethra, Urinary Abscess, etc.	..	..	..	..	..	..	4	6	10	..	..	..	..	..	..	..	3	3	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	2	10
Diseases of the Prostate	..	..	..	..	..	..	4	43	47	..	..	..	..	..	..	2	20	22	2	..	..	..	2	1	2	2	..	1	4	2	1	1	1	..	3	..	..	..	25	41
Diseases of other Male Genital Organs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of the Female Genital Organs	..	..	..	..	1	5	6	2	14	..	..	..	..	..	3	5	2	10	..	1	1	..	..	..	1	..	2	..	1	2	..	..	2	..	..	..	..	..	4	13
XI.—DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE.																																							
Post-abortive Sepsis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Abortion, not returned as Septic	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Ectopic Gestation	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Hæmorrhage of Pregnancy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Toxæmias of Pregnancy	..	..	..	..	1	5	..	..	6	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	4	6
Other Diseases and Accidents of Pregnancy	..	..	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Hæmorrhage of Childbirth and the Puerperium	..	..	..	..	1	3	..	..	4	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3
Infection during Childbirth and the Puerperium	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Toxæmias	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Accidents of Childbirth	..	..	..	..	..	2	1	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3
Other or Unspecified conditions of the Puerperal state	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE.																																							
Carbuncle, Boil	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cellulitis, Acute Abscess	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Other Diseases of the Skin and Annexa	..	1	..	..	..	1	3	1	6	..	..	..	..	1	3	1	..	5	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	2	1	1	2	4
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																																							
Acute Infective Osteomyelitis and Periostitis	1	..	..	..	..	..	1	..	2	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
Other Diseases of the Bones	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of the Joints	..	..	..	..	1	3	1	4	9	..	..	..	..	1	1	..	3	5	..	..	..	1	..	..	..	..	..	..	1	..	1	1	..	..	1	..	..	4	8
XIV.—CONGENITAL MALFORMATIONS.																																							
Congenital Malformations	57	5	..	2	..	8	5	1	78	26	2	..	2	..	4	4	..	38	..	3	3	4	1	3	3	3	2	..	3	3	1	1	1	1	..	3	3	4	44	58
XV.—DISEASES OF EARLY INFANCY.																																							
Congenital Debility	7	..	..	..	..	..	..	..	7	5	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4
Premature Birth	88	..	..	..	..	..	..	..	88	56	..	..	..	..	..	..	..	56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	33	69
Injury at Birth	50	..	..	..	..	..	..	..	50	35	..	..	..	..	..	..	..	35	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	34
Other Diseases peculiar to the First year of Life	53	..	..	..	..	..	..	..	53	23	..	..	..	..	..	..	..	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	31	47
XVI.—OLD AGE.																																							
Senile Dementia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Old Age	..	..	..	..	..	..	..	46	46	..	..	..	..	..	..	..	70	70	6	4	2	4	2	2	3	3	4	2	6	7	2	6	4	3	3	1	6	25	1	7
XVII.—DEATHS FROM VIOLENCE.																																							
Suicide by Poison	..	..	..	..	..	2	..	1	3	..	..	..	..	..	2	..	1	3	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3
,, Poisonous Gas	..	..	..	..	1	..	9	5	17	..	..	..	..	1	2	9	5	17	..	1	..	1	1	1	1	..	2	2	..	1	1	2	..	1	2	..	1	..	..	4
,, Hanging or Strangulation	..	..	..	..	..	1	1	1	4	..	..	..	..	..	1	1	1	4	..	..	1	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1
,, Drowning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Firearms	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Cutting and Piercing Instruments	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
,, Jumping from a High Place	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Crushing	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Other means	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Infanticide	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Homicide by Firearms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Homicide by Cutting or Piercing Instruments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Homicide by other or unspecified means	..	..	..	..	1	1	..	..	2	..	..	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Railway Accidents	..	..	..	..	..	3	1	..	4	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1
Motor Vehicle Accidents	..	..	3	10	5	7	7	8	40	..	..	..	1	5	4	5	3	23	..	3	2	..	2	1	..	..	..	1	4	1	1	1	2	2	1	1	1	9	26	38
Other Road Transport Accidents	..	..	..	..	1	1	..	..	2	..	..	..	..	..	1	1	..	2	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Water Transport Accidents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Air Transport Accidents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Accidents in Mines and Quarries	..	..	..	..	..	5	3	1	9	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	8
Food Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Agricultural and Forestry Accidents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Accidents caused by Machinery	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Accidental Absorption of Poisonous Gas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
,, Poisoning (not by Gas)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Burns (conflagrations excepted)	1	1	2	1	1	..	2	4	12	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Mechanical Suffocation	13	1	..	..	..	..	1	1	15	13	1	..	..	..	..	..	1	3	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	9	11
,, Drowning	..	..	1	1	..	..	5	4	11	..	..	..	..	..	..	..	1	1	..	1	..	3	..	1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..
,, Injury by Firearms	..	..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Injury by Cutting and Piercing Instruments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Injury by Fall, Crushing, etc.	1	..	1	2	2	10	12	37	65	1	..	..	..	1	1	7	10	32	2	5	2	5	3	2	4	5	4	1	..	3	1	1	4	5	1	1	3	3	16	38
,, Injury by Animals	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Electricity (Lightning excepted)	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Accidents	..	..	..	..	1	4	3	2	11	..	..	..	..	1	1	4	2	8	2	..	1	3	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	4	6
Deaths of Civilians due to Operations of War	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deaths of Persons in Military Service during Operations at War	..	..	..	..	..	3	..	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Legal Executions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3
XVIII.—ILL-DEFINED DISEASES.																																							
Sudden Death	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cause of Death unstated or ill-defined	..	..	..	..	..	..	1	7	8	..	..	..	..	..	..	2	7	9	1	1	1	..	..	2	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	5
TOTAL	484	51	41	68	152	456	1316	2158	4726	291	23	10	30	111	292	1020	1970	3747	189	184	172	298	260	201	206	229	180	136	214	234	143	182	230	190	154	178	167	211	1190	2597

GEOLOGY.—The geological formation of the area consists of heavy clay on the top of hard sandstone, which overlies coal seams.

CLIMATOLOGY.—The following is a brief summary of the main features of the weather in 1947, as recorded on the instruments in Leazes Park.

The mean maximum and minimum temperatures were 56.1° F. and 39.6° F. respectively.

The rainfall for the year was 25.21 inches, 1.08 inches less than that of 1946 (26.29).

The following table shows the frequency of the directions of the wind :—

W.	on	15 days.
N.W.	on	142 ,,
N.E.	on	31 ,,
E.	on	10 ,,
S.E.	on	101 ,,
S.W.	on	65 ,,
S.	on	1 ,,

Sunshine.

Sunshine records have been made available by the courtesy of Professors G. W. Todd and J. A. Hanley, of King's College. The observations are taken at Cockle Park Farm (fifteen miles north of the City, and in a rural area), and at the College itself. During the year 1,046 hours of sunshine were registered in the City, as compared with 1,415 at Cockle Park.

WATER SUPPLY.—The City is served by the Newcastle and Gateshead Water Company with a plentiful supply of pure upland surface water, collected from large catchment areas at Catcleugh, close to the Cheviots, and in lower Northumberland. It is stored in large impounding reservoirs at Catcleugh, Hallington, and Whittle Dene, and passes through filters at Whittle Dene and Throckley. It was found, however, that filtration did not secure the degree of freedom from bacteria which was desirable, and during the last few years it has been supplemented by chlorination, with marked improvement.

From these stations the domestic water supply is piped into the City, whilst the great riverside works, for trade purposes, are catered for by a separate "trade" main. The great majority of our 81,939 dwellinghouses possess an adequate internal water supply. In 551 of them (population approximately 2,000), the supply is by standpipes

in the back yard, whilst in 3,039 others supplies are available to the ground floor holdings from backyard standpipes, with internal supplies to the other floors. 10 houses in part of a rural outskirt of the City are supplied from wells.

The water supply has been satisfactory in quality and quantity and is not liable to have plumbo-solvent action.

The bacteriological reports upon the water are given on page 89.

SEWERAGE.—There are 427.5 miles of sewers in the City discharging directly into the Tyne, which is tidal, at various points along the 8½ miles of river frontage.

CLEANSING AND SCAVENGING.—A weekly collection of refuse is made from the whole of the domestic premises and twice weekly from certain business premises.

There are 86,397 dry ashtubs and galvanised iron bins, 19 dry ashpits, 28 privy ashpits and 15 privy pails in the City. One school (in the area added in 1935) is served by " chemical " closets, there being no sewers available. With this exception, all the schools are served by the water-carriage system.

Vital Statistics of Whole District during 1947 and previous Years.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Net Deaths belonging to the District.			
		Uncorrected Number	Net.		Number	Rate.	of Non-residents registered in the District	of Residents not registered in the District	Under 1 Year of Age.		At all Ages.	
			Number	Rate.					Number	Rate per 1,000 Nett Births.	Number	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1913	271,295	7,480	7,460	27.5	4,611	17.0	560	141	908	122	4,192	15.5
1914	271,523	7,564	7,538	27.8	5,069	18.7	546	138	1,029	137	4,660	17.2
1915	278,107	7,575	7,545	27.8	5,257	18.9	693	207	1,007	133	4,771	17.2
1916	278,107	7,332	7,248	26.2	4,875	17.5	680	232	899	123	4,427	15.9
1917	278,107	6,548	6,495	23.4	4,646	16.7	718	246	732	113	4,174	15.0
1918	278,107	6,555	6,468	23.3	5,380	19.3	872	308	692	107	4,816	17.3
1919	275,099	6,793	6,674	23.3	5,358	19.5	737	234	806	120	4,855	17.6
1920	286,061	8,433	8,070	28.0	4,609	16.1	779	195	817	101	4,025	14.0
1921	278,400	7,720	7,284	26.2	4,602	16.5	817	142	699	96	3,927	14.1
1922	281,600	7,432	6,987	24.8	4,698	16.7	831	145	646	92	4,012	14.2
1923	283,800	6,961	6,367	22.4	4,298	15.1	789	150	623	98	3,659	12.9
1924	285,900	7,029	6,335	22.2	4,607	16.1	929	172	632	100	3,850	13.5
1925	286,300	7,031	6,215	21.6	4,732	16.5	989	165	550	88	3,908	13.6
1926	284,700	6,728	6,007	21.0	4,460	15.7	979	161	530	88	3,642	12.8
1927	288,500	6,215	5,395	18.7	4,468	15.5	1,058	178	474	88	3,588	12.4
1928	281,500	6,360	5,429	19.2*	4,683	16.6	1,178	179	447	82	3,684	13.1
1929	283,400	6,120	5,126	18.1	5,040	17.8	1,313	172	438	85	3,899	13.8
1930	283,400	6,190	5,223	18.4	4,665	16.5	1,232	133	384	74	3,566	12.6
1931	283,600	6,058	5,056	17.8	4,911	17.3	1,251	145	467	92	3,805	13.4
1932	285,100	6,006	4,883	17.1	4,579	16.0	1,174	134	370	76	3,539	12.4
1933	286,500	5,770	4,712	16.4	4,695	16.4	1,182	127	359	76	3,640	12.7
1934	287,050	5,848	4,695	16.4	4,823	16.8	1,322	145	389	83	3,646	12.7
1935	292,700†	5,895	4,666	16.0	5,040	17.3	1,489	121	400	86	3,672	12.6
1936	290,400	5,709	4,537	15.6	5,148	17.4	1,421	151	408	90	3,878	13.1
1937	290,400	5,996	4,796	16.5	5,107	17.6	1,403	160	435	91	3,864	13.3
1938	291,300	6,101	4,678	16.1	4,866	16.7	1,413	168	307	66	3,621	12.4
1939	293,400	5,855	4,646	15.8	4,804	17.0	1,328	185	289	62	3,661	12.9‡
1940	255,900	5,501	4,519	17.6	4,727	18.5	1,181	187	284	64	3,733	14.6
1941	254,960	4,599	4,176	16.4	4,905	19.2	1,208	254	315	76	3,951	15.5
1942	254,100	4,686	4,289	16.9	4,398	17.3	1,140	222	255	59	3,480	13.7
1943	254,890	5,162	4,548	17.8	4,759	18.7	1,235	185	291	64	3,709	14.6
1944	262,920	6,799	5,359	20.4	4,585	17.4	1,298	221	270	50	3,508	13.3
1945	265,990	5,950	4,836	18.2	4,469	17.7	1,234	200	192	40	3,435	13.0
1946	283,740	8,219	6,079	21.4	4,569	16.1	1,242	188	249	41	3,515	12.4
1947	290,470	8,512	6,449	22.2	4,726	16.3	1,190	211	286	44	3,747	12.9

* Calculated on a population of 282,200.

† Rates calculated on a population of 291,025.

‡ Death-rate calculated on a population of 283,200.

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE FOR 1947.

(Registrar General's Return).

Causes of Death.	Sex	All Ages	0–	1–	5–	15–	45–	65–
All Causes	M.	2031	171	18	12	210	637	983
	F.	1712	115	16	17	196	370	998
1—Typhoid and para-typhoid fevers	M.	..	..	..	..	..	..	..
	F.	..	..	..	..	..	..	..
2—Cerebro-spinal fever	M.	..	..	..	..	..	..	..
	F.	1	..	..	..	1	..	..
3—Scarlet fever	M.	..	..	..	..	..	..	..
	F.	..	..	..	..	..	..	..
4—Whooping cough	M.	3	2	1	..	..	..	..
	F.	4	2	2	..	..	..	..
5—Diphtheria	M.	3	1	1	1	..	..	..
	F.	..	..	..	..	..	..	..
6—Tuberculosis of respiratory system	M.	148	2	1	1	79	52	13
	F.	106	..	1	1	91	11	2
7—Other forms of tuberculosis	M.	16	1	4	..	7	2	2
	F.	24	..	5	10	8	1	..
8—Syphilitic diseases	M.	18	..	..	..	1	11	6
	F.	10	1	..	..	2	5	2
9—Influenza	M.	12	2	..	..	1	5	4
	F.	8	2	..	..	..	2	4
10—Measles	M.	..	..	..	..	..	..	..
	F.	2	2	..	..	..	..	..
11—Acute poliomyelitis and polioencephalitis	M.	1	..	..	..	..	..	1
	F.	2	..	1	1	..	..	..
12—Acute infectious encephalitis	M.	8	..	..	..	2	3	3
	F.	2	..	..	..	1	1	..
13—Cancer of buccal cavity and œsophagus(M) uterus (F)	M.	29	..	..	..	..	10	19
	F.	25	..	..	..	4	11	10
14—Cancer of stomach and duodenum	M.	49	..	..	..	3	24	22
	F.	41	..	..	..	3	14	24
15—Cancer of breast	M.	1	..	..	..	..	1	..
	F.	39	..	..	..	3	26	10
16—Cancer of all other sites	M.	199	..	..	..	8	95	96
	F.	135	..	..	..	5	49	81
17—Diabetes	M.	5	..	..	..	1	3	1
	F.	24	..	..	..	2	6	16
18—Intra-cranial vascular lesions	M.	228	..	1	..	1	46	180
	F.	245	..	..	..	4	51	190

Causes of Death at different periods of life for 1947—*continued.*

Causes of Death.	Sex	All Ages	0–	1–	5–	15–	45–	65–
19—Heart disease	M.	470	..	..	2	22	146	300
	F.	404	..	..	..	23	66	315
20—Other diseases of the circulatory system	M.	86	..	..	..	..	19	67
	F.	99	..	..	..	1	19	79
21—Bronchitis	M.	163	9	1	..	8	82	63
	F.	96	9	..	..	1	15	71
22—Pneumonia	M.	97	32	4	..	6	19	36
	F.	63	17	2	1	2	10	31
23—Other respiratory diseases	M.	48	1	..	..	5	20	22
	F.	20	..	..	..	1	7	12
24—Ulcer of stomach or duodenum	M.	29	..	..	..	6	15	8
	F.	8	..	..	..	1	1	6
25—Diarrhœa (under 2 years)	M.	14	14	..	..	..	..	..
	F.	10	10	..	..	..	..	..
26—Appendicitis	M.	3	..	3	..	..	..	..
	F.	6	..	1	..	3	1	1
27—Other digestive diseases	M.	33	2	..	1	7	11	12
	F.	34	1	1	..	5	11	16
28—Nephritis	M.	45	..	..	..	7	12	26
	F.	48	..	..	..	3	19	26
29—Puerperal and post abortive sepsis	F.	..	..	..	..	..	..	..
30—Other maternal causes	F.	4	..	..	..	4	..	..
31—Premature birth	M.	29	29	..	..	..	..	..
	F.	21	21	..	..	..	..	..
32—Congenital malformations; birth injury; infantile disease	M.	61	58	..	..	2	1	..
	F.	39	31	2	..	2	4	..
33—Suicide	M.	23	..	..	..	8	7	8
	F.	8	..	..	..	2	5	1
34—Road traffic accidents	M.	16	..	..	4	6	2	4
	F.	10	..	1	1	5	1	2
35—Other violent causes	M.	55	8	3	2	12	16	14
	F.	35	8	..	..	2	3	22
36—All other causes	M.	139	10	2	1	18	32	76
	F.	139	11	..	3	17	31	77

Resident Population, 290,470.

Deaths Under 1 Year.

	Legitimate.	*Illegitimate.*
M.	157	14
F.	105	10

REPORTS OF THE
ASSISTANT CHILD WELFARE MEDICAL OFFICER
AND MATERNITY OFFICER

II—THE MATERNITY AND CHILD WELFARE DEPARTMENTS

INFANTILE MORTALITY, MATERNITY AND
CHILD WELFARE, NURSING HOMES.
DIPHTHERIA IMMUNISATION

INFANTILE MORTALITY.

SUMMARY OF BIRTHS AND DEATHS, 1947.

	LEGITIMATE.			ILLEGITIMATE.			Grand Total.	
	M.	F.	Total.	M.	F.	Total.		
Total Births in the year	4,145	3,970	8,115	210	187	397	8,512	
Net „ „ „	3,130	2,986	6,116	179	154	333	6,449	†
Net Deaths under 1 year	157	105	262	14	10	24	286	†
Death Rate per 1,000 births	50	35	43	78	65	72	4 4	

BIRTHS AND DEATHS SHOWING THE DISTRIBUTION.

Ward.	Births.	Deaths under 1 year of age.	Children under 1 year of age— Death rate per 1,000 births.
St. Nicholas'	234	14	60
Kenton	302	14	46
Scotswood	356	19	53
Stephenson	565	29	51
Armstrong	451	16	35
Elswick	344	18	52
Westgate	319	17	53
Arthur's Hill	254	14	55
Benwell	401	18	45
Fenham	208	7	34
Sandyford	301	10	33
Jesmond	199	8	40
Dene	201	4	20
Heaton	313	10	32
Byker	425	19	45
St. Lawrence	407	17	42
St. Anthony's	360	13	36
Walker	501	25	50
Walkergate.....	308	14	45
City	6,449	286	44

All births and deaths occurring in Public Institutions have been allotted to the Wards to which they properly belong.

† Registrar General's figures for calculation of Live Birth Rate and Infantile and Maternal Mortality.

ANALYSIS OF INFANTILE MORTALITY.

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Death-rate of Infants *under* 1 *year* per 1,000 births	91	66	62	64	76	59	64	50	40	41	44
Death-rate of Infants *under* 3 *months* per 1,000 births...	54.0	45.1	44.8	40.4	48.3	40.3	41.1	35.8	27.9	30.9	29.5
Death-rate of Infants from *Premature Birth*, per 1,000 births	19.4	15.8	17.2	14.6	20.9	16.5	13.8	11.9	11.6	13.8	8.7
Death-rate of Infants *under* 1 *year* per 1,000 births from *Premature Birth*, plus all *Congenital Causes**	35.7	33.8	35.4	31.4	36.9	32.2	31.4	27.3	21.3	23.9	22.6
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Diarrhœa and all other Digestive Diseases*†	19.0	12.2	7.8	4.5	7.5	7.5	8.6	6.9	3.9	3.8	4.2
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Infantile Atrophy, Debility and Marasmus*.....	1.9	3.2	2.0	1.6	1.4	0.2	0.6	0.7	0.2	0.3	0.1
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Measles*	0.4	1.1	0.2	1.3	0.5	0.7	0.0	0.0	0.2	0.3	0.3
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Whooping Cough*	2.9	0.4	1.1	0.7	3.1	0.9	1.5	0.9	0.6	1.0	1.2
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Respiratory Diseases* ..	22.1	10.9	8.5	15.3	15.8	12.3	15.8	10.3	6.0	6.7	10.1
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Tuberculosis* (all forms)	1.0	0.2	0.9	1.1	1.2	0.0	0.2	0.7	0.8	0.2	0.5

For particulars of deaths, as to causes, etc., see Table on page 20A.

* "*All Congenital Causes*" includes Syphilis, Congenital Defects and Diseases of Early Infancy.

† "*Diarrhœa and all other Digestive Diseases*" includes Diarrhœa, Dysentery, Epidemic or Zymotic Enteritis, Rickets, Diseases of the Stomach, Enteritis, Obstruction of Intestine, Peritonitis and other Diseases of the Digestive System.

CAUSE OF DEATH.	AGE PERIODS. GROSS. Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total under 1 Year of Age.	NET (after allowing for transfers). Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total under 1 Year of Age.	Deaths in Institutions in the City of "Residents" or "Non Residents."
EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.																					
Enteric Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	1	1	..	..	..	1	2	..	..	..	1	1	..	..	..	1	2	..
Whooping Cough	..	..	..	..	..	3	3	5	..	11	..	..	..	..	..	3	2	3	..	8	4
Diphtheria	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	..	1	1
Influenza	..	..	..	1	1	..	2	1	..	4	..	..	..	1	1	..	2	1	..	4	..
Dysentery	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-Spinal Fever	..	..	..	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	2
Tuberculosis of the Respiratory System	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	1	1	2	1
,, ,, Central Nervous System	..	..	..	..	..	..	..	1	2	3	..	..	..	..	..	..	..	..	1	1	3
,, ,, Peritoneum and Intestines	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Disseminated Tuberculosis	..	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	..	..	2
Tuberculosis of Other Organs	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
TOTAL TUBERCULOSIS	..	..	..	..	..	1	2	2	3	8	..	..	..	..	..	..	..	1	2	3	7
Syphilis	..	..	1	..	1	1	..	..	..	2	..	..	..	..	..	1	..	..	..	1	2
Pyæmia Septicæmia	..	..	..	2	2	..	1	..	..	3	..	..	..	..	..	..	1	..	..	1	2
Tumours of undetermined nature	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.																					
Diseases of the Adrenals	..	..	1	..	1	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	..
Other General Diseases	..	..	..	..	..	..	..	2	2	4	..	..	..	..	..	..	..	1	1	2	3
DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS.																					
Hæmorrhagic Conditions	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	2
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																					
Meningitis	..	..	..	..	..	1	3	3	1	8	..	..	..	..	..	1	3	..	1	5	6
Diseases of the Medulla and Spinal Cord	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mental Disorders and Deficiency	..	1	..	..	1	..	..	..	..	1	..	1	..	..	1	..	..	..	..	1	..
Infantile Convulsions	..	..	..	..	..	2	3	..	..	5	..	..	..	..	..	2	3	..	..	5	..
Other Diseases of the Nervous System	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of the Organs of Vision	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diseases of the Ear and Mastoid Antrum	..	..	..	..	..	1	..	2	..	3	..	..	..	..	..	..	..	1	..	1	3
Intra-cranial lesions of vascular origin	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	..	1	..
DISEASES OF THE CIRCULATORY SYSTEM.																					
Chronic affections of the valves and endocardium	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Circulatory System	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DISEASES OF THE RESPIRATORY SYSTEM.																					
Diseases of the Larynx	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1
Bronchitis	..	..	..	..	..	7	8	4	2	21	..	..	..	..	..	6	7	4	2	19	2
Broncho Pneumonia	2	..	1	1	4	17	27	3	7	58	..	..	..	1	1	12	19	3	4	39	26
Lobar Pneumonia	..	..	..	..	..	1	2	..	..	3	..	..	..	..	..	1	2	..	..	3	..
Pneumonia (not otherwise defined)	1	1	..	..	2	3	1	..	2	8	1	1	..	..	2	..	..	..	1	3	8
Congestion, œdema, hæmorrhagic infarction and thrombosis of lungs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Respiratory System	..	..	..	..	..	1	..	1	..	2	..	..	..	..	..	1	..	1	..	2	1
Carried forward	3	2	3	5	13	39	55	24	20	151	1	2	1	3	7	27	41	15	12	102	70

RETUN OF DEATHS UNDER ONE YEAR OF AGE DURING THE 52 WEEKS ENDED 27TH DECEMBER, 1947.

CAUSE OF DEATH.	AGE PERIODS. GROSS. Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total under 1 Year of Age.	NET (after allowing for transfers). Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total under 1 Year of Age.	Deaths in Institutions in the City of "Residents" or "Non-Residents."
Brought forward	3	2	3	5	13	39	55	24	20	151	1	2	1	3	7	27	41	15	12	102	70
DISEASES OF THE DIGESTIVE SYSTEM.																					
Diseases of the Buccal Cavity, Pharynx, etc.	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Diarrhœa and Enteritis	..	..	2	1	3	26	13	5	2	49	..	..	..	..	..	13	11	2	..	26	34
Appendicitis	..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	2
Hernia, Intestinal Obstruction	1	..	..	..	1	1	4	1	..	7	..	..	..	..	..	..	2	..	..	2	6
Diseases of the Pancreas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Stomach	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Intestines	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Peritonitis, without stated cause	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
NON-VENEREAL DISEASES OF GENITO-URINARY SYSTEM AND ANNEXA.																					
Acute Nephritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Kidneys and Ureters	..	1	..	..	1	..	..	..	1	2	..	..	..	..	..	..	..	..	1	1	2
DISEASES OF THE SKIN AND CELLULAR TISSUE.																					
Cellulitis, Acute Abscess ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Skin and Annexa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DISEASES OF THE BONES AND ORGANS OF MOVEMENT.																					
Osteomyelitis and Periostitis	..	..	..	1	1	..	..	..	..	1	..	..	..	1	1	..	..	..	..	1	1
CONGENITAL MALFORMATIONS.																					
Congenital Malformations	24	4	5	..	33	10	3	8	3	57	14	1	2	..	17	3	2	3	1	26	40
DISEASES OF EARLY INFANCY.																					
Congenital Debility	2	..	..	1	3	4	..	..	..	7	2	..	..	..	2	3	..	..	..	5	5
Premature Birth	76	5	6	1	88	..	..	..	..	88	49	3	4	..	56	..	..	..	..	56	69
Injury at Birth	34	6	2	3	45	3	1	1	..	50	24	4	2	1	31	2	1	1	..	35	34
Other Diseases peculiar to the First Year of Life	35	3	4	4	46	3	3	1	..	53	17	2	1	1	21	..	1	1	..	23	47
DEATHS BY VIOLENCE.																					
Accidental burns (conflagration excepted)	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1
Accidental Mechanical Suffocation	1	..	..	1	2	6	5	..	..	13	1	..	..	1	2	6	5	..	..	13	..
Accidental Injury by Fall, Crushing, Landslide, etc.	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..	1	..
Other and unspecified accidents	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Causes of Death Unstated or Ill-defined.																					
Ill-defined causes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL	176	21	22	17	236	93	85	43	27	484	108	12	10	7	137	54	63	23	14	291	313

Report of the Assistant Child Welfare Medical Officer.

It is a little disappointing to have to report an increase in the infantile mortality rate during this year of 1947, and also to show a higher rate than that for England and Wales as a whole after the encouraging results in 1946. The Newcastle rate, however, is still lower than that for other large cities. One main reason for the greater number of deaths of infants in the first year of life was the exceptionally severe weather during the first three months of the year which resulted in an abnormally high proportion of deaths from pneumonia and other respiratory infections. This was offset, however, by the fact that the number of infants dying before they reached the end of their first month was less than in 1946, particularly the number of deaths due to prematurity.

For some years past those interested in such statistics have been very much concerned about the large percentage of infant deaths due to prematurity. Although it is difficult to reduce the number of premature births, every effort is being made to save those babies who are born prematurely. Since the domiciliary service for premature infants was started in 1945 the results have been more and more encouraging, and there are now two midwives engaged full-time on nursing premature infants and one midwife gives half her time to this work. During 1947, although prematurity was still the greatest single cause of infant deaths in the first month it only accounted for 41 per cent. of these deaths as compared with 57 per cent. in 1946. The results of this special work show beyond doubt that, given reasonable home conditions, premature infants have a better chance of survival when nursed with special care in their own homes than if admitted to hospital.

The care of the illegitimate child still constitutes one of the greatest social problems in child welfare work, and the infantile mortality rate of these babies is much higher than it should be and much higher than that for legitimate births.

The comparable figures are shown below for the past 8 years.

Infantile Mortality Rate, Newcastle upon Tyne.	1947	1946	1945	1944	1943	1942	1941	1940
Legitimate	43	39	38	50	62	60	75	64
Illegitimate	72	77	59	48	101	39	95	56

The problem of the unmarried mother and her baby is largely shouldered by moral welfare workers attached to the various religious bodies in the City. Unmarried girls who for some reason or other are unable to have their babies at home are admitted to one or other " mother and baby home " run by these voluntary religious bodies. There are Salvation Army, Church of England and Catholic homes which all admit Newcastle girls and which, collectively, adequately cover the needs of the City. Arrangements are made for the future of the baby before the mother leaves the home. Wherever possible the mother is encouraged to keep her baby, but in some cases a foster home must be found and in others adoption is the only solution.

At the end of 1947, the Health Authority undertook a new responsibility in taking over the Scotswood District Nursing Association and the district nursing in that area. From 5th July, 1948, when all district nursing in the City will become a Local Health Authority responsibility, it will take over some of these associations and operate others under agency. District nurses continue to nurse maternity cases having infectious conditions.

It is becoming more and more evident that the functions of Maternity and Child Welfare lie more in the field of social medicine than ever before. Although there is still the need for medical advice and treatment, and education in health and nutrition, the changing aspects of modern society are producing new problems of a social and economic nature and making new services vitally necessary. Although there is not the poverty due to unemployment that there was before the war, the rising cost of living is driving more women into paid jobs than in previous years. This not only increases the demand for a greater Nursery Service but, because it means that few people can now call on free relatives and neighbours when in trouble and sickness, it results in a much greater demand for domestic help. This is a service which will inevitably have to be extended.

1947 has been a year of planning and looking forward always with hope and sometimes with apprehension. At the same time the routine work of the department has continued, characterised by the happy atmosphere and cheery goodwill of its members and inspired by the enthusiasm and untiring spirit of Miss G. B. Cameron, the Chief Health Visitor.

TOTAL ATTENDANCES AT THE MATERNITY AND CHILD WELFARE CENTRES, 1947.

Centre.	Ante-Natal Sessions.	Ante-Natal.		"Post Natal."		New Children.			Individuals.			Attendances.			Medical Sessions.		Individuals.	
		Individuals.	Attendances.	Individuals.	Attendances.	Under 12 months.	Over 12 months.	Total.	Under 12 months.	Over 12 months.	Total.	Under 12 months.	Over 12 months.	Total.	Number.	Average Attend'ce.	Boys.	Girls.
Benton	..	..	..	..	..	117	9	126	165	108	273	1333	507	1840	59	32	147	126
Benwell	108	445	1943	1	1	257	44	301	376	277	653	2430	1546	3976	145	27	341	312
Byker	100	745	2673	12	12	378	85	463	522	419	941	3041	1448	4489	144	31	487	454
City	..	..	..	..	..	131	10	141	170	108	278	1177	454	1631	49	33	137	141
Cowgate	..	..	..	..	..	156	24	180	205	123	328	1181	410	1591	49	32	134	194
Diana Street	50	426	1399	..	..	257	33	290	346	240	586	2171	821	2992	100	30	295	291
Elswick	98	631	2137	..	..	433	66	499	553	437	990	3663	1953	5616	148	38	516	474
Fawdon	20	19	51	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fenham	100	475	1764	..	..	346	23	369	513	316	829	4175	1570	5745	146	39	445	384
Heaton	98	426	1849	1	1	329	25	354	446	231	677	3231	910	4141	98	42	346	331
Jesmond	..	..	..	..	..	144	18	162	238	188	426	2270	1428	3698	98	38	223	203
Leazes	..	..	..	..	..	91	9	100	135	76	211	1094	462	1556	50	31	104	107
Scotswood	51	363	1320	1	1	256	50	306	361	280	641	2166	873	3039	101	30	330	311
Shieldfield	..	..	..	..	..	166	19	185	233	159	392	1757	945	2702	50	54	218	174
St. Anthony	49	514	1823	4	4	452	45	497	631	445	1076	4525	2013	6538	149	44	558	518
Walker	50	423	1003	..	..	158	6	164	225	99	324	1296	388	1684	49	34	174	150
Walkergate	..	..	..	..	..	204	14	218	279	174	453	2182	920	3102	99	31	258	195
Wharncliffe Street	49	506	1400	..	..	229	28	257	321	164	485	1776	862	2638	149	18	261	224
Total 1947	773	4973	17362	19	19	4104	508	4612	5719	3844	9563	39468	17510	56978	1683	33.9	4974	4589
Total 1946	730	5424	19209	12	13	3555	495	4050	5029	3906	8935	33898	18451	52349	1631	32.1	4559	4376

Deaths of Infants.

Infants.	1942	1943	1944	1945	1946	1947
Deaths of Infants during first week of life	101	98	102	96	122	108
Deaths of Infants aged 1 to 4 weeks	28	37	50	21	25	29
Deaths of Infants aged 1 to 12 months	129	154	122	73	99	154
Deaths from Prematurity	71	63	64	56	84	56
Deaths of Twins and Triplets	29	23	29	20	29	25
Infantile Mortality Rate	**59**	**64**	**50**	**40**	**41**	**44**

Attendances at Child Welfare Centres.

Year.	No. of Attendances.	No. of Individuals.	Average Attendance per Individual.	Average Attendance at each Session.
1927	46,672	6,522	7.1	42.4
1928	53,960	6,532	8.3	49.3
1929	52,460	6,574	7.9	48.2
1930	67,626	7,776	8.7	44.2
1931	83,561	8,927	9.4	43.1
1932	100,658	9,251	10.9	51.5
1933	99,103	8,955	11.1	50.9
1934	107,717	8,872	12.1	54.6
1935	104,174	8,952	11.6	52.2
1936	104,954	8,794	11.9	50.9
1937	119,527	9,777	12.2	54.9
1938	137,404	10,577	13.0	61.3
1939	111,355	10,367	10.2	62.7
1940	83,787	9,463	8.9	56.1
1941	60,228	7,897	7.6	37.6
1942	53,910	8,217	6.5	32.8
1943	55,910	8,201	6.8	35.0
1944	57,805	9,254	6·2	35.4
1945	53,570	8,561	6·3	32·9
1946	52,349	8,935	5·9	32·1
1947	56,978	9,563	6.0	33.9

Toddlers.

As in previous years care and attention was bestowed on the children of toddling age, among whom health deteriorates rapidly unless it is closely watched. For more than twenty years special efforts have been made in Newcastle to encourage mothers to bring toddlers to the Centres. Of the 56,978 attendances at the Centres during 1947, 17,510 were made by children of 1—5 years of age.

TODDLERS ATTENDING THE CENTRES.

Year.	Number of Children.
1937	4,806
1938	5,224
1939	5,336
1940	4,936
1941	3,848
1942	3,746
1943	3,585
1944	3,934
1945	3,694
1946	3,906
1947	3,844

Dried Milk.

During the year 1947, 3,621 lbs. of dried milk in cartons were given gratis and vouchers for 1,590 were given for cost price milk, the latter being distributed by the chemists as formerly. 1.6 per cent. of the children and 4 nursing mothers attending the Centres were given free milk.

This is in addition to the National Milk Scheme.

There is also a distribution of Fruit Juice and Cod Liver Oil at the Welfare Centres, under the Control of the Food Office.

The following table shows the quantity of dried milk distributed each month during the year 1947 :—

MONTH.	FREE.	AT COST PRICE.
	Pkts.	lbs.
January	329	51
February	351	102
March	314	61
April	313	62
May	321	273
June	381	122
July	295	388
August	326	76
September	276	152
October	297	67
November	210	105
December	196	131
Total	3,609 =3,621 lbs.	1,590

Children attending Centres	9,563	
Children given free milk	150	
Percentage	1·6	
Nursing mothers given milk	4	
Free milk given to children (lbs.)	3,610	=3,621 lbs.
Free milk given to expectant mothers (lbs.)	11	

Work of the Health Visitors.

With the exception of a limited number of homes in the residential district, such as parts of Jesmond, every birth in the City was visited regularly by members of the Health Visiting Staff. For all purposes during the year a grand total of 98,917 visits were made. 6,221 births were visited, and 27,642 visits were paid, an average of 4 re-visits per child. These gave a total of 33,863 visits to children under one year.

Summary of Visits.

	Primary.	Subsequent.	Total.
Births	6,221	27,642	33,863
Measles	2,369	4,217	6,586
Pneumonia	446	579	1,025
Diarrhœa	15	25	40
Whooping Cough	895	746	1,641
Children over 1 year	....	40,832	40,832
Hospital Cases	....	....	86
Expectant Mothers	764	130	894
Special Visits	....	....	688
Visits *re* Adoptions	....	....	25
Visits to Boarded-out or Nursed-out Children	66	131	197
Unsuccessful Visits (Outs and Removals)	....	....	9,059
Orthopædic Work, including treatments	....	....	2,750
Tuberculosis Contacts	164	368	532
Home and Domestic Helps	....	....	273
Tuberculosis Visits, December, 1947	34	392	426
	10,974	75,062	98,917

Infants on Visiting List.

Of 6,171 children under 1 year who were visited in 1947, 4,904 completed their first year, and of the remainder :

281 died,
705 left the City,
228 could not be traced,
53 were visited only once.

The following figures are therefore based on the 4,904 who completed the first year, *plus* the 281 who died, making in all a total of 5,185, and of that total 2,973 or 57.3 per cent., attended the Welfare Centres.

Illnesses.—Among the children visited, 293 or 5.65 per cent., contracted measles ; 212 or 4 per cent., contracted whooping cough ; 87 or 1.6 per cent., contracted diarrhœa ; 510 or 9.8 per cent., contracted bronchitis or pneumonia.

Details as to the stated **Feeding** of the 5,185 children under supervision during the year are given in the following table. 96 died before feeding was established.

	Feeding.					
	Breast.		Mixed.		Artificial.	
	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.
At First Visit	3,858	75.8	400	7.9	831	16.3
At time of death of those of above Children who died in First Year.....	44	1.14	23	5.7	118	14.2
Surviving Children (4,904) at 9 months	123	2.5	971	19.8	3,810	77.7

Details as to children who should have attained the age of 5 years during 1947 :—

Well and attending school	2,585
Ill and not attending school	13
Left City or failed to trace	1,051
Died in 2nd year	23
Died in 3rd year	7
Died in 4th year	11
Died in 5th year	3
Total surviving whose whereabouts are known	2,598
Total deaths	44
Total reported upon.....	3,693

The addresses of 793 children who left the City were sent to the Medical Officers of Health for the districts to which they had gone.

Care of Premature Infants.

The total number of premature babies notified during 1947 were :—

Born at home .....140 living births and 10 still-births.
Born in hospital .....192 living births and 34 still-births.

Of the 140 living births 63 received special nursing by one of the "premature infant" nurses. The results are shown below :—

Cases with "Special" Nursing.	Living.	Dead.
Under 2½ lbs.	—	3
2 lbs. 9 ozs. to 3 lbs. 8 ozs.	5	2
3 lbs. 9 ozs. to 4 lbs. 8 ozs.	26	4
4 lbs. 9 ozs. to 5 lbs. 8 ozs.	23	—
	54	9
Cases not "Specialled."		
Under 2½ lbs.	1	5
2 lbs. 9 ozs. to 3 lbs. 8 ozs.	4	6
3 lbs. 9 ozs. to 4 lbs. 8 ozs.	10	4
4 lbs. 9 ozs. to 5 lbs. 8 ozs.	42	5
	57	20

Tuberculosis Visiting.

In December, 1947, the visiting of notified cases of Tuberculosis was taken over by the Health Visitors who now visit these cases on their own districts. Two of the "Tuberculosis" nurses were transferred from the Dispensary to the Health Visitors' Staff.

Health Talks.

Brief talks dealing with an appropriate subject—such as digestive disorders among children in the spring and summer, and the respiratory diseases in the autumn and winter—were frequently given at every Centre by the Centre Health Visitor, from a comprehensive syllabus of subjects which emphasises everything conducive to maintaining good health in mothers and children. These talks are listened to with interest.

In addition to these Health talks demonstrations were given by the Ministry of Food on cooking and some Ministry of Information Films shown, etc.

Orthopædia.

288 patients have attended during the year. Of these, some have appeared on several occasions for examination, others, in addition to attendance for examination, have attended regularly for treatment.

New cases referred to the Orthopædic Department during the year	146
Children transferred on attaining the age of five years from the Maternity and Child Welfare Lists to that of Newcastle Education Authority	41
Attendances for examination or for re-examination by the Orthopædic Specialist	440
(Of these 146 were new patients—65 girls and 81 boys.)	
Patients' attendances for treatment were	2,310

Treatments given :—

Swedish Remedial Exercises	1,391	
Massage	222	
Electricity	1,057	
Manipulations	605	
Plasters	13	
		3,288
Average number of children per month attending for treatment		62
Average number of children per month attending for periodic examination		144

3 children did not attend after several notifications.
1 child had left the district.
1 parent preferred to attend the Royal Victoria Infirmary.

18 children were discharged as not requiring further treatment (" cured "). These included cases of :—

Flat Feet	4
Genu Valgum	7
Talipes Calcaneus Deformity	2
Sterno-mastoid Tumour	1
Deformity toes	1
Peculiarity Gait	2
Birth Fracture Femur	1

No Orthopædic Disability found at date of attendance.

These were referred as :

Deformity of Foot	1
Torticollis	1
Peculiarity Gait	1
Old Injury Forearm	1

6 children left the district.

Parents unwilling or unable to continue attendance	25
Children recommended for admission and admitted to W. J. Sanderson Orthopædic Hospital School	1
Preferred to attend other hospitals	2

X-ray examination in 13 cases (23 films).

Photographs—6 patients (14 prints)

Plaster Splints were made in 13 cases.

Surgical Appliances and Special Boots as ordered at the Newcastle Education Committee's Orthopædic Department :—

Special Boots	81
Alterations to Boots	90
New Splints	41
Splint Repairs	11

Classification of cases receiving treatment in the Department by the Orthopædic Staff as at 31st December, 1947.

Flat Feet	18
Flat feet and Genu Valgum	2
Genu Valgum	21
Genu Varus	1
Deformity Toes	10
Metatarsus Varus	1
Congenital Club Foot	9
Congenital Valgus Foot	2
Congenital Talipes Calcaneus	2
Congenital Dislocation-Hip	2
Erbs Palsy	2
Peculiarity Gait	1
Asymmetry Lower Limbs	1

Classification of Cases which have been examined during the year.

(A proportion of these cases have attended for treatment—the remainder under observation.)

Flat Feet	58
Flat Feet and Genu Valgum	8
Genu Valgum	42
Genu Varus	6
Metatarsus Varus	11
Deformity Toes	1
Old Injury Great Toe	1
Congenital Flat Feet	2
Congenital Club Foot	1
Congenital Talipes Calcaneus	1
Congenital Deformity Hands	2
Old Fracture Tibia	1
Head Tilt	2
Hemiplegia	2
Poliomyelitis	1
Asymmetry Lower Limbs	1
Peculiarity Gait	14

Dental, Aural and Nasal Treatment.

Under the arrangements made with the Education Authority 201 nursing or expectant mothers and 238 children were referred for dental treatment. Of these 160 women and 211 children were treated.

Dentures were supplied gratis, or at a modified cost, fixed according to economic circumstances, to 63 women, all of whom were either nursing or expectant mothers.

Similarly 162 children were sent for aural and nasal treatment, and of these 19 were treated and 44 resulted in operations.

Ultra-Violet Ray Therapy.

Those children who are brought to the Centres, and who are considered to be in need of artificial sunlight, are referred for such treatment to the Light Department of the Newcastle General Hospital, or to the Brinkburn Street Sun-Ray Clinic.

	Sun-Ray Clinic.	Newcastle General Hospital.	Total.
Number of patients treated	43	29	72
Number of treatments given	531	240	771

Sewing Classes.

A total number of 295 classes were held at 6 Centres. The number of attendances was 2,443, an average of 8 mothers at each class.

Care of Illegitimate Children.

Total number of illegitimate births (Net)		333
Number of unmarried mothers who were admitted to Mother and Baby Homes		34
Hope Dene	11	
Elswick Lodge (closed for 10 months)	1	
Brettagh Holt	22	
	34	

Children's Acts, 1908-1933.

At the beginning of the year there were 65 nursed-out children in the City, and 88 at the close of the year. Of these 30 were with foster mothers and 58 were in Institutions.

CHILDREN IN INSTITUTIONS.

Convent of La Sagesse	5
National Children's Home & Orphanage....	17
Northern Counties Institution for the Deaf and Dumb	13
Nazareth Home	8
Dr. Barnado's Home	15
	58

All these children were regularly supervised and kept under observation. No deaths occurred during the year.

Adoption of Children (Regulation) Act, 1939.

(a) Number of Persons who gave notice under Section 7 (3)	26
(b) ,, Children adopted ,, ,,	24
(i) Number of such Children under supervision at end of year ..	12
(ii) Number of such Children who died in 1947	Nil.
(iii) Number of such Children returned to parents	1

In addition the Durham and Northumberland Adoption Society notified us of the placing of 17 children for adoption in Newcastle.

Nurseries.

During the year the number of attendances of children at the Day Nurseries has been satisfactory. There has been a certain amount of infection which inevitably reduces the numbers and by limiting admissions makes the period of waiting for admission longer.

The applications for admission of children have steadily increased and are far beyond the number which can be accommodated. This is due partly to the increase in the number of broken marriages, and also to the rising cost of living, making it difficult for some families to live on the father's earnings alone.

There is a Residential Nursery at Armstrong Road for children who are temporarily deprived of home life. The capacity of this Nursery is 36.

In October three of our students sat the examination for the Nursery Nurses' Certificate—the first examination since the change over from the National Society Children's Nurseries Examination to the Royal Sanitary Institute Examination. All three students passed.

Nurseries—Returns for Year, 1947.

Nursery.	Total Capacity.	Children on Register.	Number of Attendances 0-2 years.	Number of Attendances 2-5 years.	Total Attendances.	Average Daily Attendance.
Cresta	40	85	1565	6408	7973	32
Willow Avenue	50	86	2461	6969	9430	38
Renwick Street	50	81	1727	8244	9971	39
Woodland Crescent ...	48	91	2721	5334	8055	32
West Parade	50	84	2842	6494	9336	37
Byker Park	50	94	1918	7792	9710	39
Gosforth Street	50	105	2169	7096	9265	37
St. Anthony's	50	100	2388	6754	9142	37

Almoner's Department.

Assessments, 1947.

APPLICATIONS FOR DRIED MILK.

Social Groups.	Number Eligible.	Number Ineligible.	Total.
Working	4	6	10
In the Services	3	4	7
Miscellaneous Cases	20	14	34
Total	27	24	51

APPLICATIONS FOR REDUCTION OF MATERNITY FEES.

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working	60	27	3	90
In the Services	7	7	2	16
Miscellaneous Cases	41	39	61	141
Total	108	73	66	247

APPLICATIONS FOR REDUCTION OF MEDICAL AID FEES.

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working	634	174	19	827
In the Services	17	38	18	73
Miscellaneous Cases	24	38	70	132
Total	675	250	107	1032

APPLICATIONS FOR THE SERVICES OF THE HOME HELPS.

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working	170	206	4	380
In the Services	3	13	3	19
Miscellaneous Cases	..	3	13	16
Total	173	222	20	415

APPLICATIONS FOR ORTHOPÆDIC APPLIANCES.

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working	46	19	4	69
In the Services	2	5	1	8
Miscellaneous Cases	2	7	9	18
Total	50	31	14	95

APPLICATIONS FOR DENTURES.

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working	25	27	2	54
In the Services	..	4	1	5
Miscellaneous Cases	..	8	6	14
Total	25	39	9	73

APPLICATIONS FOR THE SERVICES OF THE DOMESTIC HELPS

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working.....	21	20	..	41
In the Services	..	3	1	4
Miscellaneous Cases.....	5	12	6	23
Total	26	35	7	68

APPLICATION FOR REDUCTION OF PRINCESS MARY MATERNITY HOSPITAL FEES.

Social Groups.	Assessed at Full Cost.	Assessed at Part Cost.	Free Cases.	Total.
Working	33	219	..	252
In the Services	..	20	..	20
Miscellaneous Cases	..	14	3	17
Total.....	33	253	3	289

N.B.—The Group of Miscellaneous Cases includes widows, persons in receipt of Out-Door Relief, the unemployed and blind persons.

Social Statistics.

Total Number of cases advised or assisted :— 450.

The following forms of help were given :—

Clothing	109
Bedding	39
Furniture	2
Dentures	5
Spectacles	6
Convalescence	36
Fuel Difficulties	1
Confinement	14
Extra Nourishment	9
Housing	9
Financial	14
Advice on Domestic Problems	53
Free Maternity Parcels	14
Clothing Coupons	3
Work Found	3
Fares	2
Medical Attention	35
Domestic Help	13
Pram	1
Lip Reading	1
Escort arranged	1

Children were placed in the following ways :—

Residential Nursery	9
Institution	12
Day Nursery	14
Adoptions arranged	3

Number of Home Visits :— 77.

Cases were referred to the following agencies for advice and help :—

The Newcastle Council of Social Service	5
Soldiers, Sailors and Airmen's Families Association	33
Women's Voluntary Service	47
Moral Welfare Workers	66
Education Department	7
Ministry of Fuel & Power	1
Public Assistance Committee	25
Assistance Board	1
Board of Trade	4
Ministry of Labour	2
British Legion	6
Housing Department	1
Vickers-Armstrong Benevolent Fund	1
Sanitary Inspector	2
Royal Northumberland Fusiliers	1
National Society for the Prevention of Cruelty to Children	2
Voluntary Tuberculosis Care Council	1
Marriage Guidance Council	1
National Council of Cancer Relief	1
Old People's Welfare	1
St. Vincent de Paul	1
British Red Cross	1

Home Help Service.

The Staff of Home Helps, all of whom were employed on a part-time basis, numbered 22, and during the year they rendered service to 363 lying-in women. In 348 instances contributions towards the cost of the services were received from the families concerned—in the remaining cases the services were supplied gratis.

Domestic Help Service.

Nine domestic workers have been more or less permanently employed. These workers render service in homes where the housewives are unable, through illness, to carry out their normal duties. Such service was given in 75 homes.

District Nursing.

Scotswood Area.

Number of visits undertaken by the two district nurses from December 8th to end of December, 1947.

No. of patients attended—	
New Cases	23
Re-visits	309
	332

Municipal Training Course for Health Visitors.

The Seventeenth Training Course for Health Visitors commenced in October, 1946, and ended with the examination at the Medical School, King's College, in April, 1947. Of the 16 students enrolled, 15 sat the examination, and 13 qualified.

S. M. Livingston,
Assistant Child Welfare Medical Officer.

REPORT OF THE MATERNITY OFFICER—YEAR 1947.

INTRODUCTION.

There have not been any really significant changes in this part of the Health Services. There is a slight decrease in the maternal mortality rate which is 0.60 per 1,000 births this year. This is extremely gratifying for last year's rate was the lowest figure ever recorded in Newcastle.

There was an increase in the proportion of midwives' deliveries among the total births in the city, and this is associated with the fact that hospital over-crowding has thrown more work on to the district.

The still-birth rate diminished slightly, but is still too high, and as on previous occasions " toxæmia of pregnancy " and " ill-health of the mother " are responsible for far too many cases of still-birth.

Half the midwives' cases needed the services of a doctor at some stage or other and, as in previous years, this relatively high proportion is due to an insistence on midwives summoning medical aid without hesitation, and I would not recommend any attempt to reduce the proportion of medical aid requests issued. There was, however, a higher incidence of medical aid calls for post-partum hæmorrhage, and the Maternity Emergency Service was called out very frequently in 1947, many of the calls also being for post-partum hæmorrhage. This complication is one which should be largely avoidable and the high proportion of calls for this abnormality is not at all satisfactory.

Again there were no deaths from puerperal infection, and no district case was ever seriously ill from infection. It is probably a tribute to the better treatment of puerperal infection on the district, aided by penicillin and sulphonamides, that the number of admissions of puerperal pyrexia to the City Hospital for Infectious Diseases has fallen considerably in recent years.

It must be placed on record that the district midwifery staff were on many occasions required to give assistance to the maternity unit at the General Hospital. It is apparently easier to obtain staff for district midwifery than for hospital work, and on several occasions the staff of the Maternity Department was so depleted by illness and holidays that the hospital would have done very badly without the ready response from the district midwives to calls for their services in hospital for limited periods. This liaison between the maternity unit and the district service is one of the most pleasing features of the

Health Service in Newcastle, and it is to be hoped that in the future, under the National Health Service Scheme, it will be possible to continue this happy relationship.

The work of the Premature Infant Service increased during 1947, but this is the subject of a special report by Dr. Miller, the Pædiatrician at Newcastle General Hospital and needs no further reference here.

Maternal Mortality.

There was a fall in the maternal death rate, down to 0.60 per 1,000 births, which is the lowest figure ever recorded in this city.

Puerperal Pyrexia.

There was an increase in the number of notifications in Newcastle and a slight decrease in extra-mural cases. More cases were admitted to hospital.

Ophthalmia Neonatorum.

There was an increase in the incidence of this condition. Only one of the notified cases proved to be of gonococcal origin.

Ante-Natal Clinics.

Attendances during the year at the ante-natal clinics were 17,362.

Transport of Midwives.

Fourteen midwives now use their own cars for district midwifery including the occasional transport of cases to hospital. This welcome innovation has almost completely solved the transport difficulty which has been a regular complaint in previous years. An allowance of £40 per annum was granted from August 1st, 1946, and since October, 1947, this has been increased by an amount equal to the cost of the Road Fund License. The increasing use by midwives of their own cars renders it possible to begin the organisation of a gas and air analgesia service for the district.

In addition to midwives' own cars, transport has been assisted by the excellent service given by the car pool based on the City Hospital for Infectious Diseases.

It is still often difficult, however, to transport women into hospital and nursing homes, especially when the destination lies just over the boundary line of neighbouring local authorities, such as Gosforth.

Work of Municipal Midwives.

103 midwives notified their intention to practice midwifery in the City :—

45 Permanent Municipal Midwives.

8 Temporary Municipal Midwives.

4 Private Midwives.

45 Employed in Institutions, permanent or temporary.

1 Normally employed outside the City, but occasionally working within our boundary.

Attendances at Confinements.—The following table shows the work of the midwives in the City during 1947 and previous years :—

	1944.	1945.	1946.	1947.
Births attended, as Midwives	2,374	1,934	2,634	2,819
,, ,, as Maternity Nurses .	550	570	763	796
Total Net Births	2,924	2,504	3,397	3,615
Percentage of Net Births in City	54.6	51.8	55.9	56.1

Maternity Service.

The Ante-Natal Centres.

Attendance.—During the year the Ante-Natal Centres were attended by 4,973 expectant mothers, 19 women attended "Post-Natal" Clinics. The following table shows the attendances at the Ante-Natal and "Post-Natal" Clinics :—

Centre.	Ante-Natal.		"Post-Natal."	
	Attendances.	Individuals.	Attendances.	Individuals.
Benwell	1,943	445	1	1
Byker.....	2,673	745	12	12
Diana Street	1,399	426	..	..
Elswick	2,137	631	..	..
Fawdon	51	19	..	..
Fenham	1,764	475	..	..
Heaton	1,849	426	1	1
Scotswood	1,320	363	1	1
St. Anthony's	1,823	514	4	4
Wharncliffe St.	1,400	506	..	..
Walker.....	1,003	423	..	..
1947	17,362	4,973	19	19
1946	19,209	5,424	13	12

Summary of Municipal Midwive's Work, 1947.

No. of Ante-Natal Visits.	No. of Clinic Visits.	No. of Deliveries,		No. of Nursings.
		As Mat. Nurse Doctor engaged.	As Midwife.	
16,290	2,230	712	2,742	55,216

Still-births.—Of the 2,742 births attended by the municipal midwives, 50 still-births occurred. In the 712 cases where municipal midwives attended in the capacity of maternity nurse, 18 still-births occurred.

Of the 6,622 births registered, 173 related to still-births, which gives a rate of 26·1 per 1,000 total births.

Still-births Registered	173
Still-births Notified	168
Percentage Notified	97.1
Still-births Visited	168

Duration of Pregnancy.	*No.*	*Percentage of Total notified.*
At or under 7 months	13	7.7
At 7–8 months	52	31.0
At full time	103	61.3
	168	

Suggested Cause of Still-Births :—

	Cases.
(*a*) Ill-health of the mother	18
(*b*) Foetal deformities and malpresentations and uterine inertia	39
(*c*) Premature delivery, ante-partum hæmorrhage, etc...	36
(*d*) Other causes, including toxaemia of pregnancy and accidents	75

Notices for medical aid sent by midwives :—

FOR THE MOTHER.

During Pregnancy—1947

Ante-Partum Hæmorrhage ...	46
Abortions	17
Illness (Miscellaneous).....	59
Suspected toxaemia of pregnancy	39
	161

During Labour—

Uterine Inertia	274
Malpresentations	
Retained Placenta	29
Post-Partum Hæmorrhage ...	32
Ruptured Perineum	491
	826

During Puerperium—

Rise of Temperature.....	38
Undefined Illness of Mother ..	47
	85

FOR CHILD.

Prematurity	75
Discharging Eyes	169
Congenital Defects	20
Illness of Baby	96
Still-births	15
Rashes	23
	398
Total calls for mother and child	1470

In 52·1 per cent. of the midwive's cases the services of a doctor were requisitioned.

Claims for fees from doctors in respect of calls from midwives :—

	Cases.			
	1944.	1945.	1946.	1947.
For prolonged labour-malpresentation ..	49	39	121	183
For post partum hæmorrhage	22	17	17	25
For ante partum hæmorrhage	27	27	61	66
For illness ot mother	144	113	170	178
For illness of child	97	77	118	146
For premature birth	39	31	65	60
For discharging eyes	84	90	119	169
Ruptured Perineum	361	313	375	492
Other	158	132	167	175
Specialists called in	14	10	9	17
Total cases	995	849	1222	1511

Consultants' Services.

The services of obstetrical specialists were provided on seventeen occasions. The Midwifery Emergency Service was sent to seventeen cases.

Summary of work done by Municipal and other Midwives.

	Midwifery Cases.		*Maternity Cases.*
Municipal Midwives	2,742	..	712
Private Midwives	23	..	4
Institutions, Gables, Salvation Army, etc. .	54	..	80
	2,819	..	796

Complications of Child-birth.

(1) Puerperal Pyrexia.—167 cases were notified during the year. Details of these are given in the following table :—

	Total Cases Notified.	Newcastle Cases.	Extra Mural Cases.	Total Deaths.
Puerperal Pyrexia	167	88	79	Newcastle.. 0 Extra Mural 0 — Nil

Of the Newcastle cases 49 occurred in Hospital, and 20 others were admitted to hospital, the remainder being nursed at home.

All City cases were visited and the attendants at the confinements are indicated in the following table :—

	Puerperal Pyrexia.
Doctors	—
Doctors and Midwives	7
Midwives	32
Princess Mary Maternity Hospital Staff.....	14
Newcastle General Hospital	33
Gables Maternity Home.....	1
Western Nursing Home.....	1
	88

(2) Maternal Mortality.

6,196 Newcastle women were confined in the City and 426 Newcastle residents had their confinements outside the City. There were four maternal deaths, a mortality rate of 0.60 per thousand as compared with 0.64 for the previous year.

A revised classification has been adopted for these cases, but for comparative purposes, the deaths are also classified separately on the same plan as has previously been adopted for other years.

Revised Classifications.

Abortions, including sepsis following abortions	1
Hæmorrhage and shock after confinement (including renal complications).....	1
Infection during and after confinement	—
Toxæmias of pregnancy, including pyelitis	2
Puerperal phlegmasia and embolism.....	—
Accidents of pregnancy and childbirth.....	—
Associated maternal deaths (heart disease, etc.).....	—
	4

Former Classification.	1947	1946	1945	1944	1943	1942	1941
Abortions (Septic)	..	..	5	1	3	1	1
Abortions (Not septic)	1	1	..	..	..	1	..
Accident of Pregnancy	..	..	..	2	3	..	1
Hæmorrhage and shock	1	3	1	3	2	3	6
Other Accidents of Childbirth	..	..	..	2	1	2	2
Infection during Childbirth and Puerperium	..	..	3	6	..	3	..
Toxæmia of Pregnancy	2	..	..	5	1	2	..
Puerperal Phlegmasia	..	..	..	..	..	..	..
Ectopic Gestation	..	..	1	..	1	..	..
Unspecified conditions of Puerperal State	..	..	..	..	..	..	..
TOTAL	4	4	10	19	11	12	10

Place of Death.	*Total.*	*Incidence per* 1,000 *births.*
*Newcastle General Hospital	2	1·22
Private Houses	1	0·21
Princess Mary Maternity Hospital	1	0·38

* There were also 2 deaths of women not classed to Pregnancy or Childbearing, but returned as associated therewith.

(3) Ophthalmia Neonatorum.

The number of notified cases was twelve and all these were City residents. Twelve City cases were visited :—

Doctors and Midwives	2
Midwives	9
Princess Mary Maternity Hospital	..
Newcastle General Hospital	1
Nursing Homes	..
	12

The ophthalmia incidence per 1,000 births (live) for the last seven years has been as follows :—

1941	4·4
1942	6·5
1943	6.4
1944	5·2
1945	3·1
1946	1·5
1947	2·0

Births.

Total Births.—Of the 6,449 infants born alive in 1947 and belonging to Newcastle residents, 3,309 were boys and 3,140 were girls. Of the former 51 per 1,000 and of the latter 36 per 1,000 died during their first year.

42.5 per cent. of the births in families belonging to Newcastle occurred in institutions, as shown in the following table :—

Nursing Homes	253
Princess Mary Maternity Hospital	537
Gables Maternity Home	241
Newcastle General Hospital	1,474
Other outside hospitals	235
	2,740

Illegitimate Births.—333 illegitimate children were born to Newcastle residents during the year, and the death rate in this group of children was 72 per 1,000 as compared with 43 per 1,000 legitimate children.

Every effort is made to ensure that these children are brought regularly to the Welfare Centres.

Notification of Births.—Of the 8,512 live and 314 still-births (gross) which were registered in the City in 1947, 8,517 were notified as follows :—

Notified by	*Gross Living Births.*	*Gross Still Births.*
Medical Practitioners	6	—
Medical Practitioners and Midwives	704	13
Midwives	2,707	56
Princess Mary Maternity Hospital	2,457	151
Newcastle General Hospital	1,478	76
Other Maternity Homes	857	12
	8,209	308

LINTON SNAITH,

Maternity Officer.

NURSING HOMES.

There are 9 Registered Nursing Homes in the City, 2 Maternity, 2 General and Maternity, 3 Medical and Surgical, and 2 Surgical. In addition there are 3 Nursing Homes which are exempt from registration.

During inspections of these Nursing Homes in accordance with the Public Health Act, 1936, Section 191, the nine Homes were found to be well equipped and efficiently supervised.

REPORT BY Dr. F. J. W. MILLER ON THE OPERATION OF HOME NURSING OF PREMATURE INFANTS.

EXPERIENCE OF THREE YEARS 1945-1947.

In a long succession of annual reports dating from 1873,concerning the causes of death in Newcastle, the Medical Officers of Health have made continual reference to the problems of the deaths of young infants and the measures which have been adopted to reduce the annual loss of infant life. It is fair also to claim that a considerable measure of success has been achieved for, whereas one infant in five born in 1900 and one infant in ten born in 1924 died before the age of one, in 1947 the rates had been reduced to less than one in twenty. At least half the deaths in the first year occur in the first month and again half of these occur in children who have been prematurely born. Prematurity is therefore one of the chief factors in infant death and one of the problems which will repay close study.

The causes of premature birth are largely problems for the obstetrician ; the care of premature infants a problem for the pædiatrician. This report covers only the care of live born premature children born and nursed at home during the three years 1945 to 1947. In it I shall give an account of the experience gained in providing a home nursing service for premature infants, present the results and suggest arrangements for the future.

The Problem.

In Newcastle upon Tyne we know that about 40 per cent. of all premature infants are born at home and in these three years we have been trying to find data by which we could answer the question—Is it better that premature infants who are born at home should also be nursed there or should they be admitted **immediately** to hospital ?

This is by no means a simple question as it is almost impossible to obtain two groups which can be directly compared. I have therefore compared the results obtained in the children born and nursed at home with the results which would have been expected if the same children had been born and nursed in a good maternity hospital.

Organisation of the Service.

In March, 1944, the long apparent need for improvement in the care of premature children was afforded official recognition in the Ministry of Health Circ. 20, giving recommendations for the care of premature children both at home and in hospital. In 1945, the home nursing service started in Newcastle and has been slowly expanded. A policy for the care of premature infants was agreed by the Health Committee in 1946.

The present position with regard to staff and equipment is :—

(1) Two midwives are engaged whole-time.

(2) One midwife works part-time.

(3) Nine sets of equipment have been provided at the Newcastle General Hospital and made available on request for loan to any householder inadequately provided. Each set comprises, cot with detachable linings, hot water bottles, mattress and blankets, rubber sheeting, feeder, thermometer and fish kettle sterilizer. Electric blanket and oxygen have not been provided as they are dangerous unless there is constant highly skilled technical supervision. This equipment was used 47 times in 1947 and each set was loaned for an average duration of one month.

(4) Whenever necessary the services of a home help are supplied but great reliance is placed upon neighbourly help and it is pleasing to note that the tradition of help within the family is still very real in Newcastle.

Method of Operation.

Any medical practitioner or midwife faced with the care of a premature infant at home may call for the assistance by telephoning the maternity hospital, and help is limited only by the availability of equipment and nursing staff. The equipment is sent out by hospital ambulance, which at night also picks up the nurse (during the day she uses her own car). After arrival at the home, the ' premature ' nurse takes over the care of both mother and child, and the original midwife has no further responsibility in the case. The ' premature ' nurse explains to the family why special attention is given to very small children, which particular dangers exist, and how she will require the co-operation of the whole family in order to do her best for the infant.

The maximum number of cases which she can care for at any given time is three ; the number of visits and length of each visit are determined by the circumstances of the case and are left to the judgment of the nurse. In some cases she has stayed all night or all day, but as a general rule either a grandmother, a member of the family, or a neighbour performs the duty of sitting with the child at night or whenever necessary during the day. Practically speaking, a maximum of three visits each day is possible ; as a routine at least two visits for fourteen days, then one visit each day until the twenty-eighth day has been reached satisfactorily. The longest time the nurse has attended a case has been seven weeks. Before the ' premature ' nurse stops visiting, the district health visitor takes over the supervision of the child so that there is a continuity of help available. This is made very effective by the excellent spirit of co-operation which exists between the midwives and health visitors of Newcastle.

The ' premature ' nurse is also a midwifery teacher and usually has living with her a pupil midwife who accompanies her to her cases and learns her methods of dealing with the infants. The role of a ' premature ' nurse is friend, helper, and teacher ; the points upon which she concentrates are feeding, warmth, standards of cleanliness and the avoidance of infection. The results speak for themselves and are, I believe, largely a result of the personalities of the nurses bringing out the best qualities of the parents and leaving a sense of accomplishment which is very good for the whole family.

Incidence of Prematurity.

In 1945, prematurity (birth weight of 5½lbs. or less) was made voluntarily notifiable from midwives, hospitals and nursing homes. Since then the incidence has been as set out in Table I, and over the two periods is seen to be remarkably constant in Newcastle, at 6 per cent. total and 5.4 per cent. live born, incidence agreeing very closely with figures published for Birmingham, where a total incidence of 6.9 per cent. and a live born incidence of 6.0 per cent. have been reported.

5. Incidence of Prematurity. Table I.

	Total Births.	Total Prems.	Live Births.	Live Prems.	Incidence.	Percentage Liveborn.
1945—						
1946 ..	10,083	666	9,784	584	6.6	6.0
1947 ..	6,240	376	6,078	332	6.0	5.4

It is seen therefore that there will be about 270-330 live born premature infants each year in Newcastle and we know at present about 40-45 per cent. are born at home. Thus a premature infant service should be able to meet the demands of approximately 100-150 premature infants born at home in any one year.

6. Results. Table II.

Care of Premature Children (all such children born in the city).
Home and Hospital.

	Born. 1945-46	Born. 1947.	Survived 1st month.		% Living at 28 days.	
			1945-46.	1947.	1945-46.	1947.
Below 2½ lbs.	51	18	..	1	..	..
2 lbs. 9 ozs.-3½ lbs. ..	69	36	22	16	33	44
3 lbs. 9 ozs.-4½ lbs. .	158	83	126	70	79	84
4 lbs. 9 ozs.-5½ lbs. ..	306	195	289	184	91	94
All weights	584	332	437	271	75	81.7

The overall results of the care of the premature infants in Newcastle during 1945 and 1946 will be given and compared with those for 1947. These figures include both home and hospital born children and are given to show the total picture of prematurity in the city. Although it is difficult to find other figures for comparison one can say with some confidence that the results show that in the city as a whole the standard of care is already very high and that in 1947 the results appeared to be even more satisfactory than in 1945 and 1946.

In Table III I have given the results for premature children born and nursed at home and again it is seen that in 1947 there was an improvement over 1945 and 1946. In the whole group over the three years the results were, however, very encouraging. They will be referred to again and are assessed below.

Table IV shows the results in those premature children born at home and nursed by the ' premature ' nurses. These figures cannot be compared with the results in Table III, for in this period we could not provide special care for all premature infants and medical practitioners and midwives called for assistance from the ' premature ' nurses at their own discretion. In general, special assistance was asked if they thought the smallest infant might survive or the larger infant (4½-5½ lbs.) gave rise to anxiety. The group of infants in which the results have been particularly pleasing is those with a birth weight between 3lbs. 9ozs. and 4½ lbs. In three years from 82 such infants only 7 have been lost.

Table III.

RESULTS IN PREMATURE CHILDREN BORN AND NURSED AT HOME.

	Born. 1945-6.	Born. 1947.	Survived first 28 days.		Percentage living at 28 days.	
			1945-6.	1947.	1945-6.	1947.
Below 2½ lbs.	27	9	..	1	..	..
2 lbs. 9 ozs.-3½ lbs. ..	35	17	11	9	30	50
3 lbs. 9 ozs.-4½ lbs. ..	80	44	66	36	82.5	81.8
4 lbs. 9 ozs.-5½ lbs. ..	97	70	88	65	90.7	93
All weights	239	140	165	111	69	79.3

Table IV.

RESULTS IN PREMATURE CHILDREN NURSED BY SPECIAL 'PREMATURE' NURSE.

	Born. 1945-6.	Born. 1947.	Survived first 28 days.		Results over 3 years.	
			1945-6.	1947.	Total.	Living.
Below 2½ lbs.	5	3	..	..	8	..
2 lbs. 9 ozs.-3½ lbs. ..	18	7	8	5	25	13
3 lbs. 9 ozs.-4½ lbs. ..	52	30	49	26	82	75
4 lbs. 9 ozs.-5½ lbs. ..	23	21	23	21	44	44
All weights	98	63	78	52	159	128

Assessment of Results.

In order to assess the position with regard to the care of premature children I have compared the results obtained over the three years observation with those which could have been expected if these infants had been born prematurely and nursed in a good maternity hospital with a premature unit. These comparisons are shown in Table V. If they can be accepted as a valid method of comparison it is true to say that the results of this three year work are at least of the same order as if the children had been born in hospital, and they do indicate a very high standard of nursing care.

Table V.

	(i) Survival % in "Sorrento." 1931-43 Premature Infant Unit.	(ii) % in (1) Applied to Whole Newcastle Series Expected Results.	(iii) Actual Results in Whole Newcastle Series 1945-47.	(iv) % in (1) Applied to Infants Born at Home Expected Newcastle	(v) Actual Results all infants Born at Home 1945-47. Newcastle
Under 2½ lbs.	7	5	1	3	1
2 lbs. 9 ozs.-3½ lbs.	45	47	38	23	20
3 lbs. 9 ozs.-4½ lbs.	75	180	144	91	100
4 lbs. 9 ozs.-5½ lbs.	90	450	473	150	153

Comments.

I believe we have shown in this last three years it is possible to nurse the premature infant at home in the great majority of cases and that results of a very high order can be achieved. I doubt therefore whether any significantly better results could be obtained in premature infant units unless it is in the group of infants under 3½ lbs. In that very small group I have not, as yet, sufficient data.

This special nursing service for premature infants should be developed in association with the municipal midwifery service of which it is a part. Hitherto we have utilised the services of two and at certain times three nurses who are interested in the problems of the care of premature infants. In the future I would recommend that in each group of midwives working in the city there is one nurse who will do this type of work so that a specially trained and interested nurse should always be available to undertake the care of any premature child. One of the functions of a premature infant unit in a Maternity Hospital should be the training of midwives in the care of premature infants and it would be advisable for all midwives to undergo a course of such training.

Three other points are also extremely important for the success of such a scheme as I have described here. First, that the nurses engaged in the work should be volunteers and deeply interested in the care of children ; the patience and ' knack ' of dealing with premature infants can come only to a person who actively wants to do the work. Secondly, there must be sympathetic and flexible administrative control ; the nurses must be encouraged to make suggestions for the improvement of the service and to take personal responsibility for their children. Thirdly, the co-operation of the parents and relatives is fundamental. This co-operation has been one of the most

encouraging parts of the whole experience. The great interest in the infant and the sense of achievement in the family when the child gets a good start is far better than if it had been taken away to a hospital and returned a month or six weeks later an unknown infant. This seems particularly worthy of emphasis to-day, when so many of our social services and institutions appear to undermine the confidence and strength of the family by reducing, rather than helping it to carry its responsibilities.

In conclusion I would say that in this service we do appear to have found a new instrument of social value and one which will help materially our efforts to reduce the deaths of infants in the first month. We must be prepared, however, to evolve the service as we gain experience, and tend this new instrument so that use does not make it blunt but rather care make it more keen and fine.

This has been an impersonal report giving the experience of an intensely personal service, but it would be extemely wrong if one did not recognise and pay tribute to the essential help given by Miss G. B. Cameron and Mrs. E. Walker in their kindly and mutually complementary administration; to Miss M. T. Binks, the first midwife to undertake this work in Newcastle and her present colleagues Miss G. P. Forster and Miss M. E. Jackson. They should be accorded the credit of this service for they did the hard work involved.

F. J. W. Miller,
Pædiatrician to the Maternity Unit,
Newcastle General Hospital.

DIPHTHERIA IMMUNISATION.

The well-established scheme for Diphtheria Immunisation continued to run during the year and there were no major new developments. Attention is drawn to the greater number of re-inoculations than ever before and particularly in respect of children entering school just before the age of five years. This result is in the main due to the system of sending post cards to parents of children just over the age of four years, and drawing attention to the need for further protection before the child goes to school and meets additional risks. This scheme has proved well worth while as will be shown by perusal of the tables.

It should also be noted that the number of notifications of cases of Diphtheria during the year was 52 as compared with 191 during the year 1946.

NUMBER OF INDIVIDUALS ATTENDING THE CLINICS FOR INOCULATION AGAINST DIPHTHERIA.

	Primary Immunisation.						Re-inoculation.						Total individuals attending the clinics.
	Under 5 years.		5-14 years.		Total.		Under 5 years.		5-14 years.		Total.		
	East End.	West End.	East End.	West End.	East End.	West End.	East End.	West End.	East End.	West End.	East End.	West End.	
1st Quarter..	228	213	31	21	259	234	73	78	78	67	151	145	East 2811
2nd Quarter.	470	402	26	18	496	420	155	132	120	72	275	204	
3rd Quarter .	572	426	30	26	602	452	157	149	182	99	339	248	West 2202
4th Quarter .	411	320	29	22	440	342	143	94	106	63	249	157	
	1,681	1,361	116	87	1,797	1,448	528	453	486	301	1,014	754	5,013

NUMBER AND AGES (AT TIME OF FIRST INOCULATION) OF INDIVIDUALS ATTENDING THE CLINICS FOR PRIMARY IMMUNISATION.

Age in years :—	0-1	1	2	3	4	Total under 5	5	6	7	8	9	10	11	12	13	14	15+	Total over 5	Total all ages.
1947.....	539	2067	185	103	148	3042	92	27	30	16	14	11	5	6	2	..	..	203	3245
1946.....	271	1929	273	151	122	2746	142	84	98	91	41	33	23	25	11	..	1	549	3295
1945.....	176	2255	318	144	99	2992	59	38	10	9	9	4	4	6	6	3	5	153	3145

NUMBER OF INDIVIDUALS WHO COMPLETED A FULL COURSE OF PRIMARY IMMUNISATION DIVIDED INTO TWO AGE GROUPS.

1947.	Under 5 years.	5-14 years.	Total.
Clinics	2945	356	3301
Private Practitioners	651	133	784
Total	3596	489	4085

1946.	Under 5 years.	5-14 years.	Total.
Clinics	2749	462	3211
Practitioners	678	191	869
Schools	..	141	141
Total	3427	794	4221

1945.	Under 5 years.	5-14 years.	Total.
Clinics	2651	141	2792
Practitioners	740	207	947
Schools	..	426	426
Total	3391	774	4165

NUMBER OF INDIVIDUALS WHO WERE RE-INOCULATED.

	Under 5 years.	5-14 years.	Total.
Clinics	981	787	1768
Private Practitioners	78	48	126
Total	1059	835	1894
1946 Clinics	312	955	1267
1945 Clinics	206	365	571

No figures available for general practitioners.

TOTAL ATTENDANCES AT THE DIPHTHERIA IMMUNISATION CLINICS.

	Primary Immunisation.		Re-inoculation.		Total attend-ances.	Number of clinics	Average Attend-ance at each clinic.
	under 5	5-14	under 5	5-14			
Scotswood	596	17	144	56	813	49	16.59
Benwell	649	110	131	150	1040	49	21.22
Fenham	977	37	297	142	1453	51	28.49
Byker	1383	121	262	190	1956	50	39.12
Jesmond	343	24	61	72	500	53	9.43
St. Anthony's ...	1365	183	254	192	1994	50	39.88
Walker Gate	426	62	83	133	704	49	14.36
Elswick	775	72	134	96	1077	49	21.97
Heaton	901	59	259	280	1499	50	29.99
Diana Street	776	52	141	115	1084	50	21.68
Wharncliffe St. ..	346	32	49	24	451	50	9.02
Total Attendances .	8537	769	1815	1450	12571	550	....

Attendance at EAST END clinics (including Byker, Jesmond, St. Anthony's, Walker Gate, Heaton and Wharncliffe Street) ..... 7,104.

Attendances at WEST END clinics (including Scotswood, Benwe'l, Fenham, Elswick and Diana Street) ..... 5,467.

Primary Immunisation.

Number attending for first inoculation ..... 100 Per. cent.
,, ,, second ,, ... 96.16 ,, ,,
,, ,, third ,, ... 85.95 ,, ,,

DIPHTHERIA NOTIFICATIONS AND DEATHS IN RELATION TO IMMUNISATION.

Age.	NOTIFICATIONS.		DEATHS.	
	Number.	Number Immunised Among Those Notified.	Number.	Number Immunised Among Those Who Died.
Under 1 year	2	..	1	..
1 year	3	..	1	..
2 years	2	..	..	..
3 years	3	1	..	..
4 years	6	2	..	..
5-9 years	17	10	1	..
10-14 years	7	6	..	..
Totals	40*	19*	3	Nil.

* The number notified includes cases diagnosed as "Tonsillitis in Diphtheria carrier" (3 cases, all immunised), but excludes "carriers" (3 cases, all immunised).

NUMBER AND AGES OF THE INDIVIDUALS WHO WERE RE-INOCULATED AT THE CLINICS.

Age in years :	3	4	Total under 5	5	6	7	8	9	10	11	12	13	14	15	Total over 5	Total all Ages.
1947.....	4	977	981 (55% of Total)	539	145	114	67	63	68	14	4	1	2	..	787	1768
1946.....	2	310	312 (24% of Total)	200	157	159	131	114	60	50	58	25	1	..	955	1267
1945.....	2	204	206 (36% of Total)	121	66	57	37	31	23	9	9	5	5	2	365	571

IMMUNISATION IN RELATION TO CHILD POPULATION.

NUMBER OF CHILDREN WHO HAD COMPLETED A FULL COURSE OF IMMUNISATION UP TO 31ST DECEMBER, 1947.

Age at 31st Dec., 1947, *i.e.*, born in the year :—	1947	1946	1945	1944	1943	1942-38	1937-33	Total under 15 years.
Number immunised	1	1992	2537	3064	2779	14368	18323	43064
Estimated mid-year population	24290					41170		65460
Percentage	42.70					79.40		65.78
Percentage, 1946	43.30					75.10		64.40
Percentage, 1945	43.00					79.10		67.00

DIPHTHERIA : INCIDENCE & MORTALITY :

Age period.		Number of Individuals.	Number of cases.	Case rate per 1,000.	Deaths.	Care Mortality per 100.
0-4 years.	" Fully immunised "	10373	3	0.28	..	0.00
	All others	13917	13	0.93	2	15.38
5-14 yrs.	" Fully immunised "	32691	16†	0.48	..	0.00
	All others	8479	8	0.94	1	12.50
0-14 yrs.	" Fully immunised "	43064	19†	0.44	..	0.00
	All others	22396	21	0.93	3	14.28

† These figures include three cases (aged 6, 6 and 8 years) diagnosed as " Tonsillitis in Diphtheria carrier."

INCLUDING REPORTS OF THE
MEDICAL SUPERINTENDENT OF THE
INFECTIOUS DISEASES HOSPITAL
AND THE BACTERIOLOGISTS

III—INFECTIOUS DISEASE

FEVERS, FOOD POISONING,
CITY HOSPITALS FOR INFECTIOUS DISEASES,
DISINFECTION, BACTERIOLOGY

DEATHS (CORRECTED) FROM NOTIFIABLE INFECTIOUS DISEASES AND NON-NOTIFIABLE ZYMOTIC DISEASES.

WARD.	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Pneumonia.	Cerebro-Spinal Fever.	Encephalitis Lethargica.	Polioencephalitis.	Poliomyelitis	Measles and Rubella	Puerperal Fever.	Smallpox.	Whooping Cough.	Diarrhœa (under 2 years of age).	Dysentery.	Malaria	Tuberculosis. All forms.
St. Nicholas'	..	..	..	..	6	..	2	..	..	..	..	..	..	1	..	..	14
Kenton	..	..	..	..	6	..	..	..	..	1	..	..	1	..	..	..	25
Scotswood ..	1	..	..	..	12	..	1	..	..	..	..	..	3	2	..	..	13
Stephenson..	..	..	..	..	13	..	1	..	2	..	..	..	2	4	..	..	34
Armstrong ..	..	..	..	..	18	1	..	..	..	..	..	..	1	..	..	..	16
Elswick	..	..	..	..	8	..	..	..	..	..	..	..	2	..	..	..	13
Westgate ...	2	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..	15
Arthur's Hill	..	..	..	..	7	..	2	..	..	..	..	..	..	1	..	..	11
Benwell	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	20
Fenham	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	7
Sandyford...	..	..	..	..	7	..	..	..	..	..	..	..	..	1	..	..	15
Jesmond ...	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	10
Dene	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	14
Heaton	..	..	..	..	3	..	1	..	..	..	..	..	1	..	..	..	16
Byker	..	..	..	..	7	..	1	..	..	..	..	..	1	4	..	..	17
St. Lawrence	..	..	..	..	12	..	..	..	..	1	..	..	..	3	..	..	14
St. Anthony's	..	..	..	..	12	..	..	..	..	..	..	..	..	1	..	.	12
Walker	1	..	..	..	7	..	..	..	1	..	..	..	..	7	..	1	22
Walkergate..	..	..	..	..	2	..	..	..	..	..	..	..	..	3	..	..	10
City ...	4	..	..	..	142	1	10	..	3	2	..	..	11	27	..	1	298

NOTE :—All deaths in Public Institutions have been allotted to the Wards to which they properly belong.

NOTIFIED CASES OF INFECTIOUS DISEASE AND DEATHS (GROSS).

EXCLUSIVE OF TUBERCULOSIS.

AGES OF CASES OF INFECTIOUS DISEASE NOTIFIED AND DEATHS REGISTERED DURING THE YEAR 1947.

NOTIFIABLE DISEASE.	AT AGES—YEARS.																GROSS TOTAL.				NET TOTAL.		Cases admitted to Hospital (gross).
	Under 1.		1 to 5.		5 to 15.		15 to 25.		25 to 45.		45 to 65.		65 and upwards.		Ages not known.		1947.		1946.		1947.		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.*	Deaths.	
Diphtheria (including Membraneous Croup)	2	1	13	1	26	2	16	..	4	1	..	..	..	..	..	..	61	5	191	18	52	4	61
Erysipelas	..	..	..	..	2	..	3	..	28	..	46	..	13	..	..	..	92	..	108	..	87	..	20
Scarlet Fever	..	..	65	..	210	..	26	..	15	..	2	..	..	..	..	..	318	..	408	..	310	..	196
Enteric Fever	..	..	1	..	3	..	1	1	1	..	..	..	..	..	..	..	6	1	9	..	1	..	6
Cerebro-Spinal Fever	11	2	8	4	8	..	8	..	8	1	..	..	..	..	..	..	43	7	22	11	29	1	35
Acute Poliomyelitis and Acute Polioencephalitis	4	..	35	3	32	5	18	2	6	2	..	..	..	..	..	..	95	12	3	3	46	3	86
Encephalitis Lethargica	..	..	1	..	..	..	..	..	..	1	..	3	..	4	..	..	1	8	..	4	1	10	3
Puerperal Pyrexia	..	..	..	..	..	..	40	..	127	..	..	..	..	..	..	..	167	..	161	1	88	..	20
Ophthalmia Neonatorum	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	..	9	..	11	..	4
Pneumonia	95	69	111	6	64	2	37	1	71	7	93	28	44	69	..	..	515	182	504	199	515	142	84
Malaria	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	3	..	8	..	3	1	..
Dysentery	..	..	5	..	3	..	1	..	4	..	..	..	2	..	..	..	15	..	173	1	14	..	11
†Measles and Rubella	174	2	1389	..	1011	..	71	..	26	..	2	..	..	..	5	..	2678	2	3726	3	2678	2	56
‡Chickenpox	38	..	304	..	731	..	38	..	11	..	3	..	..	..	..	..	1125	..	1426	..	1125	..	..
§Whooping Cough	126	11	617	3	223	..	..	..	3	..	..	..	4	..	..	..	973	14	1082	15	972	11	..
	462	85	2549	17	2313	9	259	4	307	12	146	31	63	73	5	..	6104	231	7830	255	5932	174	582

* Cases from outside the City excluded for the purpose of calculating NET Death Rates.
† Ministry of Health Regulations, 1920. ‡ Temporarily notifiable.
§ Became notifiable on 1st November, 1939.

WARD DISTRIBUTION OF INFECTIOUS DISEASES (NET).

WARD.	Diphtheria.	Erysipelas.	Enteric Fever.	Scarlet Fever.	Cerebro-Spinal Fever.	Poliomyelitis.	Acute Polio-encephalitis.	Encephalitis Lethargica.	Measles.	Rubella.	Puerperal Pyrexia.	Ophthalmia Neonatorum.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Smallpox.	Chickenpox.	Malaria.	Dysentery.	Whooping Cough.	Tuberculosis (all forms).	TOTAL.
St. Nicholas'	6	1	..	5	..	..	..	1	51	18	1	..	21	1	..	24	1	..	28	28	186
Kenton	..	5	..	22	..	2	..	..	163	29	7	1	28	2	..	56	..	..	43	17	375
Scotswood	3	9	1	16	..	2	..	..	153	12	3	1	22	2	..	22	1	2	51	37	337
Stephenson	3	8	..	16	5	2	..	..	84	8	10	1	42	2	..	91	..	3	95	59	429
Armstrong	2	5	..	17	1	2	..	..	96	9	7	1	28	2	..	34	..	1	86	37	328
Elswick	..	2	..	23	2	4	..	..	206	14	5	..	18	1	..	69	..	..	108	23	475
*Westgate	11	3	..	11	2	3	..	..	140	22	3	2	18	1	..	86	..	1	56	35	394
†Arthur's Hill	2	2	..	17	6	4	..	..	180	23	2	1	19	1	..	126	..	1	62	30	476
Benwell	1	6	..	20	2	3	..	..	166	18	4	..	21	2	..	42	..	1	79	47	412
Fenham	1	3	..	16	1	1	..	..	119	17	4	..	11	1	..	32	..	..	49	41	296
Sandyford	1	..	..	9	..	1	..	..	64	27	4	..	15	1	..	18	..	2	20	22	184
§Jesmond	5	4	..	17	..	..	..	..	64	18	1	..	9	1	..	46	..	..	12	22	199
Dene	3	3	..	13	1	1	..	..	58	37	1	..	8	1	..	6	..	..	15	21	168
Heaton	1	9	..	19	..	2	..	..	60	41	5	..	20	1	..	76	..	..	35	29	298
Byker	..	3	..	14	2	..	..	..	42	25	11	1	50	2	..	38	..	1	30	24	243
St. Lawrence	3	3	..	18	4	4	..	..	63	55	4	1	38	2	..	55	..	1	26	27	304
St. Anthony's	2	12	..	19	..	3	..	..	68	33	8	1	46	2	..	73	..	..	49	59	375
Walker	5	6	..	24	1	7	..	..	243	51	6	1	40	2	..	130	..	1	62	63	642
‡Walkergate	3	3	..	14	2	5	..	..	174	27	2	..	32	2	..	101	1	..	66	23	455
	52	87	1	310	29	46	..	1	2194	484	88	11	486	29	..	1125	3	14	972	644	6576

* Includes Royal Victoria Infirmary.
† ,, Elswick Grange and Newcastle General Hospital.
‡ ,, City Hospital for Infectious Diseases, Walker Gate.
§ Fleming Memorial Hospital.

HOUSEHOLDS AFFECTED WITH INFECTIOUS DISEASES

Exclusive of Tuberculosis Measles and Chickenpox.

Diseases.	Households with						Military or Naval Cases.	Institutions. *	Total Cases (Gross).	Cases. from outside of City.	Net Cases.
	1 Single Case.	2 Cases each.	3 Cases each.	4 Cases each.	5 Cases each.	6 Cases and over.					
Diphtheria (including Membranous Croup) ..	42	2	..	..	..	..	..	15	61	9	52
Erysipelas.....	85	1	..	..	..	..	..	5	92	5	87
Scarlet Fever	273	14	..	..	..	..	..	17	318	8	310
Enteric (or Typhoid Fever)	1	..	..	..	..	..	..	5	6	5	1
Cerebro-Spinal Fever	29	..	..	..	..	..	1	13	43	14	29
Poliomyelitis	46	..	..	..	..	..	1	48	95	49	46
Polio-encephalitis	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica .	1	..	..	..	..	..	..	..	1	..	1
Puerperal Pyrexia	40	..	..	..	..	..	..	127	167	79	88
Ophthalmia Neonatorum.	11	..	..	..	..	..	..	1	12	1	11
Pneumonia	490	9	2	..	..	..	..	1	515	..	515
Dysentery.....	9	..	1	..	..	..	..	3	15	1	14
Malaria	3	..	..	..	..	..	..	..	3	..	3
Whooping Cough.....	672	119	17	2	..	..	..	4	973	..	973
Total	1702	145	20	2	..	..	2	239	2301	171	2130

* See next page.

INFECTIOUS DISEASES.

Schools and Infectious Disease.—It was not found necessary to close any school on account of infectious disease during the year.

PUBLIC INSTITUTIONS AND INFECTIOUS DISEASE.

The following notifications were received during the year :—

Institutions, &c.	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Cerebro-Spinal Fever.	Measles and Rubella.	Puerperal Pyrexia.	Pneumonia.	Pollomyelitis	Dysentery.	Malaria.	Ophthalmia Neonatorum	Whooping Cough.	Total.
Royal Victoria Infirmary	3	..	6	..	..	1	..	..	2	..	..	..	..	12
Fleming Memorial Hospital	3	..	1	..	..	1	..	..	..	..	..	..	..	5
Newcastle General Hospital	..	..	..	..	7	2	35	..	..	2	..	1	..	47
City Hospital for Infectious Diseases	9	5	8	5	6	..	..	..	46	1	..	..	..	80
Princess Mary Maternity Hospital	..	..	..	..	..	..	89	..	..	..	..	..	..	89
Military Barracks	..	..	..	..	..	3	..	..	1	..	..	..	..	4
Throat, Nose and Ear Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Eye Hospital	..	..	..	..	..	..	3	..	..	..	..	..	..	3
Nursing Homes	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Hostels, etc.	..	..	1	..	..	..	..	..	..	..	..	..	..	..
Hotels	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deaf and Dumb Institution	..	..	1	..	..	..	..	..	..	..	..	..	2	3
Dr. Barnardo's Home	..	..	..	..	..	1	..	1	..	..	..	..	..	2
La Sagesse Convent	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Convent of Sacred Heart	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Day Nurseries	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blind School	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Vincent's Home	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hopedene	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Elswick Grange	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Total	15	5	17	5	13	9	127	1	49	3	..	1	4	249

Does not include any cases belonging to the City which could properly be assigned to their homes.

SCARLET FEVER.

Notifications of 310 cases were received during the year. There were no deaths.

DIPHTHERIA.

52 cases were notified during the year, and 4 died, a case mortality of 7.7 per cent., as compared with 7.8 in 1946.

MEASLES AND RUBELLA.

2,678 cases (including 484 of rubella) were notified, and there were 2 deaths (net), representing a death rate of 0.01 per 1,000 population, as compared with 0.01 in 1946, and a case mortality of 0.07 per cent. of notified cases (net).

The following table shows the deaths in the various wards, and at different age periods :—

Ward.	Under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	1 and under 2 years.	2 and under 3 years.	3 and under 4 years.	4 and under 5 years.	5 and under 10 years.	Over 10 years.	Totals
St. Nicholas'	..	..	..	..	..	..	..	..	..	..	..
Kenton	1	..	..	..	..	..	..	..	..	..	1
Scotswood	..	..	..	..	..	..	..	..	..	..	..
Stephenson	..	..	..	..	..	..	..	..	..	..	..
Armstrong	..	..	..	..	..	..	..	..	..	..	..
Elswick	..	..	..	..	..	..	..	..	..	..	..
Westgate	..	..	..	..	..	..	..	..	..	..	..
Arthur's Hill	..	..	..	..	..	..	..	..	..	..	..
Benwell	..	..	..	..	..	..	..	..	..	..	..
Fenham	..	..	..	..	..	..	..	..	..	..	..
Sandyford	..	..	..	..	..	..	..	..	..	..	..
Jesmond	..	..	..	..	..	..	..	..	..	..	..
Dene	..	..	..	..	..	..	..	..	..	..	..
Heaton	..	..	..	..	..	..	..	..	..	..	..
Byker	..	..	..	..	..	..	..	..	..	..	..
St. Lawrence	..	..	..	1	..	..	..	..	..	..	1
St. Anthony's	..	..	..	..	..	..	..	..	..	..	..
Walker	..	..	..	..	..	..	..	..	..	..	..
Walkergate	..	..	..	..	..	..	..	..	..	..	..
Total	1	..	..	1	..	..	..	..	..	..	2

Each Health Visitor visited and re-visited selected cases occurring in her district. By this arrangement each case is seen immediately on receipt of the notification, and advice is given regarding the nursing and isolation of the patient. The cases are kept under supervision until they recover, and should subsequent cases occur in the family they are recorded.

Measles Cases, including Rubella, notified during 1947.

Cases notified by Medical Practitioners	2,538
Cases found by Health Visitors	140
Cases notified by Parents and others	..
	2,678 gross.

Of the total number of measles cases notified, 2,369 in 2,032 households (or 88.5 per cent.) were visited by the Health Visitors, and 4,217 re-visits were paid, a total of 6,586 visits.

Of the 309 unvisited cases, 300 were in better-class houses and 9 were in institutions. There were two deaths.

Medical Attendance.—In 97.4 per cent. of the cases visited a doctor was in attendance.

Condition of Patient.—In 95.8 per cent. of the cases visited the disease ran a normal course, but bronchitis, pneumonia or other complications developed in the remainder.

The following were the ages of visited cases who were suffering from measles :—

Under 1 year	164
1–2 years	262
2–3 years	358
3–4 years	333
4–5 years	325
5–6 years	434
Over 6 years	493
	2,369

FOOD POISONING.

12 cases of illness due to organisms of the food poisoning group were notified during the year.

ENTERIC GROUP OF FEVERS.

During the year 1947, 6 cases of the enteric group of infections were notified. The distribution of these cases, according to the months in which they were notified, the type of infection (typhoid or paratyphoid), and their place of origin, is recorded in the following table :—

Distribution of Enteric Group Infections for 1947.

	Newcastle.		Extra-Mural.	
	Typhoid.	Para-typhoid B.	Typhoid.	Para-typhoid B.
January	..	..	..	..
February	..	1	..	..
March	..	..	..	..
April	..	..	..	..
May	..	..	..	..
June	..	..	..	1
July	..	..	..	2
August	..	..	..	..
September	..	..	1	..
October	..	..	..	..
November	..	..	1	..
December	..	..	..	..
Totals	..	1	2	3

DIARRHŒA.

There were in all 32 deaths from the disease, equal to a death rate of 0.11 per 1,000 population, and this number included 27 deaths of children under two years of age.

SMALLPOX.

No case of this disease occurred in the City during the year.

The following are the particulars of **Vaccination** during the last forty-two years :—

Year.	Births Registered	Successful Vaccinations	Unsuccessful Vaccinations	Exemption Certificates.		Deaths. Removals and Post-ponements
				Number.	Percentage to Total Births	
1906	7,721	6,733	28	92	1.2	..
1907	7,610	6,702	16	94	1.2	..
*1908–12	35,265	27,240	114	3,398	9.6	..
1913–17	34,296	21,251	33	7,144	20.8	..
1918–22	34,372	19,011	95	9,262	26.9	..
1923–27	31,290	19,658	30	5,542	17.7	..
1928	5,780	4,320	19	912	15.8	..
1929	5,638	3,555	33	1,092	19.4	..
‡1930	†6,195	3,897	31	1,264	20.4	1,003
1931	6,059	3,754	39	1,343	22.2	923
1932	6,009	3,600	27	1,395	23.2	889
1933	5,770	3,479	18	1,377	23.9	809
1934	5,890	3,467	27	1,449	24.6	874
1935	5,899	3,474	32	1,401	23.7	901
1936	5,713	3,271	29	1,379	24.1	926
1937	6,010	3,377	26	1,495	24.9	1,013
1938	6,101	3,481	19	1,635	26.8	868
1939	5,855	3,210	13	1,461	24.9	1,100
1940	5,547	3,366	20	1,137	20.5	932
1941	4,602	2,890	21	881	19.1	735
1942	4,722	3,082	33	849	18.0	702
1943	5,182	3,303	31	1,060	20.4	745
1944	6,693	4,250	29	1,322	19.8	1,034
1945	5,987	3,894	31	1,192	19.9	811
1946	8,257	5,349	34	1,388	16.8	1,363
°1947	8,520	5,541	54	1,374	16.1	1,115

* Vaccination Act, 1907, came into force.

† Walker District included.

‡ Supervision of Vaccination transferred from Guardians to Health Committee on 1st April, 1930.

° Provisional figures.

CHICKENPOX.

1,125 cases were notified. There were no deaths.

ERYSIPELAS.

87 cases of this disease were notified and there were no deaths.

PUERPERAL PYREXIA.

88 cases were notified, and there were no deaths. Inquiries were made concerning all the notified cases.

INFLUENZA AND PNEUMONIA.

These diseases accounted for 165 deaths as against 175 last year.

Total deaths at age periods.

Under 5 years.	5–15.	15–25.	25–45.	45–65.	65 and over.	Total.
54	1	2	5	31	72	165

As will be seen from the above figures, 54, or 32.7 per cent., of the deaths occurred below the age of 5 years.

515 cases of pneumonia, including influenzal-pneumonia, were notified. For the ages and ward distribution, see pages 61 and 62.

Of that number 446, or 86.6 per cent., were visited by Health Visitors. It was found that 381, or 85.4 per cent., were primary pneumonia, 29, or 6.5 per cent., were cases of influenzal-pneumonia, and 36, or 8.1 per cent., were cases of pneumonia following other diseases.

Ages.—The ages of the 446 cases visited were as follows :—

Under 1 year	85
1–5 years	108
5–15 years	58
15–25 years	34
25–45 years	61
45–65 years	63
and over 65 years	37
	446

Housing.—20 cases occurred in 1 roomed dwellings, 92 cases occurred in 2 roomed dwellings, 145 cases occurred in 3 roomed dwellings, and 189 cases occurred in dwellings with more than 3 rooms.

Type of House.—179 cases occurred in flats, 60 cases in tenements, and 207 in self-contained houses.

Previous History.—

There was a previous history of			Measles	in 104 cases.
,,	,,	,,	Whooping Cough	in 78 cases.
,,	,,	,,	Influenza	in 61 cases.
,,	,,	,,	Frequent winter Coughs and Colds	in 185 cases.
,,	,,	,,	Pneumonia	in 50 cases.
,,	,,	,,	Tuberculosis	in 11 cases.

Hospital Treatment.—84 cases of pneumonia were treated in the Infectious Diseases Hospital.

Deaths.—40, or 8.9 per cent., of the visited cases of pneumonia died.

ENCEPHALITIS LETHARGICA.

Three proved cases of encephalitis lethargica were admitted to the City Hospital during the year.

ACUTE POLIOMYELITIS.

Eighty-six proved cases of poliomyelitis were admitted to the City Hospital during the year.

CEREBRO-SPINAL MENINGITIS.

During 1947 29 cases of cerebro-spinal fever occurring in Newcastle residents were notified.

There was 1 death among these 29 cases, equivalent to a case mortality rate of 3.4 per cent. The corresponding figures for 1946 and 1945 were 18.2 per cent. and 43.8 per cent.

BACILLARY DYSENTERY.

Bacillary dysentery has been prevalent in the City since 1928.

The number of notifications in 1947 was 14, a marked decrease on the figure for 1946 which was 173. The figure for 1945 was 360.

There were no deaths.

The distribution of the organism according to type among the 14 City cases was as follows :—

Sonne Type	6
Flexner Type	7
Amœbic	1

CITY HOSPITAL FOR INFECTIOUS DISEASES.

To the Medical Officer of Health.

Sir,

I beg to submit the report for the City Hospital for Infectious Diseases during the year 1947.

No new building construction or modernisation has been carried out during the year, and none of those measures which were set out in last year's report and which were regarded as the minimum requirements to make the hospital capable of carrying out its proper work, have been accomplished.

In particular, the lack of cubicle isolation becomes more urgent and it should be emphasised that there are only twenty four cubicles to undertake the various commitments of the City and special cases from outside authorities. This proportion of cubicle beds is quite inadequate and falls far short of what is usually regarded as the minimum, namely, one-third of the total bed accommodation. It is apparent that the old type of multiple-bed fever ward is quite obsolete and that a few cases of diphtheria or scarlet fever can completely immobilise a whole ward, with consequent wastage of nursing staff. More cases can be accommodated in proportion to the existing staff if increased cubicle isolation is available. It has been suggested in the current estimates, that to achieve this, two of the open wards should be converted into modified cubicles as a temporary expedient, until such times as new construction can be carried out. It would appear that in future, accommodation for infectious diseases of all types should be cubicle isolation only.

The shortage of nursing staff continues to be a source of anxiety and is the main factor in limiting the capacity of the hospital. The situation became so acute, that in May 1947, the employment of part-time nurses was instituted. On an average there are more part-time than full-time nurses and the number of hours these 50 part-time nurses work is approximately equivalent to 25 nurses on full time duty. This scheme is not completely satisfactory and has many imperfections, not the least of which is the disparity between the salary of the full-time and part-time nurses, which is very much to the disadvantage of the permanent staff. It was not to be expected, however, that difficulties would not occur and in spite of this it is true to say that the part-time nurses are giving very valuable assistance, without which it is doubtful whether the hospital could continue to function adequately or even to remain open at all.

The principal of inviting the co-operation of mothers and encouraging them in special cases to participate in the nursing of their

children, has been continued, but too often domestic commitments have prevented this.

Partly as a result of the shortage of nurses, but mainly in pursuance of the modern conception of the etiology of the streptococcal infections, the admissions of Scarlet Fever have continued to be limited as far as possible and home nursing encouraged in suitable cases. As a result of this, the percentage of cases admitted to hospital has diminished considerably, whereas prior to the War, the hospitalisation of 100% of cases was attempted and often achieved, in 1946, only 80% were admitted and last year this was reduced to 60%. It is realised that under the present conditions of housing, domiciliary nursing is not always practicable and it will be necessary to continue to provide hospital accommodation for many cases of streptococcal infection. Too often, however, admission is requested because of the mistaken attitude on the part of the doctor or parent as to the seriousness of infectivity of a moderate sore throat accompanied by a rash, or alternatively, the out-of-date isolation and quarantine usually imposed is too irksome to be attempted at home.

The public, and it must be admitted, a number of practitioners, are not sufficiently instructed in this matter and do not properly realise that open hospital wards, particularly where infectious cases are nursed, are actively dangerous, especially for children. The lesson of hospital cross-infection has not yet been learnt.

There was a considerable reduction in the number of cases admitted to hospital during the year, namely 1073 as against 1452 in 1946. This was mainly accounted for by the decrease in the incidence of cases and carriers of diphtheria from 253 in 1946, to 87 in the present year, by the restricted admissions of scarlatina from 307 to 192 and the fall in incidence of dysentery from 81 in 1946, to 11 in 1947.

The nation wide epidemic of poliomyelitis was reflected in the moderate increase of admissions of that disease, although most of the cases came from outside authorities and only 37 cases, of which 6 were non-paralytic, belonged to Newcastle. It became possible to distinguish a definite pattern in the disease before paralysis developed and also in the non-paralytic cases, and although this was not a new discovery and was to be read in the American literature for some years previously, it was a new experience to many British physicians. One lesson of the epidemic was the realisation of the relative paucity of facilities for orthopædic treatment and physiotherapy available to the paralysed convalescent patient, and although co-operation was forthcoming from the Royal Victoria Infirmary and the Newcastle General Hospital, the demands were often too great for the organisation.

CITY HOSPITAL FOR INFECTIOUS DISEASES, WALKER GATE.

Diseases Admitted—1947.

1947.		Proved to be:—																										
Sent in as	Number.	Scarlet Fever.	Diphtheria.	Diphtheria Carriers.	Enteric Fever.	Dysentery.	Measles.	Rubella.	Varicella.	Mumps.	Pertussis.	Epidemic Cerebro-Spinal Meningitis.	Other forms of Meningitis.	Poliomyelitis.	Encephalitis Lethargica.	Pneumonia.	Bronchitis.	Other Respiratory Diseases.	Erysipelas.	Skin and Septic Conditions.	Puerperal Pyrexia.	Tonsillitis.	Other Gastro-Intestinal Diseases.	Ophthalmia Neonatorum.	Louping Ill.	Anthrax.	Tetanus.	Unclassified.
Scarlet Fever	226	195	..	..	..	..	2	13	..	..	..	..	..	..	..	2	1	..	..	2	..	9	..	..	..	..	..	2
Diphtheria	124	..	60	..	..	..	2	..	..	..	..	..	..	..	..	2	1	1	..	1	..	45	..	..	..	..	..	12
Diphtheria Carriers	25	..	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	15	..	..	..	5	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	1	..	..	..	..	5
Dysentery	34	..	..	..	..	10	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	19	..	..	..	..	3
Measles	37	..	..	..	..	..	28	3	..	..	..	..	..	..	..	5	1	..	..	..	..	..	..	..	..	..	..	..
Rubella	5	1	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Varicella	16	..	..	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mumps	7	..	..	..	..	..	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pertussis	68	..	..	..	..	..	2	..	..	..	59	..	1	..	..	2	2	1	..	..	..	..	..	..	..	..	1	..
Epidemic Cerebro-Spinal Meningitis	36	..	..	..	..	..	1	..	..	..	..	22	7	1	2	..	..	..	..	..	..	..	..	..	..	..	..	3
Other forms of Meningitis	69	..	1	..	..	..	..	..	1	..	1	11	19	6	..	5	1	..	..	2	..	5	3	..	1	..	..	13
Poliomyelitis	124	..	..	..	1	..	..	..	..	..	1	1	1	79	1	1	1	..	..	..	..	4	1	..	..	..	..	33
Encephalitis Lethargica	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Pneumonia	106	..	..	..	..	..	2	..	..	..	8	1	1	..	..	64	5	10	..	..	..	1	..	..	..	..	..	14
Bronchitis	5	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
Other Respiratory Diseases	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..
Erysipelas	29	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20	8	..	..	..	..	..	..	..	1
Skin and Septic Conditions	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..
Puerperal Pyrexia	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tonsillitis	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	20	..	..	..	..	..	..	1
Other Gastro-Intestinal Diseases	24	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	19	..	..	..	..	..	1
Ophthalmia Neonatorum	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	16	..	..	..	..	4
Louping ill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..
Anthrax	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Unclassified	65	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	61
Totals	1073	196	61	25	6	11	37	19	17	6	71	35	29	86	3	84	18	19	20	21	20	84	40	4	1	1	1	158

Liaison with the Child Health Department of the Royal Victoria Infirmary has been strengthened during the past year and Professor Spence has visited the hospital on many occasions and given valuable help. As part of this closer co-operation, a small number of cases of miliary and meningeal tuberculosis have been treated in hospital with streptomycin under the guidance of the Child Health Department. Two cases have now been in hospital for continuous treatment for five to six months.

The Sanatorium pavilions remained unchanged and here the need for modernisation and new construction becomes more obvious with the passage of time. Particularly is this so in regard to occupational therapy. Almost nothing is possibe in this respect until an occupational therapist is attached to the hospital and proper accommodation made available. The monotony of hospital life for tuberculous patients has been slightly relieved by the acquisition of a cinematograph projector and popular films have been shown in the wards. The Army authorities have also been helpful in providing weekly shows by a mobile film unit for service patients.

I would like to record once again my indebtedness to the various staffs of the hospital for their continued loyal support and willing assistance at all times. In particular I would thank Dr. Neubauer, Matron and Mr. Richardson who have given their services unstintingly throughout the past year.

Finally, I wish to refer to the changes about to take place in the immediate future. Together with other Municipal Hospitals, the City Hospital will soon be transferred to the Regional Hospital Board, thereby severing a connection of fifty-nine years. During that time the relations between the Health Department and this hospital have always been close and cordial, and although during the years before the war, the hospital was perhaps not so generously provided for as it might have been, so that now many deficiencies are apparent, I would, however, like to acknowledge the kindness and ever-ready help I have received from you and your Committee since I was appointed to this hospital in 1946. I can only hope that my future relations with the Regional Hospital Board will be as pleasant and fruitful.

Yours faithfully,

E. G. Brewis,

Medical Superintendent.

City Hospital for Infectious Diseases,
Walker Gate,
Newcastle upon Tyne, 6.

Admissions and Deaths, 1947.

1947.	Admissions.													Deaths.											
Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Scarlet Fever	21	12	9	13	12	7	16	7	16	27	28	28	196	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	13	..	9	7	8	4	10	2	1	5	..	2	61	1	..	..	..	..	1	1	..	..	..	..	..	3
Diphtheria Carriers	4	6	..	2	6	1	2	..	..	2	2	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever Group.	..	1	..	..	..	1	2	..	1	..	1	..	6	..	..	..	..	..	..	..	..	..	..	1	..	1
Dysentery	4	..	..	..	1	..	1	2	1	1	..	1	11	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles.	12	4	4	1	3	2	1	2	1	..	3	4	37	..	..	..	..	1	1	..	..	..	..	..	..	2
Rubella	..	5	8	3	..	..	..	1	..	1	1	..	19	..	..	..	..	..	..	..	..	..	..	..	..	..
Varicella.	2	1	..	1	1	3	1	1	..	1	5	1	17	..	..	..	..	..	..	..	..	..	..	..	..	..
Mumps.	..	..	..	..	1	..	..	1	..	2	..	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..
Pertussis.	11	2	8	7	6	5	7	6	9	1	2	7	71	..	..	2	4	..	2	..	1	1	..	..	1	11
Epidemic Cerebro-Spinal Meningitis	5	2	4	7	7	3	2	1	..	2	..	2	35	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Forms of Meningitis	4	6	1	4	2	4	1	..	1	2	1	3	29	3	6	1	3	1	3	1	..	1	1	..	..	20
Poliomyelitis.	1	..	..	..	..	2	14	34	21	5	7	2	86	..	..	..	..	..	..	1	1	2	..	..	..	4
Encephalitis Lethargica	..	1	1	..	..	..	..	1	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia	23	8	10	5	4	5	4	1	2	3	4	15	84	..	1	2	..	..	2	1	..	..	..	1	1	8
Bronchitis	2	1	3	1	..	..	1	..	1	2	2	5	18	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Respiratory Diseases	1	1	5	3	1	2	1	..	1	2	1	1	19	..	..	..	..	..	..	1	..	..	..	..	..	1
Erysipelas	1	1	2	3	1	1	1	2	2	2	3	1	20	..	..	..	..	..	..	..	..	..	..	..	..	..
Skin and Septic Conditions	1	2	1	4	3	4	..	1	..	1	2	2	21	..	..	..	..	..	1	..	..	..	..	..	..	1
Puerperal Pyrexia	..	1	1	2	4	3	2	1	1	1	3	1	20	..	..	..	..	..	..	..	..	..	..	..	..	..
Tonsillitis	6	8	9	8	5	4	10	6	6	10	4	8	84	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Gastro-Intestinal Diseases	1	3	1	2	1	5	5	4	7	2	5	4	40	..	1	..	..	..	1	..	..	..	..	..	..	2
Ophthalmia Neonatorium	1	1	..	..	1	..	..	1	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..
Louping Ill	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Anthrax	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified	12	9	10	16	6	14	11	27	11	14	14	14	158	1	..	1	1	..	1	..	..	..	1	..	2	7
	125	75	87	89	73	70	92	101	83	86	88	104	1073	5	8	6	8	2	12	5	2	4	2	2	5	61

CITY HOSPITAL FOR INFECTIOUS DISEASES.

Report of the Medical Superintendent.

ACCOMMODATION.

This is provided at the City Hospital for Infectious Diseases, Walker Gate, where there are 224 beds, (of which 60 are neither readily available nor very suitable accommodation) and 48 cots for Fever patients, and 106 beds for Tuberculosis patients. 172 beds are also maintained at the Moor Hospital in the event of smallpox occurring, but in the absence of this disease some of these beds are used for septic skin diseases and scabies patients.

By agreement with the West Northumberland Joint Hospital Board, the Medical Superintendent is also Visiting Superintendent of the Lemington Isolation Hospital of 50 beds and an arrangement exists whereby the cases are interchangeable between the two hospitals if extra accommodation is required.

ADMISSIONS.

There were 1,073 admissions during the year to the Infectious Diseases section of the hospital, the average daily number of patients being 69. 15% of the total admissions were Extra-Mural patients. The following table gives the ages and sex distribution of the patients :—

Ages.	0–1	1–2	2–5	5–15	15–25	25–45	45 and over	Total
Males.	68	36	84	143	73	56	35	495
Females. . .	42	42	75	168	147	70	34	578
Total. . .	110	78	159	311	220	126	69	1073

STREPTOCOCCAL INFECTIONS.

Scarlet Fever.—There were 196 cases admitted of which 8 were outside cases and the remainder represented 60% of the total cases notified in the City. 95 (50%) received streptococcal antitoxin. The disease still retains its mild form and there were no deaths.

Complications occurred in 38 cases (20%). These consisted of :— Adenitis—15 cases. Rhinitis—5. Otitis Media—9. Carditis—4. Abscess—4. Albuminuria—1

Erysipelas.—19 cases were treated although one case was admitted twice for the same condition.

Tonsillitis.—There were 84 cases of which 42 (50%) were due to hæmolytic streptococci.

Puerperal Pyrexia.—20 cases of this condition were admitted to hospital but in only 4 was the streptococcus the responsible organism.

DIPHTHERIA.

The total number admitted was 61 clinical cases and 25 carriers. Of these, 52 cases and 16 carriers belonged to Newcastle and the remainder were Extra-Mural.

There were 3 deaths, all Newcastle cases, and the mortality rate was 4·9%. Of these fatal cases one was an infant three months old who died eighteen hours following tracheotomy, one was a child of 13 months who had been ill for three days with a severe nasopharyngeal and laryngeal infection and who died six hours after admission, and the third was a boy of 5 years of age who developed myocarditis and finally pneumonia following a pharyngeal paralysis six weeks after onset. None of these cases had been immunised.

The following table indicates the clinical type of disease and the various age groups :—

Types.	0-1	1-2	2-5	5-10	10-15	15-25	25-45	Over 45	Total.
Nasopharyngeal	..	1(1)	..	5(1)	1	2	1	..	10(2)
Faucial	..	1	9	9	7	15	3	..	44
Laryngeal ...	2(1)	2	..	2	..	..	..	..	6(1)
Nasal	..	..	..	1	..	..	..	..	1
Other Forms .	..	..	..	..	..	..	..	..	..
Totals ..	2(1)	4(1)	9	17(1)	8	17	4	..	61(3)

Figures in parentheses indicate deaths.

Immunisation State.—The severity of the cases amongst immunised and non-immunised is shown in the following table :—

	Moderate.	Mild.	Severe.	Laryngeal
Immunised.	13	9	2	1
Non-Immunised.	10	6	7(2)	4(1)
Totals.....	23	15	9(2)	5(1)

Figures in parentheses indicate deaths.

Swabbing and Administration of Antitoxin prior to admission.—23 cases had been swabbed and of these, 17 were positive before being admitted to hospital. 7 of the positive cases had been given antitoxin prior to admission.

CEREBRO-SPINAL MENINGITIS.

There were 35 cases of this disease, 13 being Extra-Mural. There were no deaths. The age incidence is given in the following table :—

0–1	1–2	3–4	5–14	15–24	25–44	45+	Total
7	3	3	7	8	6	1	35

Treatment was the same as last year and all cases received either sulphathiazole or sulphadiazine. In addition, 28 cases received penicillin, 17 by both intramuscular and intrathecal routes, 5 intramuscular alone and 6 intrathecal alone. Complications occurred in 6 cases and are set out as follows :—

1. Temporary Hydrocephalus.
2. Left optic atrophy and arthritis of elbow.
3. Permanent left nerve deafness.
4. Pericardial and pleural effusion.
5. Myocarditis.
6. Non-specific gastro-enteritis.

POLIOMYELITIS.

There were 86 cases of poliomyelitis admitted to the hospital and of these 37 were Newcastle cases and 49 Extra-Mural. 28 or 32·5% of the total were non-paralytic or abortive cases.

The age incidence for all cases and for abortive cases is indicated in the following table :—

Ages	0–4	5–9	10–14	15–19	20–24	25–30	Over 30	Total
All Cases	34	16	15	13	3	1	4	86
Abortive Cases .	6	8	5	6	1	1	1	28

Primary Illness.—In 51 of the cases, of which 15 were non-paralytic, a primary illness preceding the meningeal or paralytic stages by a definite interval was recorded. This primary illness was observed throughout all the age groups in proportion to the number of cases in each group, and did not occur with increased frequency at any par-

ticular age. The latent period varied considerably and the following table shows the duration in days of this interval for the cases in this group.

Interval in days. ...	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Cases	1	7	8	6	9	5	15

The type of primary illness followed roughly two main patterns :— one with symptoms referable to the gastro-intestinal tract and the other suggesting an upper respiratory infection.

The frequency of the various symptoms occurring in these 51 cases is set out below.

Vomiting.	18	Limb Pains.	5
Headache.	15	Respiratory Catarrh.....	4
Sore throat.	12	Convulsions.	3
Malaise.....	9	Abdominal Pain.	3
Nausea.	6	Diarrhœa.	1

Meningeal signs were observed in 34 paralytic cases and 15 non-paralytic cases.

Cerebration.—The mental state was altered in 27 cases and in these the following symptoms were noted:—Drowsiness—12. Listlessness—7. Confusion—3. Fretfulness—2. Hysteria—1. Restlessness—1. Coma—1.

Eye Signs.—In 9 cases signs referable to the eyes were noticed. In 8 cases, nystagmus or pre-fixation tremor occurred, while strabismus was seen 3 times and ptosis and diplopia once each.

Paralysis.—Affection of the cranial nerves either alone or with other paralysis were seen in six cases. The paralysis was restricted to the arms in 15 cases and to the legs in 27 cases and to the trunk in 2 cases. Combined arm and leg paralysis occurred in 10 cases, while paralysis of the diaphragm was seen in 5 cases and retention of urine in 6 cases.

Cerebro-Spinal Fluid.—Pleocytosis occurred in the Cerebro-Spinal fluid of 42 paralytic cases and 19 non-paralytic cases, whilst in 18 paralytic and 7 non-paralytic cases, the fluid was normal. The highest recorded count in this series was 387 cells. The majority of the cells were lymphocytes, but in 8 paralytic and three non-paralytic cases, polymorphs predominated, ranging from 55—85% of these cases.

Deaths.—4 deaths were recorded, all resulting from diaphragmatic and bulbar paralysis. These cases were all treated in the mechanical respirator, one for over 4 months. One of the fatal cases was a pregnant woman who was delivered of a live child by Cæsarean section, the mother dying some days later from respiratory paralysis.

ALIMENTARY INFECTIONS.

Enteric Fever.—There were 4 cases of Paratyphoid B and 2 cases of Typhoid Fever, but only one case of Paratyphoid fever resided in the City. One of the typhoid cases died four days after admission. One typhoid carrier was admitted from a neighbouring isolation hospital as an acute surgical emergency and was operated on for strangulated femoral hernia.

Dysentery.—There were 11 cases of this disease, 7 of Flexner type and 4 of Sonne type. There were no deaths.

Salmonella Infection.—7 cases were treated all belonging to the Typhi-Murium (Aërtrycke) group.

Non-Specific Gastro-Enteritis.—33 cases were admitted for treatment and of these 2 died, both cases being babies of seven weeks old.

MEASLES.

37 cases were admitted of which 28 were uncomplicated cases, 7 had broncho-pneumonia, one was suffering from convulsions and one from Encephalitis. One baby of 8 months developed miliary tuberculosis and was transferred to another hospital, and two cases developed tuberculous broncho-pneumonia and died.

PERTUSSIS.

71 cases were admitted and of these 48 were complicated, 42 with broncho-pneumonia; 4 with bronchitis, one with encephalitis and one with convulsions. There were 11 deaths in this group, all in cases with broncho-pneumonia and of these 5 were under the age of six months, 3 were between six months and one year, 2 were between 1 and 2 years and one was 3 years old.

Case mortality rate was 15·5%. One case of broncho-pneumonia subsequently developed miliary tuberculosis and has been undergoing streptomycin treatment for the past five months.

PNEUMONIA.

There were 84 cases of which 39 were bronchial, 38 lobar and 7 atypical or virus pneumonia.

There were 8 deaths among the broncho and lobar pneumonia cases, but as 4 of these cases died within twelve hours of admission, they have not been included in the mortality rate, which was therefore 5·4%.

The following table for all cases gives age and sex incidence.

Ages.	0-1	1-2	2-5	5-15	15-25	25-45	45 & over	Total
Males	9(2)	3	8	5	9	6	12(2)	52(4)
Females	10(1)	3(1)	3	4	1	3(1)	8(1)	32(4)
Total	19(3)	6(1)	11	9	10	9(1)	20(3)	84(8)

Figures in parentheses indicate deaths.

STAFF SICKNESS.

During the past year, 81 nurses were off duty for a total of 1277 days and 25 domestics for 326 days. The following is a summary of of the conditions for which these members of the staff reported sick.

	Nurses.	Domestics.
Upper respiratory Infections.	34	6
Minor accidents	2	3
Rheumatic conditions.	5	1
Gastro-intestinal conditions.	7	5
Appendicectomy.	2	..
Septic conditions	10	..
Genito-urinary conditions	4	2
Pulmonary tuberculosis.	2	..
Debility, etc.	5	..
Other conditions.	10	8
	81	25

E. G. Brewis,

Medical Superintendent.

BACTERIOLOGICAL EXAMINATIONS.

Joint Committee as to Bacteriological Services.

City Bacteriological Laboratory,

Newcastle General Hospital,

Westgate Road.

———

1st January to 31st December, 1947.

The following report of the bacteriological examinations carried out on behalf of the Joint Committee as to Bacteriological Services, at the City Bacteriological Laboratory, Newcastle General Hospital, is submitted.

The nature of the investigations and the results obtained are given under the various sections as follows :—

Nature of Specimen.	Total number examined.	Number found positive.	Percentage positive.
Swabs for C. diphtheriæ—			
(*a*) Suspected cases and contacts from City	1,537	34	2·21%
(*b*) Ditto from Newcastle Gen. Hospital	1,154	13	1·12%
(*c*) Routine swabs from City Hospital for Infectious Diseases	471	..	..
TOTAL	3,162	..	..
Sputum for tubercle bacilli (microscopically)—			
(*a*) from practitioners	225	29	12·88%
(*b*) from miscellaneous sources	21	1	4.76%
(*c*) from patients in City Hospital for Infectious Diseases	62	7	11·29%
(*d*) From Newcastle General Hospital	1,264	81	6·4%
TOTAL	1,572	..	..
Swabs for hæmolytic streptococci—			
(*a*) from City Hos. for Infectious Diseases	440	165	37·5%
(*b*) from Newcastle General Hospital	1,473	132	8·96%
(*c*) from Tuberculosis Dispensary	35	4	11·42%
(*d*) from Gables Maternity Home	36	..	..
(*e*) from other sources	509	200	39·29%
TOTAL	2,493	..	..

During the year the typing of C. diphtheriæ was undertaken.

The following is a summary of the results obtained :—

Gravis.	Intermedius.	Mitis.	Atypical.	C. diphtheriæ not isolated, Hofmann and Diphtheroid bacillus, etc.	Total.
35	4	2	1	35	77

Virulence Tests.

Virulence tests were undertaken by the Central Public Health Laboratory, King's College, and County Laboratory, Newburn, during the year.

16 cultures were submitted and the following results obtained :—

Virulent	8
Non-virulent	8
	16

Note.—All proved gravis strains tested were found to be virulent. Most of the non-virulent strains were atypical.

The following specimens were also submitted to the Central Public Health Laboratory, King's College, and County Laboratory, Newburn, for animal inoculation for the presence or absence of B. tuberculosis, and reports were received :—

Classification.	City Infectious Diseases.	Newcastle General Hospital.	General Practitioners.	Total.
Inguinal lymph glands	..	1	..	1
Cerebro-spinal fluid	..	3	..	3
Sputum	..	..	..	..
Pleural fluid	1	3	..	4
Pus from various sources	1	3	..	4
Urine	..	69	2	71
Gastric juice	..	2	..	2
Stomach washings	1	1	..	2
	3	82	2	87

Agglutination Reactions :—

(a) enteric group	83
(b) abortus-melitensis group	77
	160

A total of 160 specimens of blood were examined involving 373 agglutination reactions :—

	City Hospital for Infectious Diseases		Newcastle General Hospital.		Other Sources.		Total.	
Total number of specimens received.	53		57		50		160	
Organisms.	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.
B. typhosus "H"	5	25	3	26	..	24	8	75
Do. "O"	2	10	1	10	..	4	3	24
B. paratyphosus B. "H"	6	24	3	26	1	23	10	73
Do. "O"	2	8	..	11	..	4	2	23
B. dysenteriæ Flexner V.W.X. Sonne, Shiga	..	..	..	5	..	..	..	5
Brucella abortus	..	23	2*	26	2*	22	4	71
Brucella melitensis	..	23	2*	26	2*	22	4	71
	15	113	11	130	5	99	31	342
	128		141		104		373	

* 1 case.

Some of the positive results shown in the above table represent repeat tests on the same patient. There were actually two cases of typhoid fever and five of paratyphoid B.

Enteric Fevers, Bacillary Dysentery and Food-poisoning.

Specimens were received and examined for organisms of the above-named groups. The following table gives the source of the specimens and a summary of the results obtained :—

Organisms isolated.	City Hospital. for Infectious Diseases	Newcastle General Hospital.	Health Dept.	Willow Avenue Nursery.	Woodland Crescent Nursery.	St. Anthony's Nursery.	Armstrong Road Nursery.	TOTAL.
B. typhosus (fæces)	2	..	2	..	..	..	..	4
B. paratyphosus B. do.	9	..	1	..	..	..	..	10
Do. (urine)	3	..	..	..	..	..	..	3
Salmonella typhi-murium (aërtrycke) (fæces)	15	9	14	..	..	..	..	38
Salmonella dublin do.	..	1	..	..	..	..	..	1
Salmonella oranienburg do.	..	..	1	..	..	..	..	1
Salmonella gærtner do.	3	..	..	..	..	..	..	3
B. dysenteriæ—								
Flexner do.	8	3	1	..	..	..	..	12
Sonne do.	5	2	6	..	..	..	..	13
Amœbic dysentery (E. histolytica) do.	..	1	..	..	..	..	..	1
Hookworm ova present do.	..	1	..	..	..	..	..	1
Total positive (fæces)	42	17	25	..	..	..	..	84
do. do. (urine)	3	..	..	..	..	..	..	3
Total negative (fæces)	169	642	163	7	4	4	3	992
Do. do. (urine)	27	2	2	..	..	..	..	31
Aggregate number of fæces and urines examined.....	241	661	190	7	4	4	3	1,110

Cerebro-Spinal Fluids.—A total of 692 specimens were received for examination as described below. Reports were returned and the following is a summary of the results obtained :—

Classification	City Hospital for Infectious Diseases	Newcastle General Hospital.	Other Sources.	Total.
Meningococcal meningitis	20	10	..	30
Tuberculous meningitis	18	9	..	27
Pneumococcal meningitis	3	4	..	7
Influenzal meningitis	1	..	..	1
Case of louping-ill	1	..	..	1
B. pyocyaneus isolated	..	1	..	1
Meningitis with inconclusive indication of infecting organism	45	25	3	73
No definite evidence of meningitis	188	92	3	283
Cases undergoing treatment re-tested	134	135	..	269
	410	276	6	692

Miscellaneous Examinations :—

These may be summarised as follows :—

Classification.	City Hospital for Infectious Diseases	Newcastle General Hospital.	Miscellaneous Hospitals, etc.	Newcastle Health Dept.	Total.
Blood cultures for organisms	30	98	2	9	139
Pus, fluid, etc., and other material for bacteriological tests	175	2,201	165	78	2,619
Microscopical examination of smears from various sources (Vincent's angina, etc.)	117	166	..	77	360
Urine for bacteriological examination	35	1,491	104	82	1,712
Grouping of hæmolytic streptococci	2	51	..	3	56
Examination of post-natal swabs for presence of meningococci	..	..	..	26	26
Preparation of autogenous vaccine	..	1	..	..	1
Sputum for cultural examination	2	65	..	4	71
Blood for malaria parasites	..	..	..	1	1
Sterility tests on samples of water from tank in D. Block, Newcastle General Hospital	..	6	..	..	6
Exposure of culture plates in Wards for presence of streptococci	..	92	..	..	92
Specimens for penicillin sensitivity	..	65	..	10	75
Blood for icterohæmorrhagiæ	..	9	..	..	9
Samples of ice cream for bacteriological examination	..	..	..	89	89
Veterinary Dept., per Mr. Thornton (corned beef, currants, mussels, etc.)	..	..	..	19	19
Estimation of streptomycin concentration in patients' blood	..	5	..	..	5
	361	4,250	271	398	5,280

MILK EXAMINATIONS :—

Milk (Special Designations) Order, 1936.

During the year 1947 a total of 994 samples of milk were examined at this laboratory according to the technique prescribed in Mem. 139/Foods (January, 1937), and the following results were obtained :—

	(*a*) Methylene blue test.				(*b*) Bacillus coli test.				Pasteurised (methylene blue).			
	Total.	Satisfactory.	Unsatisfactory.	Percentage Unsatisfactory.	Total.	Satisfactory.	Unsatisfactory.	Percentage Unsatisfactory.	Total.	Satisfactory.	Unsatisfactory.	Percentage Unsatisfactory.
Tuberculin Tested or T.T. (Certified) ...	206	155	51	24·75%	206	158	48	23·3%	97	89	8	8·24%
Accredited	118	103	15	12·71%	118	99	19	16·1%				
Undesignated	447	307	140	31·31%	447	340	107	23·93%				
Heat-treated	69	56	13	18·84%								
Sterilised.....	57	53	4	7·01%								

Tuberculin Tested or T.T. (Certified)	206
Accredited	118
Undesignated	447
Pasteurised.....	97
Heat-treated	69
Sterilised	57
TOTAL	994

The following table gives a complete summary of the various specimens received and examined during 1947 :—

Classification.	City Infectious Diseases Hospital.	Newcastle General Hospital.	Princess Mary Maternity Hospital.	The Gables Maternity Home.	Newcastle Health Dept. and Practitioners.	Total.
Swabs for C. diphtheriæ	471	1,154	2	..	1,496	
,, from Tuberculosis Dispensary					39	3,162
,, for hæmolytic streptococci	440	1,473	10	36	499	
,, from Tuberculosis Dispensary					35	2,493
Sputum for tubercle bacilli	62	1,264	9	..	225	
,, from miscellaneous sources					12	1,572
Detailed examination and typing of C. diphtheriæ—						
Newcastle cases	46	10	..	..	21	77
Agglutination tests :—						
(*a*) Enteric group	30	29	..	..	24	83
(*b*) Abortus-melitensis	23	28	..	..	26	77
Fæces for the enteric-dysentery food-poisoning groups	211	659	..	..	188	
,, from Willow Avenue Nursery					7	
,, from Woodland Crescent Nursery					4	1,076
,, from St. Anthony's Nursery					4	
,, from Armstrong Road Nursery					3	
Specimens for penicillin sensitivity	..	65	..	..	10	75
Urine for the enteric group organisms	30	2	..	..	2	34
Blood cultures for organisms	30	98	2	..	9	139
Cerebro-spinal fluids	410	276	..	..	6	692
Smears for microscopical examination for Vincent's angina, etc.	117	166	..	..	77	360
Pus, fluids, etc., for organisms	175	2,201	164	..	79	2,619
Urine for bacteriological examination	35	1,491	104	..	82	1,712
Miscellaneous examinations not otherwise classified (page 87)	4	229	..	..	53	286
Milk examinations:—						
(*a*) Combined methylene blue-coli test	..	..	..	..	771	
(*b*) Pasteurised (methylene blue)	..	..	..	..	97	
(*c*) Heat-treated ,, ,,	..	..	..	..	69	994
(*d*) Sterilised ,, ,,	..	..	..	..	57	
Water examinations :—						
(*a*) for bacillus coli	..	..	..	..	370	
(*b*) from the City Baths	..	..	..	..	32	406
(*c*) for complete examination	..	..	..	..	4	
Specimens sent to Central Public Health Laboratory and County Laboratory, Newburn—						
Virulence tests on C. Diphtheriæ,	13	3	..	..	..	16
Material for the presence or absence of B. tuberculosis (page 90)	3	82	..	..	2	87
Samples of ice cream for bacteriological examination	..	..	..	..	89	89
	2,100	9,230	291	36	4,392	16,049

WATER EXAMINATIONS :—

i. Weekly routine examination of samples of water gave the following results in a total of 370 examinations :—

Class I.	B. Coli not found in 100 ml.....	339
Class II.	,, found in 100 ml. but not in less ..	20
Class III.	,, ,, 10 ml. ,, ..	8
Class IV.	,, ,, 1 ml. ,, ..	3
		370

ii. During the year the following samples of water were received for detailed examination and reports were submitted :—

Month.	Source.	No.
September ...	From wells on property at Brunton Bridge	4
August	From City Baths	8
September ...	ditto.	22
October	ditto	2
		36

Summary of the various bacteriological specimens received and examined for the years 1945, 1946 and 1947 :—

Nature of Investigation.	1945.	1946.	1947.
Swabs for C. diphtheriæ	8,067	4,506	3,162
Swabs for hæmolytic streptococci	3,426	3,181	2,493
Sputa for tubercle bacilli	1,166	1,298	1,572
Agglutination tests :—			
(*a*) Enteric group	114	98	83
(*b*) Abortus-melitensis	46	66	77
Milk examinations :—			
Graded milk	353	351	324
Undesignated milk	507	505	447
Pasteurised milk	81	89	97
Heat-treated milk	19	37	69
Sterilised milk	57	71	57
Water examinations :—			
For bacillus coli	359	367	370
For complete examination	26	4	4
From the City Baths	24	30	32
Detailed examination and typing of C. diphtheriæ :			
Newcastle cases	128	44	77
Virulence tests on C. diphtheriæ—			
Per Central Public Health Lab., King's College	12	17	15
Per County Laboratory, High Street, Newburn	..	..	1
Enteric Fevers (i) fæces	392	641	230
(ii) urine	21	27	34
Bacillary dysentery and food-poisoning groups	3,417	1,763	778
Amœbic dysentery	..	..	67
Hookworm ova	..	..	1
Meningitis (various)—C.S. Fluid	324	300	692
Miscellaneous bacteriological exams. from various sources	1,240	1,048	1,030
From Newcastle General Hospital	2,824	3,907	4,250
Inoculation of material for B. tuberculosis—			
Per Central Public Health Laboratory	56	95	58
Per County Laboratory, Newburn	..	..	29
TOTAL	22,659	18,445	16,049

RICHARD NORTON,
Bacteriologist.

City Bacteriological Laboratory,
Newcastle General Hospital,
Westgate Road,
Newcastle upon Tyne, 4.

The Central Public Health Laboratory, Government Buildings, Ponteland Road, Newcastle upon Tyne, 5.

Specimens reported upon during the year ended 31st December, 1947 :—

ANIMAL INOCULATIONS—		
Milks for the presence of tubercle bacilli	298	
Pus Do. Do. Do.	3	
Miscellaneous, including Urine, Sputum, Fluids, etc., for the presence of tubercle bacilli.....	66	367
Diph-Typing-Virulence	13	13
EXAMINATIONS—		
Other than animal inoculation 90		90
VENEREAL DISEASE—		
Blood for Wassermann reaction	49	
,, ,, Flocculation test	18	
,, ,, Gono-Complement Fixation test	3	
Microscopical for Gonococci	7	
C.S. Fluid for Wassermann reaction	2	
	——	79
TOTAL		549

S. H. WARREN,
Director.

REPORTS OF THE
TUBERCULOSIS MEDICAL OFFICER,
MEDICAL SUPERINTENDENT,
BARRASFORD SANATORIUM
AND
MEDICAL DIRECTOR,
MASS RADIOGRAPHY UNIT.

IV—TUBERCULOSIS

TUBERCULOSIS DISPENSARY.
BARRASFORD SANATORIUM
MASS RADIOGRAPHY.

To the Medical Officer of Health.

Dear Sir,

I beg to submit the Annual Report of the work of the Tuberculosis Services for the year 1947.

In common with the rest of the country, the demands on the Tuberculosis Service have steadily increased in the last few years, and 1947 shows a still further rise in the number of patients dealt with.

The overloading of the Service is such that there is a constant struggle to avoid the lowering of the standard of the work on account of the pressure of numbers.

As a newcomer to the City, the deficiencies are thrown sharply into relief; there is a very obvious shortage of both space and personnel, medical, nursing and clerical.

As the building of an entirely new Clinic is unlikely in the immediate future, owing to the difficulties with material and labour, it was considered advisable to modify the present building; plans for making better use of the present accommodation were submitted to Committee and approved—the provision of two separate consulting rooms, each with two dressing rooms, a new waiting room at the front of the present building, and the converting and white-washing of the cellars for storage. Much of the present overcrowding of staff, patients and records in the small general office will be overcome when these changes are completed.

The number of clinical sessions has been increased but the attendance at each is still far in excess of what can be reasonably expected to be dealt with by the available medical staff. As the Service offered improves, the tendency will be for the numbers of cases referred to the Clinic for diagnosis, to increase, and the only way to deal with this problem satisfactorily is by an increase in Medical Staff. The appointment of two additional medical assistants would help considerably, and lead to greater efficiency.

The merging of the district work of the nursing staff with the general Health Visitors' work of the city took place in September. For this, a duplicate Dispensary Register of notified persons is kept

by the Chief Health Visitor at the Maternity and Child Welfare Section, Half Moon Chambers, 10, Bigg Market, Newcastle upon Tyne; regular notifications to that department are made from the Clinic of additions and deletions from the list, caused by new cases, deaths, recovered and transferred cases, etc. Two new forms were introduced; one for the Health Visitors' primary visit and report on home circumstances, contacts, milk supply and housing; the other for subsequent visits made to that household.

An efficient Health Visitors' Service is essential, especially when institutional bed accommodation is at a premium. The waiting lists for admission are only kept at a practical low figure at the expense of the duration of residence.

Very careful choice of cases for admission is necessary and domiciliary visits by medical staff are of great importance. It will be seen that this part of the work was expanded during the year.

The Child Contact Clinic working at the Newcastle General Hospital continues to be carried on by Dr. F. J. W. Miller.

In September, a limited amount of Streptomycin became available in the Newcastle area from the Medical Research Council for the treatment of tuberculous meningitis and miliary tuberculosis. These clinical trials are encouraging, and will be extended as the preparation becomes more easily available.

Thanks are due to the continued co-operation of the medical, nursing and clerical staffs who have steadily worked in the Tuberculosis Clinic under difficult and trying conditions; without their help no service would have been possible.

RETURN SHOWING THE WORK OF THE DISPENSARY.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.				Grand Total.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—Number of definite cases of Tuberculosis on the Dispensary Register on 1st Jan., 1947	948	719	130	121	68	75	146	144	1,016	794	276	265	2,351
B.—Transferred from other authorities	3	6	2	..	..	..	..	..	3	6	2	..	11
Lost sight of cases returned	8	12	..	2	..	1	2	1	8	13	2	3	26
C.—Number of New Cases diagnosed as Tuberculosis during the year													
T.B. Minus	87	89	24	19	..	..	..	..	87	89	24	19	219
T.B. Plus	87	72	1	1	..	..	..	..	87	72	1	1	161
Non-Pulmonary	..	..	..	..	9	17	9	11	9	17	9	11	46
D.—Number of cases included in the above written off during the year as													
Recovered	1	6	..	2	1	1	2	..	2	7	2	2	13
Dead (all causes)	117	92	1	3	3	..	2	3	120	92	3	6	221
Removed to other areas	24	33	2	4	1	1	..	2	25	34	2	6	67
For other reasons	4	10	..	2	1	1	2	1	5	11	2	3	21
E.—Number of definite cases of tuberculosis on the Dispensary Register at the end of the year	987	757	154	132	71	90	151	150	1,058	847	305	282	2,492

1. Number of attendances of patients at the Dispensary during the year	15,836	4. Number of visits by Tuberculosis Medical Officers to homes of patients	139
2. Number of consultations with medical practitioners :—		5. Number of :—	
(*a*) Personal	6	(*a*) X-ray examinations (films)	6,066
(*b*) Other	2,288	(*b*) Samples of Sputum examined at Dispensary	2,379
3. Number of visits by Nurses or Health Visitors to homes of patients	8,681	at Bacteriological Laboratory	183
		(*c*) Samples of Urine tested	188
		(*d*) Blood Sedimentation tests	9

Notifications.—759 notifications were received during the year, but some were duplicates, so that the total number of new cases was 644, of whom 546 were certified to be suffering from pulmonary and 98 from non-pulmonary tuberculosis.

The details as regards sex and age are given in the accompanying table :—

SUMMARY OF NOTIFICATIONS DURING THE PERIOD, 1ST JANUARY TO 31ST DECEMBER, 1947.

(THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1930.)

AGE PERIODS.	Primary Notifications.												Total Notifications (including Cases previously notified by other doctors).
	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and upwards.	TOTAL.	
onary—													
ales	5	13	11	23	42	48	40	39	35	31	11	298	332
emales	2	7	6	15	54	52	66	18	13	10	5	248	283
Pulmonary—													
ales	2	5	6	5	4	6	4	3	2	..	4	41	65
emales	1	7	9	8	9	6	7	5	3	2	..	57	79
OTALS	10	32	32	51	109	112	117	65	53	43	20	644	759

As far as possible every notified case was visited by the nurses and urged to visit the Dispensary for examination and classification with a view to treatment.

Of the 644 cases notified, 509 attended the Dispensary and 74 others were visited in their homes by the Health Visitors in the course of the year. The names of the patients certified to have died from tuberculosis, but not previously notified, were entered in the notification register, so that if the 32 patients in this category, and 12 who died within one week of notification and were not known to the Dispensary be deducted, it will be seen that the Dispensary got into touch with nearly all of the known cases of tuberculosis. The only cases not known to the Dispensary were 61 who were living in institutions or refused to be visited.

A table has been prepared to illustrate these points and also to show the nature of the institutional treatment afforded to the cases notified during 1947. 367 of the 546 patients notified as suffering from pulmonary tuberculosis were treated in beds belonging to, or controlled by the City Council, and 70 out of a total of 98 patients notified as suffering from forms of tuberculosis other than pulmonary were treated in such beds.

The number of patients dying in the year of notification is also given, and it will be seen that 74 (equal to 11.5 per cent.) of all the new cases died in the same year as they were notified.

NOTIFICATIONS OF TUBERCULOSIS DURING 1947.

Part Affected.	Notifications.	Attended Dispensary.	Visited by Nurse but *not* attended Dispensary.	Received Institutional Treatment.						Di dur th Ye
				Barrasford Sanatorium.	Sanatorium Pav. Walker Gate.	Stannington Sanatorium.	Newcastle Gen. Hosp.	Sheriff Hill Hosp.	Totals.	
Pulmonary—										
Male	298	232	37	51	118	21	1	..	191	4
Female	248	223	19	71	88	17	..	..	176	1
Non-Pulmonary—										
Male	41	24	8	..	..	6	28	2	36	
Female	57	30	10	..	..	4	28	2	34	
TOTALS	644	509	74	122	206	48	57	4	437	7

During the year 197 cases (30.6 per cent. of the total) were notified by the Dispensary Medical Staff.

Practitioners were written to by the Medical Officer of Health when notification appeared to have been neglected.

Deaths.—There were 298 deaths from tuberculosis of Newcastle-upon-Tyne residents, 259 pulmonary and 39 non-pulmonary, giving a death rate per 1,000 population—

	Number of Deaths.	Death Rate per 1,000 Population.
Pulmonary Tuberculosis	259	0.89
Non-Pulmonary	39	0.13
All forms of Tuberculosis	298	1.02

Further details and comparative figures for previous years are submitted in the following table :—

RETURN OF DEATHS FROM PULMONARY TUBERCULOSIS OCCURRING IN :—

	Deaths which occurred in these years.									
	1941	1942	1943	1944	1945	1946	1947.			
							M.	F.	Chn	Total
Persons not notified	14	12	13	11	8	10	9	1	2	12
,, notified under 1 mth.	26	26	40	24	37	23	18	6	3	27
,, between 1 and 3 ,,	33	26	34	18	15	24	16	7	..	23
,, between 3 and 6 ,,	23	24	23	17	16	24	11	6	1	18
Total under 6 months	96	88	110	70	76	81	54	20	6	80
Persons notified between—										
6 and 12 months	19	22	26	31	21	26	12	12	..	24
,, 12 and 18 ,, ...	16	21	31	21	21	10	4	9	..	13
,, 18 and 24 ,, ...	12	19	13	19	10	15	16	10	..	26
,, 2 and 3 years	24	12	23	25	25	31	18	12	..	30
,, over 3 years	73	56	67	53	67	64	41	39	..	80
TOTALS	240	218	270	219	220	227	145	102	6	253

Contacts.—793 Contacts of cases of tuberculosis were examined during the year, 73 of whom were diagnosed as suffering from tuberculosis.

Family History.—In 69 instances amongst the 225 cases of pulmonary tuberculosis known to the Dispensary who had died during the year, *i.e.*, in 30.7 per cent., there was a history that some near relation was suffering from, or had died of pulmonary tuberculosis. The figures were 16.9 per cent. for males and 13.8 per cent. for females.

House Accommodation.—The home conditions of the people are intimately associated with tuberculosis. The numbers of rooms in the dwellings occupied by the above 225 persons were as follows :—

Rooms in Dwelling.	1	2	3	4	More than 4	Institutions.	Common Lodging Houses.	Not Known.	Total.
Deaths	9	32	64	76	39	1	1	3	225

As regards the type of house occupied, 102 were flats, 21 tenements, 97 self-contained, 1 common lodging house, 1 institution and in 3 cases the particulars were not known.

It is noteworthy that of the 225 patients suffering from pulmonary tuberculosis who attended the Dispensary and died in 1947, 204, or 90.7 per cent., had received institutional treatment, on one or more occasions. This is a high percentage and shows what a large proportion of the cases visiting the Dispensary avail themselves of the accommodation provided.

The table inserted gives details of the year's work of the Dispensary. (96A).

INSTITUTIONAL TREATMENT.

Sanatorium Pavilions, City Hospital, Walker Gate.—405 patients were admitted (229 males and 176 females).

Details of the number of patients admitted and discharged are given in the accompanying table :—

PATIENTS WHO RECEIVED TREATMENT IN THE SANATORIUM PAVILIONS, WALKER GATE, DURING THE YEAR 1947.

		Sex	In Institution on 1st January, 1947.	Admitted during the Year.	Discharged during the Year.	Died in Institution during the Year.	In Institution on 31st Dec., 1947.
Number of Patients.	Adults	M.	29	154	123	35	25
	Do.	F.	21	149	129	15	26
	Children ...	M.	..	1	1	..	..
	Do. ...	F.	..	..	..	..	..
Observation Cases.	Adults	M.	31	74	59	23	23
	Do.	F.	19	27	24	6	16
	Children ...	M.	1	..	..	..	1
	Do. ...	F.	1	..	1	..	..
TOTALS ..	..	..	102	405	337	79	91

Of the 113 patients discharged or died who had been under observation 89 were found to be suffering from tuberculosis. The total number of days of those who received treatment was 33,335 giving an average length of stay of 80.1 days.

79 patients died in the Institution ; the conditions of the other patients on discharge is given in the table below :—

	Males.	Females.	Total.
Improved	134	90	224
Without Improvement	57	56	113
Died in Hospital	50	29	79
TOTALS	241	175	416

Many of those discharged " improved " were fit for light work ; 33 were transferred to Barrasford Sanatorium and 1 to Stannington Sanatorium. 43 patients were sent to the Shotley Bridge Hospital for surgical treatment.

Treatment has been on Sanatorium lines, modified to some extent in view of the type of patient ; the essentials are the same however, namely, rest and good food under satisfactory hygienic conditions, with exercise graduated to the patient's tolerance.

X-ray Examinations.—During the year 7,348 thoracic films were taken. These included 6,066 Dispensary patients, 345 inmates of the Sanatorium Pavilions, 175 patients from the City Hospital for Infectious Diseases, 288 in connection with artificial pneumo-thorax treatment, 427 nurses and maids belonging to the staff of the Hospital, 47 Day Nursery staff and 739 children from the Child Contact Clinic at Newcastle General Hospital. In addition, 5,690 routine screen examinations were made, 4,000 in connection with artificial pneumo-thorax refills, and 1,690 to patients in hospital.

Artificial Pneumothorax Treatment.—There were 82 initial inductions of artificial pneumothorax at the City Hospital, Walker Gate ; 4 other cases were attempted but were unsuccessful. 7 of the 82 were bilateral cases.

4,782 refills were performed.

NEWCASTLE GENERAL HOSPITAL.

71 patients were admitted (38 males and 33 females). Details are given in the following table :—

PATIENTS WHO RECEIVED TREATMENT IN NEWCASTLE GENERAL HOSPITAL DURING THE YEAR 1947.

	Sex.	In Institution on 1st Jan., 1947.	Admitted.	Discharged.	Died in Institution.	In Institution on 31st Dec., 1947.
Pulmonary .. Adults	M.	..	..	..	..	..
Do. .. Do.	F.	..	..	..	..	..
Non-Pulmonary Do.	M.	4	27	25	4	2
Do. .. Do.	F.	2	20	13	6	3
Do. .. Children	M.	..	11	10	1	..
Do. .. Do.	F.	..	13	10	3	..
TOTALS		6	71	58	14	5

The results of the treatment received are given in the table below :—

	Males.	Females.	Children.	Totals.
Improved	22	12	20	54
Without Improvement	3	1	..	4
Died in Hospital	4	6	4	14
TOTALS	29	19	24	72

STANNINGTON CHILDREN'S SANATORIUM.

48 beds were maintained at this Institution for the treatment of Newcastle upon Tyne patients. These were kept fully occupied throughout the year and 66 children completed treatment. The details are shown in the following tables :—

CHILDREN WHO RECEIVED TREATMENT IN STANNINGTON SANATORIUM DURING THE YEAR 1947.

	In Sanatorium on 1st Jan., 1947.	Admitted.	Discharged.	In Sanatorium on 31st Dec., 1947.
Pulmonary Males	24	27	32	19
Do. Females	26	25	29	22
Non-Pulmonary Males	5	5	2	8
Do. Females	3	4	3	4
TOTALS	58	61	66	53

In every case except 5 benefit accrued to the patient, as is shown in the following returns :—

	Males.	Females.	Total.
Disease quiescent	22	14	36
Improved	9	13	22
Without Improvement	2	3	5
Died	1	2	3
TOTALS	34	32	66

SHERIFF HILL ISOLATION HOSPITAL.

Newcastle and Gateshead share a ward in Sheriff Hill Isolation Hospital for the treatment of non-pulmonary tuberculosis. During the year 12 Newcastle patients were admitted and 18 discharged.

The Voluntary Tuberculosis Care Council gave the following forms of assistance to 312 tuberculosis patients :—

	No. of Patients.
Milk and extra nourishment	66
Milk—No. of Patients carried forward from 1946	48
Clothing	99
Beds loaned to new patients	21
Bedding	41
Pocket Money	3
Comforts	3
Removals	3
Dental Aid	2
Spectacles	2
Fares	4
Surgical Aids	2
Convalescence	9
Furniture	1
Loan of Chair	1
Home Help supplied	1
Sundries	3
Referred to other organisations	3
	312

WORK OF ALMONERS' DEPARTMENT, 1947.

Almoners' Department.—Miss E. J. Woll, my Almoner, reports as follows :—

Total Number of Interviews	3,211
New Patients seen	609
Home Visits	22
Patients Assisted	906

DETAILS OF ASSISTANCE GIVEN :—

Clothing	157
Convalescence	56
Extra Nourishment	77
Fares	11
Transport	3
Dentures and/or Dental Treatment	17
Instruments and Repairs	5
Spectacles	2
District Nurse	15
Arrangements made for children	23
Training for/or suitable work	205
Bed and/or Bedding	111
Nursing Comforts	42
Financial Assistance	14
Domestic Help	6
Legal Aid	2
Housing Conditions	84
Pocket Money	10
Free Medical Treatment	37
Cost of Removals	4
Invalid Chairs	3
Prams	1
Admission to Special Homes and Schools	2
Home Handwork	4
Wireless Licence	1
Lodgings	3
Cost of Furniture	1
Cost of Suitcase	1
Other forms of Assistance	9
	906

AGENCIES AND DEPARTMENTS ASSISTING :—

Voluntary Tuberculosis Care Council	241
Assistance Board	13
Soldiers', Sailors' & Airmen's Family Association	11
British Legion	9
Red Cross Society	28
Public Assistance Committee	92
Ministry of Labour	206
Ministry of Pensions	10
Approved Society	26
Invalid Loan Society	16
Police Court Missionary	2
Moral Welfare Worker	2
Board of Trade	31
Works Welfare Fund	3
Works Welfare Officer	3
Outside Doctor	37
Women's Voluntary Service	85
Newcastle Dispensary	46
John Routledge Hunter Memorial Fund	14
Merchant Navy Comforts Fund	3

AGENCIES AND DEPARTMENTS ASSISTING—*continued.*

Citizens' Advice Bureau	4
Jewish Board of Guardians	2
Army Welfare Officer	4
Tyneside Council of Social Service	2
National Society of Cancer Relief	2
Poor Children's Holiday Association	1
Probation Officer	2
Old People's Welfare Committee	1
Y.M.C.A. Lend Scheme	1
Boy Scouts Association	1
Royal Alfred Society	1
Poor Men's Lawyer	2
Royal Air Force Benevolent Fund	2
Royal Naval Benevolent Trust	1

The Almoner's work proved to be of great value to the Department. Without her help during an exceedingly busy year many forms of assistance, which she administered, would not have been given. The medical staff and patients were helped very considerably by her activities.

NATIONAL SERVICE.

The Ministry of Labour sent 50 men for examination and report in connection with the calling up for Military service. In addition, 57 forms T.147 were sent to the Ministry of Labour and National Service giving details of men in certain age groups who were suffering from tuberculosis.

MINISTRY OF HEALTH MEMO 266/T.

Treatment Allowances—During the year, 383 patients were in receipt of treatment allowances. 206 of these were new patients. The amount of money paid out was £10,794 9s. 7d.

33 patients were transferred from treatment allowances to the W. Scheme (Public Assistance Account) and £4,177 13s. 5d. was paid out through that scheme.

No action was taken under the Public Health Act of 1936 with regard to the compulsory removal of patients to hospital or patients handling milk.

Yours faithfully,

C. VERITY,

Tuberculosis Medical Officer.

Tuberculosis Dispensary,
91, *New Bridge Street,*
Newcastle upon Tyne, 1,
25th August, 1948.

BARRASFORD SANATORIUM.

Report of the Medical Superintendent.

To the Medical Officer of Health.

Sir,

I beg to submit a report on the work at Barrasford Sanatorium during the year 1947.

General.—The number of beds available remained at 95. Gateshead and West Hartlepool retained their 5 and 3 beds respectively, all reserved for male cases. There was pressure on the beds for female cases, all of which were occupied fully during the year. Male cases were admitted within a week of the receipt of the application forms.

The rooms damaged severely by fire in 1946 were restored and re-occupied by patients in July, 1947. This helped to reduce the list of female cases awaiting admission.

In 1946 shortage of domestic staff threatened the continued working of the Institution, but the introduction of European Volunteer Workers saved the situation and in 1947 the domestic staff has been adequate in numbers.

The domestic staff crisis of 1946 was followed by a nursing staff crisis in 1947, which was surmounted only by the employment of suitable patients in the capacities of, what for the sake of a better term, are known here as nursing orderlies. These are mostly chosen from cases of minimal disease, sent for observation, pleurisy patients and those approaching the end of an adequate period of effective treatment. These orderlies are all volunteers and are females. They do no nursing duties, but relieve the nursing staff from duties performed normally by nurses, but require domestic accomplishments rather than clinical. They work 24 hours a week and have one complete day off a week, but continue to be regarded as patients. They receive pocket money. The plan has worked satisfactorily during the whole of 1947, and without it, it would have been necessary to reduce the number ofpatients admitted.

The sanatorium patients continue to be indebted to the British Red Cross Society for welfare work amongst them. Though not falling within the year under review, it is appropriate to record now,

the gift to the patients in March, 1948, of a magnificent radiogram by the Society. It was presented by Miss Williamson, the Red Cross Society's County Director.

November, 1947, saw the resignation of Miss A. D. Turner from her post as senior clerk at the Sanatorium. She joined the staff in 1923 and having reached the age limit she retired in good health to enjoy what is hoped will be a long period without the cares and anxieties of an administrative life. Although they have grown enormously with the passing of time Miss Turner never failed to surmount the successive difficulties of the office. She was wished God Speed on November 27th, 1947, at a function attended by the Medical Officer of Health.

Mr. G. H. Jackson was appointed as non-resident male clerk and commenced duty in December, 1947. Miss J. Macdonald and Miss L. Baglee joined the office staff during the year.

A considerable amount of interior painting was completed during the year.

The future requirements of outstanding importance are, for the patients, the provision of greatly increased facilities for chest surgery (more particularly the division of adhesions and phrenic nerve crushing), and for the staff, the enlarging and brightening of the domestic staff dining room.

X-Ray Plant.—549 films of the chest were completed during the year, and the interpretations recorded in the patients' notes. In the same period 1,441 examinations by radioscopy were made in connection with the lung collapse work. The number of both films and screening examinations show an increase on those of 1946, which themselves were higher than in any previous year.

The X-Ray plant was installed in July, 1937. A single valve set, it produces films which do not conform to the standards of the present day and it is satisfactory to know that a proposal to replace it has been supported and passed.

During the year 4 cases were admitted following examinations of groups of people by the Mass Radiography Unit in Newcastle. 3 of these had active disease (2 of them tubercle bacilli in the sputum), whilst the fourth had limited old standing quiescent trouble.

Dental Clinic.—The dental work continued in the hands of Mr. G. Hutchinson, L.D.S., who attended a clinic each fortnight.

During the year the following work was completed :—

Extractions	95
Fillings	65
Scalings and Cleanings	45
Dressings	42
Examinations	16

Attendances — 248

Occupational Therapy.—Handicrafts are under the charge of a whole-time instructor (Mr. J. A. Caughey). The full number of attendances was 3,763.

During 1947 handicraft materials have been less scarce and there has been some improvement in the scope of the work, and therefore in the interest of the patients. There is no question that occupational therapy is a very valuable phase of treatment.

Men patients were employed in general work on the estate under the care of the joiner (Mr. M. Trueman), whilst others assisted the gardener (Mr. J. Henderson) in the general maintenance of the garden.

Admissions.—The total number of cases admitted to the Sanatorium during the year was 200, 55 less than in the previous year. The number of Newcastle admissions was 179, as against 225 in 1946. Gateshead Corporation had 14 and West Hartlepool 7 cases.

Of the 200 admitted, 32 had been in the Sanatorium previously, as follows :—

1	of the re-admitted	cases	was	first	admitted	in 1936.
2	,,	,,	were	,,	,,	1941.
1	,,	,,	was	,,	,,	1942.
5	,,	,,	were	,,	,,	1943.
10	,,	,,	,,	,,	,,	1944.
8	,,	,,	,,	,,	,,	1945.
5	,,	,,	,,	,,	,,	1946.

ADMISSIONS TO THE SANATORIUM DURING 1947.

Authority.	Male.	Female.	Total.
Newcastle Corporation	81	98	179
Gateshead Corporation	14	..	14
West Hartlepool Corporation	7	..	7
During 1947	102	98	200
During 1946	137	118	255
During 1945	139	113	252
During 1944	176	115	291
During 1943	168	105	273
During 1942	149	80	229
During 1941	149	75	224
During 1940	146	74	220
During 1939	126	79	205
During 1938	141	76	217
During 1937	145	79	224
During 1936	130	62	192
During 1935	123	72	195
During 1934	104	54	158
During 1933	108	51	159
During 1932	114	54	168
During 1931	125	60	185
During 1930	121	65	186
During 1929	124	54	178

NOTE.—Figures relating to the years 1921-1928 are given in the report for 1928.

Discharges.—There were 179 discharges during 1947, as compared with 264 during 1946. There were no deaths in the Sanatorium during 1947.

DISCHARGES FROM THE SANATORIUM DURING 1947.

Authority.	Male.	Female.	Total.
Newcastle Corporation	65	93	158
Gateshead Corporation	14	..	14
West Hartlepool Corporation	7	..	7
During 1947	86	93	179
During 1946	143	121	264
During 1945	156	111	267
During 1944	173	111	284
During 1943	157	104	261
During 1942	165	78	243
During 1941	151	78	229
During 1940	144	73	217
During 1939	113	77	190
During 1938	152	77	229
During 1937	145	71	216
During 1936	124	66	190
During 1935	137	68	205
During 1934	97	47	144
During 1933	108	57	165
During 1932	111	60	171
During 1931	124	60	184
During 1930	131	59	190
During 1929	115	54	169

NOTE.—Figures relating to the years 1921 to 1928 are given in the report for 1928.

SUMMARY OF MOVEMENTS OF PATIENTS DURING 1947.

	In residence night of Dec. 31st, 1946.	Admitted during 1947.	Discharged during 1947.	In residence night of Dec. 31st, 1947.
Newcastle Corporation	58	179	158	79
Gateshead Corporation	5	14	14	5
West Hartlepool Corporation	3	7	7	3
	66	200	179	87

Details in connection with Discharged Cases.

The particulars of patients and results of their treatment which are set out later are based on the completed cases discharged. Of these 179, 9 exhibited no definite signs or symptoms of clinical tuberculosis and were discharged as soon as this fact was established reasonably and are excluded from the particulars and results of treatment which follow. The details (c to f) are therefore based on the **170 cases** which were regarded as definitely tuberculous.

(a) Length of stay—

The average duration of stay of all cases was 143·4 days.
Excluding the 9 non-tuberculous cases, 147·5 days.
The 158 Newcastle cases alone averaged 142·2 days.
The longest stay was 295 days.
The shortest stay was 5 days.

(b) Beds occupied and patient days—

Average number of beds occupied, 82, 41 by males and 41 by females.
Total number of patient days was 29,836 ; 14,875 by males and 14,961 by females.

Below is given an analysis of the average number of beds occupied, and the number of patient days.

Authority.	Average Beds occupied daily.	Patient Days.
Newcastle Corporation	74·3	27,133
Gateshead Corporation	4·8	1,751
West Hartlepool Corporation	2·6	952

(c) Age—

Years.	Male.	Female.	Total.
14–16	3	5	8
16–20	11	29	40
20–25	18	25	43
25–30	15	13	28
30–35	12	8	20
35–40	9	5	14
40–45	3	3	6
45–50	3	1	4
50–55	6	1	7
TOTAL	80	90	170

(d) Social Status—

	Male.	Female.	Total.
Single	38	56	94
Married	40	33	73
Widowers	2	..	2
Widows	..	1	1
TOTAL	80	90	170

(e) Occupations of 80 Male Patients—

Engineering, metal and electrical workers	23
Clerks, insurance, draughtsmen and students	12
H.M. Forces	9
Transport workers	8
Labourers	6
Woodworkers	4
Building trade workers, including painters	3
Coal and coke workers	2
Storekeepers	2

and one each of the following: gasmeter tester, male nurse, first-aid attendant, P.O. telephonist, checker, barman, dental mechanic, clothing press fitter, slaughterer, textile worker, market gardener Total, 80.

(f) Occupations of 90 Female Patients—

Housewives	32
Factory workers	13
Clerks and typists	12
Shop assistants	9
Dressmakers	7
Machinists	4
Household duties	3
Women's Forces	2
No occupation	2

and one each of the following: S.R. nurse, school teacher, waitress, schoolgirl, pastry cook, troupe dancer. Total, 90.

Diagnosis.

The diagnosis of pulmonary tuberculosis was confirmed bacteriologically either before or during residence in 98 cases, 51 males and 47 females. 81 patients (39 males and 42 females) were apparently

without tubercle bacilli in the sputum. The clinical findings in all sputum negative cases can be divided as follows :—

Not suffering from clinical tuberculosis	9
Pleural tuberculosis without evidence of lung tuberculosis	25
Physical signs or X-ray evidence consistent with presence of lung tuberculosis	47

In the cases of the 47 patients in the last group, the radiographs showed appearances suggesting the presence of deposit in the lung situation for which tuberculosis shows a predilection.

1,081 sputum examinations were made at the Sanatorium during the year, and of these 361 were positive and 720 were negative.

909 complete physical examinations of the chest were made during the year and the larynx was examined in the presence of any suggestive signs.

During the year 9 cases were discharged as not suffering from tuberculosis and the diagnosis in these cases were as follows :—

Organic disease of the heart	2
Healed lung tuberculosis	1
Bronchial carcinoma	1
Pneumothorax simplex	1
Simple broncho-pneumonia	1
Bronchiectasis	1
No pathological condition detected	1
Diagnosis not established	1

Treatment.—Routine sanatorium treatment has been continued on the same basis as previously, where rest and food are regarded as of first importance, followed by exercise and fresh air conditions. The range of the bodily temperature gives most important information. A raised temperature, unless due to some other cause, is in a case of lung tuberculosis an expression of active disease and bed rest is imperative until it has been reduced. All cases in the Sanatorium at all times follow the rules of routine treatment. Special methods of securing physical rest or relaxation of lung tissue are necessary in many cases, and the most common method of securing this is by artificial pneumothorax or lung collapse.

55 of the discharged cases were considered suitable for treatment by lung collapse, but in 8 of them changes in the chest in the course of the disease prevented this treatment from being carried out.

Of the 47 cases treated by lung collapse, 20 were right-sided, 21 were left and 6 were bilateral.

The results at the time of discharge were as follows :—

T.B. + Improved and losing bacilli.	T.B. +Improved but not losing bacilli.	No improvement and abandoned.	T.B. Negative, Improved.
23	3	18	3

18 cases had an artificial pneumothorax induced before admission. 15 of these lost tubercle bacilli from the sputum and one was T.B. negative throughout.

Since 1922, 999 cases have been treated by lung collapse at Barrasford, exclusive of those where it was commenced before admission, which number 190 ; 1,189 cases in all.

Division of adhesions holding the lung was performed in 16 cases, and in 4 others thoracoscopy was performed, but the adhesions could not be divided.

Crushing of the phrenic nerve was done in 3 cases, and one patient was treated by thoracoplasty, and one by pneumoperitoneum.

Results of Treatment.—Most of the patients discharged were improved in general health, having normal temperatures, increased weight and feeling and looking in normal health. In cases with tubercle bacilli in the sputum however, the only real sign of material progress is the abolition of sputum, or the absence of bacilli, after repeated search, from any sputum that remains.

Of the 98 patients with tubercle bacilli present in the sputum, 46 appeared to lose their bacilli ; 38 of these were amongst the 62 T.B. + lung collapse cases, leaving only 8 to achieve this, of the 36 T.B. + cases, who were not so treated.

The rate of red blood cell sedimentation is of some value in assessing improvement. The number of estimations of the Erythrocyte Sedimentation Rate during the year was 661.

The following are the weight records of the 170 definite cases, and the 9 not suffering from clinical tuberculosis :—

		Gained up to 7 lbs.	Gained 7 to 14 lbs.	Gained over 14 lbs.	Remained stationary.	Lost up to 7 lbs.	Lost over 7 lbs.	Not weighed on discharge.	TOTAL
170 definite cases.	Gained weight ..	56	46	31	..	..	..	..	133
	Lost weight	..	..	..	..	26	7	..	33
	Stationary	..	..	..	4	..	..	..	4
	Not weighed on discharge	..	..	..	..	..	..	..	..
Total		56	46	31	4	26	7	..	170
9 non-tuberculous cases.	Gained weight ..	6	2	..	..	..	..	..	8
	Lost weight	..	..	..	..	1	..	..	1
	Stationary	..	..	..	..	..	..	..	..
	Not weighed on discharge	..	..	..	..	..	..	..	..
Total		6	2	..	..	1	..	..	9

Patients suffering from pulmonary tuberculosis are classified as follows :—

Class A—in which tubercle bacilli have never been discovered in any discharge, etc.

Class B—in which tubercle bacilli have been so demonstrated.

Both classes are sub-divided into 3 groups :—

Group 1—Cases with slight constitutional disturbances, with limited physical signs and X-ray appearances.

Group 3—Cases with profound systemic disturbance and marked impairment of function.

Group 2—All cases which cannot be placed in Groups 1 and 3.

To indicate results of treatment the following terms are laid down :—

"Quiescent."—Cases where the general condition is good, without evidence of toxæmia, in which tubercle have not been on stained films for a period of 3 months and where X-ray films show evidence of retrogression of the tuberculous disease.

"Arrested."—Cases which have been in a state of quiescence continuously for 2 years.

"Recovered."—Cases quiescent continuously for 5 years.

"Improved."—Cases short of quiescent.

"No material improvement."—All other living cases.

When considered in these terms the results of treatment of the 170 cases of lung or pleural tuberculosis can be set out as follows :—

Class A.—T.B. Minus.

		M.	F.	Total.
G.1.	Quiescent	11	20	31
	Improved	6	8	14
	No Material Improvement	—	—	—
G.2.	Quiescent	3	3	6
	Improved	9	11	20
	No Material Improvement	1	..	1
G.3.	Quiescent	..	..	..
	Improved	..	..	..
	No Material Improvement	..	..	..

Class B.—T.B. Plus.

		M.	F.	Total.
G.1	Quiescent	..	..	..
	Improved	..	1	1
	No Material Improvement	..	..	..
G.2	Quiescent	..	1	1
	Improved	34	29	63
	No Material Improvement	5	8	13
G.3	Quiescent	..	..	..
	Improved	..	6	6
	No Material Improvement	11	3	14
		80	90	170

The number of Class A cases which improved to the stage of quiescence is made up largely of the cases of pleural tuberculosis, which had no evidence of disease in the lung itself, and of the minimal cases.

The work of the Sanatorium could not have been sustained excepting for the loyalty and hard work of the reduced nursing staff, to whom the greatest praise is due, especially to the seniors upon whom an increased responsibility was laid. To them and to the whole of the staff grateful thanks are due.

As, so far as is known, this will be the last complete report of the Sanatorium's activities submitted to you, I should indeed be thoughtless and ungrateful if I did not ask you to convey to the

Health Committee my keen regret at the break which is to occur so soon between them and us at the Sanatorium; and to thank them for their unfailing consideration and ready help in all matters relating to the good of the Institution. Similarly our thanks to you and your staff for assistance at all times.

Yours faithfully,

C. G. R. Goodwin,

Medical Superintendent.

Barrasford Sanatorium,
Hexham,
Northumberland,
May 19th, 1948.

MASS RADIOGRAPHY UNIT

Annual Report, 1947.

Herewith I beg to submit a brief report on the work of the Mass Miniature Radiography Unit during 1947.

Rather less than half the year was spent in Newcastle ; during the remainder of the time the Unit visited Ashington, Blyth, Billingham and at the end of the year was at West Hartlepool. Details are shown in the following table :—

TOWN.	FROM.	TO.	NO. OF WEEKS.
Newcastle	1st January	17th April.....	15
Ashington	18th April.....	26th June	10
Blyth	27th June	21st August	8
Newcastle	22nd August	28th September ..	5
Billingham.....	29th September ..	18th December ...	12
West Hartlepool.	19th December ...	31st December ...	2
			(not completed)

Volunteers were obtained from factories of varying types and from collieries ; further public sessions were also held. The three largest groups of workers examined were at Messrs. Vickers-Armstrong Limited, Elswick and Scotswood (9,900), at Imperial Chemical Industries Limited, Billingham (7,900) and at the Ministry of National Insurance, Benton (1,700).

The total number of miniature films taken during the year shows a slight reduction due to the comparatively small number of school children examined ; there was actually an increase in the number of adult volunteers. This accounts aiso for the increase in the proportion of ' recalls ' from 4.7 per cent. in 1946 to 5.08 per cent., but the percentage is slightly smaller than in 1945 when it was 5.6.

In the following table, some details of the numbers of miniature and of large films taken and of the number of people referred to Dispensaries are given :—

	MINIATURES.		LARGE FILMS.		DISPENSARY.		%
TOWN.	Male.	Female.	Male.	Female.	Male.	Female.	
Newcastle	6,181	5,417	358	214	72	51	1.06
Ashington	2,774	868	176	18	18	5	0.63
Blyth	909	871	83	48	12	13	1.40
Billingham.....	7,735	3,015	381	133	60	14	0.68
W. Hartlepool..	1,222	1,071	65	50	13	13	1.13
Totals ..	18,821	11,242	1,063	463	175	96	0.90

In the subsequent notes, where figures are given the corresponding figures for 1946 will be inserted in brackets for comparative purposes. It should be noted that these figures do not include those relating to persons examined at the special ' Doctors' Clinic ' which is dealt with later in this Report.

The total number of volunteers was 30,063 (32,512) and of these 2,267 (6,841) were school children. 1,526 (1,538) were asked to return for a large film. i.e., 5.08 per cent. (4.7) and of these 271 (358) or 0.9 per cent. (1.1) were regarded as tuberculous or so suspicious as to require further investigation, and the report to their own doctor included a recommendation that they should be referred to the local Chest Clinic. Reports received from Tuberculosis Officers show that at least 185 (246) of these 271 (358) did attend a Dispensary and after further clinical investigation 61 (81) were considered to be suffering from clinical tuberculosis.

After observation, the lesions in 85 (43) instances were regarded as healed or inactive and 73 (151) individuals were under observation at the end of the year.

Of the 61 (81) persons finally diagnosed as suffering from active disease 41 (64) had either been admitted to institutions or were awaiting admission at the end of the year and in 26 instances the diagnosis had been confirmed by the finding of tubercle bacilli in their sputum.

The number of persons who failed to report at a Dispensary after a recommendation to this effect had been made has caused some disquiet, but energetic measures are being taken to overcome this ' wastage.'

As in previous years the response varied considerably from group to group as did also the quality of the organisation of the local programmes and propaganda.

At Ashington, premises were provided by the National Coal Board ; colliery workers were examined including some research films

taken for the Board, and afterwards public sessions were held. The response was not as good as expected, some of the miners being suspicious of the purpose of our visit.

At Blyth, the premises were good, but the response poor, and the only industrial concern of any size in the district would not allow workers to attend during working hours.

At Billingham, premises were provided by Imperial Chemical Industries Limited for the X-raying of their own workers and also for groups from local firms and for public sessions. The premises were small, but the programme was exceptionally well organised by an I.C.I. official, and in addition the co-operation of Dr. Benham, the local Medical Officer of Health, contributed largely to the success of the public sessions.

At West Hartlepool the survey had only just started at the end of the year.

As usual, when the Unit was operating in Newcastle at the General Hospital, facilities were made available to local doctors for the X-ray examination of any of their patients. Ten special evening sessions were held which were attended by 348 patients (157 men and 191 women); 54 patients were recalled for large films and 25 cases or 7.1 per cent. were referred to the Dispensary—this contrasts forcibly with the percentage of 0.90 for the routine work. There is a strong disinclination among the general public to attend a Tuberculosis Dispensary unless definite evidence of disease has been found, and it is now firmly established that this special clinic is a most fruitful source of new cases.

The remarks in my last year's report concerning the lack of mobility of the present apparatus and the necessity for more intensive propaganda have been confirmed by this year's experience, and indeed strengthened in that a shorter working week has made employers more reluctant to allow their workpeople time off during working hours and that in sc far as the general public is concerned, mass radiography has no longer the attraction of novelty. It is strongly recommended

that the static unit be housed in one of the new Health Centres, where a permanent staff can be maintained ; also that a mobile unit be provided to visit small factories and other centres—the exposed films could be processed and read at the base.

Another satisfactory year's work has been concluded, and I have great pleasure in acknowledging my appreciation of the valuable assistance rendered by a diligent and enthusiastic staff.

Yours faithfully,

W. H. Dickinson,

Medical Director.

REPORTS OF THE
MEDICAL SUPERINTENDENT
NEWCASTLE GENERAL HOSPITAL

MEDICAL SUPERINTENDENT
SHOTLEY BRIDGE HOSPITAL

CLINICAL MEDICAL OFFICER
JOINT COMMITTEE'S CLINIC

MEDICAL OFFICER IN CHARGE
SPECIAL SKIN CLINIC

V—GENERAL DISEASES HOME AND HOSPITAL

DOMICILIARY MEDICAL SERVICES

NEWCASTLE GENERAL HOSPITAL

SHOTLEY BRIDGE HOSPITAL
JOINT COMMITTEE'S CLINIC
SPECIAL SKIN CLINIC

DOMICILIARY MEDICAL SERVICES.

This work was originally carried on by District Medical Officers, each of whom was in charge of a specified district in the City, and gave both medical attendance and medicines. These officers were remunerated by the payment of a salary and bonus.

By resolution of the City Council dated 20th September, 1933, an "open choice" method for the provision of Domiciliary Medical Services was introduced into six of the Medical Relief Districts as from 8th November, 1933.

In each of the years 1934, 1936 and 1942 a further district was included in the scheme, and the nine districts are now designated the Joint Medical Relief District.

There remains therefore only one medical relief district in which the old method of operation still continues.

Domiciliary Medical Services in the Joint Medical Relief District are given by a panel of medical practitioners who have contracted with the City Council to provide the required services. Medicines, etc., for patients in the area of the Joint Medical Relief District are supplied from two municipal dispensaries which have been established at the Newcastle General Hospital and the Newcastle Dispensary, New Bridge Street.

The following table gives particulars of the work carried out during 1947 of the remaining District Medical Officer whose area is not included in the Joint Medical Relief District.

District Medical Officer.	Number of Cases Treated.	Attend-ances by the M.O. at the Homes of the Patients.	Attend-ances by the Patients at the M.O.'s Surgery.
Dr. T. J. Ryan	670	1,379	898

NEWCASTLE GENERAL HOSPITAL.

To the Medical Officer of Health.

Dear Sir,

I have pleasure in enclosing my annual report for 1947.

The total number of patients treated in hospital was 14,011, an increase of 74 over the previous year.

In May, 1947, Close House Convalescent Home, Wylam-on-Tyne, was closed down and the Preliminary Training School for Nurses was sent there. This was necessary because a large house "Teresa," Grainger Park Road, Newcastle upon Tyne, had to be restored to its owner. As a result the accommodation for nurses became less, and Close House was the only available place for the Preliminary Training School.

Close House Preliminary Training School accommodates 30 Nurse Trainees, a Sister Tutor, a Resident Housekeeping Sister and Domestic Staff. As a training school it has left nothing to be desired but, from the administrative point of view, it has presented many difficulties because of its isolation, and special transport has had to be arranged both for Trainees and Staff. It is obvious that in the near future further Preliminary Training School accommodation will be needed nearer to the hospital.

The Nurses' Home is fully occupied but only houses about 200 nurses. In order to provide more bedrooms, eleven houses have been bought during the past few years. These are all situated in Grainger Park Road or Wingrove Road and are near to the hospital, but the time is rapidly approaching when a new Nurses' Home will have to be built. A site is available and a preliminary plan which requires considerable modification has been drawn. To relieve the present congestion in the Dining Rooms a new temporary Dining Room Block is now being built. It will seat 148 nurses and 32 maids, but this is only an interim measure and the new Nurses' Home should be proceeded with in the near future.

It had been expected that a New Maternity Department would have been commenced during the year. The plans for this were fully approved by the Ministry and a tender was accepted but the work has not commenced.

The temporary Out-patient Department opened in 1946, and, formed by simple alterations to an old ward, is now working to capacity during each week. As increasing demands are being made for more out-patient clinics, a new Out-patient Department should be provided in the near future.

Plans have been drawn during the year for the improvement and enlargement of the X-ray Department and the Steward's Offices, both of which are very overcrowded. It is hoped in the near future to proceed with some of these improvements.

The central Kitchen, which caters for all the hospital patients and the Canteen, is too small, and is quite full of equipment. The Store which is adjacent is also inadequate and the Hospital Committee should give early attention to providing a larger Kitchen, Special Diet Kitchen and a new Store.

There is need also for a Lecture Hall with adjacent rooms in which clinical lectures and demonstrations can be given both to doctors and nurses, and in which other meetings could be held. At the present time demonstrations and meetings and post graduate teaching in the hospital are handicapped by the lack of such amenities.

When the new Maternity Department is built the present Neurosurgical Theatre becomes incorporated in its structure and will be altered into a waiting room. Provision will therefore have to be made for a new operating theatre or preferably two theatres for the Neurosurgical Department. Plans have been drawn for these. They should now be considered in detail. At the same time consideration should be given to the provision of a new Neurosurgical Block. This was planned in outline in 1938. The present Neurosurgical Unit is occupying two medical wards and a whole floor of the Children's Block. The work of this Unit has grown and is so important that it should be gathered together into one building.

There is also need within the Hospital grounds for a large building containing many rooms which would house medical, surgical and administrative records and X-ray films. No store rooms are available for these, and use has to be made of basements and other undesirable places to keep them. In some instances valuable records have been destroyed because of complete lack of space.

There are other items in the hospital which require the urgent attention of the Committee such as the provision of better sluice, lavatory and bathroom accommodation in the medical wards so that these wards may be brought up to date.

The War has left a number of problems. One, the entire absence of a suitable railing round the front of the hospital and utterly inadequate Lodges at both entrances and exit gates. The results of these deficiencies are that undesirable persons occasionally get into the Hospital grounds after dark, and that there is evidence of a considerable amount of stealing of hospital property which cannot be controlled with the present scant supervision of the gates.

It is recognised that in making these observations that the full scheme for completing the hospital has not by any means been properly outlined. The time has come when a complete plan should be drawn up for this purpose. Such a plan was prepared by the Health Committee in 1938, but the War prevented its completion, and unforeseen changes have since taken place which means that a new plan will now have to be drawn up in conjunction with the Regional Planning of the Newcastle upon Tyne Regional Hospital Board.

In conclusion I would like to emphasise that the hospital has had a busy and not unsuccessful year in 1947, and has treated a large number of patients. Its special departments have catered for patients not only from the City but also from other towns and districts in the country and in one or two instances from foreign lands.

I wish to thank the Health Committee, the Medical Officer of Health and members of the Hospital Staff, both medical and lay, for their help and co-operation.

Yours sincerely,

G. HURRELL,

Medical Superintendent.

2nd July, 1948.

ADMISSIONS AND DISCHARGES, ETC., FOR THE YEAR ENDED 31ST DECEMBER, 1947.

Admissions		14,011
Discharges		14,015
Made up as follows—		
Males	3,967	
Females	6,483	
Children	3,565	
	14,015	

AGE GROUPS, 1947.

	Male.	*Female.*	*Total.*
Under 1 year	421	249	670
1—1-11 months	117	100	217
2—2-11 months	71	55	126
3—4-11 months	129	88	217
5—15	444	329	773
15—25	434	1,272	1,706
25—45	1,227	3,164	4,391
45—65	1,422	1,454	2,876
Over 65 years	932	633	1,565
Babies born in hospital	752	722	1,474
	5,949	8,066	14,015

OPERATIONS

FOR YEAR ENDED 31ST DECEMBER, 1947.

Abdominal	1,091
Gynæcological and Obstetrical	1,538
Orthopædic	1,271
Throat, Nose, and Ear	194
Blood Vessels	245
Genito-Urinary	768
Rectum	106
Dental—General and Local	254
Skin and Subcutaneous Tissues	1,219
Examinations and Aspirations	148
Gastroscopy	59
Laparoscopy	6
Peritonoscopy	1
Meningocele	1
Brain and Special Cases	949
	7,850

Major Operations	3,260
Minor Operations	4,336
Dental Operations	254
	7,850

CHARGEABLE CASES FOR YEAR ENDED 31st DECEMBER, 1947.

Authority—	*Admissions.*	*Discharges.*	*Deaths.*
Cumberland P.H.C.	12	9	1
Durham P.H.C.	325	297	24
Durham P.A.C.	24	24	–
Darlington P.H.C.	27	20	6
Darlington Memorial Hospital	5	5	–
Gateshead P.H.C.	76	66	12
Gateshead C.B.C.	1	1	–
Gosforth U.D.C.	1	1	–
Carlisle P.H.C.	1	1	–
Leeds P.A.C.	1	1	–
Middlesbrough P.H.C.	36	35	1
Middlesbrough General Hospital	2	2	–
Middlesbrough P.A.C.	1	2	–
Middlesex P.A.C.	1	1	–
Mental Deficiency Committee	1	1	–
Northumberland P.H.C.	387	320	33
North Riding of Yorks. P.H.C.	38	31	3
North Riding of Yorks. Education Committee	1	1	–
Newburn U.D.C., P.H.C.	9	9	–
Northumberland Maternity and Child Welfare	3	3	–
Northumberland Education Committee	1	2	–
Northumberland County Council	–	1	–
Norfolk P.A.C.	1	1	–
Prudhoe Hall Colony	6	5	–
South Shields P.H.C.	43	37	1
Sunderland P.H.C.	6	7	–
Tynemouth P.A.C.	23	14	6
Tynemouth P.H.C.	2	2	–
West Hartlepool P.H.C.	11	10	2
West Hartlepool P.A.C.	3	3	–
Wallsend Maternity and Child Welfare	1	1	–
Wallsend P.H.C.	4	4	–
West Riding P.H.C.	1	1	–
Royal Victoria Infirmary Transfers	63	73	
Whitton Tower, Rothbury	128	144	
Paying Patients admitted to Ordinary Wards	515		
Total Number of Deaths			1,032
Number of Inquests held			110

PRIVATE PATIENT'S SECTION.

1st January to 31st December, 1947.

Total Number of Admissions 408

	Males.	*Females.*	*Totals.*
C.1–2	112	244	356
A.3	5	15	20
B.3–4	5	2	7
C.3–4	2	5	7
D. Block	13	–	13
Quarantine	1	1	2
Infants	–	3	3
	138	270	408

Newcastle Residents	251	
Non-Newcastle Residents	157	
Under £420 per annum	239	
Over £420 per annum	169	
Average length of stay in hospital	15 days.	
Amount received for maintenance	£5,577 16	9
Amount received for Medical Services ..	£3,665 14	6
	£9,243 11	3

Of the 408 cases admitted, 245 were surgical and 163 medical.
Operations were performed on 211 patients.

CLASSIFIED LIST OF DISEASES TREATED. 1947.

INFECTIOUS DISEASES.

		Male.	*Female.*	*Children.*
1.	Measles (includes Rubella)	1	1	4
2.	Whooping Cough	..	..	10
3.	Diphtheria	..	..	..
4.	Scarlet Fever	..	1	1
5.	Erysipelas	..	..	2
6.	Influenza	2	6	1
7.	Cerebro-spinal Fever	2	2	9
8.	Enteric Fever	..	..	1
9.	Dysentery	5	1	1
10.	Non-specific gastro-enteritis	5	12	84

TUBERCULOSIS.

11.	Tuberculosis of respiratory system	27	25	53
12.	,, ,, peritoneum and intestines	..	6	5
13.	,, ,, osseous system	9	3	7
14.	,, ,, genito-urinary system	16	17	1
15.	,, ,, nervous system	3	5	9
16.	Other forms of tuberculosis—glands, etc.	7	4	15

NEW GROWTHS.

17.	Malignant disease of alimentary system	100	90	..
18.	,, ,, respiratory system	41	7	..
19.	,, ,, female genital organs	..	47	..
20.	,, ,, male genito urinary and female urinary system	110	6	2
21.	Other forms of malignant disease, *e.g.*, breast, glands, bones, secondary deposits of undetermined primary focus	30	69	4
22.	Primary brain tumours	48	52	8
23.	Simple tumours	68	71	7

METABOLIC DISORDERS.

24.	Diabetes	39	110	4
25.	Other endocrine diseases	5	57	..
26.	Vitamin deficiencies	1	1	1

RHEUMATISM.

27.	Acute articular rheumatic fever	3	3	10
28.	Acute rheumatic carditis	3	4	6
29.	Chorea	..	1	12
30.	Chronic rheumatic heart disease	25	59	..
31.	Chronic myalgia and neuritis	2	5	..
32.	Chronic joint manifestations, includes rheumatoid arthritis, osteo-arthritis, etc.	13	35	1

CIRCULATORY SYSTEM.

		Male.	*Female.*	*Children.*
33.	Chronic heart disease (other than rheumatic) ..	48	20	..
34.	Coronary Artery disease, includes angina pectoris	32	25	..
35.	Hypertension with or without myocarditis or arterio sclerosis	79	65	..
36.	Cerebral vascular accidents (other than due to nephritis)	89	74	1
37.	Other disorders of the heart—Arrhythmias congenital malformation, etc.	14	16	2
38.	Arterial affections (other than 34 and 35) includes aneurysm	67	29	..
39.	Venous affections, includes varicocele	23	71	1
40.	Hæmorrhoids	46	25	..

BLOOD SYSTEM.

41.	Hæmorrhagic conditions	..	3	9
42.	Pernicious anæmia	10	12	..
43.	Iron deficiency anæmias, includes secondary anæmias	4	27	6
44.	Hæmolytic anæmias	6	7	6
45.	Leukæmias	12	4	1

RESPIRATORY SYSTEM.

46.	Bronchitis, asthmas and emphysema	55	55	39
47.	Pneumonia	82	74	78
48.	Empyema	5	4	6
49.	Bronchiectasis	8	5	9
50.	Other lung conditions.....	27	15	16

ALIMENTARY SYSTEM.

51.	Peptic ulcer and sequelæ	313	128	6
52.	Colitis, ulcerative and mucous, cœliac disease .	3	12	3
53.	Appendicitis	83	122	60
54.	Hernia.....	142	72	48
55.	Intussusception, volvulus and obstruction	8	6	33
56.	Cirrhosis, liver atrophy, catarrhal jaundice	17	14	3
57.	Biliary conditions	20	71	..
58.	Pancreatic diseases	..	3	..
59.	Peritonitis of unspecified origin	..	3	1
60.	Other conditions	53	63	58

GENITO-URINARY SYSTEM.

61.	Nephritis—all forms	8	24	10
62.	Urinary calculi	18	12	..
63.	Pyelitis, pyelonephritis, cystitis	31	48	7
64.	Enlarged prostate	274	..	..
65.	Stricture and sequelæ	27	1	..
66.	Other conditions, phimosis, hydrocele, hæmaturia of unknown origin	102	24	37

NERVOUS SYSTEM.

67.	Locomotor ataxia, G.P.I. and other specifics ..	10	7	..
68.	Epilepsy	56	34	32
69.	Psychoses, suicides, functional nervous disorders, etc.	203	254	16
70.	Cord and nerve lesions, post encephalitis, myopathies	236	168	26

		Male.	*Female.*	*Children.*
	TEETH.			
71.	Dental Cases	22	42	16
	BONE AND JOINT CONDITIONS.			
72.	Acute arthritis and osteomyelitis	19	9	15
73.	Other bone and joint affections	10	13	13
74.	Orthopædic deformities, cartilage affections, etc.	35	32	9
75.	Accidents—fractures	128	140	92
76.	Accidents—Lacerations and general injuries	134	67	114
77.	Accidents—Dislocations	7	6	3
78.	Accidents—Burns	10	13	34
	CHILDBIRTH AND ASSOCIATED CONDITIONS.			
79.	Normal childbirth	..	1,407	1,331
80.	Toxæmias	..	83	..
81.	Accidents (including threatened abortion)	..	253	..
82.	Abortion and miscarriage	..	237	..
83.	Puerperal Sepsis	..	..	..
84.	Gynæcological conditions	..	854	6
	CONDITIONS OF THE NEW BORN.			
85.	Congenital malformations (including lips and palates), etc.	..	1	78
86.	Birth injury and prematurity	..	..	198
87.	Neonatal sepsis	..	..	7
88.	Pyloric stenosis	..	..	92
89.	Feeding difficulties and dyspepsias	..	..	53
	SEPTIC CONDITIONS.			
90.	Abscess and cellulitis, lymphadenitis and lymphangitis, etc.	162	183	167
	SKIN CONDITIONS.			
91.	Dermatoses, including impetigo, scabies, etc.	14	23	45
	THROAT, NOSE AND EAR CONDITIONS.			
92.	Enlarged tonsils and adenoids	..	2	51
93.	Nasal sinus affections	10	16	7
94.	Middle ear and mastoid conditions	12	14	37
95.	Tonsillitis, catarrhal colds and faucial inflammations, laryngitis, etc.	23	64	33
	EYE CONDITIONS.			
96.	Injury and foreign body	1	..	..
97.	Conjunctival and Corneal inflammations	3	2	3
98.	Cataract	..	..	..
99.	Accessory structures—Strabismus	..	..	..
100.	Other eye conditions	2	2	..
	VENEREAL DISEASE.			
101.	Gonorrhœa	17	5	8
102.	Syphilis	123	126	12
103.	Other conditions	19	..	..
	UNCLASSIFIED.			
104.	Senility	22	18	..
105.	For investigation, undiagnosed and not included in previous groups	418	574	300
106.	Highfield children	..	..	69

PHYSIOTHERAPY DEPARTMENT.

Newcastle General Hospital.

Total Number of Patients	3,299
,, ,, New Patients	1,356
,, ,, Treatments	20,016

Maternity and Gynæcological Department. Newcastle General Hospital.

Total Number of Patients	2,950
,, ,, New Patients	1,794
,, ,, Treatments	9,414

Sunlight Department. Newcastle General Hospital.

Total Number of Hospital and Out-patients	92
,, ,, Maternity and Child Welfare	28
,, ,, Patients	120
,, ,, Hospital and Out-patient Treatments	962
,, ,, Maternity and Child Welfare Treatments	257
,, ,, Treatments	1,219

Byker Sun-Ray Clinic.

Maternity and Child Welfare—Number of Patients	43
Number of Out-patients	140
Number of Maternity and Child Welfare Treatments	531
Number of Out-patient Treatments	2,625
Total Number of Patients	183
Total Number of Treatments	3,156

City Hospital for Infectious Diseases.

10 Patients treated.

Summary of Treatments.

Total Number of New Patients treated by Physio-therapy Staff—Newcastle General Hospital	3,453
Total Number of Treatments by Physio-therapy Staff—Newcastle General Hospital	33,805

DEEP X-RAY DEPARTMENT.

REPORT—1st January—31st December, 1947.

New Patients Seen	242
Malignant Cases Seen	133
Malignant Cases Treated	112
Benign Patients Seen	109
Out-patients Seen	675

C. L. J. Thurgar,
Director of the North of England Cancer Organisation.

RADIOLOGICAL DEPARTMENT.

There has been a steady increase in all types of cases referred for investigation. A high proportion of the examinations require a considerable expenditure of time. Until more accommodation and equipment is available it will not be possible to meet urgent and legitimate requests for examination as quickly as is desirable.

I take this opportunity to thank my colleagues Dr. T. R. Harlan and Dr. S. Josephs, and the lay staff under Mr. Palmer for their co-operation in carrying out the various departmental activities.

Record of Radiological examinations during 1947 as compared with 1946

	1946		1947	
(1) Abdomen—				
Straight examinations	218		192	
Cholecystography	147		113	
Barium Meals	754		887	
Barium enema	173		213	
		1,292		1,405
(2) Bones—				
Bones of extremities	3,859		3,955	
Spine and Sacro-iliac Joints	899		953	
Pelvis	246		226	
Myelography	13		13	
		5,017		5,147
(3) Chest—				
General examinations	4,193		4,494	
Tomography	42		46	
Bronchography	2		15	
		4,237		4,555

(4) HEAD—				
Skull—General	1,250		1,497	
Sinuses and Mastoids	118		150	
Ventriculography	63		75	
Encephalography	169		194	
Angiography	5		4	
Arteriography	–		1	
		1,605		1,921
(5) GENITO-URINARY—				
Kidneys, Ureters and Bladder	561		590	
Pyelography—Intravenous	378		498	
Pyelography—Retrograde	77		67	
Cystogram	4		7	
		1,020		1,162
(6) OBSTETRICS AND GYNÆCOLOGY—				
Examination for Pregnancy	263		312	
Salpinogography	71		49	
		334		361
Total Examinations	(1946)	13,505	(1947)	14,551

NUMBER OF PATIENTS EXAMINED.

Hospital Cases	(1946)	12,729	(1947)	13,612
T.B. Disp. and M. & C.W.	(1946)	4,035	(1947)	3,862
Total Number of Patients examined.	(1946)	16,764	(1947)	17,474

NUMBER OF FILMS USED.

Hospital Cases	(1946)	28,282	(1947)	30,939
T.B. Disp. and M. & C.W.	(1946)	4,219	(1947)	3,913
	(1946)	32,501	(1947)	34,852

WHATELY DAVIDSON,

Consultant Radiologist.

NEURO-SURGICAL UNIT.

Total Admissions for year (including Neuro-surgical Cases admitted to Children's Wards)			1,205
Deaths			132 *i.e* 11·0%
Operations	Major	568	
	Minor	345	
			913

TUMOURS AND DISEASES OF THE BRAIN.

1.	Tumours (verified)—		
	Mixed Gliomas	51	
	Pituitary (Rathke's Pouch 1, Chromophobe Adenoma 6)	7	
	Meningiomas	12	
	Acoustic Neuromas	5	
	Tuberculomas	5	
	Angiomas	1	
	Pinealoma	1	
			82
	Tumours (unverified)		40
2.	Essential Hypertension		19
3.	Abscess		29
4.	Aneurysm—		
	Carotid	12	
	Cirsoid	1	
	Subarachnoid hæmorrhage due to rupture of Aneurysm	3	
			16
5.	Encephalitis		10
6.	Degenerative Encephalopathy		17
7.	Thrombosis		14
8.	Epilepsy		90
9.	Cortical Atrophy, with Epilepsy		16
10.	Post-Traumatic Epilepsy		7
11.	Migraine		21
12.	Meningitis		12
13.	Hydrocephalus		5
14.	Psychoses		56
15.	Hysteria		9
16.	Optic Nerve Lesions		10
17.	Headaches (various)		12
18.	Mental Deficiency		5
19.	Child Delinquent		1
20.	Arachnoiditis		2

INJURIES OF THE BRAIN AND OF THE SKULL.

1.	Penetrating Wounds of the Brain		5
2.	Fractures of the Skull—		
	With Concussion	56	
	With Subarachnoid Hæmorrhage	2	
			58
3.	Concussion—		
	Closed Injury	44	
	With laceration of Scalp	14	
	With Subarachnoid Hæmorrhage	13	
			71

Injuries of the Brain and of the Skull—*continued.*

4.	Post-Concussional Syndromes		13
5.	Lacerations of Scalp and/or Face		7
6.	Massive Hæmorrhages—		
	Extra-dural	8	
	Sub-dural	32	
	Intra-cerebral	7	
			47
7.	Skull Defects		26
8.	Traumatic Paralyses		1

TUMOURS, DISEASES AND INJURIES OF THE SPINAL CORD.

1.	Tumours	16
2.	Abscesses	1
3.	Meningo-Myelitis	6
4.	Disseminated Sclerosis	25
5.	Meningocele	15
6.	Fractures of Spine	3
7.	Osteoarthritis	11
8.	Fibrositis	4
9.	Spondylitis	2
10.	Spondylolisthesis	3
11.	Degenerative Lesions of Cord	19
12.	Gunshot Wounds of Spine	1
13.	Thrombosis of the Spinal Cord	1
14.	Tabes Dorsalis	1
15.	Arachnoiditis	4

TUMOURS AND DISEASES OF SKULL AND/OR SCALP.

1.	Osteomyelitis	8
2.	Skull Tumours (Osteoclastomal)	1
3.	Scalp Tumours	2
4.	Exophthalmos	9
5	Menieres Disease	14
6.	Mobile Spasm	9
7.	Orbital Lesions	1

LESIONS OF PERIPHERAL NERVES.

1.	Trigeminal Neuralgia	43
2.	Sciatica	189
3.	Neuritis due to Carcinoma of Cervix	14
4.	Neuritis due to Carcinoma (various)	28
5.	Neuritis (various)	9
6.	Brachial Plexus Injury or Lesions	15
7.	Burger's Disease	1
8.	Raynaud's Disease	5
9.	Perthe's Disease	1
10.	Freidreich's Ataxia	1
11.	Post Herpetic Neuralgia	7
12.	Syringomyelia	1
	Pituitary Dysfunction	1
	Muscular Dystrophy	6
	Unclassified	27
	TOTAL	1,205

G. F. ROWBOTHAM, *Surgeon-in-charge,*
Department of Neurosurgery.

DENTAL DEPARTMENT.

Total number of Inspections	1,051
Total number of Extractions under G.A.	1,675
Total number of Extractions under L.A.	63
Number of Patients X-rayed	90
Number of X-ray Films	246
Dressings	39
Fillings	40
Zinc Oxide Packs	10
Scaling and Cleaning	6
Number of Patients to have Methylene Blue Treatment	3
,, ,, ,, Chronic Acid Treatment	28
,, ,, ,, Silver Nitrate Treatment	3
Curettage under L.A.	3
,, ,, G.A.	10
Removal of Radicular Cysts under G.A.	4
,, ,, ,, L.A.	1
,, Granulomas under G.A.	6
,, Granulations and Curettage under G.A.	1
Complete Alveolarectomy	1
External Incisions of Alveolar Abscess under G.A.	8
,, ,, ,, ,, ,, L.A.	1
External and Internal Incision of Sub-mandibular Abscess under G.A.	1
Removal of Papilloma of Tongue	1
Surgical Extraction of a piece of bone under L.A.	1
,, ,, ,, Retained Root under L.A.	1
,, ,, ,, Horizontally impacted 5 under L.A.	1
Surgical Extractions under G.A., including 15 impacted and/or Unerupted 3rd molars, 1 Unerupted and impacted left second Bicuspid, 1 Tooth impacted into Alveolus due to fall, 1 Retained Root, 1 Supernumary Tooth, 1 Inverted Left Central Incisor	55
Mandibular Nerve Block	1
Bismuth Stomatitis	1
Chronic Muco-membranous Stomatitis	1
Repair of Gold Inlay	1
Aerylic Restoration of Left Frontal Region	1
,, ,, Left Eye	1
,, ,, Skull	1
Tantalum Repairs of Skull for Mr. Rowbotham	5

FRACTURES OF THE MANDIBLE AND MAXILLA—

Case 1—Fracture of Right Mandible. Roger Anderson Pin fixation (4 pins). Internal splints fitted .

,, 2—Fracture of Right Mandible. Rubber headpiece applied.

,, 3—Fracture of Left Mandible. Rubber headpiece applied. Inter-dental wiring.

,, 4—Fracture of Neck of Right Mandible. Rubber headpiece applied.

,, 5—Fracture of Right Mandible and fracture of Maxilla through the mid-line. Plaster headcap applied. Metal cap splints cemented to Maxilla and Mandible, with a bar attaching lower splint by universal joints to a horizontal bar in the headcap. Elastic bands fitted from upper to lower splints to bring the Maxilla forward. Inter-dental wiring.

,, 6—Fracture of Right Mandible. Rubber headpiece applied. Inter-dental wiring.

,, 7—Fracture of Right Ascending Ramus and Left Mandible Canine region. Rubber headpiece applied. Refused further treatment.

,, 8—Fracture of Left Ascending Ramus. Rubber headpiece applied.

,, 9—Fracture of Mandible bilateral and comminuted. Roger Anderson Pin Fixation and Inter-dental wiring. Patient transferred to Shotley Bridge.

,, 10—Fracture of Neck of Right Mandible with backward displacement. Rubber headpiece applied—upper denture worn to maintain normal bite. Inter-dental wiring.

G. HUTCHINSON,

Dental Surgeon.

EMERGENCY HOSPITAL SCHEME.

During the year 151 patients were admitted who came under the Emergency Medical Service Scheme. 143 patients were discharged and 6 died.

SUMMARY OF CASES—YEAR 1947.

	In Hosp. 1/1/47.	Admit.	Dis.	Died.	In Hosp. 31/12/47.	No. of Days.
Service Patients	9	71	71	3	6	1,954
Members of Civil Def. Org. injured on duty	..	2	2	..	..	26
Wives and children of Attested Service Men	..	52	46	2	4	621
Civilian transfers under under Form 116 ...	..	..	..	..	..	..
Transferred War Workers & Trainees.	..	..	..	..	..	..
Officers and Men of Merchant Navy ...	..	16	14	1	1	560
Foreign Seamen	..	..	..	..	..	..
Fract. Cases and other injuries among industrial workers	..	..	..	..	..	..
Continuation of necessary treatment of Service Cases when invalided	..	2	2	..	..	100
Ministry of Pensions E.M.S. Cases	..	6	6	..	..	121
Evacuees and Homeless	..	..	..	..	..	..
Displaced Persons	..	2	2	..	..	45
	9	151	143	6	11	3,427

Includes 5 German P.O.W.'s.

The average daily number of E.M.S. patients in hospital during the year was 9·4.

The average stay of E.M.S. patients in hospital during the year was 23·9 days. 8 Services cases were transferred to 6 institutions. These are included in the above table, equal to 5·6 per cent of the discharges.

17 Services patients were transferred from 13 institutions to this hospital and are included in the Service admissions, equal to 11·26 per cent. of the admissions.

DEPARTMENT OF OBSTRETRICS AND GYNÆCOLOGY.

Obstretric Report.

Attendances at the Clinics during the year were as follows :—

Total attendances at Ante-natal Clinics	8,556
New patients seen at Ante-natal Clinics	2,370
Total attendances at Post-natal Clinics	1,224
Attendances at Infant Clinics	457

There were 1,758 admissions to the Maternity Department during the year. The distribution of these admissions was :—

Booked cases	1,518
Emergency admissions	240

Of these 1,758 admissions, 138 were re-admissions during pregnancy and 5 were re-admissions during the puerperium. 30 patients who were admitted during 1947 were undelivered at the end of the year. The number of patients treated in hospital during the year was 1,615.

There were 1,518 confinements in hospital, and the distribution of these cases was :—

Booked cases	1,328
Emergency admissions	190
Primiparæ	931
Multiparæ	587

There were 38 admissions of mother and baby after delivery and 14 admissions of babies without mothers.

Four maternal deaths occurred during the year, giving a maternal mortality rate of 2.5 per 1,000.

Maternal morbidity rate	41 per 1,000
Still-birth rate	50 „
Neonatal death rate	21 „

DISEASES ASSOCIATED WITH PREGNANCY.

The following conditions were encountered.

1.	Diseases of the lungs		42
2.	Heart disease		56
3.	Essential hypertension		8
4.	Pyelitis		20
5.	Thyrotoxicosis		7
6.	Diabetes mellitus		3
7.	Nervous disorders		6
	Epilepsy	4	
	Disseminated sclerosis	1	
	Parkinsonism	1	
8.	Pernicious anæmia of pregnancy		2
9.	Venereal disease		16
10.	Thrush or trichomonas vaginitis		23
11.	Diseases of the bones and joints		5
	Tuberculous hip	1	
	Tuberculous spine	2	
	Kyphoscoliosis	1	
	Infective arthritis	1	
12.	Malignant disease of breast		1
13.	Pelvic tumours		12
14.	Diseases of the alimentary system		3
	Duodenal ulcer	1	
	Catarrhal jaundice	2	
15.	Operations during pregnancy		7
	Removal of ovarian dermoid	1	
	Appendicectomy	2	
	Repair of hernia	1	
	Excision of lipoma	1	
	Excision of Bartholin's cyst	2	

Analysis of these cases shows :—

A. DISEASES OF THE LUNGS (42 cases)—

		Bkd.	*Emerg.*	*Primip.*	*Multip.*	*S.B.*	*N.N.D.*
Pulmonary tuberculosis (active)	17	15	2	11	6	1 (5·9%)	0
Pulmonary tuberculosis (quiescent)	10	10	0	6	4	0	0
Asthma	4	4	0	3	1	0	0
Bronchiectasis	4	4	0	1	3	0	0
Other chronic disease	4	4	0	4	0	0	0
Spontaneous pneumothorax (? T.B.)	1	1	0	0	1	0	0
Pneumonia	2	1	1	0	2	0	0
ALL CASES	42	39	3	25	17	1	0

With the following exceptions, the course of pregnancy and labour was unaltered :—

Active Tuberculosis.

(1) One case was terminated at 6 months by abdominal hysterotomy.

(2) One case was terminated at 30 weeks by classical Cæsarean section —the baby was stillborn. The mother's chest lesion advanced in the puerperium and she was transferred to the City Hospital for Infectious Diseases.

(3) One case was terminated at 36 weeks by lower segment Cæsarean section. The mother showed an exacerbation of the chest condition in the puerperium. The baby lived.

(4) One case developed an accidental antepartum hæmorrhage at 34 weeks and was delivered by lower segment Cæsarean section. The mother develcped tuberculous bronchopneumonia in the puerperium. The baby lived.

(5) Two cases had membranes ruptured before term—one for toxæmia and one for accidental antepartum hæmorrhage.

Quiescent Tuberculosis.

(1) One case miscarried in early pregnancy.

Bronchiectasis.

(1) In one case the membranes were ruptured at term.

(2) One case was terminated at 3½ months.

	Total.	*All cases. Pulm. T.B.*	*Active. Pulm. T.B.*
Maternal mortality	0	0	0
Maternal morbidity (notifiable) ...	3 (5.5%)	3 (11%)	3 (17.6%)
Fœtal survival rate	95.2%	92.6%	94.1%

B. Heart Disease (56 cases).

Rheumatic heart disease	52
Congenital heart disease	2
Paroxysmal tachycardia	2

METHODS OF DELIVERY.

1. Complete miscarriage at 24 weeks	1
2. Hysterotomy and sterilisation at 24 weeks following failure in early pregnancy	1
3. Spontaneous delivery	31
4. Instrumental delivery	17
5. Breech extraction	1
6. Lower segment Cæsarean section	2
7. Internal version and breech extraction	1
8. Twins—spontaneous	1
(1) Internal version and extraction, (2) Forceps	1
9. Artificial rupture of membranes at term	7

		Maternal deaths.	*S.B.*	*N.N.D.*	*Fœtal survival rate.*
Booked cases	53	1 (1.9%)	2	0	92.4%
Emergency	3	0	1	0	66.6%
ALL CASES	56	1 (1.8%)	3	0	91.1% (corrected 96.5%)

STILL-BIRTHS—

1. Intracranial hæmorrhage—breech extraction.
2. Impacted shoulders.
3. Central placenta prævia—antepartum hæmorrhage at 33 weeks.

C. ESSENTIAL HYPERTENSION.

All cases were booked and 3 occurred in primiparæ. Of the 5 cases occurring in multiparæ, 2 gave a history of previous toxaemia.

In 6 cases labour was induced at term by artificial rupture of the membranes. 1 case came into labour spontaneously and one had a complete miscarriage at 24 weeks.

D. PYELITIS.

Cases treated in hospital	15
Cases treated from the ante-natal clinic	2
Cases treated by own doctor	3

There were 14 primiparæ and 6 multiparæ.

1 case was terminated at 26 weeks for irregular bleeding throughout pregnancy—central placenta prævia.

In 1 case a spontaneous miscarriage occurred during a recurrent attack of pyelitis.

The remaining 17 cases had no further attacks during pregnancy and only one case had a mild attack in the puerperium.

E. Thyrotoxicosis.

All booked cases—4 primiparæ, 3 multiparæ.

3 cases were treated with thiouracil throughout pregnancy and 1 case received thiouracil in early pregnancy. The remainder were mild cases.

1 case was terminated at 30 weeks for associated chronic nephritis and the infant was stillborn. In 2 cases labour was induced early (at 36 and 38 weeks) by artificial rupture of the membranes. The 4 remaining cases came into labour spontaneously.

2 infants of those who received treatment with thiouracil throughout pregnancy showed an enlargement of the thyroid gland.

F. Diabetes.

All booked cases and all multiparea.

1. Mild hydramnios—artificial rupture of the membranes at 35 weeks. Normal delivery, 6 lbs.

2. Elective Cæsarean section—previous impacted shoulders. 7½lbs.

3. Artificial rupture of the membranes at 37 weeks—impacted shoulders. Stillborn, 7lbs 9ozs.

Infant mortality rate of 33.3 per cent.

G. Disorders of the Blood.

2 cases of pernicious anæmia of pregnancy were diagnosed. 1 of these was a recurrent case and had received treatment in an earlier pregnancy.

H. Venereal Disease.

16 cases were receiving treatment at the Joint Committee's Clinic.

1 infant developed gonococcal conjunctivitis, which responded to treatment.

1 congenital syphilitic had a miscarriage at 24 weeks.

Spontaneous onset of premature labour occurred in 4 patients.

I. Pelvic Tumours.

Fibroids	8
Ovarian cysts	4

Fibroids. In 1 case an elective Cæsarean section was carried out at term. 1 was terminated at 28 weeks for pre-eclampsia. The remaining cases were delivered normally, but 1 case had a post partum hæmorrhage.

Ovarian Cysts. 1 case had an ovarian dermoid removed during pregnancy; pregnancy and labour were otherwise normal. 1 case had a Cæsarean section for uterine inertia. The remaining 2 patients were delivered normally and in 1 case the cyst was removed during the puerperium.

COMPLICATIONS OF PREGNANCY.

The following cases were encountered :—

1.	Toxæmias of late pregnancy (excluding eclampsia)	171
2.	Eclampsia	8
3.	Hyperemesis gravidarum	0
4.	Hydramnios	11
5.	Thrombophlebitis	8
6.	Herpes gestationis with breast abscess	1
7.	External versions attempted for breech presentation	60
8.	Antepartum hæmorrhage	56

A. Toxaemias of Late Pregnancy.

Treated from clinic	69
Booked	145
Primiparæ	113
Admissions to hospital	102
Emergency	26
Multiparæ	58

Incidence of prematurity and infant mortality.

	5½ lbs. and under.			*Over 5½ lbs.*		
	No.	*S.B.*	*N.N.D.*	*No.*	*S.B.*	*N.N.D.*
A.R.M.	13	0	0	48	2 (1-2)	1 (1)
Spontaneous onset	15	4 (3-6)	0	72	5 (7-11)	0
Elective C.S.	5	0	2 (2-3)	14	0	0
All Cases	33	4	2	134	7	1

Analysis of Stillbirths.

1. Intrauterine death in late pregnancy; macerated stillbirth.
2. Toxic antepartum hæmorrhage at 34 weeks.
3-6. Intrauterine death in pregnancy; macerated stillbirth.
7-8. Second twin in each case; first twin healthy.
9. Intrapartum bleeding due to vasa prævia.
10. Toxic antepartum hæmorrhage.
11. Intracranial hæmorrhage.

Analysis of Neonatal Deaths.

1. Hydrops fœtalis.
2. At 12 hours. Termination at 28 weeks for severe pre-eclampsia.
3. At 4 days. Termination at 32 weeks for severe pre-eclampsia.

Methods of Delivery.

1.	Spontaneous delivery		106
2.	Instrumental delivery		24
	(1 following Duhrssen's incisions)		
3.	Elective Cæsarean section		19
4.	Emergency Cæsarean section		7
	Fœtal distress	2	
	Uterine inertia	3	
	Disproportion—trial labour	2	
5.	Miscarriage		1
6.	Hysterotomy		2
7.	Delivered at home		1
8.	Twins		10
	Spontaneous	5	
	With assistance	5	

Labour was induced by artificial rupture of the membranes on 61 occasions.

2 cases were associated with a toxic antepartum hæmorrhage and in both cases the infant was stillborn.

Maternal mortality	1 (0.6%)
Infant mortality rate	9.4% (corrected—7.6%)

Incidence of Prematurity.

Cases induced by artificial rupture of the membranes	21.7%
Terminated by elective Cæsarean section	25.0%
Spontaneous onset of labour	17.2%
All cases of viable infants	19.8%

B. Eclampsia.

Booked	2
Primiparæ	5
Antepartum	4
Emergency	6
Multiparæ	3
Intrapartum	2
Post-partum	2

Antepartum Eclampsia.

1. Emergency admission at 37 weeks. Artificial rupture of the membranes when fits controlled. Normal delivery. Premature stillbirth.
2. Emergency admission at 34 weeks. Spontaneous onset of labour. Normal delivery. Premature live birth.
3. Emergency admission at term. Artificial rupture of the membranes when fits controlled. Instrumental delivery. Live birth.
4. Devd. eclampsia at 36 weeks. Spontaneous onset of labour. Normal delivery. Stillbirth.

Intrapartum Eclampsia.

1. Emergency admission. No Fœtal heart heard on admission. Normal delivery. Stillbirth.
2. Emergency admission. Low forceps delivery at full dilatation. Live birth.

Post partum Eclampsia.

1. Blood pressure raised during pregnancy. Artificial rupture of the membranes at term. Fits started three hours after normal delivery.
2. Emergency admission with eclampsia 24 hours after normal premature twin labour at home.

Maternal mortality	nil.
Stillbirths	3 (37.5 per cent.)
Neonatal deaths	nil.

C. Hydramnios.

Booked	7
Primiparæ	6
Emergency	5
Multiparæ	6
Associated with congenital abnormality	7
Associated with maternal diabetes	1
No other abnormality	4
Twin pregnancy	0

Treatment.

No treatment	3 cases.
Artificial rupture of the membranes before term	7 ,,
Abdominal paracentesis of amniotic sac	2 ,,

Of the 2 latter cases, 1 came into labour shortly afterwards and was delivered of a stillborn infant showing hydrops fœtalis. The other case progressed to term, came into labour spontaneously and was delivered of an infant showing a marked degree of cleft palate and hypoplastic mandible. The infant died during the first day—autopsy showed an intracranial hæmorrhage.

D. Thrombophlebitis.

Femoral ...	2 cases—	Both treated with dicoumarin in pregnancy.
Saphenous .	6 cases—	3 treated with dicoumarin in pregnancy.
		1 treated with dicoumarin after delivery.
		2 treated by rest only.

E. External Versions.

Attempted on 60 occasions.	*Without Anæsthetics.*	*With Anæsthetics.*	*Total.*	*Primops.*	*Multips.*
Successful	42	7	49 (81.7%)	30	19
Failed	7	4	11 (18.3%)	8	3

Methods of Delivery following Successful Version—

Spontaneous vertex delivery	39
Spontaneous vertex delivery with impacted shoulders (diabetic) .	1
Instrumental delivery	4
Cæsarean section	3
Internal version. Breech extraction (brow presentation—E.V. 2 days earlier	1
Breech delivery. (E.V. 4 times, then spontaneous version to breech)	1
Still-birth.....	3

1. Impacted shoulders.
2. Intrauterine death in labour.
3. Intrauterine death at 36 weeks—E.V. at 32 weeks.

Methods of Delivery following Unsuccessfull Version—

Spontaneous version. Normal delivery	1
Breech delivery	6
Breech extraction for prolapsed cord	2
Cæsarean section	1
Twins (a) breech, (b) forceps	1
Still-births—prolapsed cord	1

There were no complications resulting from the performance of external version.

F. Antepartum Hæmorrhage.

Placenta prævia		9
Complete	8	
Partial	1	
Toxic antepartum hæmorrhage		2
Accidental antepartum hæmorrhage		45

	Bkd.	*Emerg.*	*Primip.*	*Multip.*	*S.B.*	*N.N.D.*
Complete placenta prævia ..	1	7	1	7	2	0
Partial ,, ,, ..	0	1	1	0	0	1
Accidental A.P.H.	20	25	27	18	15	4
Toxic A.P.H.	0	2	1	1	2	0
All Cases	21	35	30	26	19	5

Methods of delivery.	*L.S.C.S.*	*U.S.C.S.*	*Br. Ext.*	*A.R.M. N.D.*	*N.D.*	*Willer's forceps.*
Complete placenta prævia ..	5	2	1	0	0	0
Partial ,, ,, ..	1	0	0	0	0	0
Accidental ,, ,, ..	7	0	0	14	24	1
Toxic ,, ,, ..	0	0	0	1	1	0
All Cases	13	2	1	15	25	1

Maternal mortality ..... nil
Infant mortality ..... 24 (42.8%—corrected 41.0%)
Incidence of prematurity 46.4%

Blood transfusion was required in 9 cases for antepartum hæmorrhage, and in 1 case for a subsequent atoxic post partum hæmorrhage.

Multiple Pregnancy.

35 sets of twins were born in hospital.
1 patient admitted after birth of first twin.
1 set of twins admitted after birth.

Booked 31
Primiparæ 26
Emergency 6
Multiparæ 11

Presentations—
Both vertex 17
One breech, one vertex 10
Both breech 3
One breech, one transverse 3
One vertex, one transverse 2

Methods of Delivery of Individual Infants—
Vertex—normal delivery 34
Breech—assisted delivery 11
Instrumental delivery 13
Breech extraction 8
Internal version and extraction 5

RESULTS—

Both twins lived	27 pairs.
Both twins neonatal deaths	3 pairs—all at 28 weeks.
One stillbirth, one neonatal death	1 pair—at 28 weeks.
One stillbirth, one lived	5 pairs.
One neonatal death, one lived	1 pair.
Infant mortality	18.9% (corrected 17.6%)
Maternal mortality	nil
Incidence of prematurity	62.2%

LABOUR.

METHODS OF DELIVERY—

1.	Normal delivery—vertex	1,048
2.	Application of Willett's forceps followed by normal delivery	1
3.	Instrumental delivery	241
4.	Breech delivery	39
5.	Breech extraction	9
6.	Classical Cæsarean section	8
7.	Lower segment Cæsarean section	117
8.	Abdominal hysterotomy	8
9.	Hysterectomy following Cæsarean section or hysterotomy	3
10.	Delivery preceded by internal version	7
11.	Destructive operations	5
12.	Twin deliveries (see multiple pregnancy)	36
13.	Miscarriages	10

SURGICAL INDUCTION OF LABOUR.

Surgical induction of labour was carried out on 132 occasions—on 129 occasions by artificial rupture of the membranes and on 3 occasions by the insertion of Queen Charlotte's bag. The indications were :—

1.	Toxæmias of later pregnancy	61
2.	Antepartum hæmorrhage	15
3.	Maturity or post-maturity	15
4.	History of previous stillbirths	9
5.	Hydramnios	7
6.	Heart disease	7
7.	Essential hypertension	6
8.	Eclampsia	3
9.	History of erythroblastosis	3
10.	Thyrotoxicosis	2
11.	Unstable presentation	2
12.	Bronchiectasis—past dates	1
13.	Diabetes	1

NORMAL DELIVERY.

	No.	*Primips.*	*Multips.*	*Bkd.*	*Emerg.*	*Pyrexia.*	*S.B.*	*N.N.D.*
Intact perineum	370	98	272	319	51	10	27	8
Laceration	162	70	92	153	9	5	3	0
Episiotomy	516	427	89	471	45	17	4	4
ALL CASES	1,408	595	453	943	105	32	34	12

Maternal mortality ..... 1 = 0.095%
Maternal morbidity (notifiable) ..... 32 = 3.1%
Infant mortality rate..... 4.4% (0.9% corrected)
Birth injuries 3
Fracture of clavicle 1
Cephalhæmatoma 1
Wrist drop..... 1

Labour was prolonged (over 30 hours) in 56 cases.

INSTRUMENTAL DELIVERIES.

	No.	*Primip.*	*Multip.*	*Bkd.*	*Emerg.*
Low (outlet) forceps	129	117	12	104	25
Mid-cavity forceps	20	19	2	20	1
Manual rotation and forceps	83	74	9	68	15
Rotation and delivery with Kjelland's forceps	8	6	2	7	1
High forceps	0	0	0	0	0
ALL CASES	240	216	25	198	42

INDICATIONS FOR APPLICATION OF FORCEPS—

	Low.	*Mid-cav.*	*Man. rot.*	*Kjell.*	*Total.*
Delay in second stage	88	3	10	0	101
Fœtal distress	19	8	8	0	35
Maternal distress	2	1	0	1	4
Uterine inertia	8	2	3	3	15
Deep transverse arrest	0	0	54	3	57
Persistent occipito posterior	0	4	4	0	8
Outlet contraction	0	2	0	0	2
Prolapse of cord	0	0	1	0	1
Prophylactic	12	1	2	0	15
Brow—after conversion to face or vertex	0	0	1	1	2

MATERNAL MORBIDITY AND INFANT MORTALITY—

	Maternal Morbidity.	*Infant mortality.*			*Birth injuries.*
	Notifiable.	*S.B.*	*N.N.D.*	*Rate.*	
Low forceps.....	7=5.4%	7=5.4%	nil	5.4%	2 (1-2)
Mid forceps	1=5.0%	1=5.0%	nil	5.0%	1 (2)
Manual rot. and forceps	6=7.2%	3=3.6%	2=2.4%	6.0%	1 (4)
Kjelland's forceps..	nil	1=12.5%	nil	12.5%	1 (5)

BIRTH INJURIES SUSTAINED WERE—

1. Intracranial hæmorrhage.
2-3. Cephalhæmatoma.
4. Facial paralysis.
5. Subdural hæmorrhage.

Maternal mortality—nil. Maternal morbidity rate (all cases) 5.8%. Inf. mort. rate (all cases) 5.8%.

FAILED FORCEPS.

5 patients were admitted following failure to deliver with forceps. The reason for failure to deliver and the final method of delivery adopted are listed below.

CAUSES OF FAILURE—	*Method of delivery.*
1. Deep transverse arrest	Manual rotation and forceps.
2. Undilated cervix	Manual rotation and forceps.
3. Undilated cervix	Low forceps.
4. Hand prolapsed beside head ..	Hand displaced ; low forceps.
5. Unknown	Low forceps.

BREECH PRESENTATION.

Breech presentation was encountered at term or in labour on 51 occasions, excluding cases where elective Cæsarean section was performed for other conditions and excluding cases of twin pregnancy.

METHODS OF DELIVERY—

Assisted delivery (including forceps to head in 16 cases).....	39
Breech extraction (including forceps to head in 6 cases).....	9
Extraction with perforation of head	1
Cæsarean section (including one extra peritoneal)	8

MATERNAL MORBIDITY AND INFANT MORTALITY—

		Maternal morbidity		*Infant mortality*	
		Notifiable.	*S.B.*	*N.N.D.*	*Rate.*
Assisted delivery ..	23	1=4.3%	4=17.4%	1	21.7%
Assisted delivery with forceps to head ...	16	nil	nil	nil	nil
ALL CASES ...		2.6%	10.3%		12.8%
Extraction	3	nil	1=33.3%	nil	33.3%
Extraction with forceps to head.....	6	1=16.5%	3=50.0%	nil	50.0%
ALL CASES ...		11%	44.4%		44.4%
Cæsarean section	8	nil	1=12.5%	nil	12.5%

Maternal mortality	nil
Maternal morbidity rate (vaginal deliveries)	4.2%
Infant mortality rate (vaginal deliveries)	18.8%
Corrected infant mortality rate for infants over 3½ lbs.....	12.5%
Birth injuries	nil

INDICATIONS FOR BREECH EXTRACTION—

Prolonged labour and no advance in second stage	4
Prolapsed cord	3
Fœtal distress	1
Prophylactic—cardiac	1
Dystocia due to hydrops fœtalis	1

CÆSAREAN SECTIONS.

LOWER SEGMENT CÆSAREAN SECTION (performed on 117 occasions)—

Elective—including one extraperitoneal	70
Emergency—including one extraperitoneal	47

THE INDICATIONS FOR ELECTIVE L.U.S.C.S. WERE—

Frank disproportion (confirmed by X-ray)		23
Disproportion—previous Cæsarean section		11
Central placenta prævia—elective Cæsarean section		2
Primip. breech—ages 32, 38 and 44		3
Previous stillbirths and neonatal deaths		4
Diabetic—previous impacted shoulders		1
Pre-eclampsia		4
Elderly primiparity		13
Para 1 age 40—previous Cæsarean section for placenta prævia		1
Present illnesses		5
Tuberculous spine	2	
Pulmonary tuberculosis	1	
Heart disease	2	
Previous operations		3
Salpingostomy	1	
Colporrhaphy	2	

The Indications for Emergency L.U.S.C.S. were—

Cervical dystocia	2
Intrapartum infection—primip. breech, 10½ lbs.	1
Fœtal distress	6
Uterine inertia	15
Disproportion—trial labour	11
Primip. breech	2
Proplapsed cord	1
Antepartum hæmorrhage—placenta prævia	4
Accidental antepartum hæmorrhage	4
Arthritis of hips	1

Upper Segment Cæsarean Section (performed on 8 occasions)—

Elective	6
Emergency	2

The Indications for Operation were—

Central placenta prævia at 30 weeks	1
Central placenta prævia and transverse lie	1
Cornual pregnancy	1
Spinal curvature	1
Termination at 30 weeks—pulmonary tuberculosis	1
Pre-eclampsia—termination at 28 and 32 weeks	2
Termination—chronic nephritis	1

Analysis of All Cases—

	Number.	*Booked.*	*Emergency.*	*Primip.*	*Multip.*
Elective L.U.S.C.S.	70	69	1	38	32
Emergency L.U.S.C.S.	47	35	12	33	13
Classical C.S.	8	6	2	3	5

Maternal Morbidity and Infant Mortality—

	Maternal morbidity.		*Infant mortality.*	
	Notifiable.	*S.B.*	*N.N.D.*	*Mortality rate.*
Elective L.U.S.C.S.	6 = 7.1%	1 = 1.4%	1	2.8%
Emergency L.U.S.C.S.	8 = 17.0%	2 = 4.2%	2	8.4%
Classical C.S.	1 = 12.5%	2 = 25.0%	4	75.0%

Maternal mortality	nil
Maternal morbidity rate (all cases)	11.1%
Infant mortality rate (all cases)	9.6%
Infant mortality rate (infants over 3½ lbs.)	5.6%
Birth injuries	nil

Cæsarean Hysterectomy.

Performed on one occasion, the indication being a ruptured uterus following internal version for prolapse of cord. The infant was stillborn.

DESTRUCTIVE OPERATIONS.

CRANIOTOMY WAS PERFORMED ON 6 OCCASIONS THE INDICATIONS BEING—

Following I.U.D. in labour—to facilitate delivery	2
Brow presentation—no F.H. on admission	1
Prolapse of cord and hand	1
Hydrops fœtalis (included under breech extraction)	1
Failed forceps inside—followed by internal version and extraction	1

Maternal mortality 1
Maternal morbidity ..... 2 = 33·3 %

INTERNAL VERSION.

INTERNAL VERSION AND BREECH EXTRACTION WAS PERFORMED ON 7 OCCASIONS, THE INDICATIONS BEING—

Brow presentation	1
Presentation of cord	1
Prolapse of cord	2
Deep transverse arrest—failed rotation	1
Central placenta prævia with heart failure	1
Failure to deliver with forceps—preceded by craniotomy.	1

Maternal mortality ..... nil.
Maternal morbidity ..... nil.
Infant mortality rate (4 stillbirths) ..... 66·6 %

ABDOMINAL HYSTEROTOMY.

PERFORMED ON 8 OCCASIONS THE INDICATIONS BEING—

Placenta prævia	3
Pre-eclampsia	2
Heart disease	1
Pulmonary tuberculosis	1
Bronchiectasis	1

Maternal mortality ..... nil.
Maternal morbidity .....nil.

Hysterotomy was combined with hysterectomy on 2 occasions, the indications being :—

1. Previous toxæmia.

2. Previous transplantation of ureters—repeated attacks of pyelitis. Previous termination of pregnancy at 6½ months.

Maternal mortality ..... nil.
Maternal morbidity ..... nil.

rolapse of Cord.

Presentation of the cord was encountered once, and prolapse on 2 occasions. Presentation of the cord occurred in a vertex presentation and was treated by bipolar versions when the membranes ruptured, nd subsequent breech delivery.

PROLAPSE OF THE CORD WAS ASSOCIATED WITH THE FOLLOWING PRESENTATIONS :—

Breech	5 (including 2 twins)
Vertex	6
Transverse	1

Treatment.

Internal version ; breech extraction	2
Breech extraction	4
Breech delivery	2
Forceps delivery	2
Lower segment Cæsarean section	1
Internal version : ruptured uterus : Cæsarean hysterectomy	1

There were 3 stillbirths = 25%.

ABNORMAL PRESENTATIONS.

TRANVERSE LIE WAS ENCOUNTERED ON 6 OCCASIONS AND WAS TREATED IN THE FOLLOWING MANNER :—

Caesarean section (classical)	3
Internal version : breech extraction	2
External version before rupture of membranes	1

BROW PRESENTATION WAS ENCOUNTERED ON 4 OCCASIONS AND WAS TREATED IN THE FOLLOWING MANNER :—

Internal version : breech extraction	1
Extension to face : rotation and forceps delivery	1
Flexion : rotation and delivery with Kjelland's forceps	1
Craniotomy and delivery	1

COMPLICATIONS OF THE THIRD STAGE.

MANUAL REMOVAL OF THE PLACENTA WAS CARRIED OUT ON 51 OCCASIONS, THE INDICATIONS BEING :—

Prophylactic	21
Hæmorrhage during the third stage	15
Prolonged third stage	15

Blood transfusion was required on 12 occasions.

Puerperal morbidity (notifiable) ..... 10 = 19·6%

Pelvic infection only :—		*Notifiable.*
Of cases delivered in hospital.....	31 cases	5 = 16%
Admitted after delivery or interference outside ..	20 cases	4 = 20%

Post Partum Hæmorrhage.

P.P.H. occurred in 17 cases and blood transfusion was required in 13 of these cases.

6 cases were admitted with post partum hæmorrhage following delivery at home. 11 were delivered in hospital. Of those delivered in hospital :—

		Labour prolonged—over 30 hours.
Spontaneous delivery	7	nil
Forceps delivery	4	2

PUERPERAL MORBIDITY.

Notifiable Puerperal Pyrexia.

All cases in which, during the first 21 days of the peurperium a temperature of 100.4°F. is maintained for 24 hours or recurs within that period.

B.M.A. Hospital Standard.

All cases in which a temperature of 100°F. occurs twice on the bi-daily chart between the 2nd and 8th days inclusive of the puerperium.

	Total Cases.	*Booked Cases.*	*Emergencies*
Notifiable pyrexia	63 = 4·0%	49 = 3·7%	14 = 6·1%
B.M.A. Hospital Standard	104 = 6·7%	85 = 6·4%	19 = 8·3%

Minor disorders of the puerperium with little or no pyrexia : 130.

Distribution of Notifiable Cases.

	Breast.	*Genital.*	*Urinary.*	*Respiratory*	*Wound Infection*	*Phlebitis*	*Undiagnosed*	*Total*	*per cent.*
All deliveries	4	29	12	4	1	2	11	63	= 4·0%
Spontaneous	2	15	7	1	—	—	8	33	= 3·1%
Forceps	—	9	3	—	—	1	1	14	= 5·8%
L.U.S.C.S.	2	3	2	2	1	1	2	13	= 11·1%
Classical C.S.	—	—	—	1	—	—	—	1	= 12·5%
Int. Manœuvres .... / Destructive operations / Breech extraction...	—	1	—	—	—	—	—	1	= 3·2%

OPERATIONS PERFORMED IN PUERPERIUM.

Fourth day sterilisation	7
Excision of lipoma	1
Repair of old recto-vaginal fistula.....	1
Salpingo-oophorectomy (ovarian cyst)	1
Removal of retained products of conception	3
Re-suture of perineum	1

STERILISATION.

STERILISATION WAS PERFORMED BY TUBAL LIGATION ON 21 OCCASIONS.

Fourth day sterilisation	7
With L.U.S.C.S.	6
With classical C.S.	3
With hysterotomy	5

The indications were :—

Heart disease	4
Pulmonary tuberculosis	1
Chronic nephritis	1
Repeated eclampsia and pre-eclampsia	5
Tuberculosis of spine	2
Repeated Caesarean section for disproportion	1
Bronchiectasis—para. 6	1
Multiparity	4
Multiparity plus erythroblastosis history	1
Para 3—both husband and wife blind	1

INFANTS.

1. STILLBIRTHS.

Total number of stillbirths ..... 76 = 50 per 1,000 births.

Booked cases	44
Emergencies	32

CAUSE OF DEATH.	*All cases.*	*Premature Infants.*
Asphyxia for antepartum hemorrhage	19	13
Asphyxia during delivery	7	1
Prolapsed cord	5	1
Impacted shoulders	1	—
Intracranial trauma	5	2
Ruptured vasa prævia	2	—
Placental insufficiency	9	2
Congenital abnormalities	7	4
Intrauterine death in pregnancy	13	8
Maternal eclampsia	3	1
Maternal tuberculosis	1	1
One twin (other twin alive)	4	1

2. NEONATAL DEATHS.

Total number in hospital	41
Deaths in infants born in hospital	31 = 19·9 per 1,000 live births
Deaths in infants admitted after delivery	10
Booked cases	24
Emergencies	17

Cause of Death.	*All cases.*	*Premature infants.*	*Born in hospital.*
Prematurity	21	21	14
Intracranial hæmorrhage	6	1	6
Anoxia during delivery	3	1	3
Erythroblastosis	4	2	4
Spina bifida	2	—	2
Hæmorrhage (one cord, two lung)	3	2	2
Inhalation asphyxia	1	1	—
Bronchopneumonia	1	1	—

MATERNAL MORTALITY.

There were 4 maternal deaths during the year, giving a mortality rate of 2.5 per 1,000 admissions.

Two deaths occurred in booked patients, giving a mortality rate for booked cases of 1.5 per 1,000 admissions.

Two deaths occurred in emergency admissions, giving a mortality rate for emergency cases of 8.3 per 1,000 admission.

SUMMARY OF CASES.

*1. Booked Patient. M.D. 29 Years.

There was a past history of rheumatic fever and the patient had mitral stenosis and aortic incompetence. She was admitted to the medical ward with congestive heart failure on 15th January, 1947, when she was 34 weeks pregnant. Five days later she came into labour spontaneously and was transferred to the Maternity Department. She collapsed suddenly 2 hours later and died undelivered.

2. Emergency Admission. D.S. 22 Years.

Admitted with vaginal bleeding on the 8th June, 1947, at about the eighth month of pregnancy though the actual duration of pregnancy was not certain. She was alleged to have had bleeding during each month, though the last menstrual period was in October, 1946. Said to have been ill for the "past few months" with cough and night sweats. Her condition deteriorated during the few days prior to admission. She received medical attention for a week before admission but no antenatal care earlier.

Her condition was very poor and she was grossly dehydrated on admission; the uterus was the size of a 28 weeks' pregnancy. She

was treated by intravenous plasma and saline drip, desoxycorticosterous and penicillin. After slight improvement the uterus expelled a macerated fœtus 16 inches in length. Twelve hours later the patient collapsed again, developed diarrhoea with offensive stools and abdominal swelling ; she became comatose and died 10th June, 1947, 48 hours after admission.

Post mortem examination was carried out on the instructions of H.M. Coroner. No gross cause of death was found, but there were evidences of toxic change in liver and kidneys and an acute gastro enteritis. The pathologist considered that chemical analysis should take place, but permission for this was refused by the Coroner. The report given by the Coroner was " Death due to sub-acute enteritis following a miscarriage."

3. Booked Patient. E.C. 37 Years.

During pregnancy this patient had a carcinoma of breast treated by mastectomy and deep X-ray therapy. Her only attendance at the antenatal clinic was on 30th May, 1947, when she was booked for hospital confinement. On 10th August, 1947, when she was 6 months pregnant she was admitted as an emergency. She complained of generalised pains, a cold with cough for a few days and vaginal bleeding for a few hours. She was in poor condition on admission with a temperature of 103.6, pulse 116. There was no abnormality in the lungs. Uterine contractions were present and there was only slight bleeding per vaginam. Seven hours after admission the patient had a complete miscarriage and her condition deteriorated rapidly. The liver was enlarged and there was slight jaundice and vomiting. She was treated with intravenous glucose saline, insulin and calcium gluconate. Three hours later she became unconscious ; abdominal distension became marked and vomiting persisted. Her condition steadily deteriorated until she died 12½ hours after admission.

Autopsy showed an acute yellow atrophy of the liver due to toxæmia of pregnancy.

*4. Emergency Admission. E.G. 40 Years.

This patient was admitted on 10th October, 1947, with prolapse of cord and hand in a vertex presentation. There was no pulsation in the cord. Delivery was effected by perforation and forceps extrac-

tion following upward displacement of the hand. The condition of the patient was fairly good after delivery. A half-hour later she was not so well and her condition gradually deteriorated. She was treated by intraveous plasma and blood drip, glucose and insulin and digoxin, and she improved slightly. Her condition improved slightly during the next two days but on the 13th October, 1947 she developed hypostatic pneumonia ; she collapsed in the afternoon and died 72 hours after admission.

Autopsy showed that death was due to uraemia ; the right kidney showed hydroenphrosis and pyelonephritis ; the left kidney showed a pelvis filled with calculi and some atrophy of the cortex.

* These deaths are included in the Registrar-General's statistics as " Deaths of Women not classed to Pregnancy or Childbearing but returned as associated therewith."

ABBREVIATIONS.

Bkd.	—	Booked.
Emerg.	—	Emergency.
Primip.	—	Primipara.
Multip.	—	Multipara.
Devd.	—	Delivered.
N.D.	—	Normal Delivery.
S.B.	—	Stillbirth.
N.N.D.	—	Neonatal Death.
A.R.M.	—	Artificial rupture of membranes.
A.P.H.	—	Ante Partum Hæmorrhage.
P.P.H.	—	Postpartum Hæmorrhage.
I.U.D.	—	Intrauterine Death.
C.S.	—	Caesarean Section.
L.U.S.C.S.	—	Lower Uterine Segment Caesarean Section.
U.U.S.C.S.	—	Upper Uterine Segment Caesarean Section.
E.V.	—	External Version.
Br. Ext.	—	Breech Extraction.
Man. Rot.	—	Manual Rotation.
Mid-cav.	—	Mid-cavity.
Kjell.	—	Kjelland's.
F.H.	—	Fœtal Heart.
Pulm. T.B.	—	Pulmonary Tuberculosis.
B.M.A.	—	British Medical Association.

Gynæcological Department.

TOTAL ADMISSIONS FOR 1947 — 1,262.
TOTAL ADMISSIONS FOR 1946 — 1,177.

In the attached summary 1,188 cases are recorded. The difference of 74 cases between the total admissions and the number of cases recorded is due to the fact that 38 cases were transferred from the Maternity Department and shown in their records and the remaining 36 cases were admitted more than once for the same complaint.

Columns (1), (2) and (3) on each sheet show :—

(1) Total cases admitted.
(2) Total bed/days of these cases.
(3) Average number of bed/days per case.

The main rise in admissions is to be seen in abortions which have risen from 157 to 257. There has been a small rise in many other groups. There is an apparent drop in the number of cases admitted for investigation of infertility. This is due to the fact that many cases are now investigated as out-patients or, at most, are only detained overnight and therefore are not shown among the admissions.

INVESTIGATIONS AND MINOR OPERATIONS.

	(1)	(2)	(3)
1. VULVAL LESIONS.			
(a) Pruritus Vulvæ	5	45	9.0
(b) Leukoplakia	1	24	24·0
(c) Herpes Vulvæ	1	16	16·0
(d) Condylomata accuminata	5	46	9·2
(e) Lacerations	1	12	12·0
2. BARTHOLIN'S GLAND.			
(a) Cyst	7	82	11·8
(b) Abscess	9	43	4·7
3. OTHER CYSTS	4	20	5·0
4. HAEMORRHOIDS	2	30	15·0
5. VAGINAL LESIONS.			
(a) Unruptured Hymen	3	15	5·0
(b) Lacerations	4	44	11·0
(c) Post-operative scarring	1	2	2·0
(d) Incarcerated Pessary	2	12	6·0
(e) Dyspareunia	7	35	5·0
6. URETHRAL CARBUNCLE.	11	50	4·5

	(1)	(2)	(3)
7. CERVIX.			
(a) Inflammatory and Traumatic	55	297	5·4
(b) Simple Neoplasm	20	96	4·2
(c) Malignant Disease	8	79	9·8
8. ADNEXÆ.			
(a) Salpingitis, acute and chronic	4	44	11·0
(b) Parametritis	10	90	9·0
9. UTERUS.			
(a) Retroversion	7	26	3·7
(b) Endometritis—			
Sub-acute and chronic	8	40	5·0
Tuberculous	6	16	2·6
Pyometra	1	12	12·0
(c) Endometrial Polyp	4	24	6·0
(d) Carcinoma of Uterine Body	2	21	10·5
10. DISORDERS OF MENSTRUATION.			
(a) Amenorrhoea	3	15	5·0
(b) Dysmenorrhoea	10	47	4·7
(c) Hæmorrhage—			
Under 40 *years of age*—			
General, including endocrine dyscrasia	52	229	4·5
Cystic metropathia	3	15	5·0
Menopausal	1	4	4·0
Over 40 *years of age*—			
Unspecified	22	119	5·4
Menopausal	21	98	4·6
Cystic metropathia	17	47	6·9
11. OTHER POSTMENOPAUSAL BLEEDING	9	49	5·8
12. OTHER ADMISSIONS.			
(a) For Observation and Investigation	22	153	6·9
(b) Renal Investigation	11	93	8·6
(c) Complications of Pregnancy—			
Ante Partum	14	109	7·8
Post Partum (other then R.P.C.)	16	107	6·6
13. UNCLASSIFIED	7	26	3·5
	396	2332	5·8

PATIENTS ADMITTED FOR INVESTIGATION OR TREATMENT OF INFERTILITY.

	(1)	(2)	(3)
1. INFERTILITY INVESTIGATION.			
(a) D. & C.	7	21	3·0
(b) D. & C. and Insufflation—			
N.A.D.	40	128	3·4
Endocrine dyscrasia	12	36	3·0
Cervical lesion	6	19	3·3
Tubal occlusion	4	10	2·5
Inflammatory	3	14	4·6
(c) Male defect	1	3	3·0
(d) Repeated miscarriages	3	15	5·0

	(1)	(2)	(3)
2. Infertility Therapy (Operative).			
(a) Myomectomy	5	83	16·6
(b) Gilliam's Suspension	7	89	12·7
(c) Salpingostomy	4	59	14·8
(d) Fenton for dyspareunia	1	4	4·0
3. Salvage.			
(a) Salpingectomy for tuberculous salpingitis	4	76	19·0
(b) Incomplete Abortion	1	3	3·0
	98	560	5·7

Analysis of Abortion and Peurperal Cases Admitted.

Major Operations (Other than Vaginal).

	(1)	(2)	(3)
1. Abortion.			
(a) Induced Vaginal hysterotomy	4	28	7·0
Abdominal hysterotomy	6	92	15·3
(b) Incomplete: Curetted	170	913	5·3
(c) Complete	34	163	4·7
(d) Threatened	22	180	8·1
(e) Septic	10	115	11·5
(f) Inevitable	7	35	5·0
(g) Missed	4	24	6·0
(h) Hydatidiform Mole	2	17	8·5
2. Puerperal.			
(a) Hæmorrhage	7	54	7·7
(b) Sepsis	1	31	31·0
3. *Admitted as Abortions	11	120	10·9
4. Unclassified.	7	30	4·2
	285	1802	6·3

Average number of bed/days per case: 4·5.

* Admitted as Abortions, diagnosis corrected, no operation required.

Major Operations (other than vaginal).

	(1)	(2)	(3)
1. Operations on the Uterus.			
(a) Abdominal Hysterotomies	6	92	15·3
(b) Abdominal Myomectomy	16	250	15·6
(c) Subtotal Hysterectomy	67	1154	17·2
(d) Total Hysterectomy	23	419	18·6
(e) Gilliam's Suspension	7	89	12·7

2. Operations on the Appendages.	(1)	(2)	(3)
Fallopian Tubes.			
(a) Salpingectomy for Ruptured Ectopic Gestation ...	11	143	13·0
Salpingectomy for other causes	6	127	21·1
(b) Sterilisation by Tubal Tie	2	26	13·0
(c) Salpingostomy	4	59	14·8
Ovary.			
(d) Cystectomy or Oophorectomy—			
Simple cysts	18	266	14·8
Malignant cysts	6	197	35·6
3. Other Operations.			
(a) Nephrectomy	2	59	29·5
(b) Appendicectomy	6	97	16·1
(c) Inoperable carcinoma of bowel	2	50	25·0
(d) Hernia.....	3	69	23·0
(e) Other Causes (including 1 ruptured uterus)	6	82	13·6
	185	3179	17·2

Analysis of Cases Admitted following Complaint of Pelvic Floor Defect.

1. No Defect Found.	(1)	(2)	(3)
(a) Other pathology treated—			
Retroversion ..... Fibroids ..... Cervical inflammatory lesions ..... Endometritis ..... Cervical hypertrophy.....	11	99	9·0
2. Pelvic Floor Defect.			
(a) Admitted for investigation (*e.g.*, Cystoscopy)	11	55	5·0
(b) Admitted but operation not undertaken.....	5	25	5·0
3. Operative Repair of Pelvic Floor Defect.			
(a) Versical or urethral suspension for stress incontinence	8	148	18·5
(b) With other pathology, treated by Vaginal hysterectomy and repair	26	517	19·0
Vaginal hysterectomy alone	8	147	18·3
(c) With other pathology, treated by further operation (*e.g.*, hernia)	3	77	25·6
(d) Anterior or Posterior Colporrhaphy	19	298	15·7
(e) Fothergill's Pelvic Floor Repair	128	2328	15·3
(f) Repair of Complete Perineal Laceration	3	47	15·6
(g) Repair of Fistula.....	1	14	14·0
(h) Repair of Hernia of Pouch of Douglas	1	16	16·0
	224	3771	16·8

DEATHS, 1947.

There were 10 deaths in this year, which are summarized below.

1. Mrs. J. F. Hospital No. 1577. Aged 61 Years.

Inoperable carcinoma of sigmoid colon. Laparotomy was performed and subsequently the abdominal wound broke down and had to be re-sutured. The patient died 21 days after her original operation of a myocardial failure.

2. Mrs. F. B. Hospital No. 1803. Aged 62 Years.

Inoperable serous cystadenocarcinoma of ovary. Laparotomy on the 17th February, 1947. Died on the 26th February, 1947, as a direct result of her primary lesion.

3. Mrs. L. B. Hospital Nos. 6172, 10013 & 11,549. Aged 49 Yrs.

Admitted on the 10th June, 1947. Laparotomy showed serous cystadenocarcinoma of right ovary. Discharged on the 8th July, 1947, and re-admitted on the 17th September, 1947 with evidence of recurrence. Discharged on the 23rd September, 1947 and re-admitted to Medical Wards on the 28th October, 1947, where she died on the 7th November, 1947. Autopsy confirmed the serous cystadenocarcinoma of ovary with metastasis in the pelvic peritoneum, bilateral ureteric obstruction and bilateral hydronephrosis.

4. Mrs. M. A. Hospital No. 4253. Aged 63 Years.

Admitted on the 21st April, 1947 with a retained pessary. General condition very poor ; marked auricular fibrillation. The pessary was removed under light anæsthetic on the 24th April, 1947 and the patient died the next day.

5. Mrs. V.R. Hospital No. 11078. Aged 45 Years.

Admitted on the 15th October, 1947 for operation for uterine fibroids. Total hysterectomy was performed on the 16th October, 1947, and died of a pulmonary embolus on the 25th October, 1947.

6. Mrs. E. W. Hospital No. 1563. Aged 59 Years.

Admitted on the 7th February, 1947 for pelvic floor repair, which was carried out on the 8th February, 1947. She died on the 19th February, 1947 of a pulmonary embolism.

7. Mrs. M. B. Hospital Nos. 11962 and 10805. Aged 31 Years.

Admitted on the 8th October, 1947 for investigation of malignant hypertension of 4 years known duration. Patient was also three months pregnant. Discharged on the 29th October, 1947, after investigation to await operation. Re-admitted on the 8th November, 1947, when abdominal hysterotomy was performed and at the same time the capsule of the right kidney was stripped. The patient developed severe left-sided heart failure and died 5 days after operation.

8. Miss E. C. Hospital No. 10623. Aged 23 Years.

Patient admitted in coma on the 3rd October, 1947, having been delivered of a four months' complete miscarriage 18 hours previously. The patient died, still in coma, 5 hours after admission, and at autopsy an acute, diffuse nephrosis was found.

9. Mrs. E. H. Hospital No. 7416. Aged 66 Years.

Admitted on the 12th July, 1947, at 10 p.m. with gross cardiac failure complicated by prolapse of the uterus and rectum. She had been ill for three weeks and on admission had marked cyanosis. Her temperature did not register and the pulse was poor and irregular in rate and volume. She became unconscious at midnight and died at 12.20 a.m. on the 13th July, 1947.

10. Mrs. A. T. Hospital No. 679. Aged 43 Years.

Patient admitted on the 16th January, 1947 with acute abdominal pain. She had a history of an ovarian abscess removed 15 years previously in the Royal Victoria Infirmary. She was operated on on the 18th January, 1947. The operation was extremely difficult. She had a pelvic abscess, probably originating in a tube, and the bowel was adherent to this end of the peritoneum. The abscess was removed, the bowel repaired and the wound closed. She improved slowly until the 22nd January, 1947, when she developed a sore throat with a membranous exudate. No typical organism was found, but her condition rapidly deteriorated and she died on the 25th January, 1947. There was no post mortem.

Linton Snaith,
Obstetrician and Gynæcologist.

REPORT OF THE CHILDREN'S DEPARTMENT.

During the year 1947, 1,671 infants and children were admitted to the Children's Department of the Newcastle General Hospital, while 154 children were admitted direct to Whitton Tower Convalescent Home, and 5 infants to Wellburn Nursery. Of these admissions 627 were infants under one year of age, and 109 of under one month. The number of mothers admitted with their infants was 144. There were 95 deaths. The main groups of illness and injury for which patients were admitted are shown in the appended table.

There were 195 more admissions than in 1946, and this increase was chiefly in the group of under one year of age, the increase in this group being 124. The relative frequencies of the different illnesses and injuries remained almost unchanged from the previous year. Acute respiratory infections and septic infections, such as abscess and cellulitis, remained the largest single causes for admission. The increase in acute nervous infections was due chiefly to cases of poliomyelitis, some of which were admitted direct while others were transferred from the City Hospital for Infectious Diseases for orthopædic treatment. There was a rise in the incidence of childhood rheumatism, and the importance of this rise in hospital economy is out of proportion to the actual numbers, in view of the long stay in these cases.

The problem of such long stay cases is one which is not yet solved, though the appointment of an Occupational Therapist to the hospital has proved an asset. The general policy of pædiatric control of all patients, whether medical or surgical, has been maintained and has continued to prove eminently satisfactory. The accommodation for mothers admitted with their infants still requires improvement. Plans are in hand for the improvisation of treatment rooms on the various wards.

The close co-operation with the Children's Department of the Royal Victoria Infirmary has continued through the year, and there has been an increase in the teaching done in the Department. Throughout the year students from the Child Health Department have been resident, each for a period of a week, in the hospital. These facilities are appreciated by the students, and the presence of the students acts as a stimulus to the work of all in the Department. It is through the co-operation with the Royal Victoria Infirmary that it has been possible to treat a number of children suffering from tuberculous meningitis with Streptomycin.

There is a need, which is becoming more apparent, for orthopædic help; the extent to which this is required can be judged from the number of cases of fracture and of bone and joint disease.

Throughout the year the Department has been handicapped, as has the hospital as a whole, by the increasing shortage of nurses. The very high proportion of young infants admitted renders this shortage all the more serious. The number of nurses required for the Department has increased, partly owing to the rise in the number of young infants admitted, and partly to the increase of demands on nursing time made by recent advances in treatment, such as the injections of Penicillin and Streptomycin and the increasing use of Intravenous Drip treatment. Thus the demand for nurses has increased while the number of nurses available has diminished, and there have been times when the number of nurses available has been totally inadequate. Certain cases of cross-infection, some of which have proved fatal, have been attributable almost entirely to nursing shortage. It is realised that this problem is one which extends far beyond the Department, but the seriousness of the problem in relation to the lives of children admitted to hospital must be emphasised.

The demands on the time of the Resident Medical Staff have also increased, partly owing to new treatment such as the administration of Streptomycin, and it is clear that further Medical Staff will be required in order to maintain the efficiency of the Department.

Once again comment is needed on the numbers of healthy children and infants admitted to the Department. Not only is it dangerous for healthy infants to be admitted to hospital, but the admission of these infants, by increasing the work of the nursing staff, increases the risks of cross-infection. It is to be hoped that other provision will be found for healthy infants.

The work of Whitton Tower Convalescent Home and of Wellburn Nursery is not adequately reflected in the numbers of direct admissions, as many children and infants were transferred there from the hospital wards.

It is a pleasure to thank the Nursing Staff and the Resident Medical Staff for their loyal co-operation and skill throughout the year.

J. C. SPENCE,

Physician-in-Charge, Children's Department.

CHILDREN'S DEPARTMENT.

Acute Infective Illnesses		474
Specific Infective Fevers	14	
Acute Alimentary Infections	90	
Acute Respiratory Infections	142	
Acute Nervous Infections	31	
Abscess and Cellulitis	147	
Other Acute Infections	50	
Tuberculosis		71
Pulmonary	38	
Non-Pulmonary	33	
Rheumatism		32
Venereal Disease		14
Injuries		193
Burns and Scalds	28	
Fractures	46	
Birth Injury	12	
Head Injuries	33	
Lacerations and General Injuries	74	
Emergency General Surgery		158
Appendicitis	32	
Intussusception	27	
Congenital Pyloric Stenosis	94	
Miscellaneous	5	
Planned General Surgery		70
Hernia	47	
Miscellaneous	23	
Special Surgery		215
Chest Surgery (Empyema, etc.)	18	
Neurosurgery	25	
Throat, Nose and Ear Surgery	93	
Genito-urinary Surgery	6	
Plastic Surgery (Hare-lip, etc.)	42	
Gynæcology	2	
Bone and Joint Disease	29	
Skin Disease		46
Eye Disease		3
Infant Feeding Disorders		58
Dental Conditions		11
Prematurity		9
Healthy		83
Miscellaneous Medical Conditions		234
Total		1,671

DEPARTMENT OF PATHOLOGY.

The following specimens were examined in the Department during the year :—

Blood :—		
Bilirubin	189	
Bleeding time	5	
Calcium	20	
Carbon Monoxide	1	
Cell Counts	3,241	
Chlorides	19	
Cholesterol	63	
Coagulation Rate	8	
Creatinine	9	
Erythrocyte Sedimentation Rate	136	
Fragility	9	
Hæmoglobin Estimation	1,062	
Malarial Films	21	
Non-Protein Nitrogen	8	
Paul Bunnell	24	
Phosphatase	53	
Phosphorus	4	
Potassium	20	
Proteins	191	
Prothrombin time	320	
Sodium	1	
Sugar	788	
Sulphonamides	1	
Takata-Ara	2	
Thiocyanates	6	
Thymol Turbidity	5	
Urea	1,394	
Uric Acid	13	
Weltman Band	4	
		7,617
Basal Metabolic Rate		30
Sternal Marrow Films		25
Cerebro-Spinal Fluid :—		
Routine	1,402	
Lange Curves	476	
		1,878

Fæces :—		
Bile	8	
Blood	1,217	
Fatty Acid Crystals	1	
Parasites	54	
		1,280
Miscellaneous		77
Pleural Fluids		89
Seminal Fluids		116
Test Meals		488
Urea Clearance Tests		129
Urine :—		
Bence-Jones Protein	2	
Chlorides	2	
Creatinine	1	
Diastase	19	
Galactose	1	
Guterman	145	
Hippuric Acid	26	
Mosenthal Excretion Test	9	
Routine	3,604	
Sulphonamides	4	
Visscher-Bowman	1	
Volthard Excretion Test	7	
Urea Concentration Test	7	
		3,828
TOTAL		15,557

W. H. H. MERIVALE,
Pathologist.

DEPARTMENT OF SURGICAL UROLOGY.

In August the clinic lost the services of Mr. John Swinney, who took up the appointment of Urological Surgeon to the Lovelace Clinic, New Mexico, and Assistant Professor of Urology to the State of Colorado, U.S.A.

In view of my own absence for some months in South Africa during the year it is surprising that the figures have shown only a very slight decrease from the previous year with out-patients still increasing in both attendances and minor surgery.

It was necessary to restrict the area served by the Clinic due to a steadily growing waiting list that remains, despite a marked increase in surgical sessions and longer operating lists.

Total Admissions	588
,, Major Operations	589
,, (Trans-urethral prostatectomies)	272
,, Out-patient attendances	982
,, Out-patient operations	311
Average age at operation	69
Percentage of trans-urethral prostatectomy mortality	4·77%

W. E. M. Wardill.
Genito-Urinary Surgeon,
Surgical Urology Department.

DIABETIC CLINIC.

The work of the Clinic has been carried on with certain modifications. Clinics are now held on Tuesday mornings, and Friday afternoons; pregnant diabetic patients are seen on Wednesday mornings, in order to reduce the time these patients have to wait.

The whole number of diabetics attending the Clinic is 284. Each of these is now seen a minimum of 4 times a year, but the majority 12 times per year. It is noteworthy that in the Newcastle municipal area there are approximately 600 patients with diabetes mellitus, giving an estimated incidence of 1 per 500 of the population.

81 new patients attended the Clinic in 1947 (17 male and 64 female).

Diabetic admissions during 1947 numbered 75 (23 male and 52 female). Of these 20 were admitted in Diabetic Coma, of whom 4 died. There were 6 patients with hypoglycæmic coma. The remainder were admitted for various peripheral vascular defects.

Seven patients who are pregnant have been attending. Of these, one had a miscarriage at 4 months, 2 have had normal deliveries and the remainder are still under review. It is hoped to investigate the possibility of improving the infant survival rate by the estimation of the urinary pregandiol and serum œstrin levels. Dr. Merivale is co-operating in this matter.

An assessment of the changes in the autonomic nervous system in diabetic peripheral neuritis is being carried out. There are 71 patients with diabetic peripheral neuritis at this Clinic and this work is being done in the Out-patient Department on Saturday mornings. With the co-operation of the Radiological Department, a survey of the frequency of changes in the joints is being carried out.

Diabetic patients are now able to have proper "foot care" by the Chiropodist. This should result in a significant reduction in the number of admissions for such lesions.

It is hoped that the increase in Out-patient attendances should considerably reduce the future admission rate of patients with Diabetes, and in particular should reduce the incidence of Diabetic Coma.

G. O. Richardson.

Physician-in-Charge,
Diabetic Clinic.

RADIOTHERM DEPARTMENT.

32 patients received fever therapy during the year 1947. The patients were referred for treatment by the Joint Committee's Clinic.

Clinical details regarding the types of cases and the treatment are as follows :—

Diagnosis.	*No. of patients.*	*No. of treatments.*
G.P.I.	16	74
Meningo-vascular Syphilis	6	34
Tabes Dorsalis	3	18
Gonococcal Arthritis	5	11
Penicillin-resistant Gonococcal Urethritis.....	1	1
Lymphogranuloma Inguinale ...	1	1
TOTALS	32	139

The method of treatment remained unchanged. In neurosyphilis, at each session the temperature had been maintained at a level of 105°F. for five hours ; in gonococcal infections, at a level of 106-106.6°F. for eight hours.

The patients were carefully selected for treatment and no untoward reactions or complications have occurred as a direct result of the treatment. In one case of G.P.I., however, the treatment had to be discontinued after one exposure because the patient developed mental changes and became unmanageable in the general medical department.

PAUL SZEKELY.

Medical Registrar.

CARDIOVASCULAR DEPARTMENT.

Increasing work once again emphasises the inadequacy of the present accommodation of this Department, and it is greatly to be hoped that more ample quarters will be available in the near future.

During the year we have had—

Admissions	700
Out-Patients	1,300
School Children	50
Joint Committee's Clinic	68

Electrocardiography. 1,076 records were taken in 1947 as against 971 in 1946 and 812 in 1945. A new instrument has been acquired which records direct on to a roll of special paper. This obviates photographic processing and gives the result of the examination at the bedside. It should be a considerable help in the greatly increased routine use of the electrocardiograph.

School Children's Heart Clinic. The usefulness of this new departure is shown by the fact that fifty cases were given a complete cardiovascular examination during the year.

Hypertension. Further studies of the effect of sympathectomy for arterial hypertension are going on. So far ten cases have had the operation with varying degrees of benefit. It is still much too soon to form a firm opinion on the results but they do indicate that this operation has a definite place in the treatment of high blood pressure. This agrees with results from other clinics in this country and abroad.

Skin Temperature Measurement. A special electrical thermometer was presented to the Hospital by the Electrical Women's Association through the good offices of Mrs. Collingwood Stewart. This piece of apparatus measures the changes in skin temperature following the application of various stimuli and is particularly useful in the study of peripheral arterial disease. By its use cases can be selected with a view to sympathectomy for the relief of intermittent claudication, threatened gangrene and Raynaud's Disease. It is a most useful addition to the diagnostic facilities of the Hospital.

W. E. Hume,

Physician-in-Charge,
Cardiovascular Department.

ALMONER'S DEPARTMENT REPORT, 1947.

New patients interviewed	6,624
Total interviews (excluding Ante Natal Patients)	8,069
New Ante Natal patients interviewed	2,322
Cases on Social Register	852
Home Visits	114

Analysis of Work.

A—Services.

Service.	*Number of Cases.*
Advised	46
Escort provided	16
District Nurse	14
Plans for Confinement	51
Discharge arranged	36
Domestic Help	28
Foster Mothers found	3
Nurseries	7
Lodgings provided	4
Cleaning House	1
Furniture sold	1
Adoption	1
Admission to Girls' Homes	3
Baptism	1
Funeral	1
Tenant found	2
Exchange of House arranged	1
Treatment arranged	3
Application for Pension	2
Employment found	3
Various	20

B—Material Assistance.

Service.	*Number of Cases.*
Convalescence	119
Spa Treatment	6
Clothing	34
Bedding	7
Transport	52
Fares	22
Nourishment	9
Grants for Cancer Patients	17
Pocket Money	2
Instruments	190
Loan of Invalid Chairs	9
Dentures	5
Dressings	2
Extra Coupons obtained	1
Financial Assistance	6
Various	5

C—Cases Passed to Other Agencies.

Agency.	*Number of Cases.*
Moral Welfare Workers	72
Disablement Rehabilitation Officer	29
Old People's Welfare Committee	18

AGENCIES CO-OPERATING.

STATUTORY.

Agency.	*Number of Cases.*
Public Assistance Committee	15
Health Departments	80
Home for Incurables	1
Education Departments	7
Housing Department	15
Assistance Board	5
Ministry of Pensions	1
Ministry of Labour	4
Board of Trade	1
Approved Societies	35

VOLUNTARY.

Agency.	*Number of Cases.*
Works Funds	28
Miners' Welfare	1
Employer	1
Invalid Loan Society	6
Home Teaching Society for Blind	2
Mission to Deaf and Dumb	1
Voluntary Tuberculosis Care Council	2
Poor Man's Lawyer	1
Dental Hospital	1
Ivory Cross Dental Fund	1
National Society for Cancer Relief	15

VOLUNTARY—*continued.*

Agency.	*Number of Cases.*
Almoner's Cancer Fund	11
Arnison Surgical Aid Society	2
Family Welfare Societies	33
Marriage Guidance Council	2
Women's Voluntary Service	12
Routledge Hunter Memorial Fund	6
Poor Children's Holiday Association	3
Local Clergy	8
Society of St. Vincent de Paul	8
Church Army	3
Little Sisters of the Poor	5
Catholic Women's League	1
British Legion	25
Red Cross Society	6
Emergency Help Committee	2
Soldiers', Sailors' and Airmen's Family Association	5
Mission to Seamen	2
Royal Alfred Seamen's Institution	1
Royal Naval Benevolent Trust	3
W.R.N.S. Benevolent Fund	1
Regimental Funds	13
R.A.F. Benevolent Fund	8
Discharged Prisoners' Aid Society	1

JULIET E. S. BROWN,

Lady Almoner.

REPORT ON THE MENTAL WARDS.

The number of admissions to the Mental Wards was 176 men and 201 women, a total of 377, an increase of 67 over the previous year.

Of the patients treated, 30 per cent. of the men and 52 per cent. of the women were transferred to the Mental Hospital. Of these, 18 men and 25 women went as Voluntary Patients and 7 women as temporary patients. It has been a constant feature that more women than men require treatment in the Mental Hospital.

As this will be the last report I will be called upon to make, it may be of interest to record the fact that approximately 13,200 patients have passed through the Mental Wards since I started duty in 1912, and during that time no serious trouble has arisen. As is well known, mental work can give rise to quite serious trouble, but I was very fortunate in having reliable help and co-operation from the staff.

I will take the last opportunity I will have of emphasising my opinion of the great value of Mental Observation wards attached to a general hospital. Certain types of cases can be efficiently treated without entering a mental hospital, and from my experience of relatives this is very much appreciated. Post-operative, post-traumatic delirium associated with physical illness, toxic conditions, are examples of such types of cases readily dealt with in an observation ward.

In addition to the appreciation of relatives, I know how much the medical practitioners of the City have taken advantage of the facilities offered.

During the last twelve months I have had the advantage of weekly consultations with Dr. J. Saule Thomas, Medical Superintendent of St. Nicholas Hospital, and I wish to express my appreciation and thanks for his valuable help and co-operation.

Along with this report I include a statistical return of the admissions and discharges.

G. P. HARLAN.
Physician-in-Charge, Mental Wards.

RETURN OF MENTAL CASES FOR 1947.

	Male.	*Female.*	*Total.*
TOTAL ADMISSIONS DURING 1947	176	201	377
Relieving Officers—Admissions	53	77	130
Police Admissions	60	63	123
Police Admissions (W.L.'s)	17	9	26
Police from R.V.I. Admissions	11	12	23
From Newcastle General Hospital Wards ...	35	30	65
From Elswick Grange	..	10	10
	176	201	377
TOTAL DISCHARGES DURING 1947—			
To Home	50	44	94
To Elswick Grange	25	10	35
To St. Nicholas' Hospital—Certified.....	33	74	107
,, ,, ,, Voluntary	18	25	43
,, ,, ,, Temporary	..	7	7
To Newcastle General Hospital Wards.....	13	5	18
To Miscellaneous	6	4	10
Deceased	25	26	51
TOTALS	170	195	365
Patients in Wards on 31/12/47	6	6	12
	176	201	377

MATRON'S REPORT.

The Nursing Staff position during 1947 deteriorated considerably, due to the transference of the Preliminary Training School to "Close House," where accommodation and consequently the intake of Student Nurses is limited. Although the Staff return for January 4th, 1947, shows a total strength of 424, and that of January 3rd, 1948, one of 474, the latter figure includes 72 part-time nurses, some only working one day per week, so that the Wards in actual fact are worse off.

In 1946, we had 98 new Student Nurses who commenced training, in 1947, only 75. The position will, undoubtedly, deteriorate still further, and instead of the 100 per year new Student Nurses towards which we were working in 1946, the figure next year may not reach sixty.

At present, the Night Nurses' hours are much too long, no Ward has a full complement of staff, and improvements in training such as the establishment of the Block System, are impossible. As an experiment to help to improve both staffing and training, I am going to ask the Management Committee for permission to employ Ward Orderlies. Any great improvement in the number of Senior Staff cannot be expected until more accommodation is available, for although as many as possible live out now, the finding of suitable lodgings for both male and female staff is increasingly difficult, and unless I had agreed to Night Sisters, Dietitian, Occupational Therapist etc., being resident, we would not have them at all. The provision of partly furnished rooms which Senior Staff could rent from the Committee is a modern idea which I think would prove popular, and is worth consideration.

The average number per week off duty through sickness was 13.25 in 1947 as against 11 in 1946. The increase is, I think, explained by the additional number of part-time workers, amongst whom the sickness incidence is much higher than among regular full-time staff.

The Domestic Staff situation is quite satisfactory, there being a Waiting List for Ward cleaners, and good girls for the Nurses' Home and Houses are available when required. I think the appointment of Miss Lillico as Domestic Supervisor has made the girls much more contented, as she takes a real interest in their well-being and recreation.

D. R. Gibson,

Matron.

PHARMACEUTICAL DEPARTMENT.

Accommodation.

The accommodation afforded the department having resulted from the successive additions of adjoining rooms to meet the demands on the department of a greatly expanded hospital, is crowded and inadequate for the most efficient discharge of the departmental work. Much relief has been afforded at the end of the year by the provision of a Nissen Hut providing adequate accommodation for the storage of Surgical Dressings.

A re-organisation of the storage accommodation which commenced in October and is still being continued, has resulted in the available storage room being utilised to greater advantage.

The main deficiencies arise from the lack of a sterile preparations room and a refrigerator to meet the demands of modern medicinal and surgical requirements and necessitating at present, uneconomical purchases of preparations which should be made within the hospital. Plans have been submitted for the provision of the above and it is hoped that this will be remedied shortly.

Development.

A start has been made to develop the production of compounded preparations which can be produced more cheaply at the same time eliminating the incidence of Purchase Tax on costs.

Staffing.

During the year there have been numerous staff changes and for appreciable periods the department has worked understaffed, necessitating overtime working.

Inadequate portering assistance continues to necessitate overtime working and precluded the ability to undertake duties outside the department. A further porter would eliminate encroachment upon the time of ward staffs, who at present have to collect many of their requirements, at the same time relieving the general portering staffs of calls upon their time for collecting and delivering ward baskets and oxygen cylinders. Such duties should, in order to promote more efficient working devolve upon a porter set apart for such duties and are sufficient to provide full-time employment.

Supplies and Costs.

There has been a steady increase in drug and surgical instruments, and a 30 per cent. increase in surgical dressing prices during the year, and the interim budget added a further one-sixth purchase tax on a considerable proportion of drug costs. Penicillin continues to be used in increasing quantities and at the end of the year was being used at the rate of £270 worth per month.

By comparison with the corresponding period a year ago, there is a monthly reduction of drug expenditure of £250, attributable mainly to more economic buying, greater control over distribution and increased manufacturing in the department, which at present has been stepped up to a direct saving of £15 per month over former buying.

General.

Although much improvement is and will be effected within the existing premises, sight should not be lost to the fact that when further building programmes are possible, a new department planned to meet the full requirements of this Hospital should be erected.

W. T. Wing,

Chief Pharmacist.

CHIROPODY DEPARTMENT.

The Chiropody Department commenced on the 22nd September, 1947. Primarily, patients were treated in a room on C Flat, due to the delay in delivery of equipment for the present surgery. This is now complete, and the main items include :—

1. Chiropody and operator's chair.
2. Stock Cabinet.
3. Chiropody Cabinet.
4. Infra-red, Radiant Heat and Luminous Lamp.

To date, 400 patients have been seen and a total number of 1,086 treatments given.

Medical Staff.—151 members of the nursing staff and 9 doctors have taken advantage of the new facilities. They are seen periodically until the conditions have cleared up.

A systematic examination is made of all student nurses whilst they are still at the Preliminary Training School, and those suffering from foot ailments are selected for treatment. A short instruction is also given with regard to correct shoes, shoe-fitting and foot care. On first entering the wards, Pes Cavus is a common complaint amongst the nurses due to unaccustomed long standing.

Diabetes.—It was felt that as attention to the feet is of special importance in people suffering from diabetes, that an inspection should be made. Therefore, in co-operation with Doctors Richardson and Henderson, this is being done when the patients come to the Clinic. These people are now realizing the danger of complications which may ensue due to self-treatment and are co-operating well. Together with minor foot ailments, i.e., corns, callus, etc., they are particularly prone to the development of diabetic ulcers. Since the examination started three weeks ago, 39 of the 300 patients have been seen.

Chronic Bed Patients are seen automatically at three monthly intervals in the wards. It has been found that they mainly complain of nail conditions. This is due to pressure of the bedclothes over a considerable period.

OUTPATIENTS are sent by the Resident Medical Officer and Surgical Staff.

OTHER PATIENTS who are unable to reach the surgery are treated in bed by the request of the doctors. If necessary, treatment is continued after discharge from hospital until satisfactory results have been obtained.

It was suggested that an examination of women attending the hospital during pregnancy be made. In co-operation with Dr. Williamson this was started some weeks ago. It is anticipated that some experimental work on weight-bearing during this time may be carried out.

I should like to express my grateful thanks to all members of the staff who have always given me valuable assistance and advice in starting and carrying out the work of the Department.

W. BAUM,

Chiropodist.

VENEREAL DISEASES STATISTICS WITH REFERENCE TO NEWCASTLE UPON TYNE, 1947.

General Statistics—Of 3,255 patients who attended the Joint Committee's Venereal Diseases Department, 2,306 were reporting for the first time and approximately 40-45 per cent. of the latter were found to have venereal infection. Compared with 1946, there was a general reduction in the incidence of the various venereal diseases in both sexes, but it is to be regretted that there was a sharp rise in the default rate from treatment in both sexes, despite strenuous efforts on the part of social workers. I feel that this in no small measure was due to the rapid disappearance of symptoms in patients who received penicillin treatment.

Penicillin Treatment.—679 patients received penicillin for their venereal infections and this form of therapy, usually brilliantly successful in gonorrhoea, has yet to be accurately assessed in the treatment of syphilis.

Pathological Work.—7,743 specimens were examined by the medical staff of the V.D. Department, while a further 7,547 specimens were referred to the serological laboratory for investigation.

Ante-natal Investigation for Syphilis.—5,008 blood Wassermann examinations were performed on 4,973 pregnant women attending ante-natal clinics. 41 women (0·8 per cent.), apparently healthy, were found to have syphilis, which disease might well have had a disasterous effect on the pregnancy outcome if energetic treatment had not been commenced forthwith. A further 46 expectant mothers yielded "doubtful positive" blood tests and approximately 25 per cent. are still under observation.

The appalling legacy of inherited syphilis, still difficult to cure, warrants the maintenance of the existing efficient ante-natal W.R. arrangements in Newcastle.

Contacts.—245 contacts were sought and of these 171 were found. Of the latter, 101 were found to have V.D., 28 were non-venereal; 4 were transferred out of the area; 19 are not yet diagnosed and 19 refused or failed to attend for tests.

Defence Regulation 33B.—Newcastle.—87 women who had been named on Form I were sought: 21 of these women had been named twice or more on Form 1. Of these women, 54 were found and 46 were persuaded to attend. Of the latter 38 were found to have V.D.; 3 were not infected and 5 failed to complete tests. Eight women were unco-operative and failed to attend.

Of the 21 women named more than once, 15 attended after persuasion and 11 were served with Form II. Of the latter, 8 responded and 3 left the district.

Two women were prosecuted for failure to attend for treatment; 2 were summoned to Court but as they attended regularly after receiving the summons, the cases were dismissed.

Nine men named on Form I were sought; 5 were found and only one was found to have V.D.

W. V. Macfarlane,

Director, Joint Committee's Clinic.

SHOTLEY BRIDGE HOSPITAL.

To the Medical Officer of Health,

City and County of Newcastle upon Tyne.

Sir,

I beg to submit the annual report for the year ended 31st December, 1947.

A rough analysis of the return will show that :—

1. Admissions total 2,407 as against 2,526 for the previous year.

2. The number of operations performed over the year was 2,795 as against 2,823 in 1946.

3. The Radiotherapeutic Department records 788 patients admitted as against 706 during the previous year.

4. There was a small falling off in the number admitted to the Thoracic and Facio-Maxillary Units.

5. The volume of work in the Pathological Laboratory, X-Ray and Physiotherapy Departments was about the same as that during the preceding year.

Turning to the individual sections of the Hospital we have the following departments for review ;

1. General Medical and Surgical
2. Facio-Maxillary
3. Thoracic
4. Radiotherapeutic
5. Pathological Laboratory
6. X-Ray
7. Physiotherapy

General, Medical and Surgical Section.

A perusal of the attached returns will show that various conditions which were treated in the Hospital. Major surgical ailments were more frequent in our Wards than in former years, and this helped to make our Junior Medical staff and Nurses more enthusiastic in their work. There was, however, a great scarcity of medical cases, mainly due to the absence of an Out-patient Department. As pointed out in the past, a greater number and variety of medical and surgical cases will help to attract and hold our Medical and Nursing Staff. This will be necessary also, if we aspire to the status of a training school for Nurses.

Facio-Maxillary Department.

The number of cases admitted to this Unit was 262. It caters for the usual congenital deformities in children and such conditions as the sequelæ of burns and fractures of the facial bones. This Department has a considerable waiting list and is likely to require more beds and staff if it is to cater for all those requiring treatment. As it is now under the care of a Surgeon who is devoting his whole time to this type of work, I anticipate that the Clinic will have a greatly increased turnover in the future.

Thoracic Unit.

This Department catered for 820 patients during the year. It occupies 140 beds. The number seeking admission is large and there is a considerable waiting list. In addition to its 140 beds, this Unit has a Gymnasium for its patients, plus a Theatre and X-Ray Department largely for its own use. The Medical Staff attached has been greatly augmented during the year under review.

Radiotherapeutic Centre.

During the year this Department catered for 788 patients as against 706 during the preceding year. An extra Deep Therapy machine, making three in all, and a Superficial Therapy set was installed. There are three Radiographers and one Trainee Radiographer. In addition much of the surgery connected with the Unit

is now being done at Shotley Bridge Hospital. It is a busy Clinic with an ever increasing number seeking admission for treatment. The additional Deep Therapy machine and development of the surgical side has led to a greatly increased turnover.

Pathological Laboratory.

During the year this Laboratory recruited four Trainee Technicians ; a prudent move in view of the general shortage of this type of worker. An extra Senior Technician is contemplated in addition to the fully qualified Technician we already have. The work of the Department continues to increase and dealt with 14,903 specimens during the year. An extra room was allocated for the Laboratory and an assistant Pathologist was added to the staff. Here again, I anticipate a greatly increased turnover in the amount of work carried out during the coming year.

X-Ray Department.

There is for all practical purposes, but one set serving the needs of the whole Hospital. This is quite inadequate. We shall need one additional X-Ray machine with a Radiographer to function in the main building, if we are to cope with the demands for X-Ray investigation. The number of patients X-rayed during the year was 7,192.

Physiotherapy Department.

This Department is somewhat lopsided. Allocated to the Thoracic Unit there are three trained and two student Physiotherapists ; they occupy one entire hut. The rest of the Hospital is catered for by one Physiotherapist confined to a small room. I would suggest that the needs of the whole Hospital, in the matter of Physiotherapy, be centred in one building, and that patients from all Departments should be treated therein. The practice of a single Clinic laying claims to its own X-ray or Physiotherapy Unit is a bad one. Such services should function for the use of the Hospital as a whole rather than that of any one particular Clinic. The number of treatments given by the Physiotherapy Departments during the year was 33,031. The demand is increasing.

Nursing Staff.

The number of our Nursing Staff dropped during the year from 130 to 110; the proportion of qualified to unqualified is 1 to 4. During the year the Newcastle General Hospital never sent its full complement of 20 Probationers to help us, and of those sent a large percentage had to have holidays during their stay at Shotley Bridge. With this small number of Nurses we found it extremely difficult to cater for 300 patients, particularly so as the proportion of qualified Nurses on our staff was so small. I see no prospect of getting over our nursing difficulties until we have adequate accommodation for staff and a Training School of our own.

Medical Staff.

Junior Medical Staff were more easily come by than in former years; yet, like nursing personnel the conditions under which they work are of importance. A greater proportion of General, Medical and Surgical cases and less of the Special Centre type would help to attract the Junior Medical Officer, who is naturally more anxious to see the class of case he is likely to meet in practice, rather than those of a more specialised character.

In concluding this brief survey, I am conscious of many omissions; however, such as it is, I present it to you with the accompanying returns.

I think you will agree that it is a record of very good work and one which reflects credit on all sections of the Staff. For their loyal co-operation I am indebted to them all—the Medical and Nursing staffs, the various departments of the lay employees and the Office staff. As in former years I single out the Matron (Miss L. Watt), and the Clerk and Steward (Mr. N. Richards), for a special word of acknowledgment. There constant help has always been at hand to lighten my task, and I am deeply indebted to them both.

To you, Sir, my best thanks for your counsel and kindly encouragement. You have extended them both to me in full measure throughout the year and I am very grateful to you.

G. F. Duggan,
Medical Superintendent.

ADMISSIONS, DISCHARGES AND DEATHS

for Year ended 31st December, 1947.

	Male.	*Female.*	*Total.*
ADMISSIONS—			
Civilian Cases	1,346	963	2,309
Service ,,	93	5	98
TOTALS	1,439	968	2,407
DISCHARGES—			
Civilian Cases	1,247	890	2,137
Service ,,	100	4	104
TOTALS	1,347	894	2,241
DEATHS—			
Civilian Cases	95	38	133
Service ,,	5	1	6
TOTALS	100	39	139

CLASSIFIED LIST OF DISEASES TREATED.

RESPIRATORY DISEASES.

	Service.	*Civilian.*	*Total.*
Bronchitis	..	6	6
Asthma	1	7	8
Pleurisy	1	1	2
Bronchiectasis	2	118	120
Empyema	3	57	60
Broncho-pneumonia	..	2	2
Lobar Pneumonia	..	6	6
Neoplastic (Simple and Malignant)	1	254	255
Others	9	169	178
TOTAL	17	620	637

DIGESTIVE DISEASES.

Gastric Ulcer	..	15	15
Duodenal Ulcer	1	63	64
Gastritis	..	..	..
Dyspepsia	..	..	..
Gastro-enteritis	..	..	..
Cirrhosis of Liver	..	1	1
Jaundice	..	1	1
Others	1	67	68
TOTAL	2	147	149

TUBERCULOSIS.

Pulmonary	23	156	179
Non-Pulmonary	..	5	5
TOTAL	23	161	184

DISEASES OF EXCRETORY SYSTEM.

	Service.	*Civilian*	*Total.*
Acute Nephritis	..	..	..
Chronic Nephritis	..	..	..
Pyelitis	..	..	..
Cystitis	..	..	..
Others	2	49	51
TOTAL	2	49	51

ENDOCRINE DISEASES.

Goitre	..	3	3
Diabetes Mellitus	..	2	2
Others	..	..	..
TOTAL	..	5	5

RHEUMATIC DISEASES.

Acute Rheumatic Fever	..	..	..
Chronic Rheumatism	..	..	..
Rheumatoid Arthritis	..	..	..
Lumbago and Fibrositis	..	1	1
Sciatica	..	..	..
Arthritis	..	..	..
TOTAL	..	1	1

NERVOUS DISEASES.

Vascular Diseases of Nervous System	..	..	..
Syphilitic Diseases of Nervous System	..	..	..
Disseminated Sclerosis	..	..	..
Epilepsy	..	..	..
Paralysis Agitans	..	..	..
Neuritis and Neuralgia	..	..	..
Others	..	3	3
TOTAL	..	3	3

DISEASES OF CARDIOVASCULAR SYSTEM.

Rheumatic Heart Disease	..	..	..
Syphilitic Heart Disease	..	..	..
Hypertension	..	2	2
Angina Pectoris	..	3	3
Coronary Thrombosis	..	1	1
Arterio-sclerosis	..	..	..
Senility	..	..	..
Others	..	9	9
TOTAL	..	15	15

	Service.	*Civilian.*	*Total.*
MINOR AILMENTS.			
Pharyngitis	..	..	..
Laryngitis	..	..	..
Coryza	..	..	..
Influenza	..	..	..
Tonsillitis	1	..	1
TOTAL	1	..	1
SKIN DISEASES	1	..	1
BLOOD DISEASES.			
Pernicious Anæmia	..	1	1
Others	..	..	..
TOTAL	..	1	1
INFECTIOUS DISEASES.			
Measles	1	..	1
Diphtheria	..	..	..
Scarlet Fever	..	..	..
Malaria	..	..	..
Amœbic Dysentery	..	..	..
Others	..	1	1
TOTAL	1	1	2
SURGICAL CASES.			
FRACTURES (exclusive of Jaw Fract.)			
Simple	..	4	4
Compound	..	3	3
TOTAL	..	7	7
FACIO-MAXILLARY CASES	16	246	262
UROGENITAL DISEASES	3	28	31
HERNIA	4	84	88
APPENDICITIS	3	29	32
ABSCESS, CELLULITIS, ETC.	1	..	1
HÆMORRHOIDS, VARICOSE VEINS AND VARICOCELE	3	45	48
BONE AND JOINT CONDITIONS, OTHER THAN FRACTURES	3	15	18
OTHERS	17	74	91
RADIOTHERAPY DEPARTMENT	4	784	788

X-RAY DEPARTMENT.

No. of Patients	7,092
No. of Barium Meals	176
No. of Jaws	218
No. of Chests	5,613
No. of Films used in 1947	11,032

OPERATIONS PERFORMED.

Facio-maxillary Cases	150
Skin and Subcutaneous Tissues	57
Orthopædic	17
Abdominal	260
Genito-Urinary	15
Blood Vessels	69
Ear, Nose and Throat	85
Amputations	2
Thoracic	1,402
Others	738
TOTAL	2,795

PHYSIOTHERAPY DEPARTMENT.

No. of Patients treated	603

Treatments—

Artificial Sunlight	154
Electrical	1,029
Massage	7,811
Breathing and Remedial Exercises	24,037
TOTAL	33,031

PATHOLOGICAL LABORATORY.

Vaccines	1
Casoni	15
Sputum	3,461
Urine Routine	859
Occult Blood	490
Test Meal	300
Blood Chemistry	1,027
Kidney Function Test	301
Liver Function Test	49
Cerebro-Spinal Fluid	154
Worms	442
Post Mortem	86
Histology	709
Sterility	5
Blood Count	2,309
Blood Sedimentation Rate	926
Cross Group	445
Agglutination	26
Blood Culture	48
Sputum Culture	460
Pleural Fluid	985
Nose and Throat Swabs	545
Wound Swabs	536
Fæces for Culture	151
Urine for Culture	453
Penicillin Sensitivity	69
Fæcal Fat Estimation	19
Fungi	5
Malaria	27
TOTAL	14,903

REPORT ON SPECIAL SKIN CLINIC.

Consultations and treatment of Newcastle residents suffering from Scabies and disinfestation of verminous persons and their clothing has continued during the year.

Cases seen for the first time and total cases treated are substantially less than in previous years, partly due to the decline in Scabies and partly owing to a gradual falling off of contact follow-ups of children.

The admission of children and their mothers to the Moor Hospital has continued and the nurses there have given excellent service in the treatment of the more ill patients.

Comparative figures for the years 1943-1947 are as follows :—

	Total Cases Treated.	*First Treatments given.*
1943.....	11,232	4,907
1944.....	11,798	5,239
1945.....	10,105	4,428
1946.....	10,030	3,964
1947.....	7,595	2,411

At the disinfestation centre in the basement at 37, Churchill Street, verminous cases from the common lodging houses have been seen and treated regularly by the Male attendants. Careful supervision of the living conditions of these persons has again resulted in a large number of patients being seen. The total figure of 168 is just below the average number for the last four years, comparative yearly totals being :—

1943	163
1944	166
1945	285
1946	159
1947	168

I would like to express my thanks to the Medical Superintendent City Hospital for Infectious Diseases, Walker Gate, for the time spent at clinics by his Medical Staff and for the continued supply of drugs and other services. The nursing staff at the clinic and at Moor Hospital has remained unchanged, except for illness breaks, and has given loyal support throughout the year.

WILSON MINNS,

Medical Officer in Charge.

REPORT OF THE

CHIEF SANITARY INSPECTOR

VI—FOOD AND DRUGS NUISANCES, HOUSING, FACTORIES, Etc.

ANNUAL REPORT OF THE CHIEF SANITARY INSPECTOR FOR THE YEAR 1947.

To the Medical Officer of Health.

Sir,

I have pleasure in submitting the following report upon the work carried out by my section of the department during the year 1947.

As in the preceding year, the position in respect of the supply of building materials and building labour has again been most difficult. This ever present adverse circumstance, allied with high costs of work and restriction in the form of licensing control, has had the effect of curbing and preventing many pressing sanitary improvements in premises being carried out, and has also caused a wasteful drain of Inspectorial time. In the matter of disrepair in dwellinghouses, complaints to the department were indeed much above the average, particularly so those from the congested areas of the City where this sphere of work alone claimed nearly 100 per cent. of time. In an endeavour to overcome the time lag in the remedying of disrepair in dwellinghouses and also to accelerate the issue of licences when necessary, the service of informal notices to all intents and purposes ceased, and was substituted, with the consent of the Health Committee, by a daily service of statutory notices. This change generally has proved most helpful in this particular class of work.

Reorganisation of Inspectorial Duties.

The present post war troubles were foreseen some while ago and to meet this situation, and also to deal reasonably with the requirements of the years immediately ahead, a scheme of reorganisation of inspectorial duties was submitted to and approved by the Health Committee early in the year. Part of the proposal is an increase in the number of inspectorial staff, and whilst newly qualified personnel have been obtained, the experienced staff so very necessary to the scheme has not as yet been secured and consequently operation of the reorganised duties has not been commenced.

Training of Student Sanitary Inspectors.

The normal training of student sanitary inspectors ceased during the war years, with the result that the demand for qualified inspectors,

and in particular those with experience, is now far in excess of the supply. This serious position has been offset somewhat by the Ministry of Health, in conjunction with other Ministries concerned and with Local Authorities, in the arranging of full-time courses for selected ex-service men. This City, with its ample resources for the work, was selected as a centre of training, and upon request from the Director of Education the Health Committee willingly agreed to co-operate in a Course by the release of suitable staff for special tutorial duties and the use of the department for the practical work of the students. The course is now in full operation and is to terminate in November, 1948.

Overcrowding.

Report was submitted to the Health Committee as to a further survey of dwellinghouses in the City so as to ascertain the changes occurring in tenancies since the survey of 1936. From this date the changes are estimated to have been numerous, and the information then obtained as to overcrowding, etc., for all practical purposes is of very doubtful value. Apart from the information as to the present state of overcrowding that would have been ascertained, and the measures that would necessarily follow to abate this evil, it was proposed to make the survey a "Sanitary" one, and to cover all dwellinghouses in the City. A full knowledge of dwellinghouses as to the number and types, their use, their amenities or the lack of them therein is required for many purposes and this knowledge is not as yet available. The report was approved, but on submission to the Finance Committee the proposal was deferred. It is hoped, however, that this necessary work will be carried out during 1948.

Housing.

There yet remain to be rehoused over 1,000 families who are living in dwellinghouses which were condemned as being totally unfit for human habitation some 8, 9 and 10 years ago. The conditions today in a very great number of these houses are truly dreadful, and short of wholesale reconstruction of the dilapidated, decayed and worn out structures, little, practically, is possible to ameliorate the conditions. Much material and labour has been used and much of it gone to waste by the owners in carrying out, upon request, maintenance work on these dilapidated hovels. The provision of an adequate number of new houses is a most urgent necessity for these families, of whom the majority are now more than ever becoming impatient at the delay in rehousing. In divers ways and somehow,

FOOD AND DRUGS ACT, 1938.

Samples taken for Analysis during the Year 1947.

Article.	No. of Samples obtained.			Result of Analysis.		Action Taken.			Remarks.
	Formal.	Informal.	Total.	Genuine.	Not Genuine.	Prosecutions	Convictions.	Cases Dismissed.	
Milk	455	309	764	756	8	..	..	..	Formal and check samples proved genuine therefore no further action was taken.
Condensed Milk	..	4	4	4	..	..	..	..	
Butter	..	11	11	11	..	..	..	..	
Margarine	..	11	11	11	..	..	..	..	
Lard	..	10	10	10	..	..	..	..	
Cocoa	..	1	1	1	..	..	..	..	
Tea	..	11	11	11	..	..	..	..	
Coffee (including coffee extract)	..	1	1	1	..	..	..	..	
Sugar	..	11	11	11	..	..	..	..	
Baking Powder	..	6	6	6	..	..	..	..	
Custard Powder	..	1	1	1	..	..	..	..	
Cheese	..	11	11	11	..	..	..	..	
Bacon	..	8	8	8	..	..	..	..	
Golden Raising Powder	..	2	2	2	..	..	..	..	
Jams and Marmalade	..	5	5	5	..	..	..	..	
Golden Syrup	..	1	1	1	..	..	..	..	
Chocolate Milk Powder	..	1	1	1	..	..	..	..	
Dried Egg	..	1	1	1	..	..	..	..	
Rice, Semolina	..	2	2	2	..	..	..	..	
Flour, Wholemeal, Oatmeal, Oats	..	7	7	7	..	..	..	..	
Peas, Barley, Beans, Lentils	..	4	4	4	..	..	..	..	
Dried Fruits	..	2	2	2	..	..	..	..	
Tinned Fruits	..	3	3	3	..	..	..	..	
Table Jellies	..	3	3	3	..	..	..	..	
Gelatin	..	4	4	4	..	..	..	..	
Ice Cream	..	7	7	7	..	..	..	..	
Biscuits	..	6	6	6	..	..	..	..	
Cakes	..	2	2	2	..	..	..	..	
Tinned Vegetables	..	2	2	2	..	..	..	..	
Tinned Fish	..	4	4	4	..	..	..	..	
Tinned Meat	..	3	3	3	..	..	..	..	
Fish Pastes	..	4	4	4	..	..	..	..	
Meat Pastes	..	2	2	2	..	..	..	..	
Potted Meat	..	1	1	1	..	..	..	..	
Sausage	6	..	6	3	3	..	..	..	Deficient in meat content. Reported to Food Control Committee.
Pickles and Sauces	..	4	4	4	..	..	..	..	
Flavouring Essences	..	5	5	5	..	..	..	..	
Herbs (Seasoning)	..	5	5	5	..	..	..	..	
Cloves	..	1	1	1	..	..	..	..	
Curry Powder	..	1	1	1	..	..	..	..	
Soups	..	4	4	4	..	..	..	..	
Mustard, Pepper and Vinegar	..	6	6	6	..	..	..	..	
Junket Powder	..	1	1	1	..	..	..	..	
Spices	..	4	4	4	..	..	..	..	
Ground Ginger	..	4	4	4	..	..	..	..	
Gravy Salts	..	3	3	3	..	..	..	..	
Ground Nutmegs	..	1	1	1	..	..	..	..	
Bicarbonate of Soda	..	4	4	4	..	..	..	..	
Essence of Anchovies	..	1	1	1	..	..	..	..	
French Capers	..	1	1	1	..	..	..	..	
Household Drugs									
Boracic Powder 2; Flowers of Sulphur 1;	..	3	3	3	..	..	..	..	
Camphorated Oil 2; Chemical Food 3;	..	5	5	5	..	..	..	..	
Castor Oil 2; Cod Liver Oil 1;	..	3	3	3	..	..	..	..	
Composition Essence 2; Cream of Tarter 4;	..	6	6	6	..	..	..	..	
Confection of Senna 3; Epsom Salts 2;	..	5	5	5	..	..	..	..	
Glaubers Salts 3; Glycerine 1;	..	4	4	4	..	..	..	..	
Friars Balsam 1; Liquorice Powder 4;	..	5	5	5	..	..	..	..	
Gregory Powder 3; Cough Mixture 1;	..	4	4	4	..	..	..	..	
Glycerine, Lemon and Ipecacuanha Mixture 1;	..	1	1	1	..	..	..	..	
Zinc 2; Sulphur 3; Boric 3; Ointments	..	8	8	8	..	..	..	..	
Paregoric 3; Tartaric Acid 3;	..	6	6	6	..	..	..	..	
Tincture Iodine 3; Tincture Rhubarb 1;	..	4	4	4	..	..	..	..	
Syrup of Squills	..	1	1	1	..	..	..	..	
Cider	..	1	1	1	..	..	..	..	
Ginger Wine	..	1	1	1	..	..	..	..	
Sarsaparilla	1	..	1	1	..	..	..	..	
Raspberry Drink	1	..	1	1	..	..	..	..	
Gin	1	..	1	1	..	..	..	..	
Whiskey	2	..	2	2	..	..	..	..	
Rum	..	1	1	..	1	..	..	..	Formal sample unobtainable.
Totals	466	564	1,030	1,018	12	..	..	..	

a few tenants have managed to find themselves other accommodation, but there are also others from other places who are ready to, and do, unauthorisedly occupy the condemned vacated rooms, irrespective of insanitary conditions or consequences. Their presence, in many instances is made known to the department by way of complaint from them as to their bad housing conditions plus a request for a new house.

Applications for Council Houses.

The Housing Committee's "Points Scheme" for determining priority of applicant for a Council house is an excellent one, and yet, no matter how well organised it is, it cannot of itself cater for every circumstance and condition that must or should be taken into consideration in the allocation of houses. To meet this situation the Health and Housing Committees agreed that the special knowledge of the Medical Officer of Health and the Chief Sanitary Inspector be used jointly in classifying, in four groups, all applications received in the department for Council houses. This service, of which details are set out on page 229, has proved of material help to everyone concerned.

Food Supply.

Supervision of all types of food premises in the City, together with sampling of foodstuffs, has been well maintained. In regard to the quality of the various articles of foodstuffs sampled, the percentage of non-genuine samples is much below that of the previous year. Deficiencies were found only in respect of fat content in milk and meat content in sausage.

The Milk Supply.

During 1942 investigation was made as to the sources and grades of milk supplied to the milk purveyors in the City and as sold by them for consumption in the City. This inquiry was carried out again during the year and it is found that supplies were received from 700 producers in the Counties of Northumberland, Durham and Cumberland, 14 local producers and 4 wholesale depots. The total gallonage, 22,046, obtained on the check day represents a daily consumption of 0.62 pints per head of the estimated population.

The results of the inquiry are set out in the tables following :—

Milk (Percentages) as Purchased and as Sold.

	T.T. (Cert.)	T.T.	Accredited	Pasteurised	Sterilisd	Heat treated	Undesignated	Total.
As produced or Purchased..	3·85	7·14	7·38	9·57	..	13·24	58·82	100
As sold for consumption	3·85	4·52	0·76	57·02	3.86	5·30	24·69	100

Milk (Percentage) as Sold in 1942 and 1947.

	T.T. (Cert.) & T.T.	Accredited	Pasteurised	Sterilised	Heat Treated	Undesignated
1942	1·72	2·26	46·78	13·37	9·15	26·72
1947	8·37	0·76	57·02	3·86	5·30	24·69
Diff.	+6·65	—1·50	+10·24	—10·49	—3·85	—2·03

Despite the difficulties milk producers have had in obtaining feeding stuffs for their herds, the average milk fat content of the milk samples is slightly higher than that of the previous year, being 3.70 per cent. against 3.55 per cent. Biologically, the percentage of positive samples showed a welcome decrease of from 2.1 in the previous year to 1.3. Bacteriologically, the results of the examinations of all milk samples are again very unsatisfactory.

New Legislation.

The Ice Cream (Heat Treatment) Regulations, 1947, came into force on the 1st May, 1947, and when in full operation will have a far reaching effect in securing the sale of a wholesome ice cream. Briefly, their effect controls the type of apparatus to be used in the manufacture of ice cream, methods of manufacture and generally, hygienic control is tightened up very considerably in every way in respect of this commodity. A provisional standard as to wholesomeness of ice cream has been made and is in use for an experimental period. This standard sets out in four grades, Nos. 1, 2, 3 and 4, the wholesomeness or otherwise of this foodstuff. Grades 1 and 2 are good, whilst Grades 3 and 4 are bad. A major difficulty yet to be overcome is that, whilst many manufacturers are very anxious indeed to obtain modern and approved apparatus, the supply at present is far short of the demand. A nutritional standard has not as yet been set, and this urgent matter must perforce await the time to come when a choice of ingredients is freely available to all manufacturers. In this respect, however, a few of the makers do manage to market an ice cream with a fat content of 12 per cent., on the other hand the great majority rarely exceed 1 or 2 per cent. of fat.

FOOD AND DRUGS ACT, 1938.

Total samples.—1,030 samples were procured and submitted to the Public Analyst during the year. This number, 54 below that of the previous year, represents a sampling rate of 3.5 per thousand population. The rate recommended by the Ministry of Agriculture and Fisheries is 3.0 per 1,000 population.

Informal samples.—In all, 564 samples (54.43 per cent. of the total) have been so taken and analysed. Of this number, 309 were milk. This method of sampling affords a very useful guide as to the quality of the foodstuffs and drugs being sold in the city, but legal proceedings cannot be instituted when an informal sample is found to be not genuine. In such instances, however, formal sampling of the article concerned is carried out at the earliest moment.

Samples not genuine.—The total number of these samples was 12, representing 1.165 per cent. of all the samples. 8 were of milk, 3 of sausages, and 1 of rum. Details as to the deficiencies are set out in the schedule (page 208A). During the preceding year 7.20 per cent. of the samples were found to be not genuine.

Milk samples.—Sampling of milk accounted for the major number of the total samples. In all, 764 (74.29 per cent. of the total) were so procured, and of these 8 (1.047 per cent. of the milk samples) were certified to be below the minimal limit fixed by the Sale of Milk Regulations, 1939, viz., 8.5 per cent. non-fatty solids and 3.0 per cent. milk fat. 5 of the samples were deficient in non-fatty solids and 3 below the standard in respect of milk fat. Deficiencies in non-fatty solids ranged from 2.3 per cent. to 0.8 per cent. and in milk fat from 11.6 per cent. to 6.6 per cent. 7 of these milks were produced in Northumberland, whilst the other was from a producer in the City. The following table sets out the average composition of all the milk samples.

Composition (Average) of all Milk Samples.

Designation.	No. of Samples.	Composition (average).	
		Milk Fat.	Non-fatty Solids.
T.T. (Cert.)	71	4·25	9·02
T.T.	62	4·11	8·82
Accredited	23	3·57	8·83
Pasteurised	298	3·55	8·73
Heat Treated	82	3·65	8·77
Sterilised	101	3·60	8·54
Undesignated	127	3·65	8·75
	764	3·70	8·75

BACTERIOLOGICAL EXAMINATION OF MILK.

Samples of all milks sold in the City are taken regularly and submitted to bacteriological examination. In all, 994 samples were procured, the results being as follows :—

Designation.	No. taken.	Satis-factory.	Unsatisfactory.			
			Meth. Blue.	B. Coli.	Meth. Blue and B. Coli	%
T.T. (Cert.)	73	57	2	3	11	21·92
T.T.	134	88	11	8	27	34·34
Accredited	118	91	9	10	8	22·89
Undesignated ...	445	280	57	19	89	37·08
Total.....	770	516	79	40	135	32·98
			Phosphatase Test.			
Pasteurised	99	99	—	—		—
Heat Treated ...	68	64	4	—		5·88
Sterilised	57	57	—	—		—
Total.....	224	220	4	—		1·78

TUBERCULOUS MILK.

382 samples were submitted to the Bacteriologist who subsequently reported 5 of them to be positive. These samples were of milk produced on five premises in the County of Northumberland. In each instance the appropriate action was taken in the matter. The following table sets out the grades of milk sampled and the results of the examination :—

Designation.	No. Taken.	Negative.	Positive.	Percentage.
T.T. (Cert.)	7	7	—	—
T.T.	58	58	—	—
Accredited.....	39	39	—	—
Undesignated	263	258	5	1·90
Pasteurised	7	7	—	—
Heat Treated	5	5	—	—
Sterilised	3	3	—	—
Total	382	377	5	1·30

The table following sets out the percentage of milk samples found to contain tubercle bacilli during the past 28 years :—

Year.	Percentage of Samples found Tuberculous.
1920	6.3
1921	5.5
1922	7.0
1923	4.5
1924	3.2
1925	8.0
1926	4.0
1927	3.7
1928	3.7
1929	8.7
1930	4.2
1931	3.7
1932	1.8
1933	2.0
1934	2.6
1935	3.4
1936	2.7
1937	4.3
1938	3.8
1939	5.2
1940	5.7
1941	2.3
1942	5.0
1943	3.0
1944	3.1
1945	0.8
1946	2.1
1947	1.3

Milk Churns.—All churns on return from retailers in the City, and others passing through the City, to producers, wholesalers, etc., are inspected at railway stations, on road vehicles, and at dairy premises. 10 of the 15,059 examined were found to be in an unsatisfactory condition of cleanliness. Unfortunately, except in one instance, no action could be taken in respect of these dirty churns as the names and addresses of the consignors were missing, and until the law is amended, compelling the sender to attach his name and address to empty churns, some may be returned uncleansed and unchallenged.

The Milk and Dairies Order, 1926, Article 6, and the Food and Drugs Act, 1938, Section 22.

Five applications were received for registration as retail purveyors of milk and all were granted. Inspection of all premises dealing in milk is carried out as a routine measure and during the year, apart

from minor offences, the condition of the premises generally have been found to be satisfactory. The total number of premises registered are :—

Producers of Milk (Wholesale)	1
Producers and Retailers	16
Shops (Sale of Dairy or the like commodities)	55
Shops (General)	380
Total	452

Milk (Special Designations) Order, 1936.

The number of licences granted during the year is in accordance with the following table :—

	Grade of Milk.			Total.
	Tuberculin Tested.	Accredited.	Pasteurised.	
Pasteuriser-bottler-dealers	—	—	1	1
Producer-bottler-retailers	1	5	—	6
Bottler-retailers	11	—	—	11
Retailers	11	—	—	11
Supplementary Licences (Retailers)	—	—	1	1
Total	23	5	2	30

The Public Health (Condensed Milk) Regulations, 1923, 1927.

Four samples of condensed milk were procured, all of which were certified to be genuine and in full compliance with the regulations.

Artificial Cream.—Retail premises on the register number 2. As the sale of this commodity however is still prohibited under a Civil Defence Regulation no action has been taken.

Ice Cream—Newcastle Corporation (General Powers) Act, 1935, Section 4.

Premises used for the manufacture, storage and/or sale of ice cream together with the person occupying such premises or vending ice cream, are registered under the above Act. During the year, 44 applications for registration were received and all except one were granted. Careful and constant supervision is exercised over these premises and the persons engaged therein, so as to maintain hygienic conditions. The number of such premises on the register is 202.

During the year 149 samples of ice cream were procured from manufacturers and vendors and submitted to the Public Analyst or the Bacteriologist, with the following results :—

	No. of Samples.	Result.
Public Analyst.....	7	All genuine.
(Fat content varied from 0.2 per cent. to 12.0 per cent)		
	No. of Samples.	Grade.
Bacteriologist.....	82	I .....9 II .....21 III .....16 IV 36
	27	Plate Count. Lowest—200. Highest—500,000.
	28	Presence of B.Coli. Absent—12. Present in 5cc.—4 ,, 1cc.—5 ,, 1/10cc.—1 ,, 1/100cc.—1 ,, 1/1,000cc.—3 ,, 1/10,000cc—2

Five samples were submitted to the Bacteriologist prior to the introduction of provisional grading.

Butter and Margarine Warehouses, etc.

These premises (2 Butter Factories and 15 Margarine Warehouses), registered under Section 34 of the Food and Drugs Act, 1938, were inspected on 17 occasions, when conditions therein were found to be satisfactory.

During the taking of 22 samples of butter and margarine, which were certified to be genuine, packages, wrappings, etc., containing margarine were also examined on the premises and found to be in compliance with requirements.

Preservatives in Food.

Of the total samples (1,030) submitted to the Public Analyst 6 were found to contain preservatives. The samples were sausages, and all contained Sulphur Dioxide within the limit allowed under the

Public Health (Preservatives in Food) Regulations, 1925-1940. Samples of sausages were also submitted to the Public Analyst for analysis as to their meat content, and in three instances the meat content was found to be below the prescribed percentage. Details of the deficiencies were submitted to the Food Control Committee, prosecutions were ordered by them, and the offenders were fined in two instances, the remaining offender being cautioned.

Bakehouses.

The number of registered bakehouses in the City total 186. Of these, 5 are certified " basement bakehouses." Certification of these latter premises is in quinquennial periods, and inspection as to whether re-certification is to be granted or otherwise is due in 1948. Generally throughout the year, despite difficulties in the renewal of utensils, overalls, etc., reasonably satisfactory conditions have been maintained.

No. of Factory Bakehouses (Mechanical)	76
(Non-mechanical) ..	75
No. of Domestic Bakehouses	35
Total	186

Restaurant Kitchens. (Including Hotels, Cafes, Snack Bars, Refreshment Rooms, Works and other premises' canteens.)

The conditions under which foodstuffs are handled, stored and prepared are daily under supervision, together with the amenities provided for the staff and patrons. During the year sanitary conditions have been maintained, not without difficulty. There is noted an increasing number of patrons frequenting these premises, where, in some instances, there is not available adequate staff, equipment, nor amenities. The number and types of these premises are :—

Hotel Kitchens	32
Cafes and Restaurants	107
Snack Bars	11
Refreshment Rooms	1
Canteens	35
British Restaurants	3
Coffee Stalls	1
Total	190

Fried Fish Shops.

The number of these shops in the City total 149, and under a local Act it is a scheduled " Offensive Trade." Comments as to this trade are set out under Offensive Trades on page 227.

Offences other than Adulteration.

10 offences were reported to the Health Committee who resolved in each instance that the offenders be cautioned.

OFFENCES OTHER THAN ADULTERATION.

Offence.	No. of Cases.	Action Taken.
MILK & DAIRIES ORDER, 1926— Article 28— Churns not properly cleansed before being returned	1	Offender cautioned.
MILK & DAIRIES ORDER, 1926— Article 32— Failure to use all practicable precautions to prevent milk from being contaminated by dust, dirt, rainwater or otherwise	2	Offenders cautioned.
MILK (SPECIAL DESIGNATIONS) ORDER, 1936—THIRD SCHEDULE Part IA (6)— Contraventions of conditions of licence	7	Offenders cautioned.
Total	10	

WATER SUPPLY.

The supply of water is furnished to the City by the Newcastle and Gateshead Water Company. The main supply is pure upland surface water obtained from large catchment areas at Catcleugh (close to the Cheviots) and in lower Northumberland. Secondary supply is from the River Tyne at Barrasford and Wylam. Reservoirs are situated at Catcleugh, Colt Crag, Hallington and Whittle Dene. Filtering and Chlorinating stations are situated at Whittle Dene and Throckley, 11 and 5 miles respectively west of the City.

From these stations the domestic water supply is piped into the City, whilst the great riverside works, for trade purposes, are catered for by a separate " trade " main. The great majority of our 81,939 dwellinghouses possess an adequate internal water supply. In 551 of them (population approximately 2,000), the supply is by standpipes in the back yard, whilst in 3,039 others supplies are available to the ground floor holdings from backyard standpipes, with internal supplies to the other floors. 10 houses in part of a rural outskirt of the City are supplied from wells.

The water supply has been satisfactory in quality and quantity and is not liable to have plumbo-solvent action.

Bacteriological Examination.—The domestic supply is sampled weekly from supply taps on premises within the City and also at Throckley Water Works and two other control stations outside of and west of the City. Throughout the year 370 samples have been taken, whose classification is as follows :—

Class I	(B. Coli not found in 100ml.)	339
Class II	(B. Coli found in 100ml. but not in less)	20
Class III	(B. Coli found in 10ml. but not in less) .	8
Class IV	(B. Coli found in 1ml. but not in less)..	3

Chemical Analysis.—4 samples are taken monthly, from the domestic supply, from different points within the City. It is not liable to have a plumbo-solvent action, and in each instance the Public Analyst certifies that the water is of satisfactory organic purity, its microscopical characteristics are good, it is clear and bright, and is suitable for a public supply. The average analysis of the chemical samples is shown below :—

	Parts per 100,000.
Total solids dried at 180°C.	19.7
Chlorine as chlorides	1.7
Free ammonia.....	0.009
Albuminoid ammonia	0.009
Nitrogen as nitrates	0.12
Oxygen absorbed (4 hours at 80°F.)	0.253
Total hardness	13.1
Permanent hardness	3.8
Temporary hardness	9.3
Lead and copper	Nil
Iron	Nil
pH value	7.0

Public Baths.—Samples of the plunge bath waters are submitted periodically for examination. Results of these examinations are set out on page 89. In addition during the season the bath waters are tested (Chloroscope) weekly to ensure sterility of the water being maintained.

NUISANCES.

The number of nuisances reported upon and dealt with was slightly lower than the previous year's total, viz., 12,043 as against 14,403. None of the complaints after investigation were found to be of an unusual character but rather, in the main, reflected the neglect of maintenance work occurring during the preceding years. In this work much time must elapse before satisfactory conditions prevail.

Notices Served.—The number of notices served increased very considerably over the previous year's total. Informal notices jumped

17 per cent., statutory notices 158 per cent., and other letters 24 per cent. The actual numbers are :—

Number of notices served :—		
Informal	5,820	
Statutory	4,761	
		10,581
No. of " summons " letters sent		440
*No. of other letters sent		490
No. of circular letters sent		336
Total		11,847

* Includes letters sent relative to the " Overcrowding " provisions of the Housing Act, 1936 (" permitted numbers," etc.)

Legal Proceedings.—Legal proceedings were instituted in five instances. The nature of the offences and the result of the prosecutions are as follows :—

SUMMARY OF LEGAL PROCEEDINGS TAKEN BEFORE THE MAGISTRATES FOR THE ABATEMENT OF NUISANCES DURING THE YEAR 1947.

Nature of Complaint.	Result of Summons.
PUBLIC HEALTH ACT, 1936.	
Basement dwelling with damp walls and holed bedroom floor.	Court ordered closure of basement.
Defective house roof.	Case dismissed on payment of costs.
Window sash-cords broken. Scullery roof defective and walls damp. Rear door thresh missing and offshoot eaves-spout obstructed.	Owner fined (£5) plus costs and ordered to execute the work in 7 days.
Rear fall-spout defective	Case dismissed on payment of costs.
Defective W.C. and dustbin dilapidated	Work done prior to hearing and summons withdrawn.
TOTAL NO. OF CASES	5

Pail Closets, Privies, &c.

A number of pail-closets, privies, etc., are situated in the semi-rural areas on the outskirts of the City. Structurally they are in a reasonably sound condition, and owing to the absence of convenient sewerage facilities they must remain. The conversion of these to water-closets will be enforced immediately sewerage facilities are available. Indication of their situation is set out in the following table :—

SITUATION OF PAIL-CLOSETS, PRIVIES, ETC. IN CITY.

WARD.	Total No.	Pail Closets.	"Cell" Privies.	Combined Privies and Ashpits.	Dry Ashpits.
St. Nicholas	8	..	..	..	8
Scotswood	2	..	..	2	..
Kenton	33	9	..	20	4
Fenham	4	2	..	2	..
Jesmond	4	1	..	..	3
Dene	6	2	..	4	..
Byker	3	..	..	..	3
St. Lawrence	2	1			1
TOTAL	62	15	..	28	19

NEWCASTLE CORPORATION (GENERAL POWERS) ACT.

The Medical Officer of Health and the Sanitary Inspector are empowered under the above Act to deal, on a 24 hours notice, with defective and/or choked drains, conveniences, soil-pipes and waste-pipes from baths, sinks, etc. On default of an owner, the works required are carried out by the Health Committee and the costs recovered from the owner or occupier of the premises, as the case may be. In all, these very useful powers have been invoked in the service of 975 notices, and in 98 instances the specified works were carried out when default was made, at a total cost to the defaulters of £282 11s. 9d. The works carried out in default were as follows :—

Choked drains cleared	44
W.C. basins renewed	41
Sink waste-pipes repaired, etc.	6
Defective drains renewed	1
Defective w.c.'s repaired	4
Water pipes repaired	2
	98

Smoke Abatement.

The position in respect of the abatement of smoke nuisances has been most difficult. Whilst it cannot be gainsaid that carelessness in stoking boiler fires, forcing of plant, and other matters leading to excess emission of black smoke, has occurred, the fact remains that the grade of fuel supplied by the Ministry of Fuel and Power to the users of boiler plants has not been suitable in every instance. Bye-laws are in operation which allow 3 minutes emission of black smoke per 30 minutes, any emission in excess being an offence and a nuisance. Whenever this permissible amount is exceeded, and also in cases where a heavy emission of " medium " smoke is observed, the cause is enquired into and advice given, wherever possible, to remedy the fault.

During the year 170 observations were made of 50 factory and other chimneys, and 12 informal notices were served.

The following table gives details of smoke inspections :—

No. of chimneys watched	No. of observations made.	No. of chimneys from which black smoke issued in such quantity as to be a nuisance.	No. of times when smoke issued so as to be a nuisance.	No. of notices served (Informal).
50	170	7	14	12

Atmospheric Pollution.

Four gauges are in use to detect atmospheric pollution. One is situated on the Town Moor in open surroundings, and the other three in densely populated areas. The Town Moor gauge is approximately $2\frac{1}{4}$ miles North of the river, whilst the others are situated approximately 1 mile, $\frac{1}{2}$-mile and $\frac{1}{6}$ mile North of the river.

Smoke emanation from chimneys of all types of premises in the densely populated and industrialised area of Tyneside confines itself to no fixed boundary, hence the deposits on the soot gauges in the City, recorded in the following tables, indicate that the abatement of smoke nuisance is a problem which cannot be dealt with effectively by one Authority alone, but rather it is a matter for immediate joint action by all the Authorities.

ATMOSPHERIC POLLUTION.—NEWCASTLE RECORDS, 1947.

TOWN MOOR GAUGE.

MONTH.	RAINFALL (Millimetres).	ENGLISH TONS OF DEPOSIT PER SQUARE MILE PER MONTH.							
		Insoluble Matter.			Soluble Matter.	TOTAL SOLIDS.	Included in Soluble Matter.		
		Tar.	Other Combustible.	Ash.			Sulphate as S.O.4	Chlorine as Cl.	Lime as Ca.
January	39·6	0·47	16·81	6·20	9·50	32·98	6·40	1·45	0·71
February ...	49·5	0·44	5·35	2·83	20·99	29·61	2·09	0·98	0·67
March	89·2	0·40	6·10	4·35	7·75	18·60	2·26	0·98	0·40
April	72·7	0·44	4·04	10·11	4·08	18·67	1·52	1·04	1·08
May	46·2	0·14	3·23	6·06	7·31	16·74	1·65	1·08	0·27
June	59·4	0·50	2·29	3·27	4·55	10·61	1·89	0·34	0·81
July	72·7	0·27	0·77	1·38	2·59	5·01	1·82	0·40	0·64
August	8·6	0·30	2·16	5·59	2·43	10·48	1·35	0·17	0·57
September ..	39·6	0·24	5·19	4·44	3·84	13·71	1·35	0·20	0·64
October	19·8	0·17	2·73	2·90	6·47	12·27	1·65	0·20	0·47
November...	59·4	0·71	2·53	3·37	5·15	11·76	1·48	0·34	0·64
December...	72·7	0·37	1·62	3·03	5·19	10·21	1·21	0·54	1·21
Total, 12 months	629·4	4·45	52·82	53·53	79·85	190·65	24·67	7·72	8·11
Average per month .	52·4	0·37	4·40	4·46	6·66	15·89	2·06	0·64	0·68

WESTGATE CEMETERY GAUGE.

Month.	Rainfall (Millimetres).	English Tons of Deposit per Square Mile per Month.							
		Insoluble Matter.			Soluble Matter.	Total Solids.	Included in Soluble Matter.		
		Tar.	Other Combustible	Ash.			Sulphate as S.O4.	Chlorine as Cl.	Lime as Ca.
January	40·1	0·37	7·05	8·34	5·31	21·07	4·87	0·71	0·71
February ...	33·4	0·54	5·21	5·85	11·91	23·51	2·25	1·57	0·61
March	113·6	0·51	5·21	7·14	3·47	16·33	3·34	1·02	1·19
April	80·2	0·51	4·97	15·48	5·72	26·68	2·35	0·58	0·95
May	46·8	0·37	4·73	9·36	3·81	18·27	2·25	0·85	0·41
June	66·8	0·17	4·49	7·49	8·51	20·66	2·38	0·24	0·82
July	80·2	0·34	2·48	2·96	4·90	10·68	2·52	0·31	0·95
August	7·4	0·41	3·44	7·79	2·45	14·09	1·70	0·14	0·54
September ..	40·1	0·10	2·21	5·45	3·47	11·23	1·50	0·14	0·61
October	26·7	0·41	4·53	5·51	6·81	17·26	2·93	0·37	0·65
November...	56·8	0·37	4·32	6·13	5·79	16·61	1·91	0·20	0·61
December...	73·5	0·65	2·79	5·72	7·86	17·02	2·31	0·78	0·78
Total, 12 months	665·6	4·75	51·43	87·22	70·01	213·41	30·31	6·91	8·83
Average per month .	55·5	0·40	4·29	7·26	5·83	17·78	2·52	0·57	0·74

WELBECK RESERVOIR GAUGE.

Month.	Rainfall (Millimetres).	English Tons of Deposit per Square Mile per Month.							
		Insoluble Matter.			Soluble Matter.	Total Solids.	Included in Soluble Matter.		
		Tar.	Other Combustible	Ash.			Sulphate as S.O.4.	Chlorine as Cl.	Lime as Ca.
January	26·9	0·24	1·27	2·39	7·53	11·43	3·94	0·89	0·44
February ...	13·4	0·41	1·20	3·08	12·32	17·01	2·40	1·03	0·41
March	67·1	0·38	3·42	5·17	16·08	25·05	6·19	1·20	0·82
April	53·7	0·38	1·75	4·82	7·94	14·89	2·46	0·68	0·72
May	47·0	0·55	2·80	6·16	11·02	20·53	3·15	1·03	0·21
June	63·8	0·31	2·74	4·65	6·19	13·89	2·39	0·34	0·68
July	73·9	0·10	1·81	3·01	4·89	9·81	2·46	0·41	1·09
August	5·4	0·24	2·74	4·82	2·77	10·57	1·64	0·10	0·47
September ..	40·3	0·14	1·71	3·49	4·52	9·86	1·78	0·21	0·48
October	8·1	0·14	1·50	4·21	4·79	10·64	1·85	0·31	0·31
November...	53·7	0·38	3·08	4·41	7·39	15·26	2·46	0·38	0·31
December...	40·3	0·24	2·53	4·79	5·95	13·51	2·12	0·31	0·24
Total, 12 months	493·6	3·51	26·55	51·00	91·39	172·45	32·84	6·89	6·18
Average per month .	41·1	0·29	2·21	4·25	7·62	14·37	2·74	0·57	0·52

CITY ROAD GAUGE.

Month.	Rainfall (Millimetres).	English Tons of Deposit per Square Mile per Month.							
		Insoluble Matter.			Soluble Matter.	Total Solids.	Included in Soluble Matter.		
		Tar.	Other Combustible	Ash.			Sulphate as S.O.4.	Clorine as as Cl.	Lime as Ca.
January	35·0	0·47	9·69	11·99	8·03	30·18	3·23	0·83	0·73
February ...	44·1	0·19	2·21	3·01	16·63	22·04	3·61	1·12	0·53
March	41·5	1·55	17·00	24·19	6·77	49·51	2·96	0·22	0·55
April	54·5	0·78	10·13	28·40	6·66	45·97	3·43	0·49	0·90
May	49·3	0·42	7·19	15·50	11·05	34·16	2·69	1·16	0·52
June	59·7	0·45	6·35	10·92	7·91	25·63	4·01	0·43	0·89
July	54·5	0·97	5·43	11·28	4·72	22·40	2·51	0·40	0·90
August	5·8	0·34	9·23	16·65	2·53	28·75	1·52	0·03	0·40
September...	41·5	0·30	7·28	14·28	8·04	29·90	3·40	0·30	0·93
October	18·2	0·22	7·83	13·68	7·40	29·13	3·66	0·17	0·58
November...	42·8	0·46	10·12	16·47	6·32	33·37	3·50	0·31	0·64
December...	44·1	0·69	8·57	12·25	8·09	29·60	2·95	0·24	0·93
Total, 12 months	491·0	6·84	101·03	178·62	94·15	380·64	37·47	5.70	8·50
Average per month..	40·9	0·57	8·42	14·88	7·85	31·72	3·12	0·47	0·71

TOTAL IN FOUR GAUGES IN THE CITY, 1947.

	Rainfall (Millimetres).	English Tons of Deposit per Square Mile per Month.							
		Insoluble Matter.			Soluble Matter.	Total Solids.	Included in Soluble Matter.		
		Tar.	Other Combustible	Ash.			Sulphate as S.O4.	Chlorine as Cl.	Lime as Ca.
Total 12 months ...	2,279.6	19.55	231.83	370.37	335.40	957.15	125.29	27.22	31.62
Average per month.	190.0	1.63	19.32	30.86	27.95	79.76	10.44	2.27	2.63
Average per gauge, 12 months.	569.9	4.89	57.96	92.59	83.85	239.29	31.32	6.80	7.90
Average per gauge, per month.	47.5	0.41	4.83	7.71	6.99	19.94	2.61	0.57	0.66

Matters Dealt With.	Dwelling Houses.	Tenem'ts.	Food Premises and Street Vendors.	Shops.	Offices.	Places of Public Resort.	Other Premises.	Totals.
Accumulations	23	27	..	1	..	..	9	60
Animal Nuisances	4	2	..	..	..	..	..	6
Cowsheds Cleansed	..	..	..	..	..	..	..	..
Cowsheds Repaired, Improved	..	..	..	..	..	..	..	..
Cooking Accommodation Repaired	54	10	..	..	..	..	..	64
Cooking Accommodation Provided	1	3	..	..	..	..	..	4
Dampness	552	73	4	1	..	..	..	630
Dustbins	672	124	2	1	..	..	12	811
Drain Tests Applied	19	5	..	..	..	..	3	27
Drains Found Defective	2	2	..	..	..	..	..	4
Drains, Waste Pipes, Cleared	460	95	..	5	1	..	..	561
Drains/Soil/Waste Pipes Repaired/Renewed(Yds)	508	71	4	30	4	..	9	626
Drains/Soil/Waste Pipes Provided (Yds.)	72	..	1	..	..	..	20	93
Doors and Windows	1080	125	..	3	..	..	..	1208
Ditches and Streams Cleansed	..	2	..	..	..	..	..	2
Floors	349	49	3	2	..	..	..	403
Food Stores Provided	21	3	1	..	..	..	..	25
Fireplaces/Flues	156	34	..	..	..	..	..	190
Lighting Improved	2	3	..	1	1	..	..	7
Manure Pits Emptied	..	..	1	..	..	..	..	1
Manure Pits Repaired/Improved	2	..	..	..	..	..	..	2
Offensive Trades (Contraventions Remedied)	..	..	1	..	..	..	..	1
Piggeries Cleansed	..	..	..	..	..	..	..	..
Piggeries Repaired/Provided	1	..	..	..	..	..	..	1
Roofs, Gutters, Spouting	2146	326	3	9	..	..	3	2487
Rooms Cleansed/Redecorated	31	20	3	4	..	..	7	65
Sanitary Accommodation Provided	11	2	..	2	1	..	2	18
Sanitary Accommodation Repaired	993	96	5	5	2	..	2	1103
Sanitary Accommodation Cleansed	12	4	..	2	..	..	..	18
Sinks/Wash Basins Repaired	184	19	2	1	1	..	..	207
Sinks/Wash Basins Provided	6	..	..	..	..	..	..	6
Sites Cleared	2	1	..	..	..	..	..	3
Stables Cleansed	..	..	..	..	..	..	1	1
Smoke Nuisances (Domestic)	66	23	..	..	..	..	..	89
Smoke Nuisances (Industrial)	4	..	..	..	..	..	..	4
Temperature Improved	..	..	..	1	..	..	..	1
Urinal Accommodation Provided (Ft.)	..	..	..	..	..	..	..	..
Urinal Accommodation Cleansed	..	..	..	..	..	1	..	1
Ventilation Improved	47	6	1	2	..	..	..	56
Walls and Chimneys (External)	300	47	4	1	..	1	2	355
Walls and Ceilings (Internal)	620	187	2	6	..	..	..	815
Washing Clothes Accommodation Provided	11	1	..	1	..	..	..	13
Washing Clothes Accommodation Repaired	49	13	1	2	..	..	..	65
Water Supply Provided (New)	18	9	1	3	1	..	..	32
Water Supply Reinstated	871	132	..	4	3	..	..	1010
Yards Repaired/Relaid	77	6	1	..	..	..	..	84
Yards Cleansed/Limewashed	7	12	..	..	..	..	2	21
Other Nuisances	109	10	..	2	..	..	1	122
Housing Acts—								
Dwellinghouses Closed	3	..	..	..	..	..	..	3
Dwellinghouses Demolished	42	..	..	..	..	..	..	42
Dwellinghouses Rendered Fit (Informal)	10	..	..	..	..	..	..	10
Dwellinghouses Rendered Fit (Statutory)	8	..	..	..	..	..	..	8
Overcrowding—								
A. New Cases	518	..	..	..	..	..	..	518
B. Rehoused (By Corporation)	430	..	..	..	..	..	..	430
C. Rehoused (Privately)	..	..	..	..	..	..	..	..
Rent Book Amendments (P.Nos., etc.)	202	..	..	..	..	..	..	202

Service of Notices.	INFORMAL. (Verbal) Served.	INFORMAL. (Verbal) Complied with.	INFORMAL. (Written) Served.	INFORMAL. (Written) Complied with.	STATUTORY. Served.	STATUTORY. Complied with.
Public Health Act	203	154	4481	2233	4605	1211
Housing Act (General)	..	..	..	..	..	..
Housing Act (Overcrowding)	..	..	1	..	..	..
Shops Act, 1934 (Sect. 10)	..	..	5	4	2	..
Food and Drugs Act, 1938	1	1	31	2	11	..
Corporation Acts and Regulations	11	32	1028	320	79	54
Tenement Bye-laws—Owner	9	..	50	36	64	20
Totals	224	187	5596	2595	4761	1285

SANITARY INSPECTOR'S TOTAL SUMMARY FOR YEAR 1947.

	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
*Complaints from Health Department	584	755	955	908	915	763	978	942	1040	887	1021	855	10603*
*Complaints on District	35	11	55	58	47	66	82	56	67	73	150	61	761*
*Nuisances found on District	38	29	33	58	31	30	64	26	66	154	72	78	679*
Inspections of Dwelling Houses—													
Under P.H. Acts	587	502	796	811	946	708	958	932	1073	948	1108	859	10228
Housing Act (Sect. 9) and Consol. Regs.	..	..	33	30	4	1	4	2	13	7	4	10	108
Housing (Slum Clearance)	51	..	60	59	..	..	86	..	4	69	..	1	330
Housing Applications	67	67	56	40	39	43	58	46	97	56	63	96	728
Housing Overcrowding	26	7	4	10	25	11	38	9	22	7	12	21	192
Tenement Holdings	573	541	641	374	405	279	479	443	489	726	581	448	5979
Tenement Yards, Courts, etc.	404	270	338	216	297	205	284	259	328	446	377	331	3755
Tenement, as to Limewashing	..	1	1	..	3	27	23	..	16	17	10	4	102
Houses let in Lodgings	1	..	..	..	..	..	..	..	..	..	..	5	6
Houses let in Furnished Rooms	..	3	10	..	..	..	..	..	..	..	..	1	14
Revisits *re* Works Ordered	1490	948	918	970	1424	1205	1717	1486	1885	2411	1827	1829	18110
Supervision of Work in Progress	252	136	204	172	149	159	212	157	252	165	333	176	2367
Inspections of Drainage Work	21	1	18	30	16	11	36	18	16	14	30	37	248
Miscellaneous Visits	200	197	108	147	102	173	160	133	208	184	271	194	2077
Inspections of Other Premises—													
Offices (Sect. 92, P.H.A. '36)	9	6	15	12	5	5	10	10	8	..	11	6	97
Shops (Sect. 10 Shops Act)	1	2	10	32	11	10	14	2	19	19	3	35	158
Hairdressers' Premises	5	2	4	7	3	2	6	5	7	7	4	4	56
Hotels, Inns, Public Houses	62	61	51	52	19	26	35	20	36	40	36	46	484
Cinemas, Theatres, Halls, etc.	50	47	25	23	11	22	15	14	33	34	38	34	346
Stables, Manure Pits, etc.	4	5	..	..	..	..	3	2	6	3	11	4	38
Piggeries	9	5	8	5	6	1	7	9	4	15	5	14	88
Yards, Accumulations, etc.	1	..	2	1	..	7	..	..	1	3	2	..	17
Public Conveniences	55	29	51	31	23	53	29	16	40	38	26	35	426
Tents, Vans, Sheds, etc.	1	..	1	..	..	330	..	..	1	..	9	9	351
Ditches, Streams	..	..	..	..	..	..	..	..	..	..	..	..	..
Schools (Sanitation)	11	10	10	6	6	9	5	1	6	4	5	5	78
*Smoke Observations (½-hour)	**23**	**12**	**26**	**18**	**9**	**5**	**3**	**4**	**16**	**16**	**14**	**14**	**160**
Visits to Boiler Plant	10	2	7	1	..	1	1	..	5	1	1	5	34
Inspections of Drainage Work	..	..	6	13	13	3	8	..	..	4	3	10	60
Revisits, *re* Works Ordered	..	..	2	4	15	1	1	..	..	..	1	..	24
Miscellaneous Visits	12	5	18	26	22	9	4	3	16	15	3	16	149
Inspections of Food Premises—													
Cowsheds	8	14	12	1	5	..	10	10	9	10	14	15	108
Dairies (Bottling/Filling)	46	40	52	26	38	13	25	29	30	37	36	36	408
Milkshops (Retail)	113	84	107	92	32	23	39	27	41	55	45	35	693
Ice Cream Manufactories	2	6	17	33	16	4	13	7	12	21	15	10	156
Ice Cream Retail Premises	16	14	21	216	68	39	34	22	38	29	25	25	547
Ice Cream Vehicles	..	..	3	2	4	70	3	..	..	..	..	..	82
Margarine Warehouses	..	2	5	1	1	..	1	..	3	..	..	1	14
Butter Factories	..	..	..	..	..	1	..	..	1	..	..	1	3
Meat Retailers	..	1	1	2	1	2	2	..	7	2	2	7	27
Fishmongers/Poulterers	12	8	19	8	10	2	8	2	9	9	8	15	110
Grocers	17	35	23	9	4	5	10	12	9	11	12	9	156
Fruiterers/Greengrocers	14	14	17	11	26	17	15	15	20	39	28	10	226
General Dealers	107	82	123	133	67	55	56	43	77	85	61	64	953
Food Manufactories (Sect. 14)	1	..	3	4	1	..	2	..	1	2	6	3	23
Catering Establishments	8	6	9	28	9	33	7	9	4	15	6	12	146
Bakehouses (Mechanical)	41	35	53	18	13	19	10	9	14	26	25	29	292
Bakehouses (Non-mechanical)	38	36	37	12	5	9	10	4	15	11	9	6	192
Bakehouses (Domestic)	..	2	3	2	2	2	12	..	..	..	..	6	29
Fried Fish Shops (Day)	85	87	71	41	45	37	31	20	45	59	38	33	592
Fried Fish Shops (Night)	..	3	..	..	..	..	2	..	1	..	1	..	7
Inspections of Drainage Work	..	..	7	..	..	..	1	2	3	..	..	..	13
Supervision of Work in Progess	..	2	16	2	1	4	..	..	..	..	..	..	25
Miscellaneous Visits	..	5	1	3	..	156	1	1	3	1	..	6	177
Offensive Trades—Blood or Soap Boiler—Fat Extractor, Bone Boiler, Gut-Scraper ... Glue and Size Maker; Tripe Preparer ... Hide and Skin Dealer; Rag and Bone Dealer	21	16	12	7	6	2	4	5	8	7	8	8	104
Total	4,431	3,339	4,009	3,723	3,898	3,794	4,489	3,784	4,935	5,652	5,113	4,566	51,733

* Not to be included in total number of Inspections.

Sunshine over the City.

Returns of sunshine are recorded at King's College in the City, and comparison is made with similar records compiled by King's College at Cockle Park, near Morpeth. (Approximately 15 miles North of the City.) The following table shows that 26 per cent. of health-giving sunshine is lost to the City due to smoke pollution :—

Month.	King's College. Sunshine (hours).	Cockle Park Sunshine (hours).
January	18·15	37·2
February	25·97	45·9
March	56·41	90·9
April	100·67	161·6
May	130·67	164·4
June	100·93	122·0
July	147·73	177·4
August	198·52	226·8
September	107·96	145.8
October	64·43	80·4
November	79·02	110·0
December	15·98	52·5
Total for year	1,046·44	1,414·9
Average per month	87·2	117·9

Rainfall.

The rainfall recorded over the City was much the same as during the previous year, being 25.21 inches, an average of 2.1 inches per month.

Offensive Trades.

In addition to the offensive trades set out under the Public Health Act, 1936, the trade of Fish Fryer is scheduled as such under a local Act. In the 12 months under report, 3 applications were received to establish offensive trades, and reports thereon were presented to the Health Committee. All were in respect of the trade of Fish Fryer. The applications were refused on account of the premises being unsuitable for the purpose.

Throughout the year inspections (703) of these trade premises were carried out systematically and many offences detected and dealt with. None of the offences however were of a serious character. Generally the businesses have been carried out in a satisfactory manner.

The great majority of these premises are fish fryers (Fish and Chip shops), whose hours of business (apart from two hours at midday) are during the evenings. Inspection of these premises during evening hours is also carried out. The number and types of offensive trades on the register is :—

Fish fryers	149
Rag and bone dealers	9
Tripe boilers	5
Gut scrapers	5
Dealers in hides and skins	4
Bone boilers	2
Fat melter	1
Fat extractor	1
Glue makers	2
Size maker	1
Soap boiler	1
Blood boilers	2
Total	182

Places of Public Entertainment, Theatres, Cinemas, &c.

Particular attention is paid to all places of public entertainment as to the suitability and sufficiency of the amenities provided for patrons and staff, together with the sufficiency of ventilation, heating, lighting, and the condition of cleanliness, etc. Many works of improvement yet remain to be carried out, but owing to the aftermath of the war and licensing restrictions, progress is indeed slow.

In regard to premises where application is made to the Licensing Magistrates for a licence for music and/or dancing, a Certificate of Sanitation from the Sanitary Authority must be produced in support of the application. Three such applications were received 2 of which were granted and the other refused, as the premises were not up to the required standard.

The total number of premises in respect of which Certificates of Sanitation have been issued is 181, comprising 4 theatres and music halls, 45 cinemas, and 132 dancing and concert halls, billiard rooms and cafes.

The number of inspections (day and evening) of all these premises carried out during the year was 346, and sanitary conditions were found to be reasonably satisfactory. The ventilation arrangements in the theatres and cinemas are tested periodically with the " Kata " Thermometer. During these tests atmospheric conditions were found to be unsatisfactory in 8 instances. The attention of the management was therefore directed to these adverse conditions and improvement promptly followed.

HOUSING.

The Housing Act, 1936.

The total number of inspections carried out during the year was 1,358.

Sections 11 and 12.

No action was taken during the year in respect of the condemnation of individual dwellinghouses deemed to be totally unfit for human habitation, or the closure of underground dwelling-rooms for a similar reason. (One such room was dealt with, however, under Section 92 of the Public Health Act.) Much work of this nature cries out for immediate attention but until the provision of new houses becomes more prolific than at present, many hovels must be patched up again and again for use, until dire necessity compels their condemnation.

Section 51.

No applications were received from owners of working class dwellinghouses for certificates in respect of agreed works of improvement other than repair or decoration.

Section 57.—Abatement of Overcrowding.

The Housing Department of the City Corporation rehoused 430 families (2,246 persons living under overcrowded conditions) into houses suitable for the needs of each family.

Applications for Council Houses.

728 applications, based on various grounds, were received in the department during the year, and after due investigation classification was made and recommendations submitted to the Housing Department. Details of these applications are :—

No. of Applications.		Classification.			Not Classified.
Received.	Classified.	A.	B.	C.	
728	534	5	144	385	194

Section 62.

Under this section the " permitted number," i.e., the number of persons who may normally sleep in a dwelling-house without causing illegal overcrowding, is issuable by the Health Committee. During

the year 202 such numbers were supplied to applicants after inspection and measurement of the rooms. This information, together with other information as to the name and address of the Medical Officer of Health and of the landlord, must be inscribed in rent books and similar documents. In far too many instances, upon inspection of rent books, this prescribed information was found to be absent. Cautions were therefore sent to all of the delinquents.

Tenemented Houses.

During the year one tenemented house ceased to be so used, whilst 14 new tenemented houses, with 72 separate holdings therein, were found, and compliance with the Byelaw requirements secured. The number of such houses on the register at the end of the year was 1,415, with holdings therein as follows :—

One-roomed holdings	1,021
Two-roomed holdings	2,452
Three-roomed holdings	497
Four-roomed holdings	57
Five-roomed holdings	8
Total	4,035

Inspections carried out of these houses numbered 9,836.

Common Lodging Houses.

In this City the business of " Common Lodging House Keeper " is rapidly passing away. In 1917 the houses numbered 57, with accommodation for 2,010 lodgers. Ten years later the number of houses had dropped to 42, with accommodation for 1,474. After another ten years the houses totalled 15, with 533 beds therein, and this year only three houses remain. Throughout this 30 year period the accommodation available for lodgers at all times was surplus to the demand. During the year under report one of the four houses (for women only), closed down owing to declining business. The highest number of lodgers occupying beds on one night was 150, the lowest was 85, and the average per night 100.

Strict supervision is exercised over these houses and sanitary conditions enforced. Lodgers, when found to be verminous, are cleansed at the Special Skin Clinic and their beds, bedding and rooms disinfested.

The type of house and accommodation available as at the end of the year is set out in the following summary.

Description of lodgers.	Number of			Accommodation.			Total.
	Houses	Single Beds.	Double Beds.	Married couples.	Single		
					Women	Men.	
Married couples and single women ..	—	—	—	—	—	—	—
Women only	—	—	—	—	—	—	—
Men only	3	103	—	—	—	103	103
TOTAL	3	103	—	—	—	103	103

The following is a summary of inspections made and contraventions found and dealt with during the year :—

SUMMARY OF INSPECTIONS, CONTRAVENTIONS FOUND, ETC. :—

Number of houses on the register at the end of the year	3
Applications for registration (Public Health Act, 1936 ; Section 238)	4
Houses ceased to be occupied as Common Lodging Houses	1
Inspections made (day 108, night —)	108
Notices served (*re* washing of bed-clothes, 13) (*re* lime-washing of houses, 7)	20

Defects and contraventions of Bye-laws, etc. :—

Water-closets defective	1
Dustbins required	—
Roofs and/or spouting defective	—
Ventilation not efficient (window sash-cords broken)	—
Yard pavement defective	—
Dampness in rooms	—
Structural defects (including plasterwork, windows, doors, etc)..	2
Inadequate cleansing of	
Rooms, passages and staircases, etc.	3
Beds and bedding	1
Yards, conveniences, etc.	5
Beds and/or bedding defective (mattresses, bedclothes)	3
Beds and bedclothes not " aired " during prescribed hours ..	—
Ventilation (windows not opened as required)	6
Non-removal of slops	—
Bedding verminous (Lice 6, Bugs, —)	6
Cases of infectious diseases reported	Nil.
Deaths reported	Nil.

Slum Clearance.

The only activity carried out was the demolition of 42 empty condemned dwelling-houses which had become in a derelict and dangerous condition.

Tents, Vans, Sheds and Similar Structures.

There are no tents, vans, sheds or similar structures occupied as dwellings in the City.

New Buildings and Sanitary Alterations.

273 plans were submitted by the Town Improvement and Streets Committee for examination, and where necessary improvements on the proposals were suggested on their return. The number of plans submitted last year was 331.

DISINFESTATION.

Eradication of Bed Bugs, Black Beetles, etc.

Rehousing.—Whenever an incoming tenant of a new or vacated Council house has lived in a verminous or query verminous house, the rooms and his goods and chattels are thoroughly treated with an insecticide before removal to his new house, whilst soft goods (mattresses, etc.) are steam disinfected. When new Council houses become more freely available then the Disinfestation Station may be re-opened to deal with disinfestation, by Hydrogen Cyanide gas, of the goods and chattels of incoming occupiers, particularly those from condemned dwelling-houses. In the meantime the present temporary action is affording much satisfaction.

Council and Private Houses.—In private houses, when found verminous, then, in accordance with the degree of infestation, the wood mouldings, skirtings, wall coverings, etc., are removed and the rooms and contents therein treated with a liquid and/or powder insecticide. Mattresses and other soft goods are removed and steam disinfected where necessary. Rooms are then thoroughly cleansed and redecorated.

In Council Estate houses the City Architect carries out all disinfestation work (apart from the use of steam), and when houses are found to be infested the foregoing procedure is carried out, but before replacement of woodwork it is well coated on the back side with

creosote or other preservative. After cleansing and redecoration of the rooms further treatment with insecticide is given and observation kept on the houses.

Insecticides in use are Zaldecide, Gammexane, D. Solution, Lowes' Deodex, etc., in liquid, powder and fume form. Reinfestation has been rarely found.

Persons.—A very difficult problem at times is the aged person usually living alone in one room under verminous conditions. Much sympathy, tact and tolerance in dealing with this type of person is required, particularly so when ill-health is present. Cleansing of the person and his clothing is carried out at the Skin Clinic, Churchill St., and whilst undergoing this the room(s) and contents are freed from vermin.

The number of premises and aged persons found to be verminous and dealt with is as follows :—

Council Houses	52
Private Houses	265
Other Premises	13
Aged Persons	7

FACTORIES ACT, 1937.

Factories, manual and non-manual, come within the jurisdiction of the Health Committee. In the latter group powers are, to some extent, restricted. Overcrowding, ventilation, heating, water supply, washing facilities, sanitary accommodation, the handling, preparation and storage of food, and a host of other matters of a hygienic nature call for constant supervision, and during the year 2,532 inspections were so made.

Outworkers.—A list of outworkers (carrying out work on behalf of a factory in their own homes) must be submitted to the Local Authority by occupiers of factories twice per year, in February and August. 10 such lists were so received, and 45 inspections were carried out on outworkers' premises.

H.M. Inspector of Factories notifies the Local Authority of any matters under their jurisdiction which have come to his notice to be dealt with by the L.A. In all 26 such notices were received as to insanitary conditions. These all received attention and the action taken was reported to H.M. Inspector as required by the Act.

Administration of the Factories Act, 1937.

Home Office Tables.

1.—INSPECTIONS FOR PURPOSES OF PROVISIONS AS TO HEALTH. INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS.

PREMISES. (1)	NUMBER OF		
	Inspections. (2)	Written Notices. (3)	Occupiers Prosecuted (4)
Factories with mechanical power	729	29	—
Factories without mechanical power.....	1,776	90	—
Other Premises under the Act (including works of building and engineering construction but not including outworkers' premises)	27	2	—
TOTAL	2,532	121	—

2.—DEFECTS FOUND.

PARTICULARS. (1)	NUMBER OF DEFECTS.			Number of defects in respect of which Prosecutions were instituted. (5)
	Found. (2)	Remedied. (3)	Referred by H.M. Inspector. (4)	
Want of cleanliness (S.1)	78	74	5	
Overcrowding (S.2)	4	4	..	
Unreasonable temperature (S.3)	5	5	..	
Inadequate ventilation (S.4)	25	25	1	
Ineffective drainage of floors (S.6)	5	5	..	
Sanitary Conveniences (S.7) — insufficient	43	37	12	
Sanitary Conveniences (S.7) — unsuitable or defective ..	43	42	7	
Sanitary Conveniences (S.7) — not separate for sexes....	16	14	1	
Other offences ..... (Not including offences relating to Home Work or offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921, and re-enacted in the Third Schedule to the Factories Act, 1937.)	58	58	..	None.
TOTAL	277	264	26	..

OUTWORK IN UNWHOLESOME PREMISES.

(Factories Act, 1937; Section 110.)

Nature of Work.	No. of Outworkers	No. of cases of default in sending Lists to the Council.	Prosecutions.
Making Wearing Apparel	20	1	None.
Paper Bags	42	..	
Total.....	62	1	

Workplaces.—Workplaces, wherein is carried out all manner of business and trades, are dealt with under the Public Health Act, 1936, and other Acts. Of these premises 205 inspections were made and the following defects found and dealt with :—

Want of cleanliness	11
Want of ventilation	4
Sanitary accommodation insufficient or defective	12
Other nuisances	8
Total	35

LIST OF TRADES.

Group.	Trades.	Number of Factories (Factories Act, 1937).	Number of Workplaces (Public Health Act. 1936).
1	Athletic Outfitters (comprises: the making and repairing of bats, rackets, guns, cycles, billiard tables, golf clubs, etc.)	26	..
2	Bakehouses	151	..
3	Food (comprises: bacon-curing, rolling and smoking, packing of vegetables, fruits, canned goods, ice cream, fish-curing and smoking, sauce and pickles, tripe-boiling, jam making, sugar boilers, egg-sorters, wholesale fish dealers, sausage makers, potato stores, etc.)	264	161
4	Laundries	31	..
5	Metal workers (comprises: blacksmiths, whitesmiths, coppersmiths, locksmiths, tinsmiths, brass-finishers; motor, electrical and general engineers, wireworkers, sheet metal workers, car-breakers, plumbers, engravers, millwrights, etc.)	528	..
6	Restaurant kitchens (including hotels, cafes, dining rooms, snack bars, works canteens, and community food supply centres)	..	190
7	Wood workers (comprises: saw mills, joiners, cabinet-makers, wood carvers, picture framers, undertakers; boat builders and repairers, ladder makers, coopers, toy makers, boxmakers, etc.)	305	..
8	Wearing apparel (comprises: dressmakers, milliners, costumiers, mantle and gown makers, underclothing, bed linen, furriers, shirt makers, tailors, etc.)	270	..
9	Workers in leather (comprises: bootmakers and repairers, bookbinders, bag and trunk makers, belt makers, harness and saddlery, etc.)	170	..
10	Watchmaking and jewellery (comprises: watchmakers, opticians, instrument makers, etc.)	56	..
11	Miscellaneous trades (comprises: transport workers, hide and skin dealers, hay and corn dealers, marine stores, scrap metal works, timber yards, grease and oil stores, bottle washers, photographers, painters and decorators, bouquet and wreath makers, soap boilers, wholesale chemists, cosmetic makers and packers, etc.)	528	217
	Total	2,329	568

Council and Other Schools.

Inspections, numbering 78, were made on schools in the City. Defects of a minor nature were found and promptly remedied on verbal request to the Education Authority.

Shops Act, 1934, Section 10.

Persons employed in or about the business of a shop are catered for under Section 10 in respect of ventilation, temperature, sanitary accommodation, lighting, washing facilities and accommodation for the taking of meals. In other matters the premises are dealt with under the provisions of other acts.

Inspections totalling 158 were made, when 89 contraventions were found and dealt with. Details of these inspections are embodied in the " Summary of Inspections " table on page 226B.

Rag Flock Acts, 1911, 1928.

No Rag Flock is manufactured in the City, it is used however in the 36 premises in the City where the trade of upholsterers or bedding makers is carried on. The object of the Acts is to ensure that Rag Flock be used in a clean state, and to this end a cleanliness standard is laid down. 9 samples of Rag Flock were purchased and after analysis by the Public Analyst 8 were certified to conform to the standard of cleanliness, whilst the other one failed to reach the standard. The firm from whom this sample was procured returned the whole consignment of Rag Flock (sample taken just after delivery of the Rag Flock and unused by them) to the makers. The Authority having jurisdiction over the area in which the makers' premises were situated was notified of the deficient sample, and samples from the manufacturer of the flock taken which were found to be satisfactory. No action was taken against the vendors of the sample by the Health Committee. All the premises where Rag Flock is used were also inspected under the Factories Act, 1937, and during the year a total of 122 visits were made.

Fertilisers and Feeding Stuffs Acts.

Factories, warehouses and retail shops where fertilisers and feeding stuffs are made, stored or sold, are visited to ascertain whether the requirements of the Act are being observed. In addition, these premises are supervised under powers of other Acts. 30 supervisory

visits were made and 22 samples (mostly informal) of fertilisers were obtained. Three were certified by the Agricultural Analyst to be deficient in certain of their constituents and not to be in conformity with the statutory statement given at the time of purchase of the sample. Action in respect of deficient samples may only be taken when authorised by the Ministry of Agriculture and Fisheries and, in consequence, details of the deficient samples were reported to them.

Agricultural Produce (Grading and Marking) Acts, 1928, 1931.

Premises wherein eggs are kept in cold or chemical storage are registrable under these Acts. 4 such premises are on the register and inspections (included under food premises) were made regularly throughout the year.

Pharmacy and Poisons Acts, 1933, 1941.

Listed Sellers of Part II Poisons.

Registration of premises and persons selling poisons scheduled under the above Acts is obligatory and much care is exercised over the registration of any food premises selling such poisons. Generally the sale in these shops is that of sealed bottles of disinfectant. New registrations during the year totalled 85 and the number of premises on the register at the end of the year was 220.

Grocery, Provision and General Dealers	159
Hairdressers	14
Druggists	11
Hardwaremen, etc.	16
Seed and Agricultural Merchants	14
Chemical Disinfectant Manufacturers	3
Electrical Supplier	1
Manufacturing Chemist	1
Veterinary Medicine Vendor	1

268 visits (apart from other inspections of these premises) were made, when the provisions of the Acts and Rules were found to be complied with. Verbal cautions, 20 in all, were given in respect of slight offences.

Exhumations.

Three exhumations and re-interments, authorised by Home Office licence, were carried out under the supervision of the Department during the year. The operations were carried out in the early morning

in a reverent and sanitary manner and with due regard to the conditions set out in the licence.

Staff Changes.

Three experienced inspectors resigned during the year—W. Ditchfield on the 31st March, E. Banks on the 19th April, and T. Sayer on the 31st May—each of whom secured appointment as Sanitary Inspector to other Authorities. Two of the vacancies have been filled by the appointment of Inspectors J. G. Simpson on the 1st July, and S. Trewhitt on the 18th August.

Much difficulty has been experienced in the endeavour to secure suitable personnel to fill the vacancies.

Conclusion.

In the ever widening sphere of public health, Inspectorial duties become more and more exacting, technique must and does change to keep abreast of events, and throughout the year the heavy demands upon the staff have been most loyally and conscientiously carried out. To each and all I record very sincerely my full appreciation of their aid. Not one step behind, however, in their efforts are the Clerical Staff, whose important work, so much in the background, contributes largely to successful team work.

I am,

Your obedient servant,

W. Gray,

Chief Sanitary Inspector.

INCLUDING REPORTS OF
DISEASES OF ANIMALS AND
INSPECTION OF MEAT AND OTHER FOODS.

VII—VETERINARY OFFICER.

ANIMALS SLAUGHTERED, CARCASES CONDEMNED,
RATS AND MICE DESTROYED.

REPORT OF THE
VETERINARY OFFICER, INSPECTOR OF MEAT, Etc.
For the Year 1947.
To the Medical Officer of Health.

I have pleasure in submitting the following report which includes the work of inspection under the Public Health Acts during the year, 1947.

Tuberculosis.

During the year, four bovine animals were dealt with under the Tuberculosis Order 1938. All of these animals were dairy cows housed within the City cowsheds, three of which were found to be excreting tubercle bacilli in the milk, while the remaining animal was found to be suffering from tuberculosis with emaciation. As has been stressed in previous reports the above named Order is unlikely to lower the general incidence of the disease in farm stock, and its public health aim is to remove "open" cases of tuberculosis from dairy herds and thus minimise the risk of tubercle bacilli being present in the milk. Thus the Order applies not only to animals affected with tuberculosis of the udder, but also to animals showing symptoms of chronic cough or of tuberculous emaciation, for in such cases secondary contamination of milk may occur from the sputum or fæces of an affected animal.

The growth of the Attested Herds Scheme throughout the country is an encouraging feature and of great public health importance. Local authorities might play their part in this campaign by insisting that only milk from tuberculosis-free herds should be purchased for use in their hospitals or other institutions. The objection at one time raised against this suggestion, that the supply of milk from tuberculosis-free herds was insufficient to meet the demand, cannot now be supported, for in Britain there are now over one million animals in Attested herds, while in Northumberland alone no less than half of the milk produced is from herds in which the animals have been proved to be non-reactors to the tuberculin test.

The growth of the Attested Herds Scheme, however, has as yet had little apparent effect on the incidence of tuberculosis found in bovine animals slaughtered within the City abattoirs, and this disease continues to be the main cause for the total condemnation of beef carcases. During 1947 no less than 86 per cent. of bovine carcases found totally unfit for human food were condemned on account of tuberculosis.

The Milk and Dairies Order of 1926.

Within the City there are 9 cowkeepers, registered as occupying 12 premises, and on the registered premises there is a total of 17 cowsheds in which are housed 420 milch cows.

Of these registered premises, two house Attested herds, whilst seven are licensed for the production of Accredited Milk.

During the year, 130 visits were made for the purpose of inspecting the animals, buildings, conditions as to cleanliness, etc.

DISEASED COWS FOUND IN REGISTERED PREMISES WITHIN THE CITY.

Year.	No. of Cow-keepers.	No. of Registered Premises.	No. of Registered Cowsheds.	No. of Milch Cows in City.	No. of Diseased Cows.				
					Tuberculosis.		Other Diseases.		Destroyed under the Tuberculosis Order, 1925 and 1938.
					Of Udder.	Other than Udder.	Udder.	Other than Udder.	
1928	19	19	31	308	3	1	1	3	4
1929	19	19	30	258	4	1	1	2	4
1930	17	17	28	251	2	3	1	4	4
1931	16	16	27	243	4	7	1	3	9
1932	16	16	27	246	4	2	7	3	6
1933	16	16	27	243	1	..	5	4	1
1934	14	14	22	223	3	2	6	4	5
1935	23	23	38	504	3	3	3	2	6
1936	22	22	35	515	5	1	1	3	6
1937	19	20	31	477	2	2	3	3	4
1938	18	21	31	489	3	2	2	1	4
1939	18	21	30	521	..	..	2	2	..
1940	15	17	26	468	4	..	3	..	4
1941	14	18	29	553	3	3	1	..	6
1942	14	18	29	554	4	5	1	4	8
1943	14	18	29	588	3	5	..	..	8
1944	13	17	28	708	6	12	..	..	18
1945	12	16	26	674	4	4	..	..	8
1946	11	15	23	527	1	6	..	..	7
1947	9	12	17	420	4	..	..	..	4

Anthrax.

Though it is the routine practice to examine bacteriologically all bovine animals arriving dead at the City abattoirs, while all bovine animals which on post-mortem inspection exhibit generalised congestion, or in which the spleen is enlarged, are similarly examined, no outbreak of the disease was found during the year under review. Examination of material from such carcases was carried out in 11 cases during the year.

The chief cause of anthrax in bovine animals in Britain is by feeding on imported cattle cake which has become contaminated by anthrax spores during the voyage. The shortage of such feeding material during and subsequent to the war has therefore resulted in a fall in the incidence of the disease, and the number of cases in Britain fell from 699 in 1939 to 121 in 1947. A similar sharp fall occurred during the war of 1914-1918, but subsequently rose again with the resumption of normal supplies.

LIVESTOCK EXHIBITED WITHIN THE NEWCASTLE CATTLE MARKET.

The Cattle Market, which ceased to function as such since the 15th January, 1940, has again operated throughout the year as a Collecting Centre. The number of animals passing through the Centre during the year was 19,965, including 5,406 cattle, 375 calves, 11,941 sheep and 2,243 swine, and an ante-mortem inspection of these was carried out prior to the animals being graded and allocated to the Government Slaughterhouses.

INSPECTION OF MEAT AND OTHER FOODS.

Animals Slaughtered within the City.

The control of slaughter of animals intended for human food, which was initiated in 1940, still continues. Being an integral part of the meat rationing scheme such control is therefore likely to be maintained for some years and it is also considered highly improbable that the meat trade will ever revert to the pre-war system of indiscriminate slaughter in private slaughterhouses. It is understood that the relevant Ministries now have the whole question of livestock marketing, slaughter, and the marketing of meat under active consideration, and local authorities would not therefore be well advised to consider embarking on any scheme involving livestock markets or abattoirs until these decisions are made generally known.

The total number of animals slaughtered within the City during 1947 approximates closely to the number slaughtered during the previous year. The number of cattle slaughtered has fallen slightly, this fall being related to a diminution in the number of animals fattened by stall feeding during the winter months. The number of calves slaughtered also shows a fall, partly because rearing of calves of the beef type is now being resumed, but chiefly because of a more equitable distribution of these animals to other slaughtering centres. In sheep the marked fall in the number slaughtered, from approximately 130,000 in 1946 to 90,000 in 1947, is related to the losses occasioned during the winter of 1946-1947. This severe winter was also a factor concerned with a great increase in condemnations of sheep livers, for routine inspection during 1947 showed that the number of sheep livers condemned for parasitic infections was the highest yet recorded and represented an increase of 562.37 per cent. over the previous year. Practically all these livers were condemned due to extensive affection with liver fluke (*Fasciola hepatica*) and the high incidence of this affection was undoubtedly related to the waterlogging of pastures during the spring of the year.

Prior to the war the number of pigs slaughtered within the City was about 50,000 yearly, the majority of these being pigs of the porker class, the carcases of which were purchased and sold by butchers in the form of retail joints. The war time policy of the Ministry of Food, to encourage the fattening of pigs to bacon size, is still being pursued and pigs of this class are not slaughtered within the City but are consigned to bacon factories. The only pigs now being slaughtered within the

City abattoirs are, therefore, boars, sows, and pigs outside the bacon class, or those sent to the City for emergency slaughter.

The demand for horseflesh still continues and is directly related to the short supply of the more generally accepted meat foods. The number of horses slaughtered in 1947 has remained high and the carcases of such animals, compared with cattle and pigs, were shown on post-mortem examination to possess a high freedom from tuberculosis or other diseases. The prejudice which still exists against the consumption of horseflesh must therefore be regarded as largely an æsthetic one.

Animals Slaughtered on Licensed Premises within the City.

	Year.				
	1947	1946	1945	1944	1943
Cattle	26,827	29,237	31,808	31,954	29,814
Calves	7,104	14,147	7,185	5,609	5,131
Sheep	92,124	130,617	115,077	125,410	137,971
Pigs	1,242	1,156	2,326	1,175	1,429
Horses	2,582	2,639	2,235	2,165	1,986
Total Animals .	129,879	177,796	158,631	166,313	176,331

Animals found Tuberculous on Routine Slaughterhouse Inspection.

Post-mortem inspection in slaughterhouses throughout Great Britain shows that tuberculosis is the commonest bacterial disease encountered in cattle and pigs and is responsible for the largest proportion of partial or total condemnations of carcases. It is an impression commonly held in the lay mind that animals suffering from tuberculosis in any degree should be regarded as unfit for human food, but this is erroneous and the only carcases whose flesh may possibly be dangerous to man are those affected with generalised disease, for in this case tubercle bacilli may be present in the muscular tissue, i.e., meat. It is therefore essential in meat inspection to distinguish between tuberculosis of a localised and of a generalised type, and the code of judgment by which carcases are classified into one of the two groups is outlined in Memo. 62/Foods of the Ministry of Health. This code has formed a basis of judgment of tuberculous carcases for the last 25 years, and it is the considered opinion of the Veterinary Officer that some of its

recommendations are unnecessarily severe and are therefore the cause of many condemnations of sound and wholesome meat. Prior to 1943 the code of judgment in Germany in regard to tuberculous carcases was similar to that which still obtains in Britain, but extensive research by German workers into the pathogenicity of the disease has resulted in a complete reversal of the German meat inspection law and has had the effect of releasing many carcases which, prior to 1943, were condemned on account of tuberculosis and totally destroyed. It is significant that in Germany only 15 per cent. of total condemnations of beef carcases are on account of tuberculosis, whereas in British abattoirs tuberculosis is responsible for not less than 60 per cent. of the condemnations of carcases of beef. It is felt that urgent consideration might be given in Britain to the findings and code of judgment of these Continental workers.

The following figures show the percentage of animals found tuberculous on routine post-mortem examination within the City slaughterhouses, the higher incidence in bulls and cows as compared with bullocks being attributable to the fact that animals of the two former classes spend much of their life in close confinement where the risk of infection is correspondingly greater.

	Animals Slaughtered.	*Percentage found Tuberculous.*
Cows	4,020	45·10
Heifers	11,241	13·21
Bulls	252	21·43
Bullocks	11,314	15·39
Calves.....	7,104	0·38
Sheep	92,124	00.108
Pigs	1,242	3·86

Carcases totally condemned.

Tuberculosis.

Cows	Heifers	Bulls	Bullocks	Calves	Sheep	Pigs
221	38	2	30	27	1	9

Other Conditions

50	16	1	3	106	194	13

Carcases partially condemned.

Tuberculosis

Cows	Heifers	Bulls	Bullocks	Calves	Sheep	Pigs
1,633	1,438	52	1,712	..	..	51

Other Conditions

1,854	2,465	23	3,047	9	2,087	97

Carcases of Beef Condemned within the City during the past Twenty Years.

Total Condemned.		Numbers condemned on account of Tuberculosis.	Percentage Tuberculous.
Year.	Carcases.	Carcases.	Per cent.
1928	115	109	94.78
1929	124	118	95.16
1930	147	124	84.35
1931	117	94	80.34
1932	135	120	88.89
1933	128	116	90.62
1934	186	158	84.94
1935	182	159	87.35
1936	255	241	94.51
1937	231	208	90.04
1938	263	205	77.94
1939	278	237	88.25
1940	460	413	85.43
1941	450	400	88.88
1942	413	369	89.34
1943	494	413	83.60
1944	416	352	84.61
1945	415	380	91.56
1946	418	364	87·08
1947	361	291	80.60

Number of Diseased Organs condemned.

	Bovine.	Swine.	Sheep.	Total.
HEADS (including Tongues)—				
Tuberculosis	1,438 (125)	27 (1,248)	— (—)	1,465 (1,373)
Other conditions....	58 (14)	— (—)	7 (—)	65 (14)
LUNGS—				
Tuberculosis	4,109 (369)	14 (14)	— (—)	4 (,123383)
Other conditions....	1,651 (72)	72 (213)	569 (37)	2 (,292322)
HEARTS—				
Tuberculosis	229 (31)	9 (—)	— (—)	238 (31)
Other conditions....	13 (1)	23 (—)	13 (—)	49 (—)
LIVERS—				
Tuberculosis	472 (175)	4 (—)	— (—)	476 (175)
Other conditions....	6,312 (785) & 29,120 lbs.	7 (80)	1,286 (111)	7,605 (976) & 29,120 lbs.
PLUCKS—				
Tuberculosis	— (—)	12 (83)	— (—)	12 (83)
Other conditions....	2 (—)	20 (45)	770 (30)	792 (75)
UDDERS—				
Tuberculosis	15 (—)	— (—)	— (—)	15 (—)
Other conditions....	1,110 (—)	— (—)	— (—)	1,110 (—)
THICK SKIRTS—				
Tuberculosis	353 (—)	— (—)	— (—)	353 (—)
Other conditions....	58 (—)	— (—)	— (—)	58 (—)
SPLEENS—				
Tuberculosis	243 (—)	— (—)	— (—)	243 (—)
Other conditions....	79 (—)	— (—)	— (—)	79 (—)
STOMACHS, MESENTERIES & INTESTINES—				
Tuberculosis	546 (24)	7 (—)	— (—)	553 (24)
Other conditions....	91 (—)	7 (239)	7 (—)	105 (239)

NOTE :—The figures in brackets indicate condemnations during 1939, i.e., the year prior to the introduction of centralised slaughtering. The increased condemnations during the war years and in 1947 may be attributed entirely to the fact that centralised slaughtering rendered possible the post-mortem inspection of 100 per cent. of the animals slaughtered within the City.

The table does not include organs condemned for decomposition. Organs and parts condemned for decomposition are detailed in the Tables on pages 254 and 255.

Public Health (Meat) Regulations of 1924.

Visits numbering 5,230 were made to meat and provision shops, restaurants, stalls, vehicles, etc., in the enforcement of the Regulations. A number of contraventions, relating chiefly to meat conveyed in dirty vehicles, and of butchers' shops not kept in a cleanly condition, were found during these visits and cautions administered.

Imported Foodstuffs.

During the year regular routine visits were made to the Quayside. Four vessels carrying meat foodstuffs arrived from Canada and Denmark, compared with the same number of arrivals during the previous year, the following being included in the cargoes, a percentage of which was examined :—

5,757 forequarters and 5,283 hindquarters beef,

2 casks cows' udders, 12 casks pigs' feet and

2 casks pigs' spleens.

Imported meat arriving by rail and road within the City is subjected to supervision and inspection within cold storage depots and wholesale meat shops.

NUMBER OF VISITS AND INSPECTIONS OF PREMISES DURING THE YEAR 1947.

	Central Markets.			Meat Shops.		Fish Shops.		Provision Shops.		Fruit Shops.							
Slaughterhouses.	Meat and Provisions.	Fruit and Vegetables.	Fish.	Wholesale.	Retail.	Wholesale.	Retail.	Wholesale.	Retail.	Wholesale.	Retail.	Wharves and Vessels.	Cold Stores.	Stalls, Carts, &c.	Food Preparing Factories.	Goods Stations.	Restaurants.
1,804	779	619	415	1126	879	76	5	785	601	811	3	218	70	881	93	49	16

TOTAL WEIGHT OF MEAT AND OTHER FOODSTUFFS CONDEMNED.

The total weight of meat and other foodstuffs condemned during the year 1947 was 507 tons, 7 cwts., 2 qrs., 26 lbs., comprising :—

	tons	cwts.	qrs.	lbs.
Beef, Mutton, Veal and Pork	124	14	3	10
Offals	101	18	3	10
Fish	10	10	..	24
Provisions	90	17	3	27
Fruit and Vegetables	179	5	3	11
	507	7	2	26

The following figures show the total weights of carcases and offals, fish and provisions, &c. (excluding fruit and vegetables) condemned since 1932. For comparison these figures are given at intervals of five years :—

	tons	cwts.	qrs.	lbs.
1932	80	1	2	26
1937	109	7	3	23
1942	204	16	1	11
1947	328	1	3	15

Condemnation Certificates.

Certificates granted in respect of carcases, offals, provisions, etc., condemned during the year numbered 4,383.

MICROSCOPICAL EXAMINATIONS.

During the year, 13 microscopical examinations were carried out in connection with cases under investigation. Material examined comprised specimens of milk and blood, two samples of milk proving negative for tuberculosis, while 11 samples of blood were found negative for anthrax bacilli.

SLAUGHTERHOUSES.

Four slaughterhouses are in use within the City for the slaughtering of cattle, calves, sheep and pigs, and as these are occupied by the Ministry of Food, on behalf of the Crown, licensing of the premises by the local authority is unnecessary. Four slaughterhouses, however, are licensed within the City for the slaughtering of horses, 2 at the Cattle Market, 1 at Byker Hill and 1 at Boyd Street, Stepney. All the premises have been regularly inspected, a total of 1,804 visits being made during the year.

Poultry and Game, Fish, Fruit and Vegetables, Provisions, &c., Destroyed as being Unfit for Human Consumption During the Year, 1947.

Poultry and Game.

		lbs.
Chickens	5	212
Ducks	15	166
Rabbits	75	291
Turkeys	2	4

Fish.

	tons	cwts.
Fish (various)	12	15

Fruit and Vegetables.

	cwts.	lbs.
Apples	64	2
Apricots	5	78
Bananas—179 bundles	—	—
Beetroot	87½	—
Brocolli	38	—
Cabbage	281	99
Carrots	138	—
Cauliflowers	24	—
Celery—576 bundles	—	—
Cherries	90	89
Chestnuts	34	28
Damsons	111½	—
Dates	319	—
Figs	1	106
Leeks—555 bundles, 7 crates, 397 bags	—	—
Lettuce—80 boxes, 318 crates	—	—
Onions—106 crates, 40 nets	—	168
Oranges—1,000 boxes	—	—
Orange pulp	22	—
Peaches	—	240
Pears	992¾	—
Plums	3	100

Fruit & Veg.—*Contd.*

		lbs.
Potatoes	14	—
Radishes—20 boxes	—	—
Red currant pulp	4	—
Rhubarb	28	70
Salad—56 chips	—	—
Sprouts	8¼	—
Scallions	9½	—
Tomatoes	3	98
Turnips	6	68
Watercress	10	85

Provisions, &c.

	lbs.
Almond Paste	14
Arrowroot	5
Bacon	10
Baking Powder	816
Barley	3,706
Beans	2,748
Biscuits	10,599
Black pudding	2,255
Brawn	13
Bread—113 loaves	—
Breakfast cereals—3,749 pkts., 152 tins	—
Cakes—159	1,309
Cake and pudding mixture—3,931 pkts., 21 tins	336
Chillies	114
Chitterlings	60
Cheese—66 cartons, 102 tins	38
Chocolate spread	52
Cocoa—66 cartons, 54 tins	421
Coffee—28 tins	9
Coffee essence—63 bottles	—
Confectionery	5,325
Cornflour	419
Cows' udders	559
Currants	328

Provisions, &c.—*Continued.*

	lbs.
Curry powder	14
Dehydrated potatoes—23 tins	110
Dried eggs—108 pkts., 11 tins	—
Fat	158
Fat extender	1,593
Fish cakes—471	18
Fish paste—465 tins, 30 jars	—
Flour	5,645
Fondants	8
Fruit squash—681 bottles	—
Garlic	72
Gelatine	16
Glucose	14
Gravy powder—40 packets	—
Ground almonds	45
Ground ginger	14
Ham	80
Ham bones	52
Honey—13 jars	—
Hops	119
Ice cream—2 gallons	—
Jam—1,033 jars	56
Jellies—219 packets	—
Lemon flavour—60 bottles	—
Lemonade powder	201
Lime juice—80 x 3 gal. tins	—
Macaroni—45 tins	—
Maize meal	33
Malted food—12 tins	—
Marmalade—108 jars	—
Maws—5 cwts.	—
Mayonnaise—30 jars	—
Meat paste—48 jars	—
Meat pies—530 & 5 cartons	120
Milk powder—385 tins	88
Milk tablets	123
Mushrooms—4 jars	—
Mustard	119

Provisions, &c.—*Continued.*

	lbs.
Oatmeal	2,153
Peas	6,984
Peel	821
Pepper—41 packets	—
Pickles—1,947 jars, 154 tins	—
Prunes	2,611
Puddings—161	—
Raisins	892
Rennet—11 bottles	—
Rice	2,381
Rolled Oats	2,225
Salt	220
Sauce—304 bottles, 19 tins	—
Sausage	6,168
Sausage meal	336
Savouries—558	—
Semolina	1,116
Soyaghetti	35
Spaghetti	48
Spice	64
Suet—5 packets	—
Sugar	124
Sweetcorn—42 tins	—
Syrup—88 tins	606
Sultanas	365
Tea	738
Tripe	59
Vermicelli	5
Vinegar—26 bottles	—
Wholemeal	40
Yeast	1,170

Tinned Goods.

	tins.	lbs.
Fruits	5,349	—
Meats	5,696	21,019
Milk	11,139	—
Vegetables	13,445	—

TOTAL CARCASES, &c., DESTROYED AS BEING UNFIT FOR

	Carcases, &c.					Lungs.				Hearts.			Ox Kidneys.
	Beef.	Veal.	Mutton.	Pork.	Goat.	Sets Ox.	Sets Calf.	Sets Sheep.	Sets Pig.	Ox.	Sheep.	Pig.	
Tuberculosis	291+ 2 sides + 10,039 lbs.	27	1	9+ 61 lbs.	..	4109	..	..	14	229	..	9	..
Johne's Disease	16	..	..	..	..	..	..	..	..	..	..	..	..
Caseous Lymphadenitis	..	..	1	..	..	..	..	..	..	..	..	..	..
Necrosis	15 lbs.	..	..	..	..	..	..	..	..	..	..	..	..
Bacterial Necrosis	..	..	..	..	..	1	..	..	..	..	..	..	..
Actinbacillosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Actinomycosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Pyrexia	2	1	2	2	..	..	..	..	..	..	..	..	..
Pyæmia	3	4	7	1	..	..	..	..	..	..	..	..	..
Pericarditis	..	..	..	..	..	..	..	..	..	8	..	4	..
Nephritis	..	..	..	..	..	..	..	..	..	..	..	..	12
Hydronephrosis	..	..	..	..	..	..	..	..	..	..	..	..	1
Septic Conditions	23¼+ 119 lbs.	9+ 20 lbs.	22½+ 369 lbs.	7¼+ 115 lbs.	..	6	..	3	..	..	..	..	..
Uræmia	2	..	..	..	..	..	..	..	..	..	..	..	..
Jaundice	..	11	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	..	..	..	..	..	..	..	..	..	..	..	..
Tumours	1	..	1	..	..	..	..	..	..	..	..	..	..
Muscular Fibrosis	28 lbs.	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia	..	..	..	..	..	13	3	1	50	..		..	..
Pleurisy	294 lbs.	4 lbs.	316 lbs.	13 lbs.	..	179	..	45	13	..	..	..	..
Pleurisy and Pneumonia	..	..	..	..	..	..	..	..	8	..	..	..	..
Peritonitis	320 lbs.	15 lbs.	23 lbs.	9 lbs.	..	..	..	..	..	..	..	..	..
Pleurisy and Peritonitis	..	..	..	..	..	1	..	..	..	..	..	..	..
Mastitis	6 lbs.	..	..	20 lbs.	..	..	..	..	..	..	..	..	..
Cirrhosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Cavernous Angioma	..	..	..	..	..	..	..	..	..	..	..	..	..
Œdema and/or Emaciation	20+ 48 lbs.	11	144	3	..	..	..	..	..	..	..	..	..
Parasites (Distomatosis, cysts, &c.)	..	..	..	..	..	1502	..	520	..	..	..	..	..
Imperfect Bleeding, Congestion, &c.	3	7	4	..	..	3	..	..	1	5	13	19	..
Melanosis	13 lbs.	..	..	..	..	..	3	..	..	..	..	..	2
Immaturity	..	63	..	..	..	..	..	..	..	..	..	..	..
Traumatism	3,553 lbs.	8 lbs.	3 + 197 lbs.	100 lbs.	..	..	..	..	..	..	..	..	..
Arthritis	13 lbs.	..	283 lbs.	1 side & 145 lbs.	..	..	..	..	..	..	..	..	..
Decomposition	1,408 lbs.	..	10+ 583 lbs.	..	1291 lbs.	..	..	..	..	..	..	..	..
Contaminated	41 lbs.	..	15 lbs.	..	..	18	..	7	..	..	34	..	..

HUMAN CONSUMPTION DURING THE YEAR 1947.

Livers.				Heads.			Plucks.			Sets St'machs & Intest's.			Stom-achs.		Mesenteries & Intestines			Ox Fat.	Udders.	Thick Skirts.	Ox Spleens.	Sweetbreads.
Ox.	Calf.	Sheep.	Pig.	Ox.	Sheep.	Pig.	Calf.	Sheep.	Pig.	Ox.	Sheep.	Pig	Ox.	Sheep.	Ox.	Sheep.	Pig.					
72	..	..	4	1438	..	27	..	..	12	101	..	6	27	..	418	..	1	4+ 34 lb.	15	353	243	..
..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	75	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22 lbs.	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	49	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1 + 4 lbs.	1	..	..	2	2	..	..	54	1	..	..	..	1	..	..	..	..	33 lbs.	..	8	1	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	35	1	..	..	..	..	..	..	..	..	..	..	17	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	1	..	..	..	..	..	..	4	2	2	6	1	7	2	1	4+ 17lb.	..	33	69	..
..	..	..	..	..	..	..	..	..	9	10	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1110	..	..	..
56 + 506 lbs	..	1 + 3 lbs	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
99	..	1285	5	..	..	..	..	649	3	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	2	17	4	2	..	2	..	..	..	..	1	..	..	..	..	..
1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	5	..	..	5	..	..	..	..	..	..	..	..	1	1	18 lb.
..	15	16	..	..	..	..	7	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..

Licensed Slaughtermen.

Under the Slaughter of Animals Act, 1933, 4 slaughtermen's licences were granted during the year, making a total of 88 licensed slaughtermen within the City. All applications for these licences are submitted to, and approved by, the Health Committee.

RATS AND MICE (DESTRUCTION) ACT, 1919, AND INFESTATION ORDER, 1943.

During the year, 4,171 visits were made to premises in respect of 668 reports of the presence of rats received, and 1,128 premises, including others than those complained of, were inspected and dealt with. Inspection of these 1,128 premises, detailed on page 257, showed that rats were found infesting 652, the remaining 476 being found free from evidence of infestation. Third Party Control work (i.e., baiting, &c.) was carried out on 474 premises, 22,722 pre-baits and 7,804 poisoned baits being laid, resulting in an estimated kill of 22.026 rats.

Advice regarding baits, traps, &c., is given free, but where rodent destruction is carried out by the department a charge is made, this being credited to the Ministry of Agriculture and Fisheries who refund to the local authority the costs of administration under the Act and Order. During the year a total of £837 was invoiced in respect of Third Party Control work. Where necessary, the testing of drains is carried out in conjunction with an inspector of the Sanitary Department, and structural repairs are enforced by the service of a Notice, if required, on the occupier of the premises.

RATS AND MICE (DESTRUCTION) ACT, 1919, AND INFESTATION ORDER, 1943.

Reports received	668
Number of premises inspected and dealt with in connection with the above	1,128
Number of premises where evidence of the presence of rats was found.	652
Number of visits made	4,171

KIND OF PREMISES DEALT WITH.

Allotments	1
Boiler Houses	3
Breweries	5
Cafes	62
Cinemas	7
Dwellings	403
Factories	124
Food Depots and Canteens	78
Garages	12
Hospitals	2
Marine Stores	2
Nurseries	3
Offices	26
Public Houses	30
Refuse Tips	5
Residential Hotels	11
Schools	2
Shops (Food)	69
Shops (other than Food)	203
Stables	7
Warehouses	73
	1,128

Number of premises requiring 3rd Party Control Work (*i.e.*, baiting, &c.)	474
Number of unpoisoned baits laid	22,722
Number of poisoned baits laid	7,804
Estimated number of rats killed	22,026

HORACE THORNTON,
Veterinary Officer.

TOWN HALL,
NEWCASTLE UPON TYNE,
30TH JUNE, 1948.

REPORT OF THE
SCHOOL MEDICAL OFFICER

VIII—SCHOOL HEALTH SERVICE

SYNOPSIS OF REPORT SUBMITTED TO
EDUCATION COMMITTEE.

SCHOOL HEALTH SERVICE DURING 1947.

The School Medical Officers have examined in the primary, Secondary, Modern, Technical, Grammar and High Schools, at the Statutory Medical Inspection of Entrants, Intermediates and Leavers, 8,699 children.

At the Clinics the following numbers of consultations have been carried out by the doctors :—

Central	8,658
Raby Street	2,676
Middle Street	2,609
Bentinck	2,256
Ashfield House	871
Atkinson Road	4,036
Cowgate	1,528
	22,634

The nurses and nursing helpers have paid 862 visits to schools and have carried out 87,324 inspections. They have issued to parents 9,074 notices calling their attention to various conditions found to be affecting the children and have excluded temporarily from school 360 children either for being verminous or for some infectious or contagious condition.

There have been 19,495 cases receiving treatment at the Clinics and they have attended on 113,809 occasions. In addition 17,482 cases have been examined and referred for treatment either at the Throat, Ear and Nose Clinic, Refraction Clinics or elsewhere. The nurses and nursing helpers have visited 2,485 homes and at the Clinic Baths 317 cases of scabies have been dealt with and 2,135 baths have been given.

Dental Clinics.—At the six Clinics 42,619 children have been examined, 19,251 attendances have been made for treatment, 13,245 extractions and 12,478 fillings have been done and gas has been administered in 4,168 cases.

Orthopædic Clinic.—1,096 patients have been in attendance, 9,201 treatments have been given and 1,653 examinations have been carried out by the specialist.

Throat, Ear and Nose Clinic.—1,910 children have been examined by the Specialist of which 738 were admitted to hospitals for operation. On the advice of the Ministry of Health, owing to the outbreak of Infantile Paralysis, no operations were carried out during the period August to November, 1947.

Refraction Clinics.—1,590 children have been specially examined for defective eyesight and, of these, spectacles were prescribed in 1,326 cases. 862 pairs of spectacles have been supplied, free of cost to the parents, through the Education Authority's Scheme.

Mass Radiography.—In connection with the survey of School Leavers, 535 boys and 742 girls were examined at the Newcastle General Hospital. Of these, 34 were recalled for further investigation.

X-ray Treatment of Ringworm.—235 cases of Ringworm of the scalp have received X-ray treatment at the Newcastle General Hospital.

Plantar Warts.—46 boys and 88 girls have been treated for this condition. It is caused by a filter passing virus and is known to be infectious. The symptoms include pain on walking or running, the the warts being usually limited to the heel or the ball of the foot. It is found more frequently in girls. Treatment has been carried out successfully and 16 boys and 39 girls are now cured.

Cardiovascular Clinic.—At the Cardiovascular Clinic, organised by Professor W. E. Hume at the Newcastle General Hospital, 45 school children have been examined and reported upon.

Special Cases.—163 children—physically handicapped, educationally subnormal or maladjusted, have been specially examined and reported upon.

Pendower Open Air School.—80 boys and 99 girls have been in attendance and 25 boys and 28 girls have been discharged, all with great improvement to their health.

Pendower Open Air School, Classes for Partially Sighted.—24 boys and 26 girls have been in attendance during the year, and 6 boys and 5 girls have been discharged.

Bolam Street Day Special School for Educationally Subnormal Girls.—109 girls have been in attendance, of which 21 have left during the year.

Lower Condercum House Day Special School for Educationally Subnormal boys.—179 boys have been in attendance of which 40 have left during the year.

Residential Special Schools.—The following children have been cared for in Residential Special Schools :—

Blind	6
Crippled	76
Epileptic	5
Deaf and Dumb	40
Educationally Subnormal	27
Heart Disease	2
Residential Open Air	6
Maladjusted	7
	169

Stannington Sanatorium.—Forty beds for various forms of tuberculosis have been practically in constant occupation.

MATERNITY AND CHILD WELFARE SCHEMES.

(The following figures are additional to those already enumerated above.)

1. **Dental.**—At the six Clinics 440 patients examined, 708 attendances made for treatment, 1,515 extractions and 8 fillings done and gas has been administered in 249 cases.

2. **Throat, Ear and Nose.**—The Specialist has examined 153 children of which 42 have been admitted to hospitals for operation.

3. **Orthopædic.**—288 patients have been in attendance, 3,288 treatments have been given and 440 examinations have been carried out by the Specialist.

R. F. Lunn,

Senior School Medical Officer.