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**CITY AND COUNTY OF NEWCASTLE UPON TYNE**

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**ANNUAL REPORT**

OF THE

**MEDICAL OFFICER OF HEALTH**


ON THE

**Sanitary Condition of the City**

DURING THE YEAR

**1937.**

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Members of Council who served on the

HEALTH COMMITTEE.

The Lord Mayor (Alderman GILBERT OLIVER, J.P.)

Councillor WALTER THOMPSON, J.P., Chairman.

Alderman DAVID ADAMS, J.P., M.P., Vice-Chairman.

Alderman J. CHAPMAN.

„ J. MOORE, J.P.

„ W. LOCKE, J.P.

Councillor CATHERINE A. AULD, J.P. Councillor MAY NEWTON.

„ H. MOAT.

„ R. M. ROWE.

„ J. PEARSON, J.P.

„ T. M. TAYLOR, J.P.

„ A. E. BEDSON.

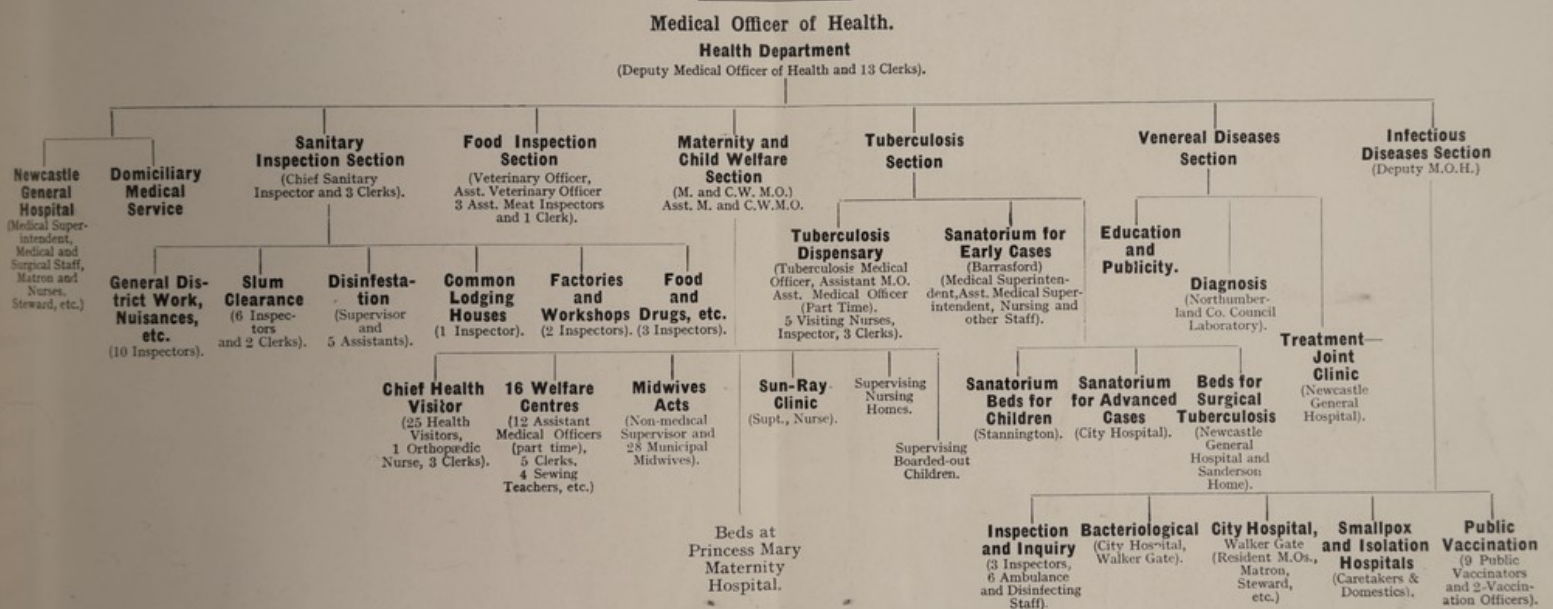
„ CATH. A. LOCKE, J.P.

„ J. E. SCANLAN, O.B.E.,  
J.P. (Sheriff).

„ E. F. WEIDNER.

„ VIOLET H. GRANTHAM.

Table showing the various Sections of the Health Committee's work which is under the direct charge of the Medical Officer of Health.





MATERNITY AND CHILD WELFARE COMMITTEE.

---

- \*Alderman JOHN CHAPMAN, Chairman.
- \*Councillor CATHERINE A. AULD, J.P., Vice-Chairman.
- \*Alderman DAVID ADAMS, J.P., M.P.
- „ JOHN MOORE, J.P.
- \*Councillor WALTER THOMPSON, J.P. †Dr. R. P. RANKEN LYLE, J.P.
- \* „ J. E. SCANLAN, O.B.E., †Dr. J. C. SPENCE.  
J.P. (Sheriff).
- \* „ MAY NEWTON. †Mrs. T. A. HIGGINBOTTOM.
- \* „ J. PEARSON, J.P. †Councillor JEANIE L. GIBBIN,  
O.B.E., J.P. (Lady Mayoress).
- \* „ CATH. A. LOCKE, J.P. † „ FRANCES E.  
TAYLOR, J.P.
- \* „ VIOLET H GRANTHAM.

\* Member of the Health Committee.

† Co-opted member.

‡ Appointed by City Council.

## STAFF.

---

J. A. CHARLES, M.D., B.S., F.R.C.P., D.P.H., Medical Officer of Health and Medical Superintendent of the City Hospitals for Infectious Diseases.

**E. F. DAWSON-WALKER**, M.D., B.S., B.Hy., D.P.H., Deputy Medical Officer of Health.

**WM. GRAY**, Chief Sanitary Inspector.

JAS. MCNICHOL, Chief Assistant Inspector and Assistant Workshops Inspector.

W. E. PERKINS, Assistant Workshops Inspector.

A. FLOCKHART A. KIRSOP W. PETTIGREW	}	Assistant Inspectors under Food and Drugs Acts.
---	---	---

L. W. JOHNSON J. BROWN L. WADE A. IBBITSON R. S. COOPER E. BANKS T. SAYER D. WILKINSON (resigned Oct.) F. JAMES C. W. SANDILANDS J. SHIPLEY	}	District Inspectors.
---	---	----------------------

W. STEWART F. GALTON E. HOUSECROFT (appointed Feb.) W. DITCHFIELD (Temp., appointed March)	}	Slum Clearance Inspectors.
---	---	----------------------------

WM. BEAN R. CHAPMAN (Temp.) A. ANDERSON (Temp., appointed Feb.) W. TWEDDLE (Temp., appointed Feb.) L. SMALLEY (appointed Nov.)	}	Infectious Diseases Inspectors.
--	---	---------------------------------

N. MAYNE, Assistant Inspector of Common Lodging Houses.

JAS. ROBSON, JAS. BRUCE, JNO. R. CRAGIE, J. W. ROBSON, THOS. MOORE, J. ROBSON, Jun., Ambulance Drivers and Disinfectors.

N. BUCKLEY, Supervisor. Assistant Supervisor, 2 Drivers and 2 Packers, Disinfestation Station.

**\*ALFRED HEDLEY**, M.S.M., **\*GEO. CUTHBERTSON**, **\*ALEC. M. WALKER**, JOS. GILHESPY, H. G. OLIVER, **\*D. H. MACPHERSON**, **\*R. DOBBIN**, H. G. COATES, **\*F. PELLATT**, **\*L. SMALLEY** (resigned Nov.), A. CAMPBELL, L. WHITEMAN, R. A. RIDLEY, R. HARDY (appointed Nov.), M. DIXON (Temp.), Clerks in the Health Department. ALICE FENWICK, E. STOBART (Temp.), A. E. BLAIR (Temp.), D. LAKEY (Temp.), (Typists).

Those marked \* hold the Sanitary Inspector's Certificate of the Royal Sanitary Institute.

**THOS. PARKER**, F.R.C.V.S., Veterinary Officer and Inspector of Provisions (retired Sept.)

**H. THORNTON**, M.R.C.V.S., B.V.Sc., D.V.H., Veterinary Officer and Inspector of Provisions (appointed Oct.)

JAS. M. ANDERSON (retired July), W. COCKBURN, GEO. PHILLIPS, R. MARCHBANK (appointed Sept.), Assistant Inspectors of Provisions.  
**\*NORMAN DICKSON**, Clerk.

**A. F. G. SPINKS, M.D.,** Maternity and Child Welfare Medical Officer.

E. G. BREWIS, M.D., B.S., M.R.C.P., D.P.H., Assistant Maternity and Child Welfare Medical Officer.

**a** GEORGINA B. CAMERON, M.B.E.\*, Chief Health Visitor and Supt. of Midwives.

**f** CATHERINE M. THEXTON†, **b** MARION MOODY\*, **c** LIZZIE ISA PRITCHARD, **c** LOUISE SHELL, **d** FLORENCE MARTHA HATFIELD\*, **d** NORAH B. WILLSON\*, **b** E. HISCO\*, **b** E. JOHNSON\*, **b** N. E. CARR\*, **b** T. MASON\*, **b** E. M. HASTIE\*, **b** N. LEWIS\*, **b** M. A. SIMPSON\*, **b** N. THOMPSON\*, **g** C. N. PHILLIPS, **b** D. A. ATKINSON, **b** M. BATTY, **b** A. CRAGGS, **b** P. E. PEARCE, **b** R. ROXBY, **b** M. SCORER (resigned May), **b** E. G. SAYER, **b** L. YOUELL, **b** A. BRADLEY, **b** C. BARRON\*, **b** G. CATO (appointed July), Health Visitors. EDITH RODGERS, MARION S. BATT, BLANCHE DICKSON, Clerks.

(Qualifications of those marked **a** C.M.B., General and Fever Nursing and R.S.I. Certificates. **b** C.M.B., General Nursing and R.S.I. **c** C.M.B. and R.S.I. **d** C.M.B. and General Nursing. **f** C.M.B., Fever Nursing and R.S.I. **g** C.M.B.)

\* State Registered Nurse. † State Registered Fever Nurse.

IRENE COOK, S.O.N.A., Orthopædic Nurse.

IRENE GAWMAN (resigned August), CATH. BARNES, MARY E. MUSE, A. DOUGALL, EDITH TAYLOR, VIOLET SIMPSON, I. WATSON (Temp. appointed April), Welfare Centre Clerks.

H. GLEN DAVISON, M.D.

L. MABEL R. CAMPBELL, M.B., Ch.B.

W. HUNTER, M.D., B.S., M.C.O.G.

GERTRUDE H. G. HICKLING, M.D., Ch.B., B.Sc., D.P.H.

C. N. ARMSTRONG, M.D., B.S., M.R.C.P., B.Hy., D.P.H.

A. G. OGILVIE, M.B., B.S., M.R.C.P.

ANNE FAIRWEATHER, M.D., B.S., B.Hy., D.P.H., D.P.M. (Psych. and Ment. Def.)

F. E. STABLER, M.D., B.S., F.R.C.S.

C. C. UNGLEY, M.D., B.S., F.R.C.P., M.R.C.S.

DOROTHY HOPKINSON, M.B., B.S.

NORA LONG, M.B., B.S.

ELSIE B. WRIGHT, M.D., B.S., M.R.C.S., L.R.C.P.

W. G. A. SWAN, M.D., B.S., M.R.C.P.

Assistant Medical Officers (part time) Welfare Centres,

MRS. E. WALKER, Non-Medical Supervisor 28 Midwives (Municipal).

**G. HURRELL, M.D., B.S., B.Hy., D.P.H.,** Tuberculosis Medical Officer.

R. FRAZER, M.B., Ch.B., D.P.H., Assistant Tuberculosis Medical Officer (appointed April).

JOHN STOKOE, M.D., B.S., Assistant Tuberculosis Medical Officer (resigned Feb.)

WM. H. DICKINSON, O.B.E., M.D., Ch.B., M.R.C.P.(Ed.), D.P.H., Tuberculosis Medical Officer (part time).

**c** CONSTANCE M. BAYNE, **d** ANNIE BOOTH, **a** W. E. DALE\*, **b** J. P. KENMIR\*, **e** M. YOUNG, Tuberculosis Visiting Nurses.

(Qualifications of those marked **a** General Nursing. **b** General Nursing, C.M.B. and R.S.I. **c** General Nursing and Health Visitors and School Nurses Certificates of R.S.I. **d** Fever Nursing. **e** Fever Nursing and C.M.B.)

\* State Registered Nurse.

W. NICHOL, Assistant Inspector (Temp., appointed Feb.)

GEO. MAGNAY, GERTRUDE GILLENDER, M. PRINGLE, Clerks.

**BARRASFORD SANATORIUM.**

**C. G. R. GOODWIN, M.R.C.S., L.R.C.P.,** Medical Superintendent.

M. H. ELLIOTT, M.B., B.Ch., B.A.O., D.P.H., Assistant Medical Superintendent (appointed July—resigned Nov.)

**FRANCES BAGULEY, A.R.R.C.,** Matron. Sisters, Nurses, Domestic Staff.

**CITY HOSPITAL FOR INFECTIOUS DISEASES.**

**E. F. DAWSON-WALKER**, M.D., B.S., B.Hy., D.P.H., Deputy Medical Superintendent.

J. F. CAITHNESS, M.B., Ch.B., D.P.H., Senior Resident Medical Assistant.

L. H. MURRAY, M.D., B.S., B.Hy., D.P.H., Resident Medical Assistant.

W. FRANK WILSON, M.B., B.S., Consulting Oto-Rhinologist.

**J. L. WATT**, Matron.

**H. PHILLIPS**, Steward.

JESSIE LAING, Assistant Matron. Sisters, Nurses, Clerks, Domestic Staff.

MAUD B. ELLIOTT, Dispenser.

GEO. COCKBURN, Engineer.

Lodge Keepers, Firemen, Porters, Gardeners, Joiner and Handyman.

**SMALLPOX AND ISOLATION HOSPITALS.**

MATTHEW and ISABELLA ROBSON, Caretakers.

**NEWCASTLE GENERAL HOSPITAL.**

**G. P. HARLAN**, M.D., Ch.B., B.Hy., D.P.H., Medical Superintendent.

G. F. DUGGAN, M.B., B.Ch., M.A.O., F.R.C.S. (Edin), Deputy Medical Superintendent.

JUNIOR RESIDENT HOUSE PHYSICIANS AND SURGEONS (6).

**A. BARON**, Matron.

S. LAKE and A. LUNT, Assistant Matrons. Sisters, Nurses, Domestic Staff.

G. H. DARLING, Dispenser.

**JAMES MATTHEWS**, Steward. Ambulance Drivers, Porters, Male Nurses, Clerks.

**CONSULTING STAFF, Etc.**

THOMAS BEATTIE, M.D., B.S., F.R.C.P., Medical Director.

F. J. NATTRASS, M.D., B.S., F.R.C.P., Physician.

ELSIE B. WRIGHT, M.D., B.S., M.R.C.S., L.R.C.P., Medical Registrar.

W. G. A. SWAN, M.D., B.S., M.R.C.P., Medical Registrar.

JOHN CLAY, C.B.E., M.B., B.S., F.R.C.S., Surgical Director.

J. C. STEWART, M.S., F.R.C.S., Surgeon.

W. E. WARDILL, M.B., B.S., F.R.C.S., Plastic and Genito Urinary Surgeon.

G. S. CLARK-MAXWELL, M.A., M.B., B.Sc., Surgical Registrar (resigned Oct.)

S. Y. FEGGETTER, M.B., M.S., F.R.C.S., Surgical Registrar (appointed Nov.)

A. LOGAN, M.B., Ch.B., F.R.C.S. (Eng. and Ed.), Surgical Registrar.

G. A. MASON, M.B., B.S., F.R.C.S., Thoracic Surgeon.

A. R. D. PATTISON, M.B., B.S., F.R.C.S., L.R.C.P., Neurological Surgeon.

S. W. DAVIDSON, M.D., B.S., M.R.C.P., Radiologist.

A. MACRAE, M.A., M.D., Ch.B., D.O.M.S., Ophthalmic Surgeon.

D. R. MACGREGOR, B.Sc., M.B., Ch.B., D.L.O. (R.C.P.S.), Oto-Rhinologist. (Died Feb.)

F. MCGUCKIN, M.D., B.S., F.R.C.S., Oto-Rhinologist (appointed Feb.)

PHILIP AYRE, M.R.C.S., L.R.C.P., Anæsthetist.

W. J. PHILLIPS, M.B., B.S., Anæsthetist.

E. JOAN THOMPSON, M.B., B.S., D.A., Anæsthetist (appointed Feb.)

S. F. EVANS, Ph.D., M.Sc., Radiotherapist.

**DISTRICT MEDICAL OFFICERS.**

Dr. R. W. NEVIN, Dr. T. J. RYAN.

**PUBLIC VACCINATORS.**

DRS. RICHARD DAGGER, T. J. RYAN, W. A. SLATER, A. M. PATERSON, J. A. BRAND, G. P. HARLAN (Newcastle General Hospital). H. L. TAYLOR, S. FULLERTON, H. R. KENDAL.

**VACCINATION OFFICERS.**

EASTERN DISTRICT—W. H. F. GARRETT.

WESTERN DISTRICT—W. W. CUMMINGS.

**To Councillor WALTER THOMPSON, J.P., Chairman  
of the Health Committee of the Corporation of  
Newcastle upon Tyne.**

SIR,

I have the honour to present the sixty-fifth Annual Report of the Medical Officer of Health on the sanitary conditions of the City.

The practice which has been followed in previous years whereby the detailed reports of the work of the several sections of the Health Department are submitted by the officers responsible has not been varied, and these documents constitute the major portion of the text.

In this letter, which is not intended either to summarise or to consolidate the reports of the sub-departments—for these of themselves are important contributions to our health records—some comment will be made on the outstanding features of the year 1937, and the more urgent of our many continuing problems will be reviewed.

*Vital Statistics—Marriage and Birth Rates.*

There are certain noteworthy details in the vital statistics of 1937 to which attention may well be directed. Marriages were somewhat less numerous than in the previous year, and the total of 2,416 falls short of the record of 1936 by 58. Nevertheless it exceeds the average for the previous five years by 78 and is equivalent to a marriage rate of 16.6 per 1,000 of the population.

The marriage rate for England and Wales was 17.4 per 1,000 in 1937, and the difference between the local and national figures is probably due to the fact that the relatively increased prosperity which has been experienced in other parts of the country, and of which the marriage rate is a sensitive index, has been slower in manifesting itself in our area. During the year the number of male and female unemployed was further reduced by 1,670 persons. This maintenance of the higher level of employment was a most welcome and significant feature in the life of the City.

For the first time since 1930 an increase in the birth rate can be chronicled. The rate for 1937 was 16.5 per 1,000—a figure markedly lower than the rates so indicative of high fertility which

were experienced in Newcastle in the early years of the present century, but materially higher than the low record of 15.6 which was reached in 1936. It is gratifying to know, moreover, that the local birth rate exceeds the corresponding rates for England and Wales, and for the 125 great towns, which in 1937 were both virtually stationary at 14.9 per 1,000.

#### *Maternal and Infantile Mortality.*

Before dealing with the general death rate for the City, something must be said of those special death rates which are concerned with the mortality of childbirth and of infancy. In previous reports it has been impossible to comment in comforting terms on either of these. The position is still the same with regard to the infantile mortality rate, but happily the maternal mortality rate which in 1936 was the highest ever recorded in the City, namely, 5.92 deaths of mothers per 1,000 live and still births, has fallen to 4.21. At this figure it is still higher than the national rate for 1937, which was 3.11, but the gap between the local and national rates is diminishing. There is reason to believe that the comprehensive midwifery services, which though organised a year ago, are still in process of being welded together, will effect a further improvement in the near future.

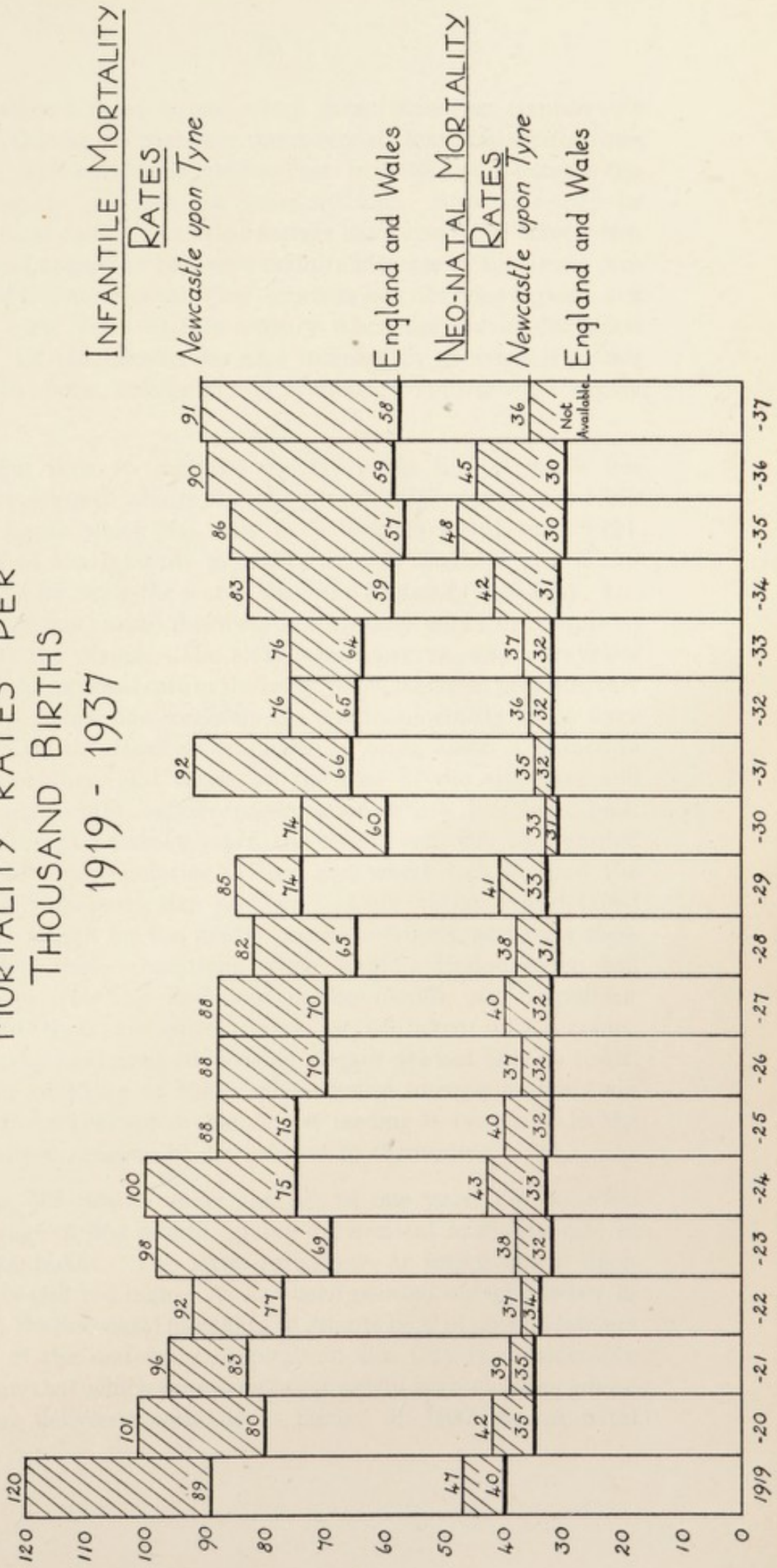
There are two other points which must be made regarding the maternal mortality rate. Firstly, the number of deaths due to puerperal sepsis was three, which is to be contrasted with an average of eight for the previous five years. This reduction was almost certainly due to the use of sulphanilamide preparations in the treatment of streptococcal infections. The introduction of this drug into midwifery is one of the major achievements of modern medicine. Our Newcastle experience has been repeated throughout the country and during the past year many hundreds of mothers, whose lives would previously have been lost, have recovered as a result of the use of this extraordinary remedy.

Since their first introduction three years ago, the sulphanilamide preparations have proved themselves to be the most important single factor in the reduction of the maternal mortality rate. But their field of action lies in the treatment of puerperal sepsis, and for the prevention of the other causes of maternal deaths we must still rely on the organization and co-ordinated working of our medical and midwife services.

FIGURE I.

INFANTILE AND NEO-NATAL  
MORTALITY RATES PER  
THOUSAND BIRTHS

1919 - 1937





The second point is one which gives cause for considerable concern. During the past year there were six maternal deaths from abortion. This number is one less than in 1936, but it exceeds the average for the previous ten years by four. Abortions may be due to natural causes, but other factors have also to be considered. There would appear to be a very definite increase in the illegal procurement of abortion in this City—such as has not been experienced since the early years of this century when the use of diachylon was rife. Of the reasons for this increase in abortion it is not proposed to speak, but social and economic conditions are largely responsible.

Turning now to infantile mortality we find a much less satisfactory state of affairs, for the rate in 1937 was 91 per 1,000 births, a figure which has only once been exceeded since 1924. The trend of the infantile mortality rate in England and Wales and in this City since the war is shown in Figure I (page 15A). The national rate has moved downwards with only minor interruptions throughout the period. The local rate, however, which travelled parallel to the national rate in the early years, has risen progressively since 1933. When one considers the enormous efforts which have been made by the Health Committee to bring about a reduction in child mortality, and totals up the cost of the elaborate and comprehensive child welfare organisation which has been built up during the past twenty years, the results can only be regarded as profoundly disappointing. How and where can we find the solution of this particular problem? Only through a detailed and minute search for the predisposing conditions, and by a mass attack upon these conditions when found. Undoubtedly bad housing, overcrowding and low income levels, are important factors, but there are other causes to be taken into account. Traditions die hard, and advertising slogans are not easy to resist. As a result of either of these causes many nursing mothers are reluctant to be persuaded that breast feeding is beneficial to the infant, and not necessarily detrimental to themselves.

Of the 435 deaths under the age of one year, 174 occurred under the age of one month, giving a neo-natal mortality rate of 36 per 1,000 births. This latter rate shows an improvement upon 1936, but is still too high. As has been pointed out previously in this report, the neo-natal mortality of infants born of normal labours in certain of the maternity hospitals in this City is considerably greater than that which occurs amongst newly-born children whose mothers are delivered normally at home. In 1937 the neo-natal

mortality amongst infants in the first category was 55 per 1,000 births; for the home born infant the corresponding rate was 30. Such a statement is not to be interpreted as meaning that a normal confinement in hospital may be prejudicial to the future welfare of the child, but the evidence suggests that overcrowded maternity wards and inferior maternity hospital accommodation are in some way associated with certain of the neo-natal causes of death. These facts are known to and appreciated by the medical staffs of the hospitals concerned, but the remedy—the provision of modern accommodation—is not entirely in their hands.

It is pleasing, therefore, to report that the existing maternity wards at the Newcastle General Hospital are to be replaced and that a new unit of 30 beds is now in course of construction. As regards the Princess Mary Maternity Hospital the position is not so favourable, as the plan of erecting an enlarged hospital of 140 beds on the Castle Leazes site has been delayed for reasons which will be referred to in a later paragraph.

Apart from the neo-natal conditions the most notable causes of death in the first year of life were the diseases of the respiratory system. Respiratory infections, of which bronchitis and broncho-pneumonia are the most important, were responsible for 105 deaths or 24.1% of the total infantile mortality.

The severity of the weather in the early months of 1937 undoubtedly contributed to the prevalence of respiratory disorders of various kinds, though it is difficult to assess the importance of seasonal conditions as predisposing influences in the causation of these infections. It can be said without fear of contradiction that the combination of overcrowding and adverse climatic conditions is one to which delicate infants are particularly prone to succumb.

The outstanding causes of infantile mortality in 1936 (apart from the first month of life) were diarrhoea and enteritis. There was a slight improvement in 1937, 80 deaths from these causes being registered in place of 94, but there are still too many minor outbreaks of gastro-intestinal infections in hospitals and institutions for the matter to be regarded complacently. In the observance of the elementary principles of personal cleanliness lies the prevention of such epidemics, and this fact cannot be reiterated too frequently.

*The General Death Rate.*

The general death rate for the City showed a slight increase and rose from 13.1 per 1,000 population in 1936 to 13.3, the highest rate since 1931. This crude rate represents the occurrence of mortality in the Newcastle population, which of course is not constituted in the same proportions as regards the age and sex of its members as is the standard population of England and Wales. By means of comparability factors, which have been prepared by the Registrar General, it is now possible to adjust these differences in the population of individual towns and counties, and to place them all on a common basis of comparison.

In Table I. are recorded the crude and adjusted death rates for all cities in England with a population of 250,000 and over, together with similar information for certain local towns and counties.

TABLE I.

Name of Town.	Population as estimated by Registrar General, Mid. 1937.	General Death Rate.	Death Rate adjusted by Comparability Factor.	Comparability Factor.
Bristol .....	415,100	11.4	11.2	0.98
Portsmouth .....	256,200	11.5	11.4	0.99
Leicester .....	262,900	12.5	12.7	1.02
London County .....	4,094,500	12.5	12.8	1.02
Birmingham.....	1,029,700	11.7	12.9	1.10
West Ham.....	259,500	11.9	13.6	1.15
Nottingham .....	278,800	13.4	13.8	1.03
Hull .....	319,400	12.6	13.8	1.10
Sheffield .....	518,200	12.5	14.1	1.13
Leeds .....	491,880	13.4	14.3	1.07
Bradford .....	289,510	14.7	14.7	1.00
<b>NEWCASTLE UPON TYNE</b>	<b>290,400</b>	<b>13.3</b>	<b>15.0</b>	<b>1.13</b>
Liverpool .....	836,300	13.2	15.2	1.15
Manchester .....	736,500	13.5	15.4	1.14
Stoke-on-Trent .....	278,200	13.1	16.0	1.22
Northumberland County ...	405,900	12.7	13.4	1.06
Tynemouth .....	66,880	12.8	14.2	1.11
Durham County .....	886,200	12.4	14.4	1.15
South Shields .....	111,000	13.4	15.0	1.12
Gateshead .....	117,600	13.7	15.4	1.13
Sunderland .....	182,900	14.0	15.7	1.12
Middlesbrough .....	139,600	13.8	16.3	1.18

As regards the actual order of merit it will be noted that our position is in the lower half of the national table, while amongst the local counties and county boroughs we are superior to Gateshead, Sunderland and Middlesbrough, equal to South Shields, and inferior to Tynemouth and the two adjacent counties.

*Mortality from certain special causes.*

Turning now to the individual causes of death the six most important of these are set out in order below (Table II.). The figures and positions for 1936 are reprinted for the purpose of comparison.

TABLE II.  
INDIVIDUAL CAUSES OF DEATH.

No.	CAUSE OF DEATH.	1937.	
		Number.	Percentage of Total Deaths.
1	Diseases of the Heart .....	835	21.6
2	Diseases of Veins and Arteries	481	12.4
3	Bronchitis and Pneumonia .....	420	10.8
4	Cancer .....	389	10.1
5	Tuberculosis—Pulmonary .....	270	7.0
6	Diseases of Nervous System.....	231	6.0

No.	CAUSE OF DEATH.	1936.	
		Number.	Percentage of Total Deaths.
1	Diseases of the Heart .....	871	22.5
2	Cancer .....	413	10.6
3	Diseases of Veins and Arteries	412	10.6
4	Bronchitis and Pneumonia .....	366	9.5
5	Diseases of Nervous System.....	276	7.1
6	Tuberculosis—Pulmonary .....	265	6.8

It will be seen that changes in the ranking of these major causes of death have occurred since 1936, but none of them are of any particular significance. There are, however, four points upon which some emphasis must be laid.

In the first place the steady increase in deaths from diseases of the cardio-vascular system (*i.e.*, heart, veins and arteries) still continues. The lives of 1,316 persons ended as the result of some form of cardio-vascular disease or failure. In 1935 and 1936 the comparable totals were 1,107 and 1,283 respectively. During the past five years the proportion of these deaths to deaths from all causes has risen from 27.5% in 1933 until in 1937 it was 34.0% or one-third of the total mortality. Nearly 68% of these deaths from cardio-vascular causes occur in persons over the age of 65, and in fact 52% of all deaths beyond that age are due to some form of heart or arterial disease. But these conditions are also important causes of death in middle age and are concerned in 32% of all deaths between 45 and 65.

The prevention of these great causes of mortality is a problem of the first magnitude, to which as yet little attention has been given. Anything that can be done to reduce the extent and effects of the Rheumatic Diseases—and much is already being attempted—will be of assistance, but the great majority of these cardio-vascular deaths are the result of the action of a number of factors over a period of years. Until we are able to slacken the speed at which modern life and industry are carried on, there will be no reduction in the number of deaths from these causes.

Secondly, the increase in the number of deaths from bronchitis and pneumonia is in great part due to the heavy mortality of infants from these conditions to which reference has already been made. The harvest of these diseases is undoubtedly greatest in infancy and amongst the aged, but pneumonia, in particular, still claims as its victims many males in the prime of life.

It is not the function of these pages to record prophecies or to anticipate progress, but it is probably safe to say that within the next year or so, remedies of the type of the sulphanilamide preparations whose success in puerperal sepsis has already been spoken of, will have brought about a substantial reduction in the death rate from pneumonia and its related diseases.

The third point of importance to be commented upon is the fact that the number of deaths from cancer, namely 389, is the lowest recorded in any one year during the past ten years, with the exception of 1931. One should not attach undue significance to this fact, more especially as a scrutiny of the various types of cancer included in these totals, does not show any definite reduction in the mortality from cancer of those parts of the body in which modern methods of treatment are most effective. Cancer of the mouth, breast and uterus are amongst those forms of the disease which give relatively successful results with radium and deep X-ray therapy, but so far as this City is concerned it is impossible to claim any manifest improvement in the mortality on behalf of these methods.

For many years the City and the surrounding areas have lacked adequate facilities for deep X-ray therapy. These will shortly be forthcoming as the result of the recent re-organization of the X-ray Department at the Royal Victoria Infirmary, and the opening of the special Deep Therapy Block at the Newcastle General Hospital. For the latter the City is indebted to the generosity of the Schools and Charities Committee and the interest of its Chairman, the Lord Mayor (Alderman Gilbert Oliver), and Vice-Chairman (Councillor James Grant).

Finally, deaths from pulmonary tuberculosis again showed a slight increase. The figures for the years 1935 and 1936 were 240 and 265 respectively. The total for 1937 was 270. This is a reminder, if any were required, that in the City, as on Tyneside generally, the conquest of tuberculosis is not yet complete. The disease is still with us, attacking perhaps in guerrilla fashion nowadays, and less furiously than before, but unremitting care and vigilance are necessary to keep its inroads within control.

TABLE III.

*Average Death Rates per 100,000 in England and Wales and Newcastle upon Tyne during the Ten Year Period 1927-1936. (Based upon the Registrar-General's Abridged List of Causes of Death.)*

No.	Causes of Death.	England and Wales.	Newcastle upon Tyne.	Newcastle as a percentage of England and Wales.
(1)	(2)	(3)	(4)	(5)
	All causes .....	1,212	1,291	106.5
	*Infantile Mortality .....	63.8	83.3	<b>130.6</b>
1.	Typhoid and paratyphoid fevers....	0.71	0.77	108.5
2.	Measles .....	8.0	16.5	<b>206.2</b>
3.	Scarlet Fever .....	1.6	3.0	<b>187.5</b>
4.	Whooping Cough .....	7.2	9.9	<b>137.5</b>
5.	Diphtheria .....	7.8	5.3	68.0
6.	Influenza .....	33.5	26.0	77.6
7.	Encephalitis lethargica.....	2.3	3.2	<b>139.1</b>
8.	Cerebro-spinal fever.....	1.9	4.8	<b>252.6</b>
9.	Tuberculosis of respiratory system	70.3	99.7	<b>141.8</b>
10.	Other tuberculous diseases .....	19.6	23.5	119.9
11.	Syphilis .....	3.4	7.0	<b>206.0</b>
12.	General paralysis of the insane, tabes dorsalis .....	4.7	6.6	<b>140.4</b>
13.	Cancer, malignant disease .....	149.9	142.4	95.0
14.	Diabetes .....	14.9	14.6	98.0
15.	Cerebral haemorrhage, etc. ....	66.2	54.7	82.6
16.	Heart disease .....	248.7	236.3	95.0
17.	Aneurysm .....	3.3	3.8	115.1
18.	Other circulatory diseases .....	60.6	92.9	<b>153.3</b>
19.	Bronchitis .....	56.6	56.0	98.9
20.	Pneumonia (all forms) .....	79.1	93.4	118.1
21.	Other respiratory diseases .....	12.7	12.9	101.6
22.	Peptic ulcer .....	10.5	11.2	106.6
23.	Diarrhoea, etc. (under 2 years) ....	10.1	20.2	<b>200.0</b>
24.	Appendicitis .....	7.3	5.9	80.8
25.	Cirrhosis of liver .....	3.8	2.9	76.3
26.	Other diseases of liver, etc. ....	6.4	7.8	121.9
27.	Other digestive diseases .....	†	†	†
28.	Acute and chronic nephritis .....	38.7	44.0	113.7
29.	†Puerperal sepsis.....	1.7	1.9	111.8
30.	†Other puerperal causes .....	2.5	2.7	108.0
31.	*Congenital debility, premature birth, etc. ....	32.2	35.5	110.2
32.	Senility .....	46.3	27.8	60.0
33.	Suicide .....	13.0	11.8	90.8
34.	Other violence .....	41.8	39.3	94.0
35.	Other defined causes .....	†	†	†
36.	Causes ill-defined or unknown .....	†	†	†

\* The rates for these headings are per 1,000 live-births.

† Not extracted.

‡ The rates for these headings are per 1,000 live-births for 1927 and per 1,000 live and still births 1928 and onwards.

Death rates which are equivalent to 125 per cent. or more of the similar rates for England and Wales are indicated in heavier type.

Table III. (page 21) is of particular interest as it indicates at a glance the average death rate for England and Wales and for the City, from the 36 causes set out in the Registrar General's Abridged List. The period over which the rates have been averaged is now one of ten years, and the fifth column shows the differences between our own and the national record, which are of significance and importance.

The following are the causes of deaths of which our experience is 25% greater than the average of the country as a whole—infantile mortality, measles, scarlet fever, whooping cough, the epidemic diseases of the central nervous system, pulmonary tuberculosis, syphilis, general paralysis of the insane and tabes dorsalis, certain diseases of the circulatory system, and diarrhoea in children under two years.

With the exception of the cardio-vascular diseases, every one of these conditions is, in greater or less degree, preventable. They are the diseases of cities and urbanised communities, created and perpetuated by overcrowding and poverty. They are diseases more particularly of the earlier years of life, which where they fail to kill, frequently maim and incapacitate. From the purely economic standpoint of the wastage of young lives and the preservation of many thousands of working years for the benefit of the community, there is no group of diseases which offers a more fruitful ground for systematic investigation and energetic attack.

#### *Infectious Diseases.*

The notifiable infectious diseases, excluding tuberculosis, together with those other infectious conditions to which the notification regulations do not apply—whooping cough, influenza and diarrhoea—were responsible for 564 deaths in 1937 as compared with 499 in 1936. The distribution of the deaths amongst the individual diseases showed considerable variation, there being a marked reduction in the mortality from diarrhoea and to a less extent from diphtheria. On the other hand, a severe winter was characterised by a heavy incidence of pneumonia, and by a sharp outbreak of influenza. This latter disease was the cause of 101 deaths, mostly amongst elderly people.

Of the other infectious diseases, measles showed the greatest decline, the number of cases notified and the fatalities amongst them, namely 1,862 and 14 respectively, being the lowest since 1922.

Diphtheria also registered a considerable decline, though the 475 cases recorded were above the normal average for the past ten years. Amongst these cases 23 deaths occurred, equivalent to a case mortality rate of 4.8% which is an improvement on the rate of 5.1% experienced in 1936. The work of the immunisation clinics, which continued steadily, both in the schools and child welfare centres, has undoubtedly contributed materially in protecting large numbers of children against this most serious infection.

The relative unimportance of scarlet fever in recent years can be gauged from the fact that though 843 cases of this disease were notified in 1937, only one resulted fatally. This is a record as far as Newcastle is concerned, and should be contrasted with the holocaust of 1866 when 500 persons died from the virulent scarlet fever of those days.

#### *Nutrition.*

In December, 1936, a report on the dietary survey of 1934 was published under the title of "A Study of the Diets of Sixty-nine Working Class Families in Newcastle upon Tyne," and a copy of this document was included with the Annual Report for 1936.

One criticism which was made regarding the report was to the effect that facts ascertained in 1934 were of little value in 1936. It was suggested that the economic and dietary conditions of the families investigated had probably improved with the passage of time. But such criticism overlooked the obvious possibility that the data of 1934 could be used as the starting point for future enquiries.

In point of fact a re-survey of the financial circumstances of 64 of the 69 families has been carried out both in 1937 and in 1938. The results are interesting and suggestive, but as it is impossible to tabulate them fully here, only the more significant will be referred to.

Dealing with the 38 families who were unemployed in 1934, 37 have been traced. The details of these are as follows:—

- in two instances the head of the family had died, and the families came into the category of widows' families;
- thirteen had remained in the unemployed group throughout;
- in fifteen the breadwinner had been employed both in 1937 and 1938;

in two cases after being unemployed in 1937, the head of the family was employed in 1938 ;

five breadwinners employed in 1937 had reverted to unemployment in 1938.

There is thus in the group of unemployed families a considerable measure of general improvement to be recorded. The conditions of the families whose breadwinners had been unemployed throughout were *prima facie* substantially unaltered. It must be remembered, however, that a series of special economic influences have operated since 1934, and the effect of these has been experienced by unemployed and employed families alike. The nature and results of these special factors will be referred to in subsequent paragraphs.

Turning to the employed group, 24 of the original 28 families were traced. Their subsequent history in 1937 and 1938 can be summarised thus :—

twenty had remained in the employed group throughout ;  
one breadwinner had become unemployed in 1937 and remained so in 1938 ;

two heads of families who had been unemployed in 1937 were again employed in 1938 ;

one breadwinner previously employed had become unemployed in 1938.

The general economic influences already referred to also applied to the employed families, and their effect upon the 20 families in the group whose heads had been continuously employed has been specially studied. As a result of the operation of one or more of the following factors—higher rentals ; the increased size or greater maturity of the family ; the rise in the cost of living—these families on an average are not as well off as they were in 1934. Such increments as have been added to their incomes in the form of larger wages have been more than counterbalanced by the other factors.

The problem which presents itself to the housewife is briefly this. Shall she spend less on food, or alternatively maintain the dietary expenditure at the cost of other sections of the family budget ? When it is realised that the present prices of foodstuffs in Newcastle are on an average 18% higher than in 1934, it would appear probable that either less food is being consumed by the families under discussion, or that the same quantities of foodstuffs are being obtained from cheaper sources. To determine what

actually happens would require another dietary survey. But the facts are sufficiently suggestive to make it imperative for us to keep a close watch for the earliest signs of malnutrition, particularly amongst the children and in the ranks of the selfless, uncomplaining housewives. Abundant provision is now made for the welfare of the child, both before and after it reaches school age, but there is no class of the community which more constantly escapes medical care and supervision than the mother of the working class family. And there is no one who merits more worthily that care and attention.

#### *Domiciliary Medical Services.*

A special report describing the working of the open choice system of providing domiciliary medical services which has been adopted in eight of the ten medical relief districts of the City was published in April, 1938. It relates to the period March, 1936—February, 1937, and is included in the present annual report as Appendix A.

Reference is made in a footnote to the report to the increased scale of remuneration which was adopted by the City Council in January, 1938, and made applicable as from the first of that month. Under the new scale the quarterly payment per patient treated is advanced from 5/- to 6/3. The effect of this will be to increase the cost of the scheme by approximately £1,000 per annum. But the Health Committee can now feel that it has satisfied the more pressing requests of the medical practitioners and that the scheme is favourably accepted by patients and doctors alike.

#### *General Hospital Services.*

The steady progress and continuous development of the work of the Newcastle General Hospital is seen in the columns of Table IV., in which are recorded the main statistical data since the transfer of the hospital to the City Council.

TABLE IV.

Year.	Admissions.	Operations.	Maternity Cases.
1930 .....	3,048	596	97
1931 .....	3,598	1,125	99
1932 .....	4,522	1,428	161
1933 .....	4,776	1,560	194
1934 .....	5,544	2,076	225
1935 .....	6,245	2,722	273
1936 .....	6,707	2,722	388
1937 .....	7,801	2,719	545

More detailed information is given in the pages of the hospital report itself, which now incorporates special sections relating to the activities of the important departments which have been established for neuro-surgery, fever therapy, diabetes and thoracic surgery. These latter departments are an outstanding tribute to the energy and industry of the consulting staff of the hospital, and to the foresight of the Health Committee which has encouraged and fostered these newer enterprises.

In May, 1937, the new X-ray Department and Infants' and Quarantine Wards were informally opened by the Chairman of the Health Committee, Councillor Walter Thompson, J.P.

Since April 1930, over £20,000 has been spent by the Health Committee in minor structural improvements and reconstructions at the Newcastle General Hospital, but the opening of these new buildings constituted the completion of the initial stages of the comprehensive scheme of re-organization and re-development which the Committee has adopted. Year by year this scheme will progress towards fulfilment, until the General Hospital takes its place as one of the finest institutions of its kind in the country.

*The Re-organisation of the Municipal and Voluntary Hospitals in the City.*

Towards the end of the year 1936, schemes for the complete re-organisation of the City Hospital for Infectious Diseases and the Newcastle General Hospital, together with proposals for the modernisation of the City Tuberculosis Dispensary, and the erection of a number of Maternity and Child Welfare Centres, were submitted to the Commissioner for the Special Areas, with a request that they should be considered as being eligible for grants from the Special Areas Fund.

The schemes enumerated above were regarded by the Health Committee as a necessary and urgent contribution to the long overdue re-organisation of the City's hospitals, both voluntary and municipal. It was felt that the serious position of the City and the two northern counties generally, as regards hospital accommodation, had been made so clear at the meetings of the Royal Commission on Tyneside Local Government, that those in possession of authority and the necessary funds—namely, the Ministry of Labour and the Commissioner for the Special Areas—

would welcome the opportunity of doing something both to mitigate the present disabilities of the area and to make adequate provision for the future.

The Health Committee in submitting its proposals had regard not only to the needs of its own hospitals and services, but also to the equally clamant necessities of the voluntary hospitals, whose petitions to the Commissioner it had strongly supported. The outcome of the various applications prepared by the municipal and voluntary hospitals was profoundly disappointing. Nearly eleven months passed before any decision was reached by the Special Commissioner with regard to the Health Committee's schemes. It was then announced that "after careful consideration of all the relevant circumstances, including the financial and industrial position of the City and the future prospects, the conclusion has been reached that it would not be appropriate for financial assistance from the Special Areas Fund to be offered towards the cost of these schemes."

The reasons for this refusal were somewhat amplified to a deputation headed by the Lord Mayor and Sheriff which waited upon the Commissioner in London on 21st December, 1937. It was stated that the produce of a penny rate in Newcastle was so much in excess of that obtained in towns of similar size elsewhere, and Bradford, Leicester and Nottingham were quoted as examples, that it would be difficult to give grants and benefits to Newcastle and to withhold them from these other cities. This reason, given somewhat belatedly after eleven months' cogitation, disregarded entirely the fact that the distinction between this City on the one hand, and Bradford, Leicester and Nottingham on the other, had been made by the Special Areas (Development and Improvement) Act, of 1934.

The applications of the voluntary hospitals were only a little more satisfactory in their result. The Commissioner, dealing collectively with the schemes of the Royal Victoria Infirmary, Princess Mary Maternity Hospital, Babies' Hospital and the Throat, Nose and Ear Hospital, offered a grant of £150,000, or approximately 38% of the total estimated cost.

Previous grants to hospitals in Gateshead, Sunderland, Tynemouth and other scheduled areas in the two counties had usually been on the basis of 75% of the estimated expenditure,

and the offer made to the local hospitals, coupled as it was with the suggestion that a joint public appeal should be made for the balance required, did not commend itself favourably to the hospitals concerned. At the time of writing, the question of the date of the appeal is still under consideration, but it will probably be proceeded with during the autumn of 1938.

The case of the Princess Mary Maternity Hospital is one to which further reference is required. The original scheme in respect of this hospital was submitted to the Commissioner in August, 1935. The final plans, after receiving the informal approval of the Ministry of Health, were forwarded in July, 1936. The decision of the Commissioner was announced in November, 1937.

The unsuitability of the existing accommodation at the Princess Mary Maternity Hospital had been commented upon by the Ministry of Health in the survey letter of February, 1934. It was the subject of frequent discussions between the hospital authorities and the Health Committee immediately thereafter. It has been referred to in this report annually since 1934, and its influence as a predisposing cause of neo-natal mortality, a matter of the highest importance, has been stressed in these pages repeatedly.

The Princess Mary Maternity Hospital, like all the Newcastle voluntary hospitals, derives the majority of its in-patients from without the City—from those towns and areas where hospital extensions have been recognised as deserving of grant on the 75% basis. But the needs of the Princess Mary Maternity Hospital can apparently be met by a grant of some £47,000 towards a total expenditure of £140,000. The hospital is therefore faced with the task of finding the remainder either from its own resources or through the joint appeal.

The Minister of Labour and the Commissioner for the Special Areas have earned the thanks of all concerned for the assistance which they have offered the Princess Mary Maternity Hospital, but their delay in spending two years and more in the consideration of a manifestly deserving appeal leaves one doubtful as to whether even now they have really appreciated the urgency of the various problems which press so heavily upon the managing bodies of hospitals in the City.

### *Bacteriological Services.*

On the 20th April, 1937, the Council of the University of Durham College of Medicine gave notice to terminate the arrangements which had existed since 1906, whereby they undertook the bacteriological services of the City. The events leading up to this unfortunate dispute are set out in a statement which was made to the City Council by the Chairman of the Health Committee on the 5th May, 1937, and are incorporated in the Council Proceedings for that date. Happily one of the early acts of the Council of the newly constituted King's College was to agree to return to the "*status quo ante*," and in due course the old method of providing these services for practitioners and hospitals in the City, namely, through the Public Health Laboratory of the College, will be resumed either in whole or in part.

It is sufficient for historical purposes to record that as from 1st July, 1937, the bacteriological services of the City were provided by :—

- (a) The Northumberland County Laboratory at Newburn, in respect of specimens from cases of Venereal Diseases, and all investigations requiring animal inoculation, *e.g.*, milk for tubercle bacilli; virulence tests of diphtheria bacilli, etc., and
- (b) A special laboratory which had been equipped and staffed for the purpose at the City Hospital for Infectious Diseases, in respect of all other specimens.

Dr. R. Norton was appointed in charge of this latter laboratory, and his work in organising and administering it to the satisfaction of all concerned must be gratefully acknowledged.

Our thanks are also due to the County Health Committee and the Medical Officer of Health for Northumberland, Dr. W. F. J. Whitley, and the County Bacteriologist, Dr. A. I. Messer, for their ready co-operation and assistance.

### *Venereal Diseases Services.*

The new clinic, under the management of the Joint Committee of the County Councils of Durham and Northumberland and the County Borough Councils of Gateshead and Newcastle upon Tyne, was opened on the 30th August, 1937. The building which is situated in the grounds of the Newcastle General Hospital was designed by the City Architect—Mr. R. G. Roberts. It is the property of the City Council and is leased to the Joint Committee,

which began to operate formally as from the 7th September, 1936. The administration of the Clinic was placed in the hands of a full-time Clinical Officer, Dr. A. E. W. McLachlan. As a result of the re-organisation of the services which has followed the removal of the Clinic from the Royal Victoria Infirmary, there has been a considerable increase in the number of persons who avail themselves of the facilities provided by the Joint Committee.

The figures for the final period at the Royal Victoria Infirmary clinic and first four months at the Newcastle General Hospital which are given below, are particularly interesting.

*Clinic at the Royal Victoria Infirmary :—*

1ST JANUARY—29TH AUGUST, 1937.

Newcastle patients.....	1,116
Attendances .....	14,904

*Clinic at the Newcastle General Hospital :—*

30TH AUGUST—31ST DECEMBER, 1937.

Newcastle patients.....	1,065
Attendances .....	17,198

(For Photograph and plan of the new clinic see pages 36A and 36B).

*New Maternity and Child Welfare Centre at St. Anthony's.*

The new Maternity and Child Welfare Centre which had been erected at St. Anthony's was opened by the Minister of Health—Sir Kingsley Wood—on the 22nd September, 1937. This centre, which was designed by the City Architect—Mr. R. G. Roberts, F.R.I.B.A.—is the first of a series which will eventually replace the numerous inconvenient and incommodious premises in which the work of the Maternity and Child Welfare Service has hitherto been carried out.

The new centre has been admired by all who have seen it and the photographs and plan serve to show its many pleasing features (see pages 36C, 36D, 36E and 36F).

*The Royal Commission on Tyneside Local Government.*

The Royal Commission on Local Government in the Tyneside area, which had been appointed in 1935, presented both Majority and Minority Reports to Parliament in March, 1937. The Majority Report signed by the Chairman and three members of the Commission recommended that the major local government

services should be administered by a "regional" council in an area consisting of the geographical county of Northumberland and the urbanised zone along the south bank of the River Tyne, and that in addition, a large municipal borough with a population of approximately 855,000 should be set up to replace the four riverside county boroughs and the adjacent minor units of local government. The powers assigned to this body would be those normally exercised by a municipal borough council.

The Minority Report submitted by Mr. Charles Roberts advocated the constitution of a new county borough in the central Tyneside area, to be composed of Gateshead, Newcastle, Wallsend, Jarrow, Gosforth, Hebburn, Felling and Newburn, and suggested that certain of the major services might be regionalised through the establishment of a number of Joint Boards whose various spheres of influence would not necessarily be identical.

Following upon the publication of the report, the Minister of Health, Sir Kingsley Wood, addressed meetings of local authorities in Newcastle on 21st September, 1937, and in London on 21st October. Subsequently a further conference of Tyneside authorities was held in Newcastle on 16th December, 1937, under the Chairmanship of Mr. Geoffrey H. Shakespeare, previously Parliamentary Secretary to the Ministry of Health.

Amongst the points which were made by the Minister, the following may be quoted :—

"I would urge the representatives of local authorities to take action. Though the remedies suggested in the two Reports differed, the Commission were unanimous in supporting the view already reached by Captain Wallace that a measure of unification in the Tyneside local government services was urgently called for in the interests both of progress, efficiency and economy."

"Even a cursory inspection of the area was enough to establish almost irresistibly its industrial and economic unity and the anomaly of existing local government divisions."

"The general problem of adapting local government areas to changing conditions had long been familiar. Similarly, the principle that the initiative should come from the local authorities concerned, was also a long established one and one which Parliament had re-affirmed as recently as the Local Government Act, 1929."

So far there has been no indication of local initiative, and the prospect of any spontaneous move towards the introduction of projects of a major kind is certainly remote. The possibility of some co-operation between the County Council of Northumberland and this City still remains, and the question of the co-ordination of the public health services of these two areas is at present the subject of discussion. Progress along these lines, though admittedly falling short of the wider proposals of both the Majority and Minority Reports of the Royal Commission, will undoubtedly be of benefit both to County and City alike.

#### *Co-operation with Voluntary Hospitals.*

It has been evident for some time that co-operation with the eight voluntary hospitals in the City would be facilitated by the establishment of consultative machinery of the nature of a Joint Hospitals Advisory Board, upon which both municipal and voluntary hospitals could be represented.

Previously when the Health Committee has had under consideration additions to its own hospitals, conferences have been held with the individual hospitals whose interests were concerned. This was in accordance with the requirements of the Local Government Act of 1929, but the relevant clause of that act placed the responsibility for such consultation upon the local authority and left the voluntary hospitals entirely free to enter upon schemes of hospital development or extension without reference to the municipality or county council concerned. In Newcastle the spirit of the act rather than the letter has been invoked and whenever it has been ascertained that a hospital proposed to add to its departments or to extend its activities, the Management Committee has been invited to discuss its proposals with the Health Committee. In every case the subsequent meetings have been of assistance to both parties.

It appeared to the Health Committee that the time had now arrived to put these informal arrangements for the discussion of hospital policy upon a more regular basis. During the early months of 1937 a scheme was drawn up for the establishment of a Joint Hospitals Advisory Board on which the voluntary hospitals, the City Council and the Council of King's College are represented.

The Board commenced to function in January, 1938, and at its first meeting Lord Eustace Percy, Rector of King's College, and Councillor Walter Thompson, were appointed as Chairman and Vice-Chairman respectively.

#### *Air Raid Precautions.*

There appeared on the horizon for the first time in 1937, the grim necessity of providing hospital services as part of the Air Raid Precautions scheme. This is a new and heavy responsibility even in times of peace. In the event of any national emergency it would mean that all the purposeful and constructive public health services which the Health Committee has built up during the present century would be suspended and their places taken by other activities, equally humanitarian, but reparative rather than preventive.

The first report on the medical aspect of Air Raid Precautions was issued from the Health Department in July, 1937, and though the organisation is still largely on paper, little by little the constituent portions of the scheme are being brought together. It is the ardent hope of everyone that the contemplated emergencies for which these preparations are being made may never arise.

#### *Slum Clearance and Overcrowding.*

During the year two public enquiries under the Housing Act of 1930 were held and 13 Clearance Orders and four Compulsory Purchase Orders were submitted for confirmation to the Minister of Health.

These orders comprised a total of 395 houses in which were accommodated 793 families, with a total population of 2,577 persons.

The actual amount of slum clearance accomplished during the past three years has been on the whole rather less than that effected in the years immediately succeeding the introduction of the 1930 Act, but the slowing down of the set programme is only temporary. Many of the difficulties which have been experienced by the Housing Committee have been removed, and steady progress can now be expected.

The following is a summary of the work which has been carried out in the campaign between 1931 and 1937.

Ninety-three Clearance Orders and nine Compulsory Purchase Orders have been made, and have necessitated the holding of thirteen public enquiries.

These Orders as confirmed by the Minister have dealt with 2,548 premises in which were housed 5,728 separate families, with a total population of 20,547. The activities of the Health Committee so far, as represented by the one hundred and two Orders referred to, and by action taken against individual unfit houses, will result eventually in the re-housing of no fewer than 22,249 persons or 7.7 per cent. of the total population of the City. This total will have been exceeded to a very considerable extent by the time the full programme has been completed.

During 1937 the requirements of the Housing Act of 1936, with regard to overcrowding, were fulfilled in so far as the Health Department was concerned. Of actual abatement of overcrowding there is little to report as yet, though the Housing Department is due every credit for its expeditious attack upon the problem in the Corporation housing estates.

The Overcrowding Survey of 1936 disclosed that 7.54% of council houses were overcrowded. During the past year, re-distribution of overcrowded families has been carried out within the various estates as far as possible. Apart from this and the automatic reduction which occurs in the process of re-housing the population from Clearance Areas, progress has been slow. Real improvement will only take place when adequate numbers of new houses of a size suitable for the larger family are made available, and so increase the pool of inhabitable properties of the smaller type.

Overcrowding still remains one of Newcastle's most serious evils, and will continue to do so until a substantial reduction has been effected in the incidence of overcrowding, which in 1936 was ascertained to be present in 10.7% of all dwelling-houses, and has improved but little since that time.

*Retirement of the Veterinary Officer—Mr. Thomas Parker, F.R.C.V.S.*

After completing 32 years of invaluable service with the Corporation, during which he had witnessed the growth of his department from small beginnings, for he was in fact the first full-time Veterinary Officer, Mr. Thomas Parker retired in September, 1937.

In certain branches of veterinary medicine, Mr. Parker enjoys a national reputation, and the smooth running of the department under his care and the success of the market arrangements, were a tribute to his organising powers.

The best wishes of his colleagues and the staff for happiness and long life go with him in his retirement.

*Conclusion.*

In conclusion, Sir, I am happy to have the opportunity to express my most grateful thanks to yourself, the Vice-Chairman and the members of the Health Committee, for your kindly appreciation of the work which this department has attempted to carry out, and for the unfailing consideration which you have at all times extended to me. Without that spirit of friendly co-operation one's labours would have been more difficult; with it their performance is indeed a privilege and a pleasure.

Of the staff who have helped me, and here again I would mention in particular Dr. E. F. Dawson-Walker and Mr. A. Hedley, I cannot say enough. They have worked at high pressure with little respite, but all the time with a cheerful energy and unwearying enthusiasm, which have placed me increasingly in their debt.

I am, Sir,

Your obedient servant,

J. A. CHARLES,

*Medical Officer of Health.*

*Health Department,*

*Town Hall,*

*Newcastle upon Tyne,*

*August, 1938.*

## SUMMARY OF STATISTICS, 1937.

Population (estimated mid. 1937) ....	290,400
Area of City, inclusive of river area (acres) ....	11,401
Estimated number of houses ....	78,610
Rateable value ....	£2,593,709
Sum produced by Id. rate ....	£10,183
Births ....	4,796
Birth rate (per 1,000 population) ....	16.5
Marriages ....	2,416
Deaths ....	3,864
Death rate (per 1,000 population) ....	13.3
"    "    "    adjusted by comparability factor	15.0
Infantile Mortality (deaths under one year per 1,000 live births) ....	91
Natural increase in population (excess of births over deaths in the year) ....	932

## CHIEF CAUSES OF DEATH.

Cause.	Number.	Percentage of total deaths.
Diseases of the Heart ....	835	21.6
Diseases of the veins and arteries ....	481	12.4
Bronchitis and pneumonia ....	420	10.8
Cancer ....	389	10.1
Tuberculosis (all forms) ....	324	8.4
Do. (Pulmonary) ....	270	7.0
Diseases of the nervous system ....	231	6.0
Diseases of the genito urinary system ....	174	4.5
Diseases of early infancy, and congenital malformations under 1 year ....	169	4.4

## INFECTIOUS DISEASES.

Disease.	Cases notified.	Number of deaths.	Death rate per 1,000 population
Scarlet fever ....	843	1	0.003
Diphtheria ....	475	23	0.079
Enteric fever ....	8	—	—
Erysipelas ....	167	8	0.027
Cerebro-spinal fever ....	8	5	0.017
Measles ....	1,862	14	0.048
Tuberculosis (all forms) ....	626	324	1.116

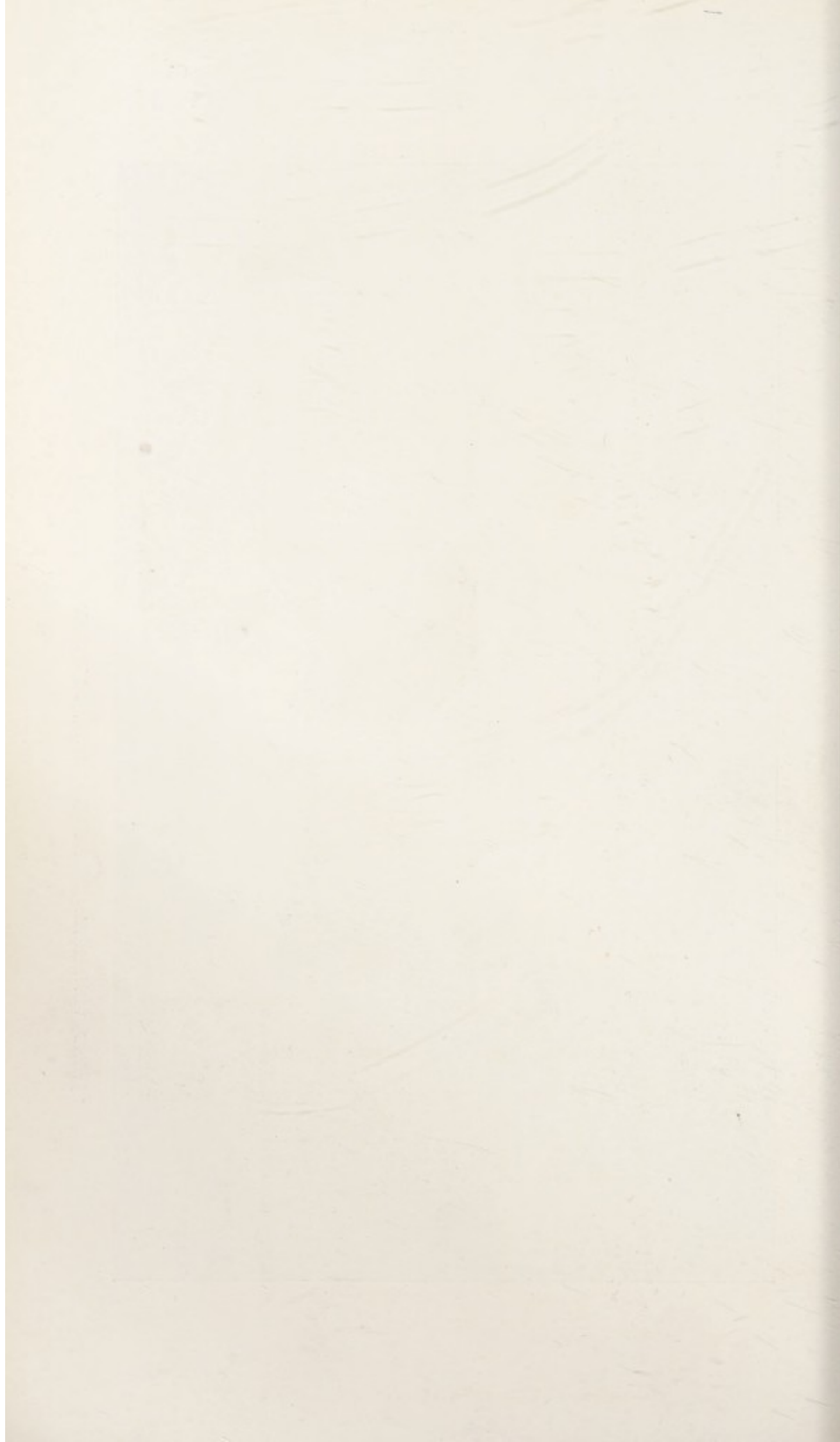
(new cases)

Whooping cough, which is not notifiable, caused 25 deaths.

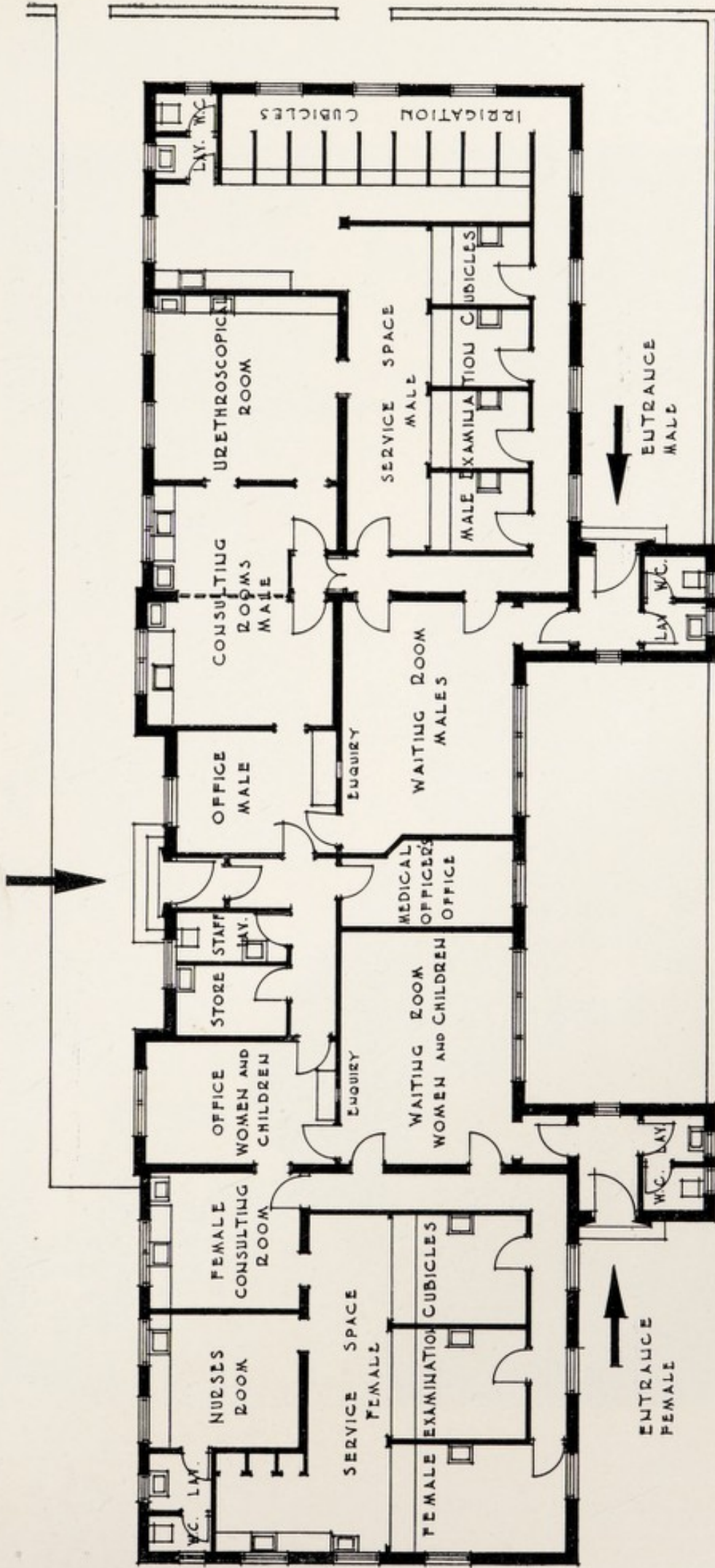
Influenza, which is not notifiable, caused 101 deaths.



JOINT VENEREAL DISEASES CLINIC, NEWCASTLE GENERAL HOSPITAL.



STAFF  
ENTRANCE



SCALE



JOINT VENEREAL DISEASES CLINIC—PLAN.



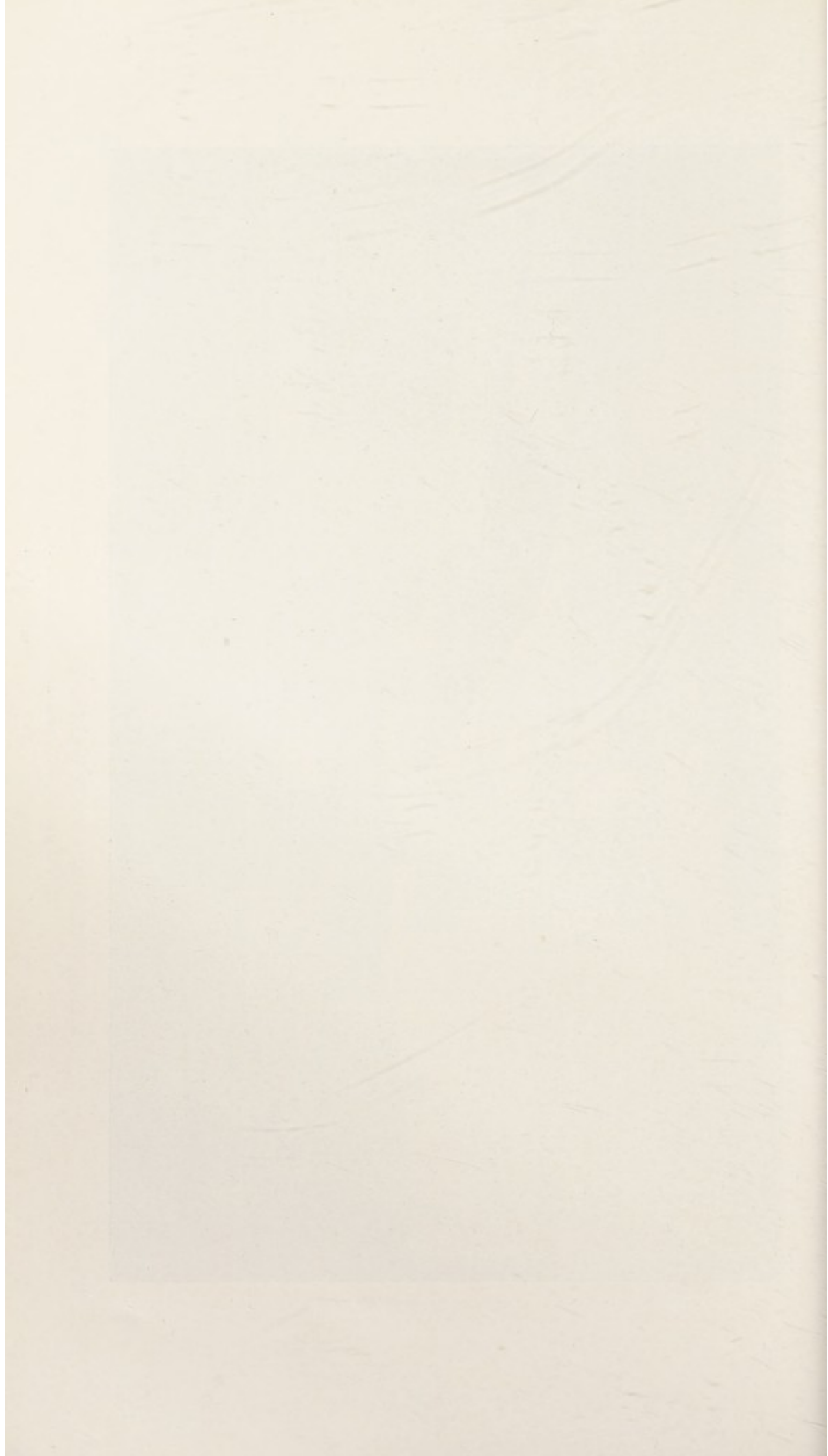


MATERNITY AND CHILD WELFARE CENTRE—ST. ANTHONY'S.





MATERNITY AND CHILD WELFARE CENTRE—ST. ANTHONY'S  
(INTERNAL COURTYARD AND PLAYGROUND).



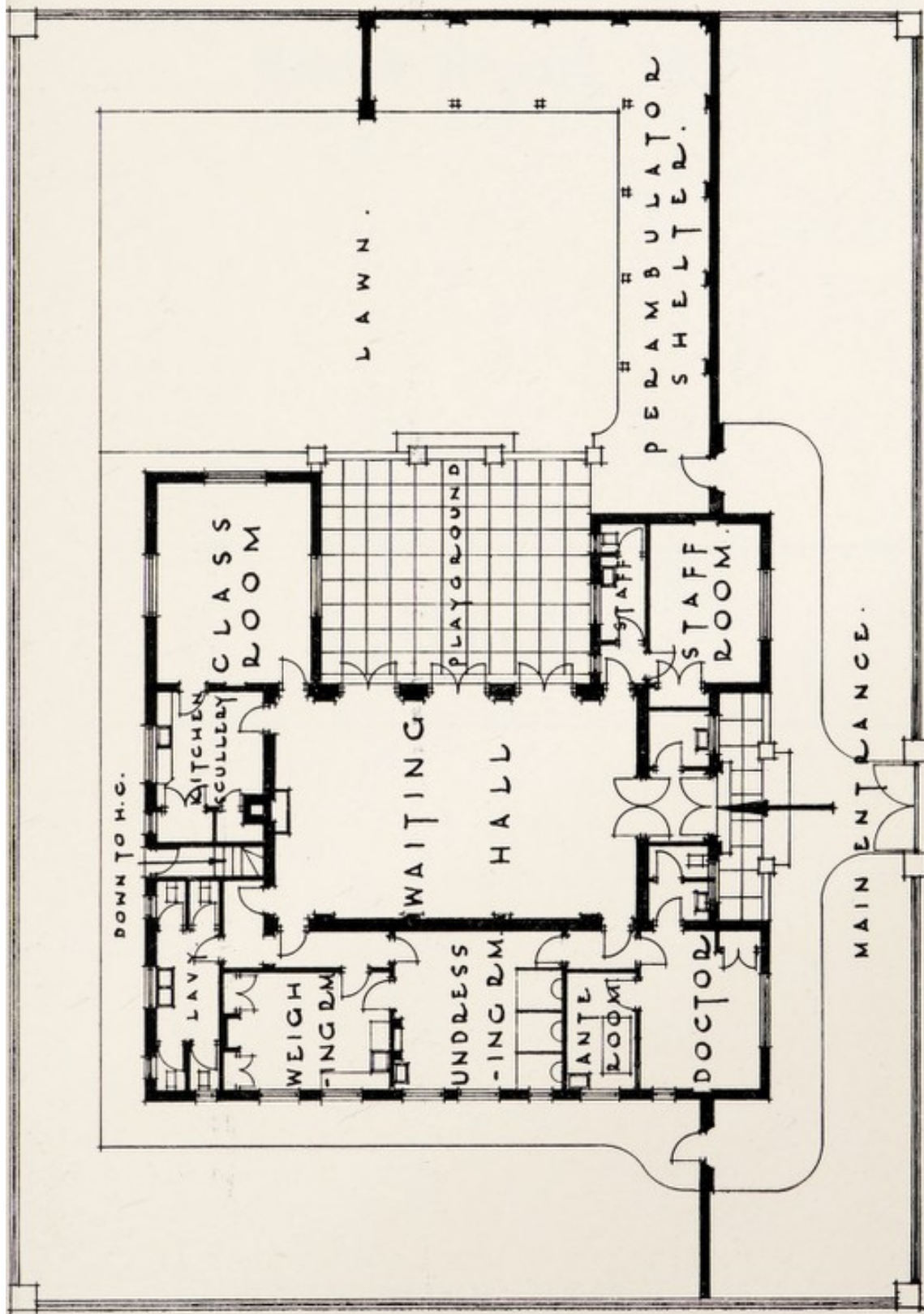


MATERNITY AND CHILD WELFARE CENTRE—ST. ANTHONY'S  
(WAITING ROOM).

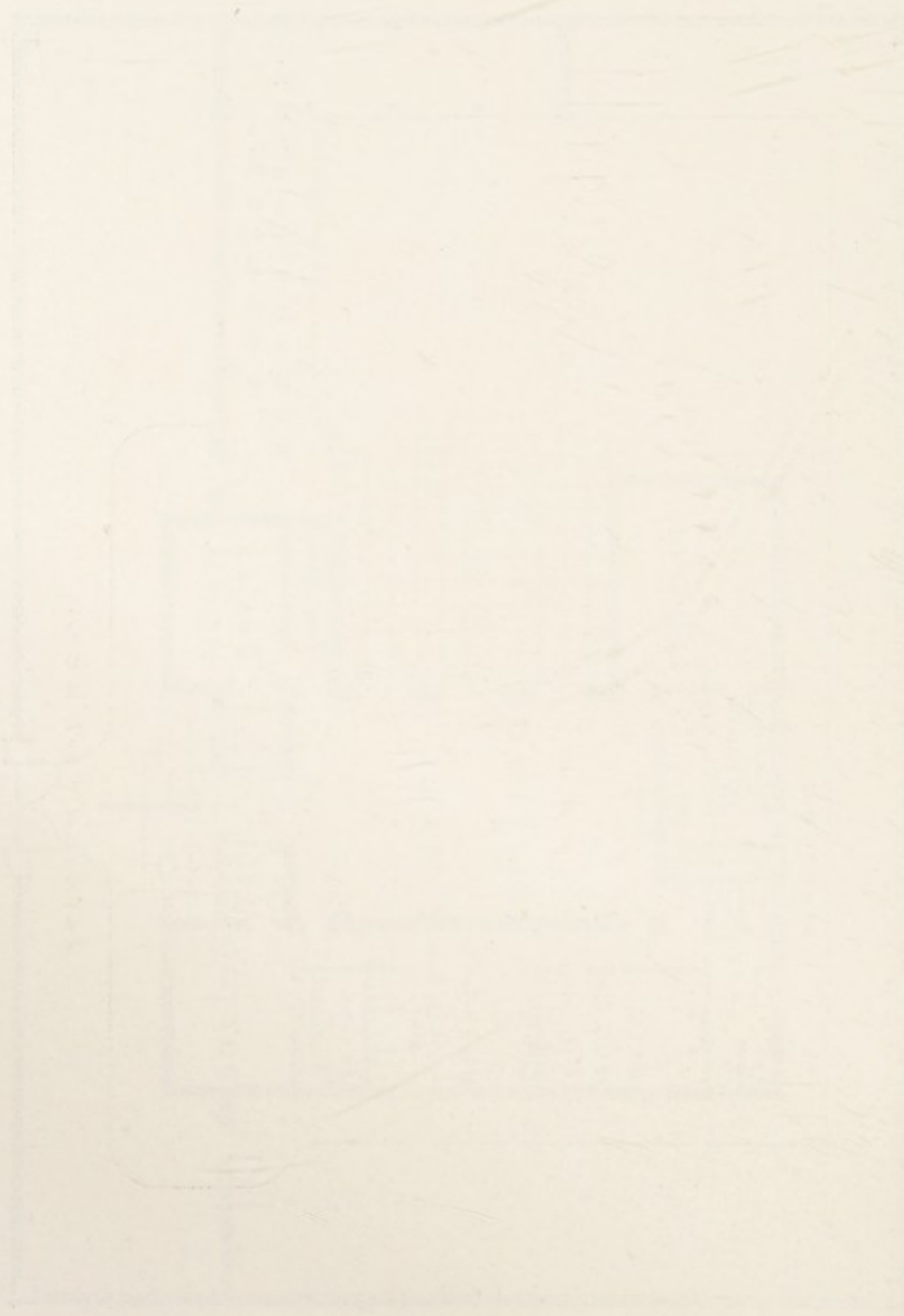


MATERNITY AND CHILD WELFARE CENTRE—ST. ANTHONY'S  
(UNDRESSING ROOM).





MATERNITY AND CHILD WELFARE CENTRE—ST. ANTHONY'S—PLAN.



CITY AND COUNTY OF NEWCASTLE UPON TYNE.

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# Health Report, 1937.

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## I.—GENERAL

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

CITY AND COUNTY OF NEWCASTLE UPON TYNE

# Health Report 1937

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## I. GENERAL

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





## GENERAL STATISTICS.

**POPULATION.**—As estimated by the Registrar General at the middle of the year 1937—**290,400.**

RETURN SHEWING THE ESTIMATED POPULATION OF THE DIFFERENT  
WARDS IN THE CITY, ACREAGE, POPULATION PER ACRE, ETC.

WARD.	Population (estimated).	Area (in- clusive of River Area).	Area of Public Open Spaces (ex- clusive of River Area).	Net Area (exclusive of Public Open Spaces and River Areas).	Population per acre (exclusive of River Area).	
					Gross	Net
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		acres.	acres.	acres.		
St. Nicholas' .....	1,825	143	1	126	14	14
St. Thomas' .....	15,259	3,194	1,102	2,092	5	7
St. John's .....	11,884	181	2	167	70	71
Stephenson.....	17,721	249	....	212	84	84
Armstrong .....	14,383	213	31	145	82	99
Elswick .....	13,219	250	18	232	53	57
Westgate .....	13,570	90	....	90	151	151
Arthur's Hill .....	9,317	142	6	136	66	69
Benwell .....	22,339	608	37	520	40	43
Fenham .....	25,701	1,508	80	1,428	17	18
All Saints' .....	13,832	193	2	176	78	79
St. Andrew's .....	10,554	174	2	172	61	61
Jesmond .....	11,107	443	49	394	25	29
Dene.....	18,655	1,585	120	1,465	12	13
Heaton.....	13,266	225	28	197	59	67
Byker .....	14,433	139	....	139	104	104
St. Lawrence .....	17,742	197	7	173	99	103
St. Anthony's .....	15,571	649	21	577	26	27
Walker .....	30,022	1,218	43	1,106	26	27
CITY.....	290,400	11,401	1,549	9,547	26	30

**INHABITED HOUSES.**—78,610 inhabited houses, which, on the estimated population, shows an average of 3.69 persons per dwelling.

**RATEABLE VALUE.**—£2,593,709. A penny rate produced £10,183.

**SOCIAL CONDITIONS.**—The principal Trades and Occupations are of a healthy nature, being generally engineering and hine making; conveyance of men, goods, and messages;

building and works of construction, *e.g.*, ship building; and connected with ships and boats, sea-faring and harbour work; food, tobacco, drink, and lodging; coal and shale mines; and commercial or business occupations.

The amount of **Public Assistance** granted during the year ended 31st March, 1937, was £378,636 for out-door relief, and £37,483 for indoor maintenance, making a total of £416,119, as compared with £429,961 in the previous year.

The number of registered male unemployed was 17,211 at the beginning of the year, and 16,023 at its close, whilst the figures for females were 2,602 and 2,120 respectively.

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. A list of municipal and voluntary hospitals serving the city is given on page 49.

**MARRIAGES.**—2,416 marriages took place during the year, as compared with 2,474 in 1936, and 2,467 in 1935.

**BIRTHS.**—4,796, equivalent to a rate of 16.5 per 1,000 population.

**DEATHS.**—(All causes)—5,107, equivalent to a gross rate of 17.6 per 1,000 population, and, after deduction of the deaths of 1,403 non-citizens and addition of 160 Newcastle residents who died elsewhere, to a net rate of 13.3 per 1,000 population. In 1936 the death rate was 13.1.

29 *Orders for Burial* (Newcastle upon Tyne Improvement Act, 1882, Sec. 47) were made, 15 being in respect of bodies lying in inhabited rooms, and 14 being cases from hospital.

*Cremation Act, 1902.*—The Crematorium, West Road, was opened on the 22nd October, 1934. The following table shows the number of cremations up to the 31st December, 1937 :—

	Newcastle Residents.	From Outside of the City.	Total.
*1934 .....	11	15	26
1935 .....	84	104	188
1936 .....	109	161	270
1937 .....	142	235	377
TOTAL .....	346	515	861

\* 22nd Oct.—31st Dec., 1934.

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.
1912	410	435	603	204	152
1913	457	453	722	332	114
1914	448	505	863	465	142
1915	470	635	873	361	163
1916	477	448	856	281	117
1917	497	478	864	268	135
1918	498	503	957	252	135
1919	439	497	1,040	272	133
1920	384	534	861	275	124
1921	347	581	726	297	113
1922	363	689	913	181	92
1923	363	623	623	219	112
1924	376	667	749	206	110
1925	359	696	681	248	131
1926	335	742	596	220	158
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

## CANCER DEATHS IN AGES (MALE AND FEMALE), 1937.

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.	....	....	....	....	....	....	10	17	27
	F.	....	....	....	....	....	....	....	....	....
Cancer of the diges- tive system	M.	....	....	....	....	1	6	47	73	127
	F.	....	....	....	....	....	3	46	36	85
Cancer of the respi- ratory organs	M.	....	....	....	....	1	4	15	4	24
	F.	....	....	....	....	....	....	3	....	3
Cancer of the uterus	F.	....	....	....	....	....	7	23	8	38
Cancer of other fe- male genital organs	F.	....	....	....	....	....	....	4	....	4
Cancer of the breast	M.	....	....	....	....	....	....	....	2	2
	F.	....	....	....	....	....	5	19	11	35
Cancer of the male genito-urinary organs	M.	....	....	....	....	....	1	4	12	17
Cancer of the skin	M.	....	....	....	....	....	1	1	4	6
	F.	....	....	....	....	....	....	....	....	....
Cancer of other or unspecified organs	M.	....	....	....	1	2	....	4	6	13
	F.	....	....	....	....	....	....	6	2	8
	M.	....	....	....	1	4	12	81	118	216
	F.	....	....	....	....	....	15	101	57	173
TOTAL		....	....	....	1	4	27	182	175	389

The average age at death for males was 63 and females 60.

**INFANTILE MORTALITY.**—435 infants died before completing the first year of life, representing a rate of 91 deaths per 1,000 live births.

**ZYMOTIC DEATH RATE.**—There were 156 deaths from the "Chief Zymotic Diseases"—smallpox, measles, scarlet fever, diphtheria, whooping cough, fever (typhus, simple continued, and enteric) and diarrhoea (all ages)—equivalent to 0.54 deaths per 1,000 population.

**TUBERCULOSIS.**—324 persons died from various forms of tuberculosis, 270 being from pulmonary, and 54 from non-pulmonary. The equivalent death rates are: *all forms* 1.12 *pulmonary* 0.93, and *non-pulmonary* 0.19, per 1,000 population.

For comparison of death rates with previous years see large table, page 39A.

For particulars of deaths as to site of disease, age, etc., see table page 45A.

**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 1937, as recorded on the "Newcastle Chronicle's" instruments :—

The mean barometer reading was 29.7 inches. The mean maximum and minimum temperatures were 62.0 F. and 46.2 F. respectively.

The rainfall for the year was 29.68 inches, 4.88 inches more than that of 1936 (24.80).

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

W.	on	25	days.
N.W.	on	120	"
N.E.	on	48	"
E.	on	6	"
S.E.	on	70	"
S.W.	on	81	"
S.	on	9	"
N.	on	6	"

#### Sunshine.

Sunshine records have been available by the courtesy of Professors G. W. Todd and J. A. Hanley, of Armstrong 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 890 hours of sunshine were registered in the City, as compared with 1,139 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.

In the vast majority of cases the household taps are served directly from the mains without intervening cisterns. A separate trade supply is piped to some of the great riverside works from a point above the filters.

The bacteriological reports upon the water are given on pages 113 and 122.



Table with columns for Cause of Death, Age Periods (Gross, Net, Total), and Wards-Net Deaths (St. Nicholas, St. Thomas, St. John's, Stephenson, Armstrong, Etwick, Wiggate, Arthur's Hill, Rowell, Parkham, All Saints, St. Andrew's, Jesmond, Dene, Heaton, Byker, St. Lawrence, St. Anthony's, Walker, Inward, Outward). Rows are categorized into L-Epidemic, Endemic and Infectious Diseases; II-Cancer and other Tumours; III-Rheumatism, Diseases of Nutrition and of Endocrine Glands and other General Diseases; IV-Diseases of the Blood and Blood-forming Organs; V-Chronic Poisoning; VI-Diseases of the Nervous System and Sense Organs; VII-Diseases of the Circulatory System; VIII-Diseases of the Respiratory System. A 'Carried forward' row is at the bottom.



## VITAL STATISTICS, YEAR 1937.

## COMPARISON WITH OTHER DISTRICTS.

DISTRICT.	Birth Rate.	General Death Rate.	Death Rate adjusted by Comparability Factor.	Infantile Mortality Rate.	Death Rate per 1,000 from Enteric Fever, Smallpox, Scarlet Fever, Measles, Whooping Cough, and Diphtheria.	Tuberculosis (all forms) Death Rate.
England and Wales .....	14.9	12.4	..	58	0.14	†
125 Great Towns (including London)	14.9	12.5	..	62	0.17	†
<b>NEWCASTLE UPON TYNE..</b>	<b>16.5</b>	<b>13.3</b>	<b>15.0</b>	<b>91</b>	<b>0.21</b>	<b>1.12</b>
Hull .....	18.2	12.6	13.8	77	0.34	1.12
Leeds .....	14.8	13.4	14.3	67	0.15	0.83
Bradford .....	13.8	14.7	14.7	70	0.24	0.77
Sheffield .....	15.3	12.5	14.1	55	0.11	0.80
Manchester .....	14.3	13.5	15.4	76	0.26	1.03
Salford .....	15.1	14.6	17.2	84	0.19	1.02
Liverpool .....	19.3	13.2	15.2	82	0.48	0.92
Nottingham .....	16.0	13.4	13.8	80	0.15	0.99
Leicester .....	14.5	12.5	12.7	62	0.16	0.96
Stoke-on-Trent .....	16.7	13.1	16.0	81	0.24	0.94
Birmingham .....	16.3	11.7	12.9	60	0.19	0.80
Cardiff.....	15.4	12.6	13.3	65	0.19	0.99
Bristol .....	14.5	11.4	11.2	46	0.07	0.80
Portsmouth .....	14.9	11.5	11.4	44	0.14	0.62
West Ham .....	16.1	11.9	13.6	62	0.14	0.79
London (County) .....	13.4	12.5	12.8	60	0.13	0.80
Gateshead .....	17.7	13.7	15.4	77	0.28	1.11
South Shields .....	16.5	13.4	15.0	80	0.33	1.28
Tynemouth .....	16.2	12.8	14.2	66	0.24	0.97
Sunderland .....	19.7	14.0	15.7	85	0.28	1.03
Middlesbrough .....	19.5	13.8	16.3	91	0.38	1.18
*County of Northumberland..	15.2	12.7	13.4	66	0.18	0.73
*County of Durham .....	17.1	12.4	14.4	71	0.35	0.74

\* Administrative County.

† Not available.

## Vital Statistics of Whole District during 1937 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.	
													10
1	2	3	4	5	6	7	8	9	10	11	12	13	
1911	267,261	7,089	7,082	26.5	4,667	17.5	448	165	973	137	4,384	16.4	
1912	269,193	7,219	7,194	26.7	4,221	15.7	529	146	727	101	3,838	14.5	
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	

\* Calculated on a population of 282,200

† Rates calculated on a population of 291,025.

## Corrected Death Rates in different Wards, 1937.

St. Nicholas'.	St. Thomas'.	St. John's.	Stephenson.	Armstrong.	Elswick.	Westgate.	Arthur's Hill.	Benwell.	Fenham.	All Saints'.	St. Andrew's.	Jesmond.	Dene.	Heaton.	Byker.	St. Lawrence.	St. Anthony's.	Walker.	City
11.0	10.0	12.9	13.1	12.8	19.9	13.6	14.7	14.8	12.6	12.5	14.7	14.0	11.8	13.3	11.6	11.5	15.7	12.9	13

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

**CAUSES OF DEATH AT DIFFERENT PERIODS  
OF LIFE FOR 1937.**

(REGISTRAR GENERAL'S RETURN).

CAUSES OF DEATH.	Sex	All Ages	Age Groups										
			0-	1-	2-	5-	15-	25-	35-	45-	55-	65-	75-
All Causes	M.	2098	261	32	18	50	73	96	113	222	385	501	347
	F.	1779	176	27	24	32	61	78	109	167	292	353	460
1—Typhoid and paratyphoid fevers	M.	....	....	....	....	....	....	....	....	....	....	....	
	F.	....	....	....	....	....	....	....	....	....	....	....	
2—Measles	M.	8	1	3	3	1	....	....	....	....	....	....	
	F.	6	1	4	....	1	....	....	....	....	....	....	
3—Scarlet fever	M.	1	....	....	1	....	....	....	....	....	....	....	
	F.	....	....	....	....	....	....	....	....	....	....	....	
4—Whooping cough	M.	14	9	4	1	....	....	....	....	....	....	....	
	F.	13	6	5	2	....	....	....	....	....	....	....	
5—Diphtheria	M.	10	....	2	....	8	....	....	....	....	....	....	
	F.	12	....	1	6	4	....	....	1	....	....	....	
6—Influenza	M.	53	1	1	....	3	3	4	3	8	17	9	4
	F.	49	2	1	1	....	....	2	1	4	7	13	18
7—Encephalitis lethargica	M.	7	....	....	....	....	....	1	1	1	2	2	....
	F.	3	....	....	....	....	....	1	....	1	....	1	....
8—Cerebro-spinal fever	M.	4	1	1	....	....	1	....	1	....	....	....	
	F.	1	....	....	....	1	....	....	....	....	....	....	
9—Tuberculosis of respiratory system	M.	162	....	1	....	3	25	40	29	25	30	9	....
	F.	110	2	....	2	6	32	22	21	8	13	4	....
10—Other tuberculous diseases	M.	33	3	....	2	6	5	7	3	4	3	....	....
	F.	21	....	2	2	4	7	1	....	3	2	....	....
11—Syphilis	M.	7	1	....	....	....	....	....	....	3	1	2	....
	F.	8	1	....	....	1	....	1	....	3	1	1	....
12—General paralysis of the insane, tabes dorsalis	M.	9	....	....	....	....	....	....	2	3	3	1	....
	F.	4	....	....	....	....	....	....	1	1	2	....	....
13—Cancer, malignant disease	M.	227	1	....	1	1	3	5	9	24	58	85	40
	F.	183	....	....	....	....	....	1	14	45	63	35	25
14—Diabetes	M.	25	....	....	....	....	1	1	1	2	5	11	4
	F.	38	....	....	....	2	2	1	1	4	9	8	11
15—Cerebral hæmorrhage, etc.	M.	72	1	....	....	....	....	1	1	7	20	25	17
	F.	81	....	....	....	....	....	....	2	10	16	25	28
16—Heart disease	M.	500	....	....	1	3	4	9	16	61	104	171	131
	F.	447	....	....	....	2	4	14	15	32	81	140	159
17—Aneurysm	M.	5	....	....	....	....	1	....	2	1	1	....	....
	F.	4	....	....	....	....	1	1	....	1	....	1	....
18—Other circulatory diseases	M.	154	....	....	....	....	....	....	....	6	25	72	51
	F.	166	....	....	....	....	....	....	....	7	22	56	81

Causes of Death at different periods of life  
for 1937—*continued.*

CAUSES OF DEATH.	Sex	All Ages	0-	1-	2-	5-	15-	25-	35-	45-	55-	65-	75-
19—Bronchitis	M. F.	74 53	9 4	1 1	1 .....	1 .....	..... .....	2 1	3 1	8 4	13 3	13 6	23 33
20—Pneumonia (all forms)	M. F.	174 113	55 40	14 8	5 7	4 2	5 4	5 4	11 7	14 6	31 10	20 11	10 14
21—Other respiratory diseases	M. F.	19 17	1 .....	..... .....	..... .....	..... .....	1 .....	1 4	3 3	6 .....	3 2	3 4	1 4
22—Peptic ulcer	M. F.	20 5	..... .....	..... .....	..... .....	..... .....	..... .....	1 .....	2 1	4 3	9 .....	2 .....	2 1
23—Diarrhœa, etc.	M. F.	59 32	53 23	1 1	..... .....	..... .....	..... .....	..... 1	..... 2	2 1	2 .....	..... 2	1 2
24—Appendicitis	M. F.	4 9	..... .....	..... .....	..... .....	1 3	1 1	1 2	..... 1	..... 1	1 1	..... .....	..... .....
25—Cirrhosis of liver	M. F.	11 2	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... 1	2 .....	1 1	7 .....	1 .....
26—Other diseases of liver, etc.	M. F.	8 12	..... .....	..... .....	..... .....	1 .....	..... 1	..... .....	..... .....	2 .....	3 8	1 1	1 2
27—Other digestive diseases	M. F.	22 25	4 6	1 .....	..... .....	1 2	..... .....	2 .....	..... 2	6 5	4 4	2 3	2 3
28—Acute and chronic nephritis	M. F.	71 73	1 2	..... .....	..... .....	1 .....	..... 1	3 3	7 7	5 8	17 15	23 18	14 19
29—Puerperal sepsis	F.	5	.....	.....	.....	.....	1	.....	4	.....	.....	.....	.....
30—Other puerperal causes	F.	16	.....	.....	.....	.....	1	10	5	.....	.....	.....	.....
31—Congenital debility, premature birth, malformation, etc.	M. F.	95 74	94 74	..... .....	..... .....	..... .....	1 .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....
32—Senility	M. F.	30 39	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	7 5	23 34
33—Suicide	M. F.	23 17	..... .....	..... .....	..... .....	..... .....	2 1	3 .....	4 6	6 4	3 4	4 1	1 1
34—Other violence	M. F.	75 31	1 1	1 1	1 2	11 1	11 2	7 2	8 2	11 4	9 4	8 5	7 7
35—Other defined diseases	M. F.	120 109	24 13	2 3	2 2	5 3	9 3	3 7	7 11	10 12	20 24	24 13	14 18
36—Causes ill-defined or unknown	M. F.	2 1	1 1	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	1 .....	..... .....	..... .....	..... .....

Resident Population 290,400.

UNDER 1 YEAR.

	<i>Legitimate.</i>	<i>Illegitimate.</i>
M. ....	247	14
F. ....	169	7

## HOSPITALS.

Name.	Purpose.	No. of Beds.	For Newcastle Cases.	For Cases from outside City.
MUNICIPAL.				
City Hospital for Infectious Diseases	Infectious Diseases, Tuberculosis .....	338	338	....
Smallpox and Isolation Hospitals	Smallpox and Isolation .....	172	172	....
Newcastle General Hospital	Medical, Surgical and Maternity	Men 274 Women 327 Children 160	761	....
Barrasford Sanatorium, Barrasford	Tuberculosis .....	95	75	20
Newcastle Mental Hospital, Gosforth	Mental .....	1,067	1,067	....
Shotley Bridge Colony, Shotley Bridge	Mental Defectives	473	473	....
St. Mary Magdalene Home, Newcastle	Chronic Sick .....	96	96	....
VOLUNTARY.				
Royal Victoria Infirmary, Newcastle	General, Medical and Surgical, Venereal Diseases, etc.	710	110	600
Do.	Convalescents .....	75	....	....
Fleming Memorial Hospital, Newcastle	Children .....	88	30	58
Princess Mary Maternity Hospital, Newcastle	Maternity .....	73	30	43
Eye Infirmary, Newcastle	Eyes .....	35	10	25
Throat, Nose and Ear Hospital, Newcastle	Throat, Nose and Ear	35	11	24
Hospital for Diseases of the Chest, Newcastle	Diseases of the Chest	Out patients	only.	
Catherine House, Newcastle	Maternity .....	20	....	....
Babies' Hospital and Mothercraft Centre, Newcastle	Children .....	26	10	16
Stannington Sanatorium, Stannington	Tuberculosis (Children)	310	40	270
Dental Hospital, Newcastle	Dental.....	Out patients	only.	
Walker Accident Hospital	Shipyard Accidents	21	21	....
Newcastle Dispensary	General, Medical	Out patients	only.	
Hospital for Diseases of the Skin	Skin Diseases .....	6	....	....
Hospital for Women	Women .....	Out patients	only.	
Sanderson's Home for Crippled Children, Gosforth	Children .....	134	67	67



**REPORT OF THE  
MATERNITY AND CHILD WELFARE  
MEDICAL OFFICER.**

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**II.—THE CHILD.**

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**INFANTILE MORTALITY, MATERNITY AND  
CHILD WELFARE, NURSING HOMES.**

REPORT OF THE  
MATERNITY AND CHILD WELFARE  
MEDICAL OFFICE

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II - THE CHILD

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REPORT OF THE  
MATERNITY AND CHILD WELFARE  
MEDICAL OFFICE

## INFANTILE MORTALITY.

### SUMMARY OF BIRTHS AND DEATHS, 1937.

	LEGITIMATE.			ILLEGITIMATE.			Grand Total.
	M.	F.	Total.	M.	F.	Total.	
Total Births in the year	2,925	2,797	5,722	138	136	274	5,996
Net " " " "	2,355	2,267	4,622	86	88	174	4,796
Net Deaths under 1 year	244	169	413	15	7	22	435
Death Rate per 1,000 births	104	74	90	174	79	126	91

### BIRTHS AND DEATHS (NET), 1937.

WARD.	Births.	Deaths under 1 year of age.	Children under 1 year of age— Death rate per 1,000 births.	Birth rate per 1,000 population.
St. Nicholas' .....	7	1	143	3.8
St. Thomas' .....	142	9	63	9.3
St. John's .....	176	13	74	14.8
Stephenson .....	317	28	88	17.9
Armstrong .....	262	33	126	18.2
Elswick .....	197	25	127	14.9
Westgate .....	245	26	106	18.1
Arthur's Hill.....	82	6	73	8.8
Benwell .....	559	53	95	25.0
Fenham.....	451	35	78	17.6
All Saints' .....	171	13	76	12.4
St. Andrew's.....	147	16	109	13.9
Jesmond.....	91	2	22	8.2
Dene .....	253	18	71	13.6
Heaton .....	153	11	72	11.5
Byker .....	208	23	111	14.4
St. Lawrence.....	329	30	91	18.5
St. Anthony's .....	422	24	57	27.1
Walker .....	584	69	118	19.5
<b>CITY .....</b>	<b>4,796</b>	<b>435</b>	<b>91</b>	<b>16.5</b>

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

## ANALYSIS OF INFANTILE MORTALITY.

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Death-rate of Infants <i>under</i> 1 year per 1,000 births .....	82	85	74	92	76	76	83	86	90	91
Death-rate of Infants <i>under</i> 3 months per 1,000 births	50.8	52.5	46.7	48.1	51.2	45.0	57.2	57.4	58.4	54.0
Death-rate of Infants from <i>Premature Birth</i> , per 1,000 births .....	20.6	24.5	17.8	20.2	20.7	20.4	21.5	21.9	23.4	19.4
Death-rate of Infants <i>under</i> 1 year per 1,000 births from <i>Premature Birth</i> , plus all <i>Congenital Causes</i> *	35.4	38.8	33.7	34.2	37.3	36.7	38.6	43.3	42.5	35.7
Death-rate of Infants <i>under</i> 1 year per 1,000 births, from <i>Diarrhoea and all</i> <i>other Digestive Diseases</i> † ..	13.4	15.0	11.3	12.5	9.2	12.9	13.4	13.7	22.2	19.0
Death-rate of Infants <i>under</i> 1 year per 1,000 births, from <i>Infantile Atrophy,</i> <i>Debility and Marasmus</i> ....	4.4	3.7	4.6	2.2	4.9	4.7	4.5	5.6	5.7	1.9
Death-rate of Infants <i>under</i> 1 year per 1,000 births, from <i>Measles</i> .....	2.2	3.7	0.5	5.7	0.8	1.5	1.9	0.6	1.3	0.4
Death-rate of Infants <i>under</i> 1 year per 1,000 births, from <i>Whooping Cough</i> .....	3.9	1.4	2.5	2.6	2.5	2.3	1.9	2.4	0.9	2.9
Death-rate of Infants <i>under</i> 1 year per 1,000 births, from <i>Respiratory Diseases</i>	16.6	16.4	16.8	24.7	16.0	12.9	15.5	15.9	12.1	22.1
Death-rate of Infants <i>under</i> 1 year per 1,000 births, from <i>Tuberculosis</i> (all forms) .....	1.3	1.0	1.1	2.0	0.8	1.3	0.9	0.9	0.2	1.0

For particulars of deaths, as to causes, etc., see Table on page 54A.

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

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



RETURN OF DEATHS UNDER ONE YEAR OF AGE DURING THE 52 WEEKS ENDED 1ST JANUARY, 1938.

CAUSE OF DEATH.	AGE PERIODS.																				Deaths in Institutions in the City of Residents or Non-Residents.
	GROSS.										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.	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.	
<i>Brought forward</i> .....	7	6	8	4	25	46	68	41	30	210	5	5	6	4	20	40	55	34	20	169	113
<b>DISEASES OF THE DIGESTIVE SYSTEM.</b>																					
Diseases of the Buccal Cavity, Pharynx, etc. ....							1			1							1			1	1
Other Diseases of the Stomach .....								2		2								1		1	1
Diarrhoea and Enteritis .....	1	11	19	3	34	34	27	14	6	115	1	3	8	3	15	25	23	13	4	80	96
Hernia, Intestinal Obstruction .....		1			1		7	5	1	14		1			1		4	1		6	12
Other Diseases of the Intestines .....				1	1					1				1	1					1	
<b>NON-VENEREAL DISEASES OF GENITO-URINARY SYSTEM AND ANNEXA.</b>																					
Acute Nephritis .....						1	2			3						1	2			3	3
Diseases of the Urethra, Urinary Abscess, etc. ....						1				1						1				1	1
<b>DISEASES OF SKIN AND CELLULAR TISSUE.</b>																					
Cellulitis, Acute Abscess .....				1	1			1	1	3									1	1	3
Other Diseases of the Skin and Annexa .....				1	1		1			2											2
<b>CONGENITAL MALFORMATIONS.</b>																					
Congenital Malformations .....	13	6	3	3	25	11	8	1	2	47	8	5	2	3	18	5	5	1	1	30	35
<b>DISEASES OF EARLY INFANCY.</b>																					
Congenital Debility .....	1	2	2		5	8	1	2	1	17		2	2		4	3	1		1	9	13
Premature Birth .....	96	16	17	6	135	6	2			143	67	8	6	4	85	6	2			93	92
Injury at Birth .....	21	10	2	1	34	1	3			38	5	2	1		8	1	2			11	35
Atelectasis .....	14	1			15	1				16	11	1			12	1				13	8
Icterus Neonatorum .....	3				3					3	1				1					1	2
Other Diseases peculiar to Early Infancy .....	6	9	4	4	23	2	2	1		28	2	3	1	2	8	2	1	1		12	26
<b>DEATHS BY VIOLENCE.</b>																					
Accidental Mechanical Suffocation .....							1			1							1			1	
<b>ILL-DEFINED DISEASES.</b>																					
Cause of Death Unstated or Ill-defined .....	1				1		1			2	1				1		1			2	2
<b>TOTAL</b> .....	163	62	55	24	304	111	124	67	41	647	101	30	26	17	174	85	98	51	27	435	445

## Report of the Maternity and Child Welfare Medical Officer.

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TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I have the honour to submit to you my eighteenth annual report.

### Innovations.

The year 1937 was a memorable one in that among other things it saw the practical establishment of the Midwives Act, 1936. Under this Act, Local Authorities are compelled to employ either directly or in co-operation with voluntary agencies a sufficient number of qualified midwives to meet the needs of their respective areas, so that every lying-in woman, regardless of her economic circumstances, can in time of need be sure of having at her service a reliable attendant. The Act took effect as from 31st July, 1937, and the City Council forthwith appointed twenty-eight midwives to be members of the Maternity and Child Welfare Staff. From the outset the scheme has proved to be a great boon, especially to the poorer members of the community.

The new premises which were specially built for maternity and child welfare purposes in St. Anthony's Road were officially opened by the Minister of Health (Sir Kingsley Wood, M.P.) on the 22nd September, 1937.

The centres previously conducted in the Walker Presbyterian Church Hall and St. Lawrence's Church Hall respectively were transferred to the new St. Anthony's Centre in September.

Two additional sessions weekly were commenced in the Wharncliffe Street Centre, and an ante-natal session was added in the Byker Centre.

The Centre for the Byker District, which for many years was conducted in the premises at the corner of Dalton and Shipley Streets, was transferred during the year to the Sun-ray Clinic in Brinkburn Street.

The scheme arranged jointly by the Milk Marketing Board and the Commissioner for Special Areas, by which fresh milk can be purchased in limited quantities at the reduced price of twopence per pint for nursing and expectant mothers and pre-school children, was established in the Walker district of the City in April, and large numbers took advantage of the privilege.

By the generosity of the Joint Council of Midwifery, necessitous expectant mothers attending the ante-natal centres were supplied gratis every month during the last three months of pregnancy with parcels each of which contained :—

1-8-oz. Carton of Yeast Extract,  
2-8-oz. Tins of Ovaltine,  
2-1-lb. Tins of Ostermilk,

and a supply of sterilised dressings.

This was an experiment which the Joint Council hoped would result in a reduction of the Maternal Mortality Rate.

The parcels have been distributed regularly, and have been gratefully accepted by the recipients.

In response to the Ministry of Health Circular No. 1519 (1st April, 1937) which deals with the poor physical condition of certain expectant and nursing mothers and young children, visits were made to Hull and Birmingham where meals are provided for such persons, and a report was presented to the Committee.

By an amendment of their rules the Central Midwives Board as from January, 1937, extended the normal lying-in period as applying to the duties of Midwives from ten to fourteen days.

All children who were known to have been in contact with cases of tuberculosis were specially visited, and attendance at the welfare centres was urged upon the parents. Free cod liver oil emulsion was given to such children.

The birth rate for the year at 16.5 per 1,000 is an increase of 0.9 over the rate for the previous year.

The Maternal Mortality Rate (4.21 per 1,000) is a substantial improvement on that for 1936 which was 5.92 per 1,000.

The Infantile Mortality Rate rose from 90 to 91, the increase being accounted for almost entirely by an increased number of deaths resulting from the respiratory diseases.

Both the Ante-Natal and the Children's Centres show a marked increase in the number of attendances. Approximately 800 more expectant mothers and 1,000 additional children attended during the year.

### Diphtheria Immunisation.

#### NUMBER OF CLINICS HELD.

##### *Mondays.*

Diana Street (pre-school children) (Monday and Saturday mornings) .....	42
Cowgate School .....	12
Cambridge Street School .....	6
Bentinck School.....	6
St. Mary's R.C. School .....	6
St. Paul's C.E. School.....	6

##### *Tuesdays.*

Atkinson Road School.....	5
Canning Street School.....	9
Westmorland Road School.....	6
South Benwell School.....	9
St. Andrew's C.E. School.....	6
Rye Hill R.C. School.....	6

##### *Wednesdays.*

Denton Road School.....	16
Wingrove School.....	6
Westgate School .....	6
St. Michael's R.C. School.....	6
St. John's School.....	6

##### *Thursdays.*

Walker (pre-school children).....	2
Byker " " .....	1
Pendower School .....	9
Elswick School .....	9
Whickham View School.....	9
Fenham R.C. School .....	11

TOTAL ..... 200

#### TOTALS FOR 1937.

Total No. of New Children sent for.	Total Attendances for 1st Treatment.	Total Attendances for 2nd Treatment.	Total Attendances for 3rd Treatment.	Total Attendances.
Under 1 year, 427	2,412	2,348	2,287	7,047
Over 1 year, 2,401				

### Dental, Aural and Nasal Treatment.

Under the arrangements made with the Education Authority 323 nursing or expectant mothers and 436 children were referred for dental treatment. Of these 223 women and 329 children were treated.

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

Similarly 255 children were sent for aural and nasal treatment and of these 156 were treated.

### Whalton Rest Home.

Twenty-two mothers accompanied by 27 children were sent through the Centres for two weeks' holiday at the Rest Home during the year.

### Orthopædia.

110 new cases were visited during the year. Of these 72 attended for examination by the Orthopædic Surgeon at the Education School Clinic, and a total of 292 examinations and re-examinations were made. Of cases notified to attend for examination 16 parents refused.

Average number attending twice weekly for treatment	
—Massage and Exercises .....	30
Admitted to the W. J. Sanderson Orthopædic Hospital	
School .....	8
Refused institutional treatment .....	2
Photographic Records .....	1

8 new cases attended other institutions.

### SURGICAL APPLIANCES :—

Plaster of Paris splints made in 15 cases.	
New splints supplied in	32 ..
New boots supplied in	96 ..
Alterations to boots in	48 ..
Splints repairs in	21 ..

During the year 443 children including 110 new cases were visited. Of these

Parents refused any kind of treatment in .....	22 cases.
Left City .....	9 ..
Died .....	2 ..
Attained the age of 5 years (transferred to Education Committee) .....	72 ..
Cured .....	16 ..
	<hr/>
	121 ..

leaving 322 on visiting list at end of 1937.

### Classification of 110 New Cases Visited.

#### CONGENITAL DEFORMITIES :—

Congenital Club Feet.....	6
Congenital Flat Feet .....	1
Congenital Abnormalities—Toes .....	2
Spastic Paralysis.....	4
Poliomyelitis .....	2
Ataxia .....	1
Old injury to lower limb .....	2
Torticollis .....	2
Muscular Dystrophy-Erbs Palsy .....	5
Flat Feet.....	33
Rickets—Bow Legs .....	19
Knock Knees and Flat Feet.....	21
General .....	9
Metatarsal Varus .....	2
Flexed Knee .....	1
	<hr/>
TOTAL.....	110
	<hr/> <hr/>

### Home Helps Service.

The Staff of Home Helps, all of whom were employed on a part-time basis, numbered eleven, and during the year they rendered service to 52 lying-in women. In 43 instances contributions towards the cost of the services were received from the families concerned, in the remaining instances the services were supplied gratis.

During the period of service, the Home Helps were supervised, and in all cases the reports were satisfactory.

### Maternity Hospital.

Free beds in the Princess Mary Maternity Hospital were placed at the disposal of 79 women and 95 others were admitted to the Newcastle General Hospital for confinement. Free outdoor attendance on the various districts by the Professional Staff of the former Hospital was provided for 158 women. The necessary orders were given by the Medical Officers at the Centres.

### Ante-Natal Centres.

During the year 2,636 pre-natal and 109 post-natal women attended the Municipal Clinics, this being an increase of 789 pre-natal and 32 post-natal over the corresponding figures for the previous year.

The following table shows the attendances at the ante- and post-natal clinics :—

CENTRE.	ANTE-NATAL		POST-NATAL.	
	Attendances.	Individuals.	Attendances.	Individuals.
Benwell .....	1,178	350	89	32
Byker .....	1,624	440	5	4
Fenham.....	638	191	....	....
Diana Street .....	996	281	9	5
Elswick .....	1,086	312	3	3
Heaton .....	550	126	7	5
Scotswood.....	728	173	78	54
St. Lawrence .....	795	214	10	6
Walker .....	776	311	....	....
Wharncliffe St. ....	1,057	238	....	....
	9,428	2,636	201	109

#### WOMEN ATTENDING ANTE-NATAL CENTRES.

The following details refer to the confinements of 2,025 expectant mothers who attended the municipal ante-natal centres during 1937, and whose children were born during that year.

Mothers were sent to the ante-natal centres by the following :—

	<i>Cases.</i>	<i>Percentage.</i>
Doctors .....	269	13.3
Midwives .....	414	20.0
Health Visitors on Districts.....	107	5.3
Welfare Centres and Voluntarily.....	1,235	61.4
	<u>2,025</u>	

The result of the subsequent confinements were :—

Type of Confinement.	Number of Cases.	Resulting in		
		Living Children.	Still-born Children.	Sets of Twins.
Normal.....	1,675	1,630	31	14
Instrumental .....	223	193	28	2
Cæsarian Section	11	10	1	....
Induction.....	7	5	2	....
Abortion .....	22	....	....	....
	1,938	1,838	62	16
Not Pregnant.....	57	....	....	....
Left City.....	30	....	....	....
Total .....	2,025			

*Abnormalities* were found in 123 or 6.0 per cent. of the cases, and the ultimate results were as follows :—

Abnormality.	No.	Normal Confinements.		Instrumental Confinements.			Caesarian Sections.			Induced Labour.			
		No.	Living Children.	Still-born Children.	No.	Living Children.	Still-born Children.	No.	Living Children.	Still-born Children.	No.	Living Children.	Still-born Children.
Breach Presentation	57	40	40	..	11	9	2	4	2	..	2	2	..
Deformed Pelvis ..	14	6	6	..	3	1	2	5	4	1	..	..	..
Albuminuria.....	41	36	33	3	4	3	1	..	..	..	1	..	1
Ante-partum Hæmorrhage .....	11	5	3	2	5	3	2	..	..	..	1	..	1

5 mothers subsequently died :—Sepsis, 1 ; Cardiac Disease, 2 ; Embolism, 1 ; Pneumonia, 1.

*Notices for medical aid sent by midwives :—*

FOR THE MOTHER.

*During Pregnancy—*

Ante Partum Hæmorrhage....	19
Abortions.....	7
Illness .....	14
Albuminuria & Puffiness of hands and feet .....	10
	<hr/>
	50

*During Labour—*

Uterine Inertia .....	90
Malpresentations .....	38
Retained Placenta .....	4
Post Partum Hæmorrhage....	15
Ruptured Perineum.....	142
	<hr/>
	289

*During Puerperium—*

Rise of Temperature.....	22
Undefined Illness of Mother	24
	<hr/>
	46
	<hr/>
Total calls for mother .....	385

FOR CHILD.

Prematurity .....	28
Discharging Eyes .....	31
Congenital Defects .....	5
Illness of Baby .....	30
Still-births .....	3
Rashes .....	12
	<hr/>
	109
	<hr/>
Total calls for mother and child	494

In 27.5 per cent. of the midwives' cases the services of a doctor were requisitioned.

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

	<i>Cases.</i>
For forceps delivery .....	103
For post partum hæmorrhage.....	15
For ante partum hæmorrhage.....	21
For illness of mother .....	53
For illness of child .....	57
For premature birth.....	8
For discharging eyes .....	25
Other .....	106
Specialists called in.....	12
	—
Total cases .....	400
	—

16 claims for *payment of midwives' fees* were received.

**Maternal Mortality.**

4,796 live and 189 still-born births in families belonging to the City occurred during the year. 21 women died as a result of childbirth, a mortality rate of 4.21 per 1,000 live and still births as compared with 5.92 in the previous year.

CAUSES.	1937	1936	1935	1934	1933	1932
Abortions (Septic) .....	3	4	....	1	1	1
Abortions (Not Septic) .....	3	3	1	1	4	1
Accidents of Pregnancy .....	....	1	....	1	....	....
Puerperal Hæmorrhage .....	4	1	3	3	4	3
Other Accidents of Childbirth	3	1	2	2	2	4
Puerperal Fever .....	2	6	12	7	7	9
Other Toxæmias of Pregnancy	3	1	1	1	2	2
Puerperal Phlegmasia .....	1	....	4	1	....	1
Ectopic Gestation .....	....	1	....	1	....	1
Unspecified conditions of puerperal state .....	....	3	....	2	2	....
Puerperal Albuminuria and Convulsions .....	2	7	2	6	....	....
	21	28	25	26	22	22

**Puerperal Septicæmia and Puerperal Pyrexia.**

One hundred and thirty-three cases were notified during the year—26 puerperal fever and 107 pyrexia. Details of these are given in the following table :—

	Total Cases Notified.	Newcastle Cases.	Extra Mural Cases.	Admitted to Hospital.	TOTAL DEATHS.	
*Puerperal Septicæmia	26	9	17	113	Newcastle	4
					Extra Mural ....	10
Puerperal Pyrexia	107	48	59		Newcastle	0
					Extra Mural ....	0

\* Ceased to be notifiable on 1st October, 1937.

Of the 57 City cases 55 were visited and the attendants at the confinements are indicated in the following table :—

	<i>Puerperal Septicæmia.</i>	<i>Puerperal Pyrexia.</i>
Doctors .....	2	1
Doctors and Midwives.....	2	10
Midwives .....	1	13
Princess Mary Maternity Hospital Staff .....	....	19
Newcastle General Hospital.....	3	....
Elswick Lodge .....	1	3
	<hr/>	<hr/>
	9	46
	<hr/>	<hr/>

### Consultants' Services.

The services of Obstetrical Specialists were asked for and provided on twelve occasions and the Midwifery Emergency Service was sent to four cases during the year.

### Midwives Acts.

In accordance with custom the Inspector of Midwives for the City regularly examined the professional bags, appliances and records kept by practising midwives, and all cases of ophthalmia neonatorum, puerperal pyrexia, and septicemia were carefully and thoroughly investigated and supervised.

For these various purposes 667 visits were made and 421 interviews were held. 180 visits were made to septic patients, and 167 to cases of ophthalmia neonatorum.

Sixty midwives notified their intention to practise midwifery in the City. Two of these were registered as being in practice prior to the 1902 Act, and the remaining fifty-eight qualified by

examination and possessed the Certificate of the Central Midwives Board. Ten of them only did temporary work at Maternity Homes.

The following table shows the work done by the Municipal Midwives during the period August—December :—

No. of ante-natal visits .....	3,557
No. of deliveries .....	833
No. of nursings .....	14,037

*Births attended by Midwives.*—1,764 (net) living births (an increase of 53 on the previous year) and 35 (net) still-births (19 less than in 1936) were attended by midwives during the year. Midwives attended 41.8 per cent. of the net births in the City. In addition midwives attended in the capacity of maternity nurses with doctors in 348 cases, as compared with 347 in 1936.

#### 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...	388	242	630
Number of treatments given	8,047	1,923	9,970

#### Health Talks.

A lecture lasting about ten minutes and 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—was given by the Centre Health Visitor at every Centre. There is a complete syllabus of the subjects of these talks, and this is closely adhered to. It embraces everything conducive to maintaining good health in mothers and children, and the talks are listened to with interest.

#### Nursery Schools.

These were conducted by members of the Voluntary Association in Diana Street and Wharncliffe Street Centres, and were

much appreciated and enjoyed by the parents and scholars respectively. The Wharncliffe Street School was discontinued in May owing to a paucity in the numbers attending.

### Births.

Of the 4,796 infants born alive in 1937, and belonging to Newcastle residents, 2,441 were boys and 2,355 were girls. Of the former 106 per 1,000, and of the latter 75 per 1,000 died during their first year.

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

Nursing Homes .....	115
Princess Mary Maternity Hospital.....	562
Gables Maternity Home.....	137
Newcastle General Hospital.....	535
	1,349

### Illegitimate Births.

One hundred and seventy-four illegitimate children were born—this being 4 more than in the previous year. The death rate among these children is high everywhere, and in Newcastle in 1937 it was 126 per 1,000 compared with 90 per 1,000 legitimate children. Every effort is made to save these children, and when it is possible to get the mothers to bring the children regularly to the Centres the children's lives are practically secure. In all instances the unmarried mother is provided with free milk for her infant when this is suitable and necessary.

### Deaths of Children.

	1933	1934	1935	1936	1937
Deaths of children during first week of life .....	126	112	109	102	101
Deaths of children during first month	177	197	117	106	174
Deaths from prematurity .....	96	101	104	106	93
Deaths of twins and triplets.....	39	33	29	23	30

### 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 the last eighteen years special efforts have been made in Newcastle to encourage mothers to bring toddlers to the Centres, and it is gratifying to report that of the 119,527 attendances at the Centres last year, more than half, 67,919, were made by children of 1-5 years of age.

#### TODDLERS ATTENDING THE CENTRES.

<i>Year.</i>	<i>Number of Children.</i>
1933 .....	4,351
1934 .....	4,198
1935 .....	4,288
1936 .....	4,315
1937 .....	4,806

### Ophthalmia Neonatorum.

The number of cases notified was 44, of which 40 were City cases. 40 of these were visited. The confinements were attended by :—

Doctors .....	6
Midwives .....	19
Princess Mary Maternity Hospital.....	8
Doctor and Midwife.....	3
Newcastle General Hospital .....	3
Elswick Lodge .....	1
	<hr/>
	40
	<hr/>

167 calls were made to the 40 visited cases in the City, and the ultimate results were :—

Recovered completely .....	38
Died .....	1
Slightly defective .....	1
	<hr/>
	40
	<hr/>

The *ophthalmia incidence* per 1,000 births for the last five years has been as follows :—

1933 .....	11.0
1934 .....	11.5
1935 .....	12.3
1936 .....	11.2
1937 .....	8.4

### Children Acts, 1908-1933.

At the beginning of the year there were 112 nursed-out children in the City, and 83 at the close of the year. Of these 34 were with foster mothers and 49 were in Institutions.

#### CHILDREN IN INSTITUTIONS.

The Teresa Nursery .....	27
Convent of La Sagesse.....	10
The Northern Counties Orphanage .....	5
Northern Counties Institution for the Deaf and Dumb.....	3
Nazareth Home.....	3
Salvation Army Home .....	1
	<hr/>
	49
	<hr/>

All these children were regularly supervised and kept under observation. Six of them died in Hospital during the year.

#### Municipal Training Course for Health Visitors.

The seventh Training Course for Health Visitors commenced in September, 1936, and ended with the examination at the College of Medicine in April, 1937. Of the 16 students enrolled thirteen qualified in April and one in July.

The eighth Training Course commenced with 12 students in October, 1937.

#### Welfare Centres.

The following table shows the geographical position of the Centres in the City, together with details of Centre days :—

Centre.	Address.	Women and Children.	Medical Officer.	Health Visitor.	Ante-Natal Sessions.
Benwell	Y.W.C.A. Club, Buddle Road	Monday Thursday	Dr. E. G. Brewis Dr. Dorothy Hopkinson	Miss Batty Miss Roxby	Friday, 2 p.m. Mr. F. E. Stabler.
Byker	Sun Ray Clinic, Brinkburn Street	Monday Tuesday	Dr. Anne Fairweather Dr. C. N. Armstrong	Miss Johnson	Thursday, 2 p.m. Friday, 2 p.m. Dr. Mabel Campbell.
City	Princess Mary Maternity Hospital, Jubilee Road	Tuesday	Dr. A. F. G. Spinks	Miss Pritchard	Thursday, 2 p.m. Wednesday, Mr. F. E. Stabler Thursday, Mr. W. Hunter Friday, Mr. H. Evers, Mr. Weeks
Cowgate	Methodist Church Hall, Stamfordham Road	Wednesday (All Day)	Dr. Elsie Wright, p.m.	Miss Willson	Wednesday, 10 a.m. Mr. F. E. Stabler
Diana Street, Westgate.	25, Diana Street	Tuesday Friday	Dr. Elsie Wright Dr. A. G. Ogilvie	Miss Hastie	Tuesday, 2 p.m. Mr. W. Hunter
Elswick	Elswick Wesleyan Church Hall, Malvern Street	Monday Thursday Friday	Dr. Glen Davison Dr. E. G. Brewis Dr. Gertrude Hickling	Miss Hatfield Miss Craggs	Monday, 10 a.m. Mr. W. Hunter
Fenham	Church Hall, Grange Road	Wednesday	Dr. A. F. G. Spinks	Miss Lewis	Friday, 10 a.m.
Heaton	St. Gabriel's Parish Hall, Chillingham Road	Tuesday Friday, p.m.	Dr. Anne Fairweather	Miss Carr	Dr. Mabel Campbell.
Scotswood	St. Margaret's Church Hall, Norland Road	Monday	Dr. A. F. G. Spinks	Miss Mason	Friday, 10 a.m. Mr. F. E. Stabler.
Shieldfield	St. Jude's Parish Hall, Dinsdale Road	Thursday Tuesday	Dr. C. C. Ungley	Miss Simpson	Byker (see above)
Spital Tongues	Benson Memorial Chapel, Ancrum Street	(Afternoon only)	Dr. E. G. Brewis Dr. Glen Davison Dr. C. N. Armstrong Dr. A. G. Ogilvie Dr. Gertrude Hickling	Miss Phillips	Diana St. (see above). or Wharnccliffe Street (see below). Tuesday, 2 p.m. Dr. Mabel Campbell.
{ St. Anthony's	St. Anthony's Road	Wednesday Friday	Dr. E. G. Brewis Dr. Glen Davison	Miss Bradley Miss Youell	Tuesday, 10 a.m. Mr. F. E. Stabler.
{ Walker	Do.	Monday Thursday	Dr. C. N. Armstrong Dr. A. G. Ogilvie	Miss Hisco	Tuesday, 10 a.m. Walker above).
Walkergate	Conservative Assoc. Hall, Walpole Street, Walkergate	Thursday	Dr. Gertrude Hickling	Miss Shell	Tuesday, 10 a.m.
Wharnccliffe Street, Scotswood Road	18, Wharnccliffe Street	Wednesday	Dr. Dorothy Hopkinson	Miss Pearce	Tuesday, 10 a.m. Dr. Mabel Campbell.
Benton	St. Francis Church Hall	Friday Thursday (Afternoon only)	Dr. W. G. A. Swan Dr. A. F. G. Spinks		

CENTRE.	Ante-Natal Sessions.		Ante-Natal.		Post-Natal.		New Children.			Individuals.			Attendances.			Medical Sessions.		Individuals.	
	Individ-	Attend-	Individ-	Attend-	Individ-	Attend-	Under	Over	Total.	Under	Over	Total.	Under	Over	Total.	Number.	Average	Boys.	Girls.
	nals.	nals.	nals.	nals.	nals.	nals.	12 months	12 months		12 months	12 months		12 months	12 months					
Benton	...	...	...	...	...	...	113	15	128	145	86	231	1611	787	2398	49	48.9	117	114
Benwell	...	...	350	1178	32	89	278	44	322	428	512	940	4635	9201	13836	188	73.6	469	471
Byker	...	...	440	1624	4	5	290	53	343	412	370	782	4063	5220	9283	184	50.5	405	377
City	...	...	...	...	...	...	83	11	94	130	186	316	1195	3117	4312	94	45.9	161	155
Cowgate	...	...	...	...	...	...	75	16	91	110	109	219	1202	1260	2462	96	25.6	105	114
Diana Street	...	...	281	996	5	9	270	48	318	389	380	769	4313	4968	9281	188	49.4	403	366
Elswick	...	...	312	1086	3	3	334	61	395	510	532	1042	5331	6993	12324	188	65.6	526	516
Fenham	...	...	191	638	...	...	229	22	251	358	215	573	3737	2026	5763	94	61.3	297	276
Heaton	...	...	126	550	5	7	196	43	239	280	203	483	2978	2067	5045	94	53.7	246	237
Scotswood	...	...	173	728	54	78	166	19	185	256	265	521	2577	3885	6462	141	45.8	252	269
Shieldfield	...	...	...	...	...	...	198	29	227	275	322	597	2955	5769	8724	188	46.4	295	302
Spital Tongues	...	...	...	...	...	...	72	6	78	93	56	149	828	577	1405	47	29.9	71	78
St. Anthony's	...	...	214	795	6	10	314	54	368	479	490	969	4713	6847	11560	190	60.8	506	463
Walker	...	...	311	776	...	...	313	38	351	448	429	877	3985	5655	9640	188	51.3	448	429
Walkergate	...	...	...	...	...	...	193	36	229	268	264	532	2693	3139	5832	98	59.5	270	262
Wharnciffe Street	...	...	238	1057	...	...	280	114	394	390	387	777	4792	6408	11200	152	73.7	393	384
Total	...	...	2636	9428	109	201	3404	609	4013	4971	4806	9777	51608	67919	119527	2179	54.9	4964	4813

### Attendances at Maternity and Child Welfare Centres.

(CHILDREN ONLY.)

YEAR.	No. of Attendances.	No. of Individuals.	Average Attendance per Individual.	Average Attendance at each Session.
1920.....	22,596	3,751	6.0	44.2
1921.....	32,538	4,734	6.8	40.7
1922.....	36,020	4,835	7.4	44.9
1923.....	42,515	5,153	8.2	46.5
1924.....	45,766	5,587	8.2	45.5
1925.....	45,476	5,744	7.9	43.6
1926.....	50,697	6,467	7.8	46.2
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

### Dried Milk.

During the year 120,505 lb. cartons of dried milk were given gratis, and vouchers for 11,388 were given for cost price milk, the latter being distributed by the chemists as formerly. 48 per cent. of the children and 451 women attending the Centres were given free milk.

The following table shows the quantity of dried milk distributed each month during the year 1937 :—

MONTH.	FREE.	AT COST PRICE.
	lbs.	lbs.
January.....	5,451	} 3,345
February.....	8,560	
March.....	9,114	
April.....	11,305	
May.....	9,955	
June.....	9,572	
July.....	10,976	} 8,043
August.....	9,371	
September.....	9,531	
October.....	12,315	
November.....	10,069	
December.....	14,286	
	120,505	11,388

Children attending Centres.....	9,777	
Children given free milk.....	4,691	
Percentage.....	48.0	
Expectant mothers given milk.....	451	
Free milk given to children (lbs.).....	117,656	} = 120,505
Free milk given to expectant mothers (lbs.).....	2,849	

### NOTIFICATION OF BIRTHS ACTS.

Of the 5,996 live, and 368 still-births (gross) which were registered in the City in 1937, 5,742 or 90.2 per cent. were notified as follows :—

<i>Notified by.</i>	<i>Gross Living Births.</i>	<i>Gross Still Births.</i>
Medical Practitioners.....	313	17
Medical Practitioners and Midwives	333	15
Midwives .....	1,805	35
Princess Mary Maternity Hospital....	2,195	221
Newcastle General Hospital.....	505	35
Gables Maternity Home.....	259	7
Parents .....	2	.....
	<u>5,412</u>	<u>330</u>

**Still-Births.**—Of the total net notifications of 4,303 births received, 148 were of still-births, which gives a rate of 34.1 per 1,000 of net live and still-births.

Still-births Registered (net).....	181
Still-births Notified.....	148
Percentage Notified.....	82.0
Still-births Visited.....	170

<i>Duration of Pregnancy.</i>	<i>No.</i>	<i>Percentage to Total.</i>
At or under 7 months.....	20	11.7
At 7-8 months.....	43	25.3
At full time.....	107	63.0

Suggested causes of the still-births :—

	<i>Cases.</i>
(a) Ill-health of the mother.....	33
(b) Foetal deformities and malpresentations and uterine inertia.....	39
(c) Premature delivery, ante-partum hæmorrhage, etc. ....	25
(d) Other causes, including albuminuria and accidents	73

**Syphilis** was returned as the cause of death of 2 children below the age of 1 year.

### Health Visiting.

With the exception of the so-called residential districts such as parts of Jesmond, every district in the City was visited regularly by members of the Health Visiting Staff.

For all purposes the Health Visiting Staff during the year 1937 made a grand total of 73,800 visits.

4,584 births were visited, and 18,771 re-visits were paid, an average of about 4 re-visits per child. These gave a total of 23,355 visits to children under 1 year.

SUMMARY OF VISITS.

	Primary.	Subsequent.	Total.
Births.....	4,584	18,771	23,355
Measles .....	1,716	1,618	3,334
Pneumonia .....	719	806	1,525
Diarrhœa .....	106	74	180
Children over 1 year.....	.....	.....	33,930
Hospital Cases.....	.....	.....	426
Expectant Mothers.....	.....	.....	1,299
Special Visits.....	.....	.....	1,002
Visits to Boarded-out or Nursed-out Children.....	.....	.....	616
Unsuccessful Visits (Outs and Removals) .....	.....	.....	7,475
Orthopædic Work .....	.....	.....	1,068
Tuberculosis Contacts .....	.....	.....	206
	.....	.....	74,416

**Infants on Visiting List.**

Of 4,290 children born in the City in 1936, 3,324 completed their first year in 1937 and of the remainder :

416 died,  
237 left the City,  
261 could not be traced,  
52 were visited only once.

The following figures are therefore based on the 3,324 who completed the first year, *plus* the 416 who died, making in all a total of 3,740, and of that total 2,492, or 66.6 per cent., attended the Welfare Centres.

Of the number (2,492) attending the Centres 182 died, a rate of 73 per 1,000, as compared with 90 per 1,000 for the City.

*Illnesses.*—Among the children visited 112, or 3 per cent., contracted measles; 138, or 3.7 per cent., contracted whooping cough; 138, or 3.7 per cent., contracted diarrhœa; 471, or 12.6 per cent., contracted bronchitis or pneumonia.

Details as to the stated **Feeding** of the 3,740 children under supervision during the year are given in the following table:—

	FEEDING.					
	BREAST.		MIXED.		ARTIFICIAL.	
	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.
At First Visit .....	3,245	86.8	143	3.8	352	9.4
Deaths in First Year of above Children.....	323	10.0	17	11.9	76	21.6
At time of Death .....	169	5.2	40	28.0	207	58.8
Surviving Children(3,324) at 9 months .....	1,083	32.6	770	23.2	1,471	44.2

Details as to children who should have attained the age of 5 years during 1937 :—

Well and attending school.....	2,486
Ill and not attending school .....	17
Left City or failed to trace.....	1,528
Died in 2nd year .....	88
Died in 3rd year .....	40
Died in 4th year .....	14
Died in 5th year .....	9
Total surviving.....	2,509
Total deaths.....	151
Total reported on.....	4,188

The addresses of 239 children who left the City were sent to the Medical Officers of Health for the districts to which they had gone.

#### Voluntary Workers.

As in other years the lady members of the Voluntary Association, under the presidency of Mrs. Leach and Mrs. Higginbottom, rendered valuable services, not only at the Centres, but also in the districts.

I am, Sir,

Your obedient servant,

A. F. G. SPINKS, M.D.,

*Maternity and Child Welfare Medical Officer.*

*Maternity and Child Welfare Department,*

*10, Bigg Market,*

*Newcastle upon Tyne,*

*June, 1938.*

## MATERNITY AND NURSING HOMES.

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### REPORT OF THE BOARD OF INSPECTION.

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#### 1.—Introductory.

The Annual Inspection of the Maternity and Nursing Homes in the City, under the Public Health Act, 1936, Section 191, has again been carried out by the Board specifically appointed for the purpose.

#### 2.—Record of Inspection.

Seventeen homes in all were inspected, sixteen of these being homes which were inspected last year. Since the last report was presented one nursing home has been closed owing to the ill-health of the proprietor and one new home has been granted registration.

#### 3.—Assessment of Nursing Homes.

In the two previous reports a classification of the homes under the headings of "satisfactory," "moderately efficient," and "unsatisfactory" was made.

Of the seventeen homes inspected in 1937 fifteen could be classified as "satisfactory" in a broad sense. While the standard of management and efficiency varied somewhat there was no instance where any of these seventeen showed marked deficiencies in either staff or equipment.

Of the two remaining homes one was classified as unsatisfactory, and had been classified as such in the two previous reports. The keeper stated, however, that the home was to be closed in three months' time. The other was the home which had recently applied for registration. At the time of the inspection this home was scarcely in full running order, and the staff was not complete. In view of these facts the home has not been classified in this report.

#### 4.—Observations.

The general improvement in the conditions prevailing in the nursing homes in the City, which was mentioned last year appears to have been maintained, although there is still room for improvement in certain homes. Two points call for comment. Firstly,

a reluctance in certain cases to provide a "duty room" for nurses which would appear to be a necessity in any efficient home, and secondly the absence in the majority of cases of a system of "reliefs" for meals. The introduction of this latter system would ensure undisturbed meals for the staff and would prevent complaints of lack of attention from patients.

**5.—Recommendations.**

It is suggested that the findings and recommendations of the Board be communicated to the keepers of the homes with an intimation that these latter must be carried out. In view of the fact that the keeper of the home listed as "unsatisfactory" intends to close the home it is recommended that the certificate be surrendered but no further action taken.

E. F. DAWSON-WALKER,

*Deputy Medical Officer of Health.*

A. F. G. SPINKS,

*Maternity and Child Welfare Medical Officer.*

J. L. WATT,

*Matron, City Hospital for Infectious Diseases.*

*Health Department,*

*Town Hall,*

*Newcastle upon Tyne, 1.*

## APPENDIX 1.

## CITY AND COUNTY OF NEWCASTLE UPON TYNE.

PUBLIC HEALTH ACT, 1936.

## LIST OF NURSING HOMES REGISTERED.

Ref. No.	Address.	Registered in the Name of
1.	26, Archbold Terrace	Miss M. M. Anderson
2.	1a, Clayton Road	Miss C. E. Balfour
3.	1, Park Terrace	Mr. R. J. Willan, F.R.C.S.
4.	5, Saville Place	Dr. H. Drummond
5.	4, Bentinck Terrace	Mrs. L. Newton
6.	10, Fernwood Road	Miss N. P. Hunter
7.	"The Minorities," Jesmond Rd.	Mother Prioress
8.	"The Gables," Elswick Road.	The Matron
9.	24, Grosvenor Road	Miss Kirby and Miss Rooney
10.	6, Osborne Road	Miss M. H. Robertson
11.	"Elswick Lodge," Park Road	Chairman of Management Committee
12.	5, Osborne Terrace	Mrs. H. W. B. Gordon
13.	9, Windsor Terrace	Miss I. M. Middleton
14.	"Catherine House," 63, Osborne Road	Salvation Army
15.	"The Cheviot," Bowland Lodge, Western Avenue	Mrs. M. I. Behn
16.	"Cairney House," 10, Osborne Villas	Mr. J. Gilmour, F.R.C.S.
17.	Fernwood House, Clayton Road	Mr. H. Harvey Evers, F.R.C.S.
18.	*Walker Accident Hospital, Airey Terrace, Walker	The Honorary Secretary
19.	*Northern Women's Hospital, 1a, Osborne Avenue	The Honorary Secretary

\* Exempted from Registration under Section 192.

**INCLUDING REPORTS OF THE  
DEPUTY MEDICAL SUPERINTENDENT OF THE  
INFECTIOUS DISEASES HOSPITAL  
AND THE BACTERIOLOGIST.**

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## **III.—INFECTIOUS DISEASE.**

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

INCLUDING REPORTS OF THE  
DEPUTY MEDICAL SUPERINTENDENT OF THE  
INFECTIOUS DISEASE HOSPITAL  
AND THE BACTERIOLOGIST

---

III. INFECTIOUS DISEASES

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REVEREND FOOD TOWERS,  
CITY HOSPITAL FOR INFECTIOUS DISEASES,  
DIRECTION, 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.	Poliomyelitis.	Measles and Rubella.	Puerperal Fever.	Small-pox.	Whooping Cough.	Diarrhoea (under 2 years of age).	Dysentery.	Tuberculosis, All forms.
St. Nicholas'	...	...	...	...	2	...	...	...	2	...	...	...	...	...	1
St. Thomas'	...	...	...	...	12	...	...	...	...	...	...	...	...	...	4
St. John's	5	...	...	...	12	...	1	...	...	2	...	...	4	...	18
Stephenson	...	...	...	...	19	...	...	...	...	...	...	1	6	...	19
Armstrong	1	...	...	...	29	...	1	...	2	...	...	3	1	...	11
Elswick	...	2	...	...	16	1	...	...	5	...	...	1	6	...	17
Westgate	...	...	...	...	10	...	...	...	...	...	...	4	3	...	12
Arthur's Hill	3	1	...	...	11	...	1	...	2	...	...	...	1	...	10
Benwell	4	1	...	...	38	1	...	...	1	...	...	5	9	...	34
Fenham	1	...	...	...	21	1	...	...	2	...	...	1	3	...	28
All Saints'	...	...	...	...	18	...	...	...	...	...	...	...	2	...	17
St. Andrew's	2	1	...	...	13	...	...	...	...	1	...	...	2	...	13
Jesmond	...	...	...	...	11	...	1	...	...	...	...	...	1	...	5
Dene	1	1	...	...	9	...	1	...	...	...	...	...	4	...	16
Heaton	1	...	...	...	10	...	...	...	...	...	...	2	2	...	14
Byker	...	...	...	...	14	...	...	...	...	...	...	3	9	...	18
St. Lawrence	1	...	...	...	16	...	...	...	...	...	...	...	5	...	15
St. Anthony's	1	1	1	...	13	1	...	...	...	1	...	2	9	...	30
Walker	3	1	...	...	25	1	1	...	...	1	...	3	15	...	42
CITY	23	8	1	...	299	5	6	1	14	5	...	25	82	...	324

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 1937.

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.		1937.		1936.			Cases.*	Deaths.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.						
Diphtheria (including Membranous Croup).....	13	...	97	13	283	17	63	1	34	2	5	1	...	...	...	...	495	34	705	43	475	23	508	
Erysipelas.....	5	2	3	...	9	...	20	...	44	...	76	2	7	...	...	...	181	11	193	16	167	8	93	
Scarlet Fever.....	4	...	199	1	518	1	89	...	38	...	6	...	...	...	...	...	854	2	955	11	843	1	878	
Enteric Fever.....	1	...	1	...	...	5	...	...	1	...	...	...	...	...	...	...	8	1	8	3	8	...	43	
Cerebro-Spinal Fever.....	2	3	2	1	3	1	1	2	...	3	...	1	...	...	...	...	8	11	10	16	8	5	26	
Acute Poliomyelitis.....	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	3	...	5	...	3	...	2	
Acute Poliioencephalitis.....	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1	...	...	1	1	...	
Encephalitis Lethargica.....	...	...	...	...	...	...	...	...	...	3	...	3	...	...	...	...	...	6	...	...	10	6	2	
§Puerperal Fever.....	...	...	...	...	...	...	7	3	19	12	...	...	...	...	...	...	26	15	35	43	9	5	...	
§Puerperal Pyrexia.....	...	...	...	...	...	...	34	...	73	...	...	...	...	...	...	...	107	95	95	...	48	...	4	
Ophthalmia Neonatorum.....	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	44	...	54	...	40	...	8	
Pneumonia.....	89	113	226	49	128	11	87	10	117	37	109	79	56	68	...	...	818	367	573	309	776	299	160	
Malaria.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery.....	16	...	68	...	15	1	...	...	7	...	5	...	3	...	...	...	114	1	41	4	110	...	163	
†Measles and Rubella.....	104	2	827	10	905	2	24	...	8	...	...	...	5	...	...	...	1873	14	4034	20	1862	14	54	
‡Chickenpox.....	28	...	271	...	687	...	18	...	4	...	...	...	...	...	...	...	1008	...	1144	...	1004	...	15	
	306	120	1696	74	2548	34	349	16	346	58	201	86	83	75	11	...	5540	463	7852	475	5354	362	1956	

\* Cases from outside the City excluded for the purpose of calculating Net Death Rates.

† Ministry of Health Regulations, 1920. ‡ Temporarily notifiable.

§ Ceased to be notifiable on 1st October, 1937.

## WARD DISTRIBUTION OF INFECTIOUS DISEASES (NET).

WARD.	Diphtheria.	Erysipelas.	Enteric Fever.	Scarlet Fever.	Cerebro-Spinal Fever.	Polio-myelitis.	Acute Polio-encephalitis.	Encephalitis Lethargica.	Measles.	Rubella.	Puerperal Fever.	Puerperal Pyrexia.	Ophthalmia Neonatorum.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Smallpox.	Chickenpox.	Malaria.	Dysentery.	Tuberculosis (all forms).	TOTAL.
St. Nicholas'	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*St. Thomas'	10	7	4	30	.....	.....	.....	.....	116	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. John's	23	2	.....	5	.....	.....	.....	.....	80	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stephenson	21	7	.....	15	.....	.....	.....	.....	54	48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Armstrong	37	3	.....	29	.....	.....	.....	.....	53	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elswick	27	6	.....	29	.....	.....	.....	.....	115	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Westgate	12	5	.....	13	.....	.....	.....	.....	193	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
†Arthur's Hill	11	15	2	26	2	.....	.....	.....	53	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Benwell	57	7	.....	60	.....	.....	.....	.....	340	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fenham	50	14	.....	97	.....	.....	.....	.....	377	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
All Saints'	9	6	.....	20	.....	.....	.....	.....	52	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Andrew's	9	9	.....	13	.....	.....	.....	.....	34	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jesmond	11	10	.....	28	.....	.....	.....	.....	34	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dene	8	14	.....	93	.....	.....	.....	.....	29	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Heaton	15	9	.....	78	.....	.....	.....	.....	32	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Byker	24	5	1	54	.....	.....	.....	.....	29	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence	33	7	.....	59	.....	.....	.....	.....	24	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Anthony's	45	14	1	88	.....	.....	.....	.....	46	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
†Walker	73	27	.....	104	.....	.....	.....	.....	20	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
CITY	475	167	8	843	8	3	1	.....	1682	180	9	48	40	672	104	.....	1004	.....	110	626	5980

\* Includes Royal Victoria Infirmary and Fleming Memorial Hospital for Sick Children.

† Elswick Grange and Newcastle General Hospital.

‡ City Hospital for Infectious Diseases, Walker Gate.

§ Ceased to be notifiable on 1st October, 1937.

HOUSEHOLDS AFFECTED WITH INFECTIOUS DISEASES  
EXCLUSIVE OF TUBERCULOSIS, MEASLES AND CHICKENPOX.

DISEASES.	HOUSEHOLDS WITH						Mili- tary or Naval Cases.	Insti- tutions. *	TOTAL CASES (Gross).	Cases. from outside of City.	NET CASES.
	Single Cases.	2 Cases each.	3 Cases each.	4 Cases each.	5 Cases each.	6 Cases and over					
Diphtheria (including Membranous Group) ..	374	32	4	...	...	...	...	45	20	475	
Erysipelas.....	138	3	...	...	...	...	...	37	14	167	
Scarlet Fever .....	658	57	9	2	...	...	...	47	11	843	
Enteric (or Typhoid Fever)	1	...	...	...	...	...	...	7	...	8	
Cerebro-Spinal Fever .....	8	...	...	...	...	...	...	...	...	8	
Poliomyelitis .....	3	...	...	...	...	...	...	...	...	3	
Polioencephalitis .....	...	...	...	...	...	...	...	1	...	1	
Puerperal Fever .....	7	...	...	...	...	...	...	19	17	9	
Puerperal Pyrexia .....	29	...	...	...	...	...	...	78	59	48	
Ophthalmia Neonatorum..	32	...	...	...	...	...	...	12	4	40	
Pneumonia .....	718	22	2	1	...	...	...	46	42	776	
Dysentery.....	31	3	...	...	...	...	...	77	4	110	
TOTAL .....	1,999	117	15	3	...	...	...	369	171	2,488	

\* 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.	Encephalitis Lethargica.	Measles and Rubella.	Puerperal Fever.	Puerperal Pyrexia.	Pneumonia.	Chickenpox.	Ophthalmia Neonatorum.	Polio- encephalitis.	Dysentery.	Total.
Royal Victoria Infirmary .....	3	12	20	...	1	3	1	40	2	...	...	2	84	
Fleming Memorial Hospital .....	22	4	...	5	...	6	...	1	...	...	...	1	39	
Newcastle General Hospital .....	11	12	4	2	...	5	2	...	...	...	3	59	99	
City Hospital for Infectious Diseases .....	...	...	2	...	...	1	2	...	...	...	...	...	5	
Princess Mary Maternity Hospital .....	...	2	...	...	...	...	11	73	1	...	8	...	95	
Military Barracks .....	...	...	3	...	...	...	...	...	...	...	...	...	3	
Eye Infirmary .....	1	...	3	...	...	3	...	...	...	...	...	...	1	
National Children's Home .....	...	...	3	...	...	...	...	...	...	2	...	...	6	
Throat, Nose and Ear Hospital Common Lodging Houses .....	...	5	5	...	...	...	...	3	...	...	...	...	12	
Royal Victoria School for the Blind .....	...	...	...	...	...	...	...	...	...	...	...	...	3	
Babies' Hospital, West Parade Nursing Homes .....	1	...	1	...	...	...	...	...	2	...	...	14	1	
Hostels, etc. ....	3	...	2	...	...	...	3	5	1	...	1	...	18	
Deaf and Dumb Institution .....	...	...	1	...	...	3	...	...	...	4	...	...	7	
St. Vincent's Home .....	3	...	4	...	...	4	...	...	...	...	...	...	8	
Teresa Nursery .....	1	...	...	...	...	...	...	...	...	...	...	1	7	
St. Joseph's Home .....	...	2	...	...	...	...	...	...	...	...	...	...	3	
<b>TOTAL .....</b>	<b>45</b>	<b>37</b>	<b>47</b>	<b>7</b>	<b>1</b>	<b>25</b>	<b>19</b>	<b>78</b>	<b>46</b>	<b>10</b>	<b>12</b>	<b>1</b>	<b>77</b>	<b>405*</b>

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

**SCARLET FEVER.**

Notifications of 843 cases were received during the year, and there was 1 death, equivalent to a case mortality of 0.1 per cent.

**DIPHTHERIA.**

475 cases were notified during the year, and 23 died, a case mortality of 4.8 per cent., as compared with 5.1 in 1936.

**MEASLES AND RUBELLA.**

1,862 cases (including 180 of rubella) were notified, and there were 14 deaths (net) in 1937, representing a death rate of 0.05 per 1,000 population, as compared with 0.06 in 1936, and a case mortality of 0.7 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'.....	...	...	...	...	1	...	...	1	...	...	2
St. Thomas'.....	...	...	...	...	...	...	...	...	...	...	...
St. John's .....	...	...	...	...	...	...	...	...	...	...	...
Stephenson.....	...	...	...	...	...	...	...	...	...	...	...
Armstrong .....	...	...	...	...	...	...	...	...	...	...	...
Elswick .....	...	...	1	...	1	...	...	...	...	...	2
Westgate .....	...	1	...	...	3	...	...	...	...	1	5
Arthur's Hill .....	...	...	...	...	...	...	...	1	...	...	2
Benwell .....	...	...	...	...	1	...	...	1	...	...	2
Fenham .....	...	...	...	...	...	...	...	...	1	...	1
All Saints' .....	...	...	...	...	1	...	1	...	...	...	2
St. Andrew's .....	...	...	...	...	...	...	...	...	...	...	...
Jesmond .....	...	...	...	...	...	...	...	...	...	...	...
Dene.....	...	...	...	...	...	...	...	...	...	...	...
Heaton.....	...	...	...	...	...	...	...	...	...	...	...
Byker .....	...	...	...	...	...	...	...	...	...	...	...
St. Lawrence .....	...	...	...	...	...	...	...	...	...	...	...
St. Anthony's .....	...	...	...	...	...	...	...	...	...	...	...
Walker .....	...	...	...	...	...	...	...	...	...	...	...
<b>TOTAL .....</b>	...	1	1	...	7	...	1	2	1	1	14

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 1937.**

Cases notified by Medical Practitioners .....	1,580
Cases found by Health Visitors .....	282
Cases notified by Parents and others .....	11
	1,873 gross.
Less 11 cases from outside the City :—	1,862 net.

Of the total number of measles cases notified, 1,716 in 1,396 households (or 91.6 per cent.) were visited by the Health Visitors, and 1,618 revisits were paid, a total of 3,334 visits.

The following particulars refer to the cases visited :—

	DWELLINGS OF					Total houses visited.
	1 room	2 rooms	3 rooms	4 rooms	More than 4 rooms	
Families .....	44	285	471	414	182	1,396
Children .....	88	672	993	1,053	376	3,182
Cases .....	57	375	553	521	210	1,716
Percentage of Cases to Children .....	64.8	55.8	55.7	49.5	55.9	53.9
Cases developing Pneumonia .....	1	8	8	11	4	32
Percentage of Cases developing Pneumonia .....	1.8	2.1	1.4	2.1	1.9	1.9
Deaths from Measles .....	....	4	4	4	....	12
Cases, notified Measles, Deaths certified Pneumonia..	....	....	....	....	....	....
Case Mortality per cent. ....	....	1.1	0.7	0.8	....	0.6

Total unvisited cases 157, including 132 better-class houses in which no deaths occurred, and 25 in institutions, with no deaths.

*Medical Attendance.*—In 97.7 per cent. of the cases visited a doctor was in attendance.

*Condition of Patient.*—In 91.8 per cent. of the cases visited the disease ran a normal course, but bronchitis, pneumonia or other complications developed in the remainder.

*Attendance at Schools.*—814, or 47.4 per cent., of the affected children had previously attended school, and 902, or 52.6 per cent., had never attended school. In connection with 518 of the latter cases, however, other children in the infected houses were scholars, equivalent to 30.2 per cent. of the total cases.

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

Under 1 year .....	103
1-2 years .....	174
2-3 years .....	186
3-4 years .....	226
4-5 years .....	211
5-6 years .....	407
Over 6 years .....	409
	<hr/>
	1,716
	<hr/>

### FOOD POISONING.

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

16 Newcastle residents were infected in connection with an outbreak in an area of a neighbouring local authority. These cases were shown to have been infected by eating pork sandwiches which had been sold from a shop in this neighbouring area. The causal organism was shown to be the bacillus *ætrycke*.

Of the remaining 11 cases, 8 were notified from the Newcastle General Hospital, all of which were Newcastle cases. One was notified from the Fleming Memorial Hospital (an extra-mural case), and one from the Babies' Hospital. The remaining case was notified from its home address. All these infections were due to the bacillus *ætrycke*.

With the exception of the outbreak referred to above, no source of infection could be traced in connection with the remaining 11 cases.

There were no deaths due to food poisoning throughout the year.

### ENTERIC GROUP OF FEVERS.

During the year 1937, 23 cases of the enteric group of infections were brought to notice, 11 of these being true cases and seven "carriers." 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 1937.

	EXTRA-MURAL.		NEWCASTLE.	
	Typhoid.	Para-typhoid B.	Typhoid.	Para-typhoid B.
January .....	....	....	....	....
February .....	....	....	....	....
March .....	....	....	....	....
April .....	....	....	....	5
May .....	....	1	....	10*
June .....	....	1	....	1
July .....	....	....	1	1
August .....	1	....	....	....
September .....	....	....	....	....
October .....	....	....	....	....
November .....	....	1	....	....
December .....	....	1	....	....
Totals.....	1	4	1	17

\* Includes seven carriers.

It will be seen that five patients came from without the City's boundaries. The remaining eighteen, including seven carriers, being Newcastle cases proper. Of the five extra-mural cases, four were notified from the Royal Victoria Infirmary and one from the Fleming Memorial Hospital. All these cases were admitted to the City Hospital, at the request of the Local Authority concerned.

The eighteen City patients who were all admitted to Hospital were made up of one case of Typhoid, 10 of Paratyphoid B. infections and 7 Paratyphoid B. carriers. All these patients made good recoveries.

Four of the above cases of Paratyphoid B. fever and all the carriers, were due to an outbreak of this infection in the Fleming Memorial Hospital during the months of April and May. With the exception of a Resident Medical Officer, the outbreak was entirely limited to the domestic staff, neither the nursing staff nor the patients being involved. All the carriers were in good health when admitted to hospital, but in the majority of cases a history of previous malaise was obtained.

In spite of extensive enquiries and bacteriological investigations, it was not possible to elicit the source of the outbreak. It seems probable that the subsequent spread among the domestic staff was due to unsatisfactory accommodation provided for the staff in the hospital. Attention had previously been drawn to

this accommodation following on an outbreak of Paratyphoid B. fever in the hospital during 1932.

In all there were 32 admissions to the City Hospital. Apart from the 23 patients mentioned above, these cases were all notified in the areas of neighbouring Local Authorities, and were admitted to the City Hospital at the request of the Local Authority concerned. Two of these cases were suffering from typhoid fever, the remaining five being Paratyphoid B. infections. The two other patients were chronic carriers of the disease who were sent in for special investigation, in order to see whether it was possible to eradicate the infection. One subsequently underwent cholecystectomy.

There were no deaths due to Enteric Fever among the cases admitted to hospital during the year.

### DIARRHŒA.

There were in all 94 deaths from the disease, equal to a death rate of 0.32 per 1,000 population, and this number included 82 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 thirty-three years :—

Year.	Births Registered	Successful Vaccinations	Unsuccessful Vaccinations	Exemption Certificates.		Deaths, Removals and Postponements
				Number.	Percentage to Total Births.	
1905	7,958	7,264	27	65	0.8	....
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	6,011	2,928	22	1,452	24.1	....

\* Vaccination Act, 1907, came into force.

† Walker District included.

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

§ Provisional figures only.

**CHICKENPOX.**

1,004 cases were notified. There were no deaths.

**ERYSIPELAS.**

167 cases of this disease were notified and there were 8 deaths.

**PUERPERAL SEPTICÆMIA AND PUERPERAL PYREXIA.**

57 cases were notified, with 5 deaths. Inquiries were made concerning 55 of these. Puerperal Septicæmia ceased to be notifiable on the 1st October, 1937.

**INFLUENZA AND PNEUMONIA.**

These diseases accounted for 400 deaths as against 294 last year.

Total deaths at age periods.

Under 5 years.	5-15.	15-25.	25-45.	45-65.	65 and over.	Total.
135	10	11	38	96	110	400

As will be seen from the above figures, 135, or 33.75 per cent., of the deaths occurred below the age of 5 years.

776 cases of pneumonia, including influenzal-pneumonia, were notified. For the ages and ward distribution, see pages 80 and 81.

Of that number 719, or 92.7 per cent., were visited by Health Visitors. It was found that 447, or 62.2 per cent., were primary pneumonia, 152, or 21.1 per cent., were cases of influenzal-pneumonia, and 120, or 16.7 per cent., were cases of pneumonia following other diseases.

*Ages.*—The ages of the 719 cases visited were as follows :—

Under 1 year .....	87
1-5 years .....	215
5-15 years .....	116
15-25 years .....	77
25-45 years .....	95
45-65 years .....	88
and over 65 years .....	41
	<hr/>
	719
	<hr/>

*Housing.*—44 cases occurred in 1 roomed dwellings, 178 cases occurred in 2 roomed dwellings, 200 cases occurred in 3 roomed dwellings, and 297 cases occurred in dwellings with more than 3 rooms.

*Type of House.*—345 cases occurred in flats, 123 cases in tenements, 248 in self-contained houses and 3 in common lodging houses.

*Previous History.*—

There was a previous history of	Measles	in 267 cases.
"	Whooping Cough	in 222 cases.
"	Influenza	in 157 cases.
"	Frequent winter	
"	Coughs and Colds	in 480 cases.
"	Pneumonia	in 163 cases.
"	Tuberculosis	in 14 cases.

*Hospital Treatment.*—145 cases of pneumonia were treated in the Infectious Diseases Hospital. The majority of these were from houses where there was over-crowding or other unsuitable home conditions. 35 of these patients died, giving a case mortality of 24.1 per cent.

*Deaths.*—147, or 20.5 per cent., of the visited cases of pneumonia died.

### ENCEPHALITIS LETHARGICA.

One case of encephalitis lethargica was admitted to the City Hospital during the year.

### ACUTE POLIOMYELITIS.

Three proved cases of poliomyelitis were admitted to the City Hospital during the year, and were later transferred to the Newcastle General Hospital.

### CEREBRO-SPINAL MENINGITIS.

During the last three years the incidence of cerebro-spinal fever, which for some years previous to 1932 had been steadily increasing, has declined, and during 1937 8 cases were notified in Newcastle. The figures for 1935 and 1936 were 27 and 17.

Sixteen cases of this disease were nursed in the City Hospital during the year. Seven of these were Newcastle cases, while the remainder were admitted either direct, or through one of the hospitals in the City, from surrounding areas.

There were 11 deaths among these 16 cases, equivalent to a case mortality rate of 68.7 per cent. The corresponding figures for 1935 and 1936 were 44.4 per cent. and 38.4 per cent.

Two of these cases died within 24 hours of admission, and one within 48 hours. If these are excluded the case mortality rate is equivalent to 61.5%. These figures are disappointingly high, but it is generally agreed that the mortality rate is higher when cases are few and of the sporadic type, than when the disease is more prevalent.

The distribution of these cases, according to the months in which they were admitted, and their places of origin, is recorded in the following table :—

	Newcastle.	Extra-Mural.	Totals.
January .....	....	....	....
February .....	....	1	1
March .....	2 (1)	1 (1)	3 (2)
April .....	1	....	1
May .....	1 (1)	2 (2)	3 (3)
June .....	....	....	....
July .....	....	2 (2)	2 (2)
August .....	2 (1)	....	2 (1)
September .....	....	....	....
October .....	....	2 (1)	2 (1)
November .....	....	....	....
December .....	2 (2)	....	2(2)
Totals .....	8 (5)	8 (6)	16 (11)

The figures in parentheses, which are included in the numbers alongside which they stand, indicate fatal cases.

The circumstances of all the Newcastle cases have been carefully investigated, but in no case has it been possible to trace the source of the infection.

One half of the cases of cerebro-spinal fever admitted to hospital came from extra-mural authorities in the neighbourhood, and wherever possible, it has been the policy of the Health Department to give assistance to authorities whose hospital accommodation is of such a character as to prevent them from giving adequate treatment to patients suffering from this extremely dangerous disease. The following table shows the age and sex distribution of the 16 cases admitted to hospital :—

Ages.	0-1.	1-2.	2-5.	5-15.	15-25.	25-45.	45 and upwards.	Totals.
Male .....	2 (2)	1 (1)	....	2	4 (2)	2 (2)	1 (1)	12 (8)
Female .....	2 (2)	1	....	1 (1)	....	....	....	4 (3)
Totals.....	4 (4)	2 (1)	....	3 (1)	4 (2)	2 (2)	1 (1)	16 (11)

Figures in parentheses indicate deaths.

It will be noted that the mortality rate is particularly high under the age of 5, and that young persons and adults from 5 to 25 have the best chance of recovery from this disease.

### BACILLARY DYSENTERY.

Bacillary dysentery has been prevalent in the City since 1928, and during the past year 205 cases were notified. In 117 of these cases the diagnosis was confirmed bacteriologically, one of these being an extra-mural case, which had been admitted to one of the City's hospitals suffering from the disease.

Ninety-seven proved cases of bacillary dysentery were admitted to the City Hospital. Among these cases there were two deaths.

The primary condition in one of these cases was tuberculous meningitis, and in the other marasmus. During the year 59 cases were notified from the Newcastle General Hospital. The majority of these cases, which were nearly all due to the Flexner type of organism, occurred during the first six months of the year. There was a marked diminution in the number of cases when the new Infants and Quarantine block was opened in May, providing greatly improved facilities for the nursing of this type of case.

Fourteen cases occurred in the Babies Hospital during the year. There was an outbreak during the month of August and September involving ten cases, the infecting organism being of the Sonne type.

The remainder were cases of the sporadic type. Two cases from the Royal Victoria Infirmary, and one from the Fleming Memorial Hospital were admitted during the year.

One nurse at the Newcastle General Hospital and one at the City Hospital were infected during the year.

The circumstances and history of all cases were carefully investigated with a view to obtaining information as to the probable sources of infection. The age, sex, and mortality incidence of the series of 97 cases admitted to hospital are given in the following table :—

Ages.	0-1.	1-2.	2-5.	5-15.	15-25.	25-45.	45 and upwards.	Total.
Males.....	8	21	14	9	....	4	4	60
Females .....	8 (2)	27	8	6	1	3	4	57 (2)
Total .....	16 (2)	48	22	15	1	7	8	117 (2)

The figures in parentheses indicate fatal cases.

The distribution of these organisms among the cases is as follows :—

	FLEXNER.					Sonne Bacillus.	Newcastle	Atypical	Flexnon Indole	Not Typed	Totals.
	W.	X.	Y.	Z.	XZ.						
Total No. of Cases .....	....	1	....	13	....	51	35	2	2	13	117
Fatal Cases....	....	1	....	....	....	....	1	....	....	....	2
Non-Fatal Cases .....	....	....	....	13	....	51	34	2	2	13	115

### VENEREAL DISEASES.

COMBINED RETURN OF STATISTICS FROM ROYAL VICTORIA INFIRMARY CLINIC,  
1ST JANUARY TO 29TH AUGUST, 1937, AND  
JOINT COMMITTEE'S CLINIC, 30TH AUGUST TO 31ST DECEMBER, 1937.

COUNTY BOROUGH OF NEWCASTLE UPON TYNE PATIENTS.

	Syphilis.		Gonorrhœa.		Non-Venereal		Soft Chancre.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
New infections .....	82	82	347	64	175	157	1	....
Transferred from R.V.I. and other Clinics, re- turned defaulters, etc.	223	199	238	60	23	27	....	....
<b>Total patients .....</b>	<b>305</b>	<b>281</b>	<b>585</b>	<b>124</b>	<b>198</b>	<b>184</b>	<b>1</b>	<b>....</b>
Discharged on comple- tion of treatment, transferred to other Clinics, etc. ....	59	28	269	46	144	164	....	....
Defaulters .....	56	57	105	32	....	....	....	....
<b>Total .....</b>	<b>115</b>	<b>85</b>	<b>374</b>	<b>78</b>	<b>144</b>	<b>164</b>	<b>....</b>	<b>....</b>
Remaining under treat- ment 31st Dec., 1937..	190	196	211	46	54	20	1	....

	<i>Males.</i>	<i>Females.</i>
Total attendance for Medical Officers' Sessions	10,131	5,377
"    "    Intermediate Treatment	15,715	879
"    "    Total attendances .....	32,102.	

Arsenical injections .....	3,116
Bismuth, mercurials, etc. ....	6,254
Wassermanns .....	1,584
Gonococcal Complement Fixation Tests .....	308
Smears for gonococci .....	2,462
Dark grounds .....	46

Default rate calculated on total number of patients dealt with during year :—

SYPHILIS.		GONORRHŒA.	
<i>Males.</i>	<i>Females.</i>	<i>Males.</i>	<i>Females.</i>
18.4%	20.3%	17.9%	25.8%

#### *Incidence of Gonorrhœa and Syphilis :—*

NEW INFECTIONS :	<i>Syphilis.</i>	<i>Gonorrhœa.</i>
Males .....	82	347
Females.....	82	64

Ratio of infection—Syphilis : 1 male to 1 female.  
Gonorrhœa : 5.4 males to 1 female.

#### *Comparison with England and Wales, (1936) :—*

	<i>Syphilis.</i>	<i>Gonorrhœa.</i>
Males .....	8,224	28,137
Females.....	5,000	7,715

Ratio of infection—Syphilis : 1.6 males to 1 female.  
Gonorrhœa : 4 males to 1 female.

This suggests that a large number of female gonorrhœtics are not investigated and treated. Difficulties—symptomlessness of the condition.

*Default rate : England and Wales :—*

	SYPHILIS.		GONORRHOEA.	
	Males.	Females.	Males.	Females.
1927 .....	22.4	21.5	30.4	20.0
1930 .....	22.9	22.6	27.9	22.7
1933 .....	20.5	22.2	26.4	24.3
1936 .....	19.1	18.1	23.2	18.4

*Default rate : Local :—*

1937 .....	18.4	20.3	17.9	25.8
------------	------	------	------	------

(1) The change over to enlarged premises—with increased facilities for the investigation and treatment of venereal diseases—should increase the possibilities of regular attendances of patients from all areas.

(2) In the case of patients living at a distance from the clinic, syphilis should present fewer difficulties than gonorrhœa, in that after the condition is diagnosed, treatment is generally at weekly intervals or less frequently, twice weekly.

In patients suffering from gonorrhœa, it should be moderately easy for the majority to attend once weekly for medical inspection and control of treatment, but most of the intermediate treatment must of necessity be carried on at home.

This difficulty may predispose to default, on cessation of symptoms, faulty treatment, etc., in men, while in women, adequate home treatment is almost impossible.

(3) To achieve a greater and permanent decrease in the default rate seems to indicate the necessity for improvement in the existing methods of persuasion, *e.g.*, some measure of compulsion on patients to complete treatment.

A. E. W. McLACHLAN,

*Clinical Medical Officer.*

31st May, 1938.

Information as to ophthalmia neonatorum will be found in Section II. (The Child).

## CITY HOSPITALS FOR INFECTIOUS DISEASES.

### Report of the Deputy Medical Superintendent.

#### Accommodation.

NAMES AND SITUATION OF HOSPITALS.	TOTAL AVAILABLE BEDS.
City Hospital for Infectious Diseases, Walker Gate—	
Fever Pavilions ..... Beds.	232
(One of 30 beds temporarily appropriated for Tuberculosis)	
Tuberculosis Pavilions .....	106
	338
Smallpox and Isolation Hospitals, Town Moor .....	172

#### City Hospital, Walker Gate.

YEAR.	Population of the City.	Number of Beds at Hospital for Fever Cases.	Total Admissions (exclusive of Pulmonary Tuberculosis and Smallpox).	Percentage of Scarlet Fever, Diphtheria and Enteric Fever Cases Admitted to Cases Notified.
1890	182,866	104	219	21.3
1900	213,039	104	290	38.6
1910	265,077	172	912	83.0
1920	286,061	232	1,710	86.4
1921	278,400	232	1,683	82.4
1922	281,600	232	1,032	86.3
1923	283,800	232	991	92.6
1924	285,900	232	1,502	90.5
1925	286,300	*232	1,711	86.4
1926	284,700	*232	1,397	89.1
1927	288,500	*232	1,493	89.7
1928	281,500	*232	1,294	92.9
1929	283,400	*232	1,713	89.1
1930	283,400	*232	1,649	96.4
1931	283,600	*232	2,347	95.6
1932	285,100	*232	2,143	96.4
1933	286,500	*232	3,040	96.3
1934	287,050	*232	3,292	95.3
1935	292,700	*232	2,881	97.2
1936	290,400	*232	2,471	97.0
1937	290,400	*232	2,261	98.5

\* 30 of these beds temporarily appropriated for Tuberculosis patients.

CITY HOSPITAL FOR INFECTIOUS DISEASES,  
WALKER GATE.

96A

Diseases Admitted—1937.

SENT IN AS	Number.	PROVED TO BE :—																											
		Scarlet Fever.	Diphtheria.	Diphtheria Carriers.	Enteric Group of Fevers.	Dysentery.	Measles.	Rubella.	Varicella.	Mumps.	Pertussis.	Epidemic Cerebro-Spinal Meningitis.	Other forms of Meningitis.	Poliomyelitis.	Encephalitis Lethargica.	Pneumonia.	Bronchitis.	Influenza.	Other Respiratory Diseases.	Erysipelas.	Skin and Septic Conditions.	Puerperal Pyrexia.	Tonsillitis.	Other Gastro-Intestinal Diseases.	Ophthalmia Neonatorum.	General Diseases.	Injuries.	Unclassified.	
Scarlet Fever .....	878	826	1	2	.....	3	3	2	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	5	.....	6	.....	.....	.....	.....	.....	27
Diphtheria .....	508	6	316	.....	1	3	.....	.....	.....	1	.....	.....	.....	.....	7	5	.....	6	.....	.....	.....	108	12	.....	.....	1	.....	42	
Diphtheria Carriers .....	139	.....	139	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Enteric Group of Fevers... ..	43	.....	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	
Dysentery.....	163	.....	.....	3	93	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	59	.....	.....	.....	.....	4	
Measles .....	54	1	2	.....	.....	44	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	1	
Rubella .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vancella .....	15	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
Mumps .....	5	.....	1	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	
Anthrax .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Pertussis .....	39	.....	.....	.....	.....	.....	.....	.....	.....	37	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Epidemic Cerebro-Spinal Meningitis .....	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	4	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Other forms of Meningitis .....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Poliomyelitis .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Encephalitis Lethargica .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia .....	160	.....	.....	.....	.....	3	.....	.....	.....	2	.....	.....	.....	.....	126	13	.....	10	.....	.....	.....	1	1	.....	.....	2	.....	2	
Bronchitis .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenza .....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Erysipelas .....	93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	79	11	1	.....	.....	.....	.....	.....	.....	.....	2
Skin and Septic Conditions .....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....
Puerperal Pyrexia .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....
Tonsillitis .....	27	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	21	4	.....	.....	.....	.....	.....
Other Gastro-Intestinal Diseases .....	44	.....	.....	1	4	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	32	.....	2	.....	1	
Ophthalmia Neonatorum... ..	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	1	
General Diseases .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....
Injuries .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Unclassified.....	13	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	10
TOTALS.....	2,261	834	320	142	32	97	53	4	16	3	41	16	11	3	1	145	20	10	20	79	32	5	138	115	7	15	4	98	



**CITY HOSPITAL, WALKER GATE.**

(Fever Pavilions.)

Admissions during the year—2,261.

The average daily number of patients in the hospital was 185, exclusive of 98 cases of Tuberculosis.

RATE PER CENT. OF CASES REMOVED TO HOSPITAL TO CASES NOTIFIED.

	1890	1895	1900	1905	1910	1915	1920	1925	1930	1931	1932	1933	1934	1935	1936	1937
Scarlet Fever .....	18.4	33.0	35.0	50.1	84.5	91.3	85.7	85.0	95.9	95.2	96.3	96.1	94.5	96.3	96.0	97.7
Diphtheria .....	8.3	28.7	40.0	36.8	80.1	89.1	89.1	94.1	97.5	99.1	96.3	100.0	98.2	98.7	98.4	99.8
Enteric Fever.....	38.9	48.0	54.5	52.0	90.5	87.0	90.0	96.4	97.6	92.3	100.0	100.0	100.0	100.0	100.0	100.0
All cases of the above, together with Continued and Typhus Fever and Cerebro-Spinal Fever, etc.	21.3	34.6	38.6	47.8	83.0	90.5	86.4	86.0	96.1	95.6	96.3	96.0	95.0	96.9	96.7	98.4

**Present Death Rates compared with those  
of Previous Years.**

RETURN SHOWING THE NUMBER OF CASES OF  
SCARLET FEVER, DIPHTHERIA AND ENTERIC FEVER ADMITTED TO HOSPITAL  
AND MORTALITY RATES PER CENT.

1891-1900.

YEARS.	NUMBER OF CASES ADMITTED TO HOSPITAL.			NUMBER OF DEATHS.			CASE MORTALITY PER CENT.		
	Scarlet Fever.	Diph- theria.	Enteric Fever.	Scarlet Fever.	Diph- theria.	Enteric Fever.	Scarlet Fever.	Diph- theria.	Enteric Fever.
1891-1895	1,105	92	277	34	26	51	3.1	28.3	18.4
1896-1900	1,087	103	442	41	21	86	3.8	20.6	19.5
1915-1934.									
1915-1919	3,402	998	194	99	89	21	2.9	9.0	10.8
1920-1924	3,919	1,037	78	37	73	9	0.9	7.5	11.6
1925-1929	3,612	908	123	43	62	23	1.2	6.8	18.7
1930-1934	6,296	860	220	76	53	15	1.2	6.1	6.8
1935-1937.									
1935	1,236	549	23	9	41	....	0.7	7.4	....
1936	929	530	25	12	40	4	1.3	7.5	16.0
1937	834	320	32	2	31	....	0.2	9.7	....

Admissions and Deaths, 1937.

DISEASE.	ADMISSIONS.												DEATHS.													
	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	84	69	87	73	66	47	55	43	82	68	64	96	834	3	4	1	1	1	2	1	3	1	1	1	2	2
Diphtheria	37	29	23	24	22	31	33	21	18	24	37	21	320	3	4	7	1	1	2	1	3	1	2	2	6	31
Diphtheria Carriers	13	24	9	5	7	8	23	9	10	6	18	10	142	1	1	1	1	1	1	1	1	1	1	1	1	1
Enteric Group of Fevers	5	11	7	7	11	2	4	2	2	9	2	1	32	1	1	2	1	1	1	1	1	1	1	1	1	2
Dysentery	1	1	2	9	7	12	2	8	9	3	13	5	97	2	2	2	1	1	2	1	1	1	1	1	1	4
Measles	1	1	1	1	3	8	10	5	1	3	8	13	53	2	1	1	1	1	2	1	1	1	1	1	1	4
Rubella	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	4
Varicella	2	1	4	2	2	1	2	3	1	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	16
Mumps	2	6	7	2	4	5	10	1	1	1	1	3	41	1	1	1	1	1	1	1	1	1	1	1	1	4
Pertussis	2	1	3	1	3	1	2	2	1	2	2	2	16	2	2	2	1	3	1	2	1	1	1	2	1	11
Epidemic Cerebro-Spinal Meningitis	2	2	1	1	1	1	1	1	1	2	1	1	3	2	2	1	1	1	1	1	1	1	1	1	1	11
Other forms of Meningitis	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	11
Poliomyelitis	12	14	12	14	15	15	7	9	14	8	13	12	145	3	4	2	2	5	3	1	4	4	7	2	2	35
Encephalitis Lethargica	3	3	1	2	2	1	1	3	1	1	2	2	20	1	1	1	1	1	1	1	1	1	1	1	1	10
Pneumonia	5	3	4	4	4	5	4	12	6	6	7	8	79	2	2	2	1	1	1	1	1	1	1	1	1	6
Bronchitis	1	1	3	4	3	3	3	3	1	3	6	4	32	1	1	2	1	1	1	1	1	1	1	1	1	5
Influenza	1	1	1	1	1	1	1	1	1	1	2	2	5	1	1	1	1	1	1	1	1	1	1	1	1	3
Other Respiratory Diseases	7	4	4	6	10	5	4	4	6	6	7	8	20	2	2	1	1	1	1	1	1	1	1	1	1	6
Erysipelas	1	1	3	4	3	3	3	3	1	3	6	4	32	1	1	2	1	1	1	1	1	1	1	1	1	5
Skin and Septic Conditions	1	1	1	1	1	1	1	1	1	1	2	2	5	1	1	1	1	1	1	1	1	1	1	1	1	3
Puerperal Pyrexia	12	14	14	6	9	7	8	9	16	12	16	15	138	1	1	1	1	1	1	1	1	1	1	1	1	3
Tonsillitis	4	1	1	5	8	17	14	11	17	17	10	10	115	1	1	1	1	1	2	1	4	5	2	1	1	17
Other Gastro-Intestinal Diseases	1	1	1	1	1	1	1	1	2	2	1	7	11	1	1	1	1	1	1	1	1	1	1	1	1	11
Ophthalmia Neonatorum	1	2	1	1	1	1	1	1	1	3	1	1	15	1	1	1	1	1	1	1	1	1	1	1	1	3
General Diseases	1	1	1	1	1	1	1	1	1	1	1	2	4	1	1	2	1	1	1	1	1	1	1	1	1	4
Injuries	8	7	6	5	4	6	7	11	11	11	15	7	98	1	1	2	1	1	1	1	1	1	1	1	1	4
Unclassified	202	197	188	172	180	166	190	161	193	181	217	214	2261	11	12	20	5	14	11	12	11	11	9	14	11	141
TOTALS	202	197	188	172	180	166	190	161	193	181	217	214	2261	11	12	20	5	14	11	12	11	11	9	14	11	141

**Length of Stay in Hospital of Early Fatal Cases.**—The following cases died within a short period after their admission to hospital :—

	<i>Within 24 hours.</i>	<i>Within 48 hours.</i>
Scarlet Fever .....	2	....
Diphtheria .....	9	4
Measles .....	2	....
Pertussis .....	2	2
Epidemic Cerebro-spinal Meningitis.....	2	1
Pneumonia .....	14	3
Other Respiratory Diseases .....	2	....
Erysipelas .....	1	1
Skin and Septic Complications .....	2	....
Puerperal Pyrexia .....	2	....
Gastro-Intestinal Conditions .....	2	1
General Diseases .....	....	1
Total .....	40	13

**Average Stay in Hospital during the last Twenty-nine Years.**

YEARS.	All Cases.		Scarlet Fever.		Diphtheria (including carriers).		Enteric Fever		Other Diseases.	
	Average No.	Average Stay in Days.	Average No.	Average Stay in Days.	Average No.	Average Stay in Days.	Average No.	Average Stay in Days.	Average No.	Average Stay in Days.
1908-12..	1,054	46.7	599	51.7	326	41.3	68	46.3	61	29.6
1913-17..	1,538	39.6	929	45.6	220	39.9	70	47.4	318	20.6
1918-22..	1,408	31.2	758	37.1	215	43.2	15	46.6	420	16.8
1923-27..	1,419	31.9	751	35.2	185	44.3	21	54.0	462	21.1
1928 ....	1,294	22.5	452	29.3	205	33.6	25	44.5	612	12.9
1929 ....	1,713	21.7	543	29.7	247	29.6	38	42.2	885	13.6
1930 ....	1,649	23.9	584	32.5	194	34.7	66	44.3	805	13.5
1931 ....	2,347	27.3	989	36.5	113	46.3	21	50.2	1,224	17.8
1932 ....	2,143	30.3	1,120	35.2	162	57.5	33	47.0	828	17.7
1933 ....	3,040	27.6	1,934	32.7	114	61.6	34	41.2	958	12.7
1934 ....	3,292	30.1	1,669	35.0	503	41.1	66	40.0	1,054	15.5
1935 ....	2,881	31.2	1,236	33.8	736	45.5	23	37.2	886	15.4
1936 ....	2,471	31.3	929	33.3	751	43.4	27	43.8	766	16.6
1937 ....	2,261	29.3	834	37.1	462	40.2	32	41.5	933	16.6

**DIPHTHERIA.**

The incidence of diphtheria in Newcastle and the surrounding area began to show a marked increase in the autumn of 1933. The number of cases and carriers admitted to hospital in 1934 rose to 503, a figure never previously reached in the last thirty years. This increase persisted in 1935 and was maintained in 1936 as shown in the above table.

The incidence of the disease appears now to be on the wane, and the number of cases and carriers occurring in 1937 has fallen markedly in comparison with the two previous years.

320 cases were admitted to hospital, and 142 carriers. 193 of these cases were of the simple faucial or tonsillar type, and in this group there were four deaths, equivalent to a case mortality rate of 2.07 per cent.

Of these four fatal cases, two were late cases which were probably originally of the naso-pharyngeal type. One of these two died a few hours after admission. Of the remaining two one died of sudden acute heart failure in early convalescence, and the other developed an obscure blood condition of the nature of anaphylactoid purpura.

In 11 cases the infection was limited to the nose. Two of these cases required the removal of tonsils and adenoids before they could be rendered free from infection.

In a group of 101 faucio-pharyngeal cases, with varying degrees of nasal involvement, there were 20 deaths—equivalent to a case mortality of 19.8 per cent.

There were 15 cases of laryngeal or tracheal diphtheria of whom seven, or 46.6 per cent. died. In six of these cases the obstruction was so considerable that tracheotomy was performed shortly after admission to hospital, and of these four died. In one case tracheotomy had been performed before admission but the child died shortly after reaching hospital.

The case mortality of the whole series of 320 cases was 9.7 per cent., compared with 7.5 per cent. in 1936, and 7.4 per cent. in 1935.

The death rate for diphtheria this year shows a definite increase on the figures for the last three years which were practically identical. It would seem that though the incidence of the disease is diminishing the virulence is in no way lessened, and the proportion of severe cases occurring is still considerable. On the other hand, as was stated in the report for 1936, the death rates for the years 1934-35-36 during which period the disease had become more prevalent in the district, when compared with the rates for the two preceding quinquennial periods showed that the virulence of the infection did not seem to have increased with the incidence of the disease as it appeared to have done in certain other areas.

In twenty-seven cases, where virulent organisms persistently remained in the throat after recovery from the disease, including also a number of healthy carriers, tonsillectomy was performed. In the majority of cases this procedure rendered the patient free from infection after a short period.

For the first time since 1933 it was not found necessary at any period of the year to utilise wards at the Moor Hospital for convalescent cases or carriers.

The scheme, inaugurated in 1934, whereby free immunisation against diphtheria of all children under the age of five was offered to parents, has been continued throughout 1937. The work has been carried out by a part-time officer, and clinics have been held each week at certain Maternity and Child Welfare Centres.

The arrangements made with the Education Authority in the autumn of 1936 whereby the parents of children attending certain schools in the City were circularised emphasizing the advantages of prophylactic inoculation, and offering free facilities, have been continued during 1937. These clinics are held in the schools, thus minimising the amount of time during which the children are absent from their classes.

A total of 200 clinics were held during the year, 45 being for infants and 155 for school children.

During the year 195 infants and 2,092 school children completed immunisation, a total of 2,287.

The typing of the bacilli isolated from cases of diphtheria was continued during 1937, with the exception of two months during the summer, when owing to the change over of the Laboratories it was not found possible to carry it out. 401 cultures were typed with the following results :—

Gravis type	...	...	101 = 25.1%
Intermedius type	...	...	75 = 18.7%
Mitis type	...	...	160 = 39.9%
Atypical type	...	...	65 = 16.3%
			— — —
			401 = 100.0%
			— — —

Among the 31 fatal cases, 16 were due to the Gravis type of organism, three to the Intermedius, and one to the Mitis type. In two cases the organisms were Atypical, and in nine cases they were not typed.

### SCARLET FEVER.

The incidence of scarlet fever in the City which, as shown by the notification and admissions to hospital, had been gradually increasing since 1928, until it reached its peak in 1933, now appears to be on the wane, and in 1937 834 cases of scarlet fever were admitted to hospital, as against 1,669 in 1934, 1,236 in 1935, and 929 in 1936. This figure is, however, slightly in excess of what would be termed a normal year.

The prevailing type of scarlet fever remained mild, and the mortality rate was 0.2 per cent., as compared with 0.7 per cent. in 1935, and 1.3 per cent. in 1936.

The first of the two fatal cases was a severe septic case admitted at the request of a neighbouring local authority, which died within 24 hours of admission.

The second died suddenly a few minutes after the intramuscular injection of Scarlet Fever antitoxin. This case, which was only of moderate severity, was an example of a very rare condition where without any previous indication of an allergic state such as hay fever, asthma or eczema, and without any history of the previous administration of serum, a condition of extreme hypersensitivity exists, the administration of serum proving immediately fatal.

In 1937 scarlet fever antitoxin was used to a greater extent than in the three previous years 1934-1936, but to a lesser extent than in the years 1931-1933. The numbers and relative proportions of patients receiving this form of treatment together with the complications rate and case mortality rate per cent. for the period 1928-1937, are as follows :—

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Scarlet Fever Cases admitted . . . . .	452	543	584	989	1,120	1,934	1,669	1,236	929	834
Number treated with Antitoxin..	177	169	249	483	380	436	331	260	243	335
Percentage treated with Antitoxin..	39.2	31.1	42.6	48.8	33.9	22.5	19.8	22.0	26.1	40.2
Percentage with Complications *	24.3	23.8	30.0	40.4	40.0	32.0	35.0	38.4	33.8	31.3
Mortality Rate percentage .....	0.44	0.74	0.69	0.5	0.8	1.4	1.8	0.7	1.3	0.2

\* Calculated on total scarlet fever admissions.

It seems clear that while it is very efficacious in the treatment of severe cases showing signs of toxæmia, and of considerable value in true "toxic" cases, its power to prevent the onset of complications is negligible, and furthermore, it is of little value in the treatment of these complications or the septic sequelæ of scarlet fever.

The general consensus of opinion seems to be that it should be reserved for the treatment of the more severe cases, and that its routine use in mild cases of scarlet fever is not advisable.

In the following table is summarised the statistical information regarding all cases of scarlet fever treated during the year under review :—

SCARLET FEVER.	Number.	Percentage treated with Anti-toxin.	Percentage with Complications.	Mortality Rate.	Return Case Rate.	Average stay in Days in Hospital.		
						All Cases.	Complicated Cases.	Non-complicated Cases.
All Cases.....	834	40.2	31.3	0.2%	3.6%	37.1	17.0	19.1
Antitoxin Cases .....	335	100	30.1	0.6%	4.5%	36.5	16.9	19.7
Non-Anti-toxin Cases	499	Nil.	32.1	Nil.	3.0%	35.8	17.1	18.6

PERCENTAGE INCIDENCE OF COMPLICATIONS.

	Rhinorrhœa.	Otorrhœa.	Adenitis	Rheumatism.	Albuminuria.	Nephritis.	Cardiac.	Other Complications.
All Cases..	12.1	8.6	4.8	0.7	1.4	0.5	1.1	2.0
Antitoxin Cases .....	11.6	9.2	4.2	0.3	1.8	0.3	1.2	1.2
Non-Antitoxin Cases .....	12.4	8.2	5.2	1.0	1.2	0.6	1.0	2.4

**Otorrhœa and Rhinorrhœa.**—The work of the Consulting Oto-Rhinologist to the Hospital (Mr. W. Frank Wilson), in the treatment and supervision of scarlet fever cases complicated by

otorrhœa or rhinorrhœa has been continued along lines developed in recent years.

The incidence of these complications showed a decrease on last year. 173 cases occurred in 834 admissions—a complication rate of 20.7 per cent., as contrasted with 33.8 per cent. in the previous year.

The distribution of these cases according to whether or not they were treated with scarlet fever antitoxin, and their respective stay in hospital, are shown in the following table :—

		Number of Cases.	Average Stay in Hospital (days).
Non-Antitoxin Cases .....	Rhinorrhœa .....	62	53.0
	Otorrhœa .....	41	66.3
Antitoxin Cases .....	Rhinorrhœa .....	39	72.7
	Otorrhœa .....	31	52.0
Total .....		173	60.4

The average stay per patient of cases in this group was 60.4 days, as contrasted with the figure given for 1936, namely, 49.6 days.

In the treatment of these patients it was found necessary to perform forty-three operations—twenty-eight for the removal of tonsils and adenoids, and fifteen for mastoidectomy.

*Subsequent Progress.*—As in previous years, supervision of cases of rhinorrhœa and otorrhœa has been maintained wherever possible after their discharge from hospital, and 154 cases of this type have been visited at varying intervals. The result of these visits showed that amongst 100 cases of rhinorrhœa, three, or 3 per cent., still had slight nasal discharge, whilst 3 or 5.55 per cent., of 54 cases of otorrhœa had slight persisting deafness or discharge from the ear.

All the cases in which the nasal or aural discharge has persisted have been kept under observation by Mr. Frank Wilson at the Out-Patient Department of the Royal Victoria Infirmary.

**“ Return ” Cases.**—The year’s total admissions of scarlet fever cases, which numbered 834, produced 30 “ Return ” cases, a percentage of 3.6. These arose from 30 “ Infecting ” cases, a percentage of 3.6.

## SEASONAL OCCURRENCE.

QUARTER.	Total Scarlet Fever Admissions.	“ Infecting ” Cases.		“ Return ” Cases.	
		No.	Percentage.	No.	Percentage.
January to March .....	240	13	3.75	6	2.5
April to June .....	186	4	2.1	10	5.4
July to September ....	180	6	3.3	4	2.2
October to December	228	7	3.1	10	4.4

Of the 30 “ Infecting ” cases (a) 19 had no complications or discharges whilst in hospital, and remained “ clean ” after reaching home, (b) 1 had no complications whilst in hospital, but developed discharges after reaching home, while (c) 10 had complications whilst in hospital, but were “ clean ” on discharge.

The figure of 3.6 for the percentage of “ Infecting ” cases is slightly higher than that for last year, but is a distinct improvement on the figures for the three preceding years. It was, however, to be expected that, with the lighter incidence of scarlet fever in the area, the return case rate would fall.

## “ RETURN ” CASES FOR YEARS 1906–1937.

YEARS.	Total Scarlet Fever Admitted.	“ Infecting ” Cases.		“ Return ” Cases.	
		No.	Percentage.	No.	Percentage.
1906–10 .....	2,203	63	2.8	82	3.7
1911–15 .....	5,185	217	4.2	251	4.8
1916–20 .....	3,202	104	3.2	112	3.5
1921–25 .....	3,850	93	2.4	105	2.7
1926–30 .....	3,160	111	3.5	110	3.5
1931 .....	989	37	3.7	39	3.9
1932 .....	1,120	49	4.4	56	5.0
1933 .....	1,934	96	5.0	107	5.5
1934 .....	1,669	86	5.1	94	5.6
1935 .....	1,236	48	3.8	52	4.2
1936 .....	928	31	3.3	34	3.6
1937 .....	834	30	3.6	30	3.6

### ERYSIPELAS.

Of recent years erysipelas has shown a tendency to become one of the commoner and severer infectious diseases prevailing in the City. Its incidence and mortality approximate roughly to those of diphtheria, with the notable exception that while the latter is a disease of children and young people, erysipelas principally attacks the middle-aged and elderly.

In the following table the number of notifications of erysipelas, the deaths caused by the disease, and the case mortality rate are detailed for the years 1926-1937. In addition, similar information is given for such of these cases as were admitted to the City Hospital, together with the duration of their stay in hospital.

YEAR.	Total Notifications.	Deaths.	Mortality Rate. Per cent.	CITY HOSPITAL.			
				Admissions.	Deaths.	Mortality Rate. Per cent.	Duration of stay in Hospital. (days).
1937....	167	8	4.8	79	6	7.6	14.7
1936....	176	12	6.8	80	9	11.2	18.3
1935....	239	15	6.3	127	20	15.7	13.1
1934....	240	16	6.6	126	23	18.2	14.2
1933....	264	12	4.5	116	15	12.9	17.4
1932....	205	13	6.4	100	11	11.0	14.6
1931....	218	11	5.0	91	4	4.4	14.0
1930....	208	12	5.8	107	11	10.3	11.3
1929....	220	11	5.0	85	8	9.4	13.0
1928....	234	19	8.1	49	6	12.2	12.6
1927....	212	12	5.7	51	2	3.9	14.5
1926....	172	5	2.9	31	2	6.5	25.6

The mortality rate for all cases of erysipelas treated in the City Hospital during 1937 was 7.6 per cent. With the exception of the year 1931 this is the lowest rate recorded in the last decade.

Of the six fatal cases one was an eight-weeks old infant with extensive erysipelas of the body, which came into hospital eleven days after the onset of the disease, and another was an eleven-months old infant which was admitted on the fourteenth day of illness and which developed streptococcal meningitis.

The remaining four fatal cases were all of advanced age, one of whom developed a hypostatic pneumonia, and another was suffering from an extensive malignant condition.

Mention was made in the report for 1936 that towards the close of the year a number of cases of this disease had been treated with a new pharmacological preparation, which was at that time marketed under the name "Prontosil," with very promising results.

The use of one of the Sulphonamide preparations in the treatment of erysipelas has now become almost universal, and all the cases admitted to hospital last year were so treated. The decline in the death rate testifies to its efficiency. All the previous forms of treatment such as antitoxin and ultra violet radiation have been superseded by the new preparation.

#### Mixed Infections.

27 patients, or 1.2 per cent., of those sent into hospital were found, on or shortly after admission, to be suffering from or incubating two distinct infectious diseases, as follows:—

Scarlet Fever with Diphtheria .....	9
Scarlet Fever with Measles .....	1
Scarlet Fever with Varicella .....	4
Scarlet Fever with Pertussis.....	1
Scarlet Fever with Mumps .....	1
Diphtheria with Scarlet Fever .....	1
Diphtheria with Pertussis.....	1
Diphtheria with Measles .....	1
Dysentery with Varicella .....	1
Dysentery with Pertussis .....	1
Measles with Pertussis .....	4
Measles with Diphtheria (Carrier) .....	1
Pneumonia with Diphtheria.....	1
	<hr/>
	27
	<hr/>

#### Cross Infections.

During the year 50 patients, or 2.2 per cent. of the total admissions, contracted a second infection in the wards of the hospital. The details are as follows, the primary infection being stated first:—

Scarlet Fever with Measles.....	6
Scarlet Fever with Diphtheria .....	11
Scarlet Fever with Varicella .....	19
Diphtheria with Scarlet Fever .....	5
Diphtheria with Measles .....	2
Diphtheria with Varicella .....	1
Pneumonia with Measles .....	1
Pneumonia with Paratyphoid .....	1
Pneumonia with Varicella .....	1
Erysipelas with Diphtheria (Carrier) .....	1
Dysentery with Measles .....	1
Varicella with Scarlet Fever.....	1
	<hr/>
Total .....	50
	<hr/>

There were no deaths.

### Staff Sickness.

*Nursing Staff.*—70 members of the nursing staff were off duty owing to sickness for a total of 1,484 days. Four nurses contracted diphtheria, three of whom were nursed in the City Hospital, and the remaining one in the hospital serving the area in which her home was situated. Two nurses became diphtheria carriers for a short period.

One nurse contracted Scarlet Fever. Of the remainder twelve suffered from tonsillitis, seven from various skin and septic conditions, seven from influenza, one contracted dysentery, and two sustained minor injuries. A ward sister after a prolonged illness died in August.

The remaining cases consisted of minor types of illness, some of which were nursed in hospital and some at home.

*Domestic Staff.*—73 members of the domestic staff were off duty through sickness for a total of 1,257 days. Eleven developed tonsillitis, eight influenza, one scarlet fever, three suffered from skin and septic conditions, and four from minor accidents. The remainder suffered from minor ailments, the majority of which were nursed in their own homes.

During the year the practice of immunising the staff against scarlet fever, diphtheria, and the enteric group of fevers has been carried out as previously.

The number of nurses contracting diphtheria is higher than usual, but all cases were fortunately mild. The close contact with severe cases necessary in their nursing occasionally leads to the acquiring of a virulent infection which breaks down a border-line immunity, even though the patient may be Schick negative.

### SMALLPOX AND ISOLATION HOSPITALS, TOWN MOOR.

Owing to the disappearance of smallpox from the neighbourhood of Newcastle upon Tyne, it was not found necessary to bring the wards of the smallpox hospital into use for that disease at any time throughout the year.

E. F. DAWSON-WALKER, M.D.,  
*Deputy Medical Superintendent.*

*City Hospital for Infectious Diseases,  
Newcastle upon Tyne,  
10th June, 1938.*

### DISINFECTION, Etc.

5,834 cases of notifiable infectious disease were inquired into by the Infectious Disease Inspectors, Health Visitors and Tuberculosis Nurses and, with the exception of measles and chickenpox, the houses or rooms connected therewith disinfected by spraying with formalin. In connection with cases of tuberculosis, 793 houses, including 982 rooms, were similarly disinfected. 816 visits were made, and disinfection was also carried out in 582 special cases.

#### INFECTED ARTICLES TREATED IN THE DISINFECTING APPARATUS AT THE CITY HOSPITAL FOR INFECTIOUS DISEASES, WALKER GATE.

ARTICLES FROM CITY.		ARTICLES—HOSPITAL PROPERTY.	
1937.	1936.	1937.	1936.
22,292	27,247	14,506	12,150

5,380 articles were also disinfected at the Smallpox Hospital.

The staff have thus dealt with 42,178 articles during the year.

Fluid disinfectant, in half-pint tins, was given out free on the order of the special inspectors, for home use in connection with infectious disease. Every precaution was taken to ensure that the disinfectant was properly and economically used.

#### DISINFECTANTS DISTRIBUTED—1937.

FROM	FOR INFECTIOUS DISEASES.	FOR PHTHISIS.
	FLUID ( $\frac{1}{2}$ pint tins.)	FLUID ( $\frac{1}{2}$ pints.)
Health Department.....	57	....
Tuberculosis Dispensary .....	....	640
Corporation Yard, Benwell .....	7	....
TOTAL.....	64	640

**BACTERIOLOGICAL EXAMINATIONS, 1937.**

During the year the bacteriological examinations were carried out

- (a) first period (January to June) at the Public Health Laboratory, King's College,
- (b) second period (July to December) at the temporary Public Health Laboratory, City Hospital for Infectious Diseases, Walker Gate, and
- (c) second period, at the Northumberland County Council Laboratory, Newburn.

**Bacteriological Examinations, 1937 (January to June).**

The following is a report of the bacteriological examinations carried out on behalf of the Health Department of the Newcastle Corporation, at the Public Health Laboratory (University of Durham), The Medical School, King's College, Newcastle upon Tyne, up to the end of June.

A total of 5,701 examinations were made during the half-year. This shows an amount of reduction compared with the previous year, most of which is due to the reduction in the number of diphtheria swabs examined.

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

**BACTERIOLOGICAL EXAMINATIONS :—**

	Swab for Diphtheria.		Sputum for Tubercle bacilli (microscopically).		Swabs for Hæmolytic Streptococci.	
	Total.	Positive.	Total.	Positive.	Total.	Positive.
Number of Examinations.....	1,868	175	337	58	95	57
Percentage Positive .....	9.36		17.21		60.00	

The number of swabs examined for diphtheria bacilli has continued to be heavy, but shows some reduction over the previous six months. The number was especially heavy in February but there has been a reduction in most of the monthly totals compared with 1936.

The examinations for Hæmolytic Streptococci show a large increase.

#### AGGLUTINATION REACTIONS :—

##### i. *Enteric Fever.*

A total of 69 bloods were examined for Widal Reactions against *B. typhosus*, *B. paratyphosus*—A and *B. paratyphosus*—B., 19 gave some reactions as below and 50 were negative.

1 was positive to *B. typhosus* "H,"

1 was positive to *B. typhosus* "H" and "O,"

1 was positive to *B. typhosus* "H," *paratyphosus*—A. "H" and *B. paratyphosus*—B. "H,"

1 gave a trace with *B. typhosus* "O,"

15 were positive with *B. paratyphosus*—B. "H."

##### ii. *Abortus Fever.*

5 bloods were examined for agglutination to *Brucella abortus* and *Brucella melitensis*, all were negative.

#### MILK EXAMINATIONS :—

##### i. For *tubercle bacilli* by animal inoculation :—

A total of 232 milks were inoculated and 12 positives were obtained = 5.17%.

##### ii. The new Standard Tests for *Graded Milks* under the Milk (Special Designations) Order, 1936, came into force on 1st January, 1937. These consisted of (a) the Methylene Blue test and (b) the *B. Coli* test for Tuberculin Tested, Tuberculin Tested (certified) and Accredited Milks, and Total Counts for Tuberculin Tested (Pasteurised) and Pasteurised Milks.

In addition "Ordinary" undesignated milks were arranged to be tested by the Methylene Blue and *B. Coli* tests.

The following results were obtained :—

	(a) <i>Methylene Blue test.</i>		(b) <i>B. Coli test.</i>	
	<i>Total.</i>	<i>Satisfied.</i>	<i>Total.</i>	<i>Satisfied.</i>
T.T. ....	89	74	89	81
T.T. (cert.).....	21	20	21	18
Acc. ....	27	26	27	26
Ordinary (undesignated)	132	85	138	91

## WATER EXAMINATIONS :—

i. Routine samples gave the following results in a total of 92 examinations :—

Class I.	B. coli not found in 100 ml. or less .....	55
Class II.	„ found in 100 ml. but not in less .....	25
Class III.	„ „ 10 ml. „ .....	10
Class IV.	„ „ 1 ml. „ .....	2
		92

## VENEREAL DISEASES :—

	Total.	Serological reactions.	Microscopical examinations.
From Treatment Centres ....	594	594	....
From Institutions .....	744	743	1
From Private Practitioners..	277	209	68
Total .....	1,615	1,546	69

## OTHER EXAMINATIONS :—

(a) **Diphtheria.**—The typing of diphtheria bacilli according to the types of Anderson, McLeod and others and intra-dermal virulence tests have been continued. Subcutaneous virulence tests have also been done on a number of cultures mostly from convalescents. The following results were obtained during the half-year :—

## VARIETY OF ORGANISMS ISOLATED.

Total.	Diphtheria types.				B. Hofmanni.	Saccharose fermenters.	No diphtheria bacilli isolated.
	Gravis.	Mitis.	Intermediate	Atypical.			
277	59	108	31	51	14	1	11

Total....249

2 Diphtheroid Bacilli.

## VIRULENCE TESTS.

Intradermal.		Subcutaneous.	
Positive.	Negative.	Positive.	Negative.
236	10	58	6
Total.....246		Total.....64	

The total of 10 negative intradermal tests were obtained with the following types :—*Gravis* 0, *Mitis* 1, *Intermediate* 1, *Atypical* 3, *B. hofmanni* 3, *Saccharose fermenters* 1 and *Diphtheroid bac.* 1.

(b) **Enteric Fevers.**—The following specimens of fæces were received and examined for organisms of the enteric group :—

	Specimens.	Positive.
From the City Infectious Diseases Hospital	98	28
From the City Health Department .....	10	5
From the Newcastle General Hospital.....	19	2
	—	—
Total.....	127	35
	—	—

From this total of 127 specimens, 35 positive results were obtained :—

<i>B. typhosus</i> being isolated	...	3 times.
<i>B. paratyphosus</i> —B being isolated	32	„

Various non-pathogenic non-lactose fermenting organisms such as *B. paracolon*, *B. Morgan No. 1*, *B. proteus* and *B. pyocyaneus* were also isolated a number of times.

Specimens of *Urine* were also similarly examined :—

From the City Infectious Diseases Hospital. 35.

From these *B. paratyphosus*—B. was isolated once, the remaining 34 specimens were negative.

(c) **Bacillary Dysentery and Food Poisoning.**—The examination of fæces for dysentery bacilli and organisms of the food poisoning group has been continued, a total of 302 specimens being submitted as follows :—

	Specimens.	Positive.
From the City Infectious Diseases Hospital	165	39
From the City Health Department .....	19	8
From the Newcastle General Hospital.....	118	46
	—	—
Totals.....	302	93
	—	—

From the 93 giving positive results the following organisms were isolated :—

<i>B. dysenteriae</i> Flexner .....	29 times.
<i>B. dysenteriae</i> Sonne .....	4 „
<i>B. dysenteriae</i> Newcastle .....	51 „
<i>Salmonella ærtrycke</i> .....	3 „
<i>Salmonella M. Bovis</i> .....	6 „

The Flexner dysentery bacilli isolated were all of Z. type. The number of Fæces and Urines examined has shown a marked increase, the total for the six months being greater than for the whole of 1936.

**(d) Cerebro-Spinal Fluids.**

A total of 26 cerebro-spinal fluids were received for bacteriological examination; detailed reports were returned and the following is a summary of the results:—

(1) Tuberculous .....	3
(2) Meningococcal .....	8
Of these 1 was Group I., 2 were Group II., Meningococci not isolated in culture, 4, and one not typed (re-examination).	
(3) Streptococcal .....	2
(4) Meningitis with inconclusive indication of in- fecting organism .....	8
(5) No definite indication of meningitis .....	5
Total .....	<u>26</u>

**(e) Miscellaneous Examinations.**

Direct examinations of throat swabs for diph- theria bacilli or Vincent's angina.....	10
<i>From the City Hospital, Walker Gate.</i>	
Urine for organisms .....	1
Blood culture .....	1
Blood agglutination test for dysentery .....	1
Blood films for malaria .....	1
Pus for organisms .....	1
Bile from gall bladder for culture .....	1
Gallstone for culture .....	1
Mucus membrane for culture .....	1
Portion of liver with abscess for organisms and amœbæ .....	1
Film for B. anthrax .....	1
<i>From Barrasford Sanatorium.</i>	
Perulent fluid for organisms.....	1
<i>Cough Plates from City Hospital, Walker Gate,</i>	
for H. pertussis .....	23
4 gave <i>Positive</i> results.	
Total .....	<u>44</u>

**(f) Measles Serum.**—One batch was put up during May.

**(g) Newcastle General Hospital.**—A number of bacteriological examinations for the Hospital have been carried out and the following is a summary:—

CHARACTER OF EXAMINATION.	
Autogenous Vaccine .....	1
Blood cultures for organisms.....	3
Bowel for organisms .....	1
Cerebro-spinal fluid for inoculation for tubercle bacilli	1
Fæces for general examination.....	2
Pleural fluid for organisms.....	1
Pus or swab of pus for organisms.....	3
Sputum for organisms .....	2
Swabs from throat for culture.....	2
Urine for inoculation for tubercle bacilli.....	3
Vomit for food-poisoning organisms.....	1
Total .....	<u>20</u>



### Bacteriological Examinations (1st July to 31st December, 1937).

The following report is submitted of the bacteriological examinations carried out on behalf of the Health Department of the Newcastle Corporation at the temporary Public Health Laboratory, situated at the City Hospital for Infectious Diseases, Walker Gate.

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 <i>C. diphtheriæ</i> —			
(a) Suspected cases and contacts from City .....	2,018	168	8.3%
(b) Routine swabs from patients in Hospital .....	1,760	....	....
Sputum for tubercle bacilli (microscopically) .....	236	33	14.4%
Swabs for hæmolytic streptococci—			
(a) from City I.D. Hospital.....	41	22	53.6%
(b) routine swabs from staff at the Babies' Hospital.....	76	18	23.7%
(c) other sources .....	33	15	45.4%

All cultures of *C. diphtheriæ* from new cases were subjected to detailed examination and the actual typing of the organisms was undertaken at the beginning of September. The results obtained are given below :—

SOURCE.		Diphtheria types.			
		Gravis.	Mitis.	Inter-medius.	Atypical.
From City Infectious Diseases Hospital.	September October November December	42	52	44	14
Cultures submitted by Dr. J. A. Grant, M.O.H., Gateshead County Borough.....	December ....	39	40	2	2

#### VIRULENCE TESTS :—

Subcutaneous virulence tests were undertaken by Dr. A. I. Messer at the County Laboratory, Newburn.

33 cultures were submitted and the following results obtained :

Virulent .....	27
Non-virulent .....	6
	<hr/>
	33
	<hr/>

One specimen of urine was also examined at the County Laboratory for tubercle bacilli by animal inoculation and found negative.

AGGLUTINATION REACTIONS :—

- (a) Enteric group.
- (b) Food-poisoning group.
- (c) Dysentery group.
- (d) Abortus-melitensis group.

A total of 49 specimens of blood were examined involving 138 agglutination reactions. The following table gives detailed results :—

SOURCE.	City Infectious Diseases Hospital.		Newcastle General Hospital.		Private Practitioners.		TOTAL.	
	Posi- tive.	Nega- tive.	Posi- tive.	Nega- tive.	Posi- tive.	Nega- tive.	Posi- tive.	Nega- tive.
Total No. of spec- imens received..	28		9		12		49	
B. typhosus H.	1	23	....	7	....	12	1	42
do. O.	1	4	....	....	....	1	1	5
B. para- typhosus A.	....	3	....	2	....	1	....	6
do. B.	5	19	....	7	1	11	6	37
Salmonella group	....	8	....	1	1	1	1	10
B. ærtrycke H.	....	5	3	....	2	....	5	5
do. O.	....	3	....	1	1	....	1	4
Brucella abortus.	....	1	....	2	....	....	....	3
do. melitensis	....	1	....	2	....	....	....	3
Patient's own organism .....	....	....	2	....	2	....	4	....
B. dysenteriae Sonne .....	1	1	....	....	....	....	1	1
B. dysenteriae Flexner .....	....	2	....	....	....	....	....	2
Total agglutina- tions .....	8	70	5	22	7	26	20	118
	78		27		33		138	

**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 :—

Organism isolated.	City Infectious Diseases Hospital.	Newcastle General Hospital.	Newcastle Babies' Hospital.	Newcastle Dispensary.	Newcastle Health Dept.	Other sources.	TOTAL.
B. typhosus (fæces)	1	....	....	....	1	....	2
B. paratyphosus B. do.	14	....	....	....	....	1	15
do. (urine)	1	....	....	....	....	....	1
B. ærtrycke (fæces)	6	8	....	....	....	....	14
(spleen)	1	....	....	....	....	....	1
(intestine)	1	....	....	....	....	....	1
B. gærtner (fæces)	....	....	....	....	....	2	2
B. newport do.	....	....	....	....	....	1	1
B. dysenteriae	....	....	....	....	....	....	....
Flexner do.	8	6	....	3	....	2	19
Sonne do.	27	15	9	6	....	9	66
Newcastle do.	3	....	....	....	....	....	3
Total positive (fæces, etc.)	61	29	9	9	1	15	124
(urine)	1	....	....	....	....	....	1
Total negative (fæces)	207	58	24	6	4	18	317
(urine)	15	....	....	....	....	....	15
TOTAL .....	284	87	33	15	5	33	457

In a number of cases organisms of doubtful significance were isolated, such as Morgan's bacillus, *B. proteus*, etc.

**Cerebro-Spinal Fluids.**—A total of 38 specimens were received for bacteriological examination; detailed reports were returned and the following is a summary of the results obtained :—

CLASSIFICATION.	SOURCE.				TOTAL
	City Infectious Diseases Hospital.	Newcastle General Hospital.	Newcastle Babies Hospital.	Newcastle Throat, Nose & Ear Hospital.	
Meningococci isolated .....	5	....	....	....	5
Tubercle bacilli isolated .....	2	....	....	....	2
Meningitis with inconclusive indication of infecting organism .....	6	1	3	1	11
No definite evidence of meningitis .....	14	....	1	....	15
Convalescent cases re-tested .....	5	....	....	....	5
TOTAL .....	32	1	4	1	38

## MISCELLANEOUS EXAMINATIONS :—

These may be summarised as follows :—

	City Infectious Diseases Hospital.	Newcastle General Hospital.	Other sources.	TOTAL.
Blood cultures for organisms..	11	1	....	12
Pus, fluids, etc, for organisms	23	23	2	48
Smears from various sources, i.e., direct examinations for C. diphtheriæ, Vincent's An- gina, Malarial parasites, etc.	49	3	2	54
Urines for bacteriological ex- amination.....	11	12	....	23
Preparation of autogenous vac- cines from material supplied	....	4	....	4
TOTAL .....	94	43	4	141

### Milk (Special Designations) Order, 1936.

During the six months ending 31st December, 1937, a total of 585 samples of milk were examined according to the technique prescribed in Memo. 139/Foods (January, 1937), and the following results were obtained:—

	Tuberculin tested.		Accredited.		Pasteurised.		Undesignated.				TOTAL.		
	Satisfactory.	Unsatisfactory.	Satisfactory.	Unsatisfactory.	Plate count.		Methylene blue test only.		Methylene blue and bac. coli.		Satisfactory.	Unsatisfactory.	
					Satisfactory.	Unsatisfactory.	Satisfactory.	Unsatisfactory.	Satisfactory.	Unsatisfactory.			
July .....	13	.....	4	.....	6	.....	4	2	.....	1	27	3	
August .....	9	12	4	7	3	1	15	12	4	23	35	55	
September .....	13	4	6	2	10	.....	44	21	10	17	83	44	
October.....	20	1	11	.....	6	.....	44	12	17	7	98	20	
November .....	22	.....	12	1	6	.....	53	12	27	10	120	23	
December .....	16	1	8	.....	6	.....	29	3	10	4*	69	8	
	93	18	45	10	37	1	189	62	68	62	432	153	
Percentage unsatisfactory .....	16.2%		18.1%		2.6%		24.7%				47.7%		26.1%

\* In addition to the above, a plate count was carried out on 2 samples of UNDESIGNATED milk, and the following results were obtained:—

Sample A. Bacillus coli present in 0.0001cc. Total count 82,000 per ml.  
 " B. " " 0.001cc. " " 90,330 per ml.

## WATER EXAMINATIONS :—

i. Weekly routine examinations of samples of water gave the following results in a total of 90 examinations :—

	Class I.	Class II.	Class III.	Class IV.	TOTAL.
	Bacillus coli not present in 100ml. or less.	Bacillus coli present in 100ml. but not in less.	Bacillus coli present in 10ml. but not in less.	Bacillus coli present in 1ml.	
July .....	11	3	.....	.....	14
Aug. ....	8	4	3	1	16
Sept. ....	11	2	2	1	16
Oct. ....	8	5	2	1	16
Nov. ....	12	6	2	.....	20
Dec. ....	5	1	1	1	8
Total .....	55	21	10	4	90

ii. During the months of September and October, 30 samples of water from various Swimming Baths in the City were examined. Detailed reports were sent; the number of organisms present was exceedingly low and the following is a summary of the results, taking the presence of bacillus coli as the indicator :—

Class I.	B. coli not found in 100 ml. or less .....	29
Class II.	„ found in 100 ml. but not in less .....	1
Class III.	„ „ 10 ml. „ .....	—
Class IV.	„ „ 1 ml. „ .....	—
		30

iii. In addition during the months of July and December a number of samples of water were submitted for detailed examination and reports were given at the time :—

July.	From a Nursing Home in the West End of the City.....	4 samples.
December.	From a residence in Fenham.....	1 sample.
	From farm premises .....	2 samples.

The following table gives a complete summary of the various specimens examined and the sources from which they were received :—

CLASSIFICATION.	(1) City Infectious Diseases Hospital.	(2) Newcastle General Hospital.	(3) Newcastle Health Dept. and Practi- tioners.	(4) Gateshead County Borough P.H.D.	TOTAL.
Swabs for <i>C. diphtheriæ</i> .....	1,760	135	1,883	....	3,778
Swabs for hæmolytic strep- tococci .....	41	....	109	....	150
Sputa for tubercle bacilli.....	1	....	235	....	236
Detailed examination of <i>C.</i> <i>diphtheriæ</i> including typing from September .....	265	....	....	86	351
Agglutination tests :—					
(i) Enteric group .....					
(ii) Food-poisoning group .....					
(iii) Dysentery group .....	28	9	12	....	49
(iv) <i>Abortus-melitensis</i> .....					
(v) Patient's own organism..					
Fæces, urines, etc., for the enteric—dysentery—food- poisoning groups.....	284	87	86	....	457
Cerebro-spinal fluids .....	32	1	5	....	38
Blood cultures for organisms	11	1	....	....	12
Pus, fluids, etc., for organisms	23	23	2	....	48
Smears from various sources, i.e., direct examination for <i>C. diphtheriæ</i> , Vincent's An- gina, Malarial parasites, etc.	49	3	2	....	54
Urines for bacteriological ex- amination .....	11	12	....	....	23
Preparation of autogenous vaccines .....	....	4	....	....	4
Milk examinations :—					
(1) Combined methylene blue-coli test .....	....	....	295	} .....	585
(2) Methylene blue test only	....	....	252		
(3) Pasteurised (plate count)	....	....	38		
Water examinations :—					
(1) For bacillus coli.....	....	....	90	} .....	127
(2) For complete examina- tion.....	....	....	7		
(3) From City Baths.....	....	....	30		
Virulence tests on <i>C. diph-</i> <i>theriæ</i> .....	2,505	275	3,046	86	5,912
Urine for T.B. by animal inoculation .....	33	....	....	....	33
	....	1	....	....	1
TOTAL .....	2,538	276	3,046	86	5,946

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27th May, 1938.*



**REPORTS OF THE  
TUBERCULOSIS MEDICAL OFFICER  
AND  
MEDICAL SUPERINTENDENT,  
BARRASFORD SANATORIUM.**

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**IV.—TUBERCULOSIS.**

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**TUBERCULOSIS DISPENSARY,  
BARRASFORD SANATORIUM.**

REPORT OF THE  
TUBERCULOSIS SERVICE  
FOR THE YEAR 1911  
BY THE  
TUBERCULOSIS SERVICE

TUBERCULOSIS

TUBERCULOSIS SERVICE  
WASHINGTON

## TUBERCULOSIS.

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### Report of the Tuberculosis Medical Officer.

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TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I beg to submit, herewith, my report for the year 1937.

The work of the department has been on similar lines to that of 1936 with the addition of minor improvements in the organisation as and when opportunity occurred.

At the time of writing the adjacent house to the Tuberculosis Dispensary has been purchased by the Corporation, and it is hoped that the erection of a larger and more suitable Dispensary will shortly be commenced upon the combined site of this house and our present building.

**The Tuberculosis Dispensary.** 448 clinics have been held at the Dispensary at each of which an average of 19 patients was seen, of these five were stripped and carefully physically examined, and in addition many minor examinations were made and recorded.

**Attendances at the Dispensary.**—3,065 persons attended the Dispensary during the year or were visited in their homes, registering 8,600 attendances, and 2,412 complete physical examinations were made. 1,843 cases attended for the first time; of these 879 were sent by general practitioners, 253 by the Dispensary Visiting Nurses, 78 by the Newcastle-upon-Tyne Dispensary, 16 by the Royal Victoria Infirmary, 37 by the School Medical Officer, 78 by the staff of the Newcastle General Hospital, 36 by the Maternity and Child Welfare Centres, 59 came of their own accord under special circumstances, 317 were sent by the Tuberculosis Dispensary Medical Staff and smaller numbers from other sources.

Of the 1,843 new cases, 421 had lived with patients known to have tubercle bacilli in their sputum and 344 with tuberculosis patients who had not tubercle bacilli in their sputum.

Table 1 gives details of the New Cases examined (excluding contacts), and Table 2 gives details of the recommended contacts as per Memo. 37/T (revised).

NEW CASES EXAMINED (EXCLUDING CONTACTS), DURING THE YEAR 1937.  
(First Schedule, Part A., Memo. 37/T., Revised).

Diagnosis.	Males.		Females.		Totals.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis .....	192	15	142	10	359
Non-Pulmonary Tuberculosis	22	23	21	21	87
Diagnosis not completed .....	15	3	7	4	29
Non-Tuberculosis .....	294	130	282	117	823
TOTALS .....	523	171	452	152	1,298

**City Police Recruits.**—By arrangement with the Watch Committee all City Police Recruits are examined and X-rayed to exclude the possibility of tuberculous disease. During the year 26 of these attended the Dispensary and all were found to be healthy.

**Contacts.**—A complete list of names and ages of the contacts of each tuberculous case is kept in the patient's dossier and every effort is made by the medical and nursing staff of the Dispensary to have all these people examined and X-rayed. The names of any that are children below the age of 5 years are sent at weekly intervals to the Maternity and Child Welfare Medical Officer and those between the ages of 5 and 14 years to the School Medical Officer. These two Medical Officers are co-operating in this work. The Maternity and Child Welfare Medical Officer keeps a separate card index of these children and supplies them with emulsion. The School Medical Officer pays special attention to them during routine examinations, and in both Departments if any of them are thought to be delicate they are referred to the Tuberculosis Dispensary for expert opinion.

In every case where a death from tuberculosis has occurred in the City the consent of the General Practitioner, who attended the deceased, is first obtained and then the remainder of the family are seen or written to and urged to be examined in case any of them may be developing tuberculosis. In this way a number of very early cases of tuberculosis have been found and many contacts seen.

MEMO. 37/T. REVISED. SCHEDULE III. PULMONARY TUBERCULOSIS.

ANNUAL RETURN SHOWING IN SUMMARY FORM (a) THE CONDITION AT THE END OF 1937 OF ALL PATIENTS REMAINING ON THE DISPENSARY REGISTER, AND (b) THE REASONS FOR THE REMOVAL OF ALL CASES WRITTEN OFF THE REGISTER. THE TABLE IS ARRANGED ACCORDING TO THE YEARS IN WHICH THE PATIENTS WERE FIRST ENTERED ON THE DISPENSARY REGISTER AS DEFINITE CASES OF PULMONARY TUBERCULOSIS, AND THEIR CLASSIFICATION AT THAT TIME.

Condition at the time of the last record made during the year to which the Return relates.	Previous to 1927.			1927.			1928.			1929.			1930.			1931.			1932.			1933.			1934.			1935.			1936.			1937.					
	Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.			Class T.B. plus.					
	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.	Group 1.	Group 2.	Group 3.		
<b>Disease Arrested—</b>	1																																						
<b>Adults—</b>																																							
<b>Male</b>	1																																						
<b>Female</b>																																							
<b>Children</b>																																							
<b>Disease not Arrested—</b>																																							
<b>Adults—</b>																																							
<b>Male</b>	3	10	13	10	33																																		
<b>Female</b>	4	8	1	1	13																																		
<b>Children</b>	1	1	1	1	4																																		
<b>Total on Dispensary Register at 31st December</b>	12	17	26	15	68	1	1	2	4	7	4	3	16	1	19	15	2	25	6	33	15	3	25	5	33	24	2	26	9	37	40								
<b>Discharged as Recovered—</b>																																							
<b>Adults—</b>																																							
<b>Male</b>	65	23	29	2	109	2		1	1	9	3	7	2	4	2	2	4	2	8	7	8	7	3	8	7	8	9	1	1	7									
<b>Female</b>	34	10	28	3	67	5		3	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
<b>Children</b>	27	1	1	1	4	6		3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
<b>Lost sight of, or otherwise removed from Dispensary Register</b>	48	15	50	12	163	27	2	13	6	21	14	2	16	3	21	30	1	22	6	29	38	1	19	10	30	32	1	12	7	23	31								
<b>Dead—</b>																																							
<b>Adults—</b>																																							
<b>Male</b>	32	38	103	72	281	13	3	30	50	92	8	1	68	34	103	15		44	51	95	19	2	51	81	134	22		30	91	182	13		20	63	85	2			
<b>Female</b>	21	10	47	63	222	13	1	28	30	59	11	2	48	49	90	11		48	49	90	11	1	29	38	68	12		24	83	77	10		25	36	81	4			
<b>Children</b>	7	2	14	10	26			1	7	8			6	2	8	4		9	3	12	1	1	2	5	8	5			6	3	9	3							
<b>Total written off Dispensary Register</b>	254	90	273	167	973	72	6	86	93	185	30	6	122	65	183	81	3	128	102	235	92	5	104	134	243	83	1	78	100	239	70		58	144	202	31	1		
<b>GRAND TOTALS</b>	246	116	309	182	1041	73	7	88	97	192	43	8	138	66	212	95	7	153	168	268	102	8	129	130	276	107	3	104	169	276	116		83	161	244	94	2		



As in previous years contacts have been examined and X-rayed by the Tuberculosis Medical Officer during visiting hours on Wednesday afternoons at the Sanatorium Pavilions, City Hospital for Infectious Diseases, Walker Gate.

The details of the contacts seen, which number 545, are set out in the following table.

85 were seen during domiciliary visiting and 16 at the Sanatorium Pavilions, City Hospital, Walker Gate, on relatives' Visiting Afternoons.

CONTACTS EXAMINED DURING THE YEAR 1937.  
(First Schedule, Part A., Memo. 37/T., Revised).

Diagnosis.	Males.		Females.		Totals.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis .....	14	1	18	7	40
Non-Pulmonary Tuberculosis .....	.....	4	.....	.....	4
Diagnosis not completed .....	4	2	.....	2	8
Non-Tuberculosis .....	98	109	182	104	493
<b>TOTALS .....</b>	<b>116</b>	<b>116</b>	<b>200</b>	<b>113</b>	<b>545</b>

280 cases, who had been seen previously and discontinued, returned for re-examination. The details are given below :—

CASES DISCONTINUED IN PREVIOUS YEARS, AND RETURNED DURING THE YEAR 1937 (INCLUDED IN PREVIOUS TABLES 1 AND 2.)

Diagnosis.	Males.		Females.		Totals.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis .....	20	1	18	5	44
Non-Pulmonary Tuberculosis .....	1	3	6	.....	10
Diagnosis not completed .....	3	.....	3	1	7
Non-Tuberculosis .....	66	40	80	33	219
<b>TOTALS .....</b>	<b>90</b>	<b>44</b>	<b>107</b>	<b>39</b>	<b>280</b>

The following table gives further details of patients and cases who attended the Dispensary or were visited in their homes :—

	Number of Patients and Cases who attended the Dispensary (or were visited in their homes), during the Year 1937.			
	Total.	Males.	Females.	Under 15 years of age.
"Sputum Positive Cases" .....	754	448	296	10
"Negative Cases" .....	2,311	723	773	815
TOTALS .....	3,065	1,171	1,069	825

Cases and patients written off the Dispensary register during the year.

CASES AND PATIENTS WRITTEN OFF THE DISPENSARY REGISTER  
DURING THE YEAR 1937.  
(First Schedule, Part A., Memo. 37/T., Revised).

DIAGNOSIS.	MALES.		FEMALES.		TOTALS.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis, Recovered .....	19	2	14	....	35
Non-Pulm. Tuberculosis, Recovered .....	4	7	6	7	24
Non-Tuberculosis .....	387	261	466	234	1,348
Left district, lost sight of, or will not attend Dispensary	53	17	63	12	145
TOTALS .....	463	287	549	253	1,552

At the end of the year the number of patients and cases on the Dispensary register was 1,859. These are tabulated below :—

NUMBER OF CASES AND PATIENTS ON DISPENSARY REGISTER  
AT END OF YEAR 1937.  
(First Schedule, Part A., Memo. 37/T., Revised).

DIAGNOSIS.	MALES.		FEMALES.		TOTAL.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis (T.B. in Sputum) .....	405	1	277	3	686
Pulmonary Tuberculosis (no T.B. in Sputum) .....	296	64	238	68	666
Non-Pulmonary Tuberculosis	122	129	121	98	470
Diagnosis not completed .....	19	5	7	6	37
TOTALS .....	842	199	643	175	1,859

The two tables (pages 128A and 128B) are self-explanatory and are required by the Minister of Health under Memo. 37/T (revised).

**Domiciliary Visits.**—During the year the Tuberculosis Medical Officer made 390 domiciliary visits to 305 patients and 85 contacts. These are included in "Attendances at Dispensary."

**Relations with other Departments and Hospitals.**—The closest co-operation has existed between the Tuberculosis Dispensary and all the various departments of the Health Department. Constant interchange of information and patients has taken place between the School Medical Service and the Tuberculosis Dispensary. The relation between it and the other Medical Services in the City has, as formerly, been most satisfactory.

**Voluntary Tuberculosis Care Council.**—During the year 110 patients were referred to the Voluntary Tuberculosis Care Council for consideration. A summary of the assistance given is tabulated below :—

	Number of Patients.
Loan of bed and bedding .....	23
Total number of beds and bedding on loan .....	110
Milk .....	47
Outfits of clothing .....	63
Eggs .....	30
Surgical Appliances.....	5
Other assistance .....	5
Referred to other societies for help .....	18
Convalescent home treatment .....	5
Dispensary and other letters for hospital .....	12
Special foods (Numol, etc.) .....	4
Friendly visits and advice .....	192

A copy of the Annual Report of the work of the Council can be obtained on application to the Hon. Secretary, 91, New Bridge Street, Newcastle upon Tyne, 2.

**Nurses' Visits to Patients.**—715 new patients were seen and 9,389 subsequent visits made.

**X-ray Examinations.**—If the diagnosis of a case is uncertain an X-ray examination gives valuable assistance. This is carried out either at the Sanatorium Pavilions, City Hospital, Walker Gate, or at Newcastle General Hospital, and now with the improved facilities that exist, every new patient is X-rayed except where peculiar circumstances are present. During the year a total of 1,872 films were taken in connection with Dispensary patients, 1,059 at the City Hospital, Walker Gate, and 813 at Newcastle General Hospital.

**Sputum Examinations.**—An effort is made to examine the sputum from every possible case and in many instances repeated examinations are necessary. 1,353 specimens of sputum were examined at the Dispensary, of these 237 contained tubercle bacilli. In addition 572 sputum examinations were carried out at the University of Durham Bacteriological Laboratory in the City and the Bacteriological Department, City Hospital for Infectious Diseases, Walker Gate, to which medical practitioners may send specimens. 92 of these were positive.

**Blood Sedimentation Tests** have been carried out as a routine upon a selected number of patients. The test has been found to be useful in estimating the activity of a tuberculous lesion.

**The Sanitary Inspector.**—Disinfection has been carried out by the Sanitary Inspector as necessary in houses after a death, or change of address of a person suffering from pulmonary tuberculosis. Bedding and clothing have been removed and disinfected also and attention has been given to overcrowding and sanitary defects.

**Notifications.**—664 notifications were received during the year, but some were duplicates, so that the total number of new cases was 626, of whom 489 were certified to be suffering from "pulmonary" and 137 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, 1937.

(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.	
Pulmonary—													
Males.....	1	10	10	9	35	37	53	40	38	35	12	280	296
Females .....	....	3	7	16	40	34	52	30	16	4	7	209	219
Non-Pulmonary--													
Males.....	2	9	15	14	10	5	10	6	6	2	....	79	84
Females .....	1	11	11	7	12	5	3	....	5	1	2	58	65
TOTALS .....	4	33	43	46	97	81	118	76	65	42	21	626	664

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

Of the 626 cases notified, 522 attended the Dispensary and 43 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, are entered in the notification register, so that if the 34 patients in this category, and 19 who died within one week of notification and were not known to the Dispensary be deducted, it will be seen that the Dispensary gets into touch with nearly all of the known cases of tuberculosis. The only cases not known to the Dispensary were five 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 1937. 323 of the 489 patients notified as suffering from pulmonary tuberculosis were treated in beds belonging to, or controlled by the City Council, and 68 out of a total of 137 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 157 (equal to 25 per cent.) of all the new cases died in the same year as they were notified.

NOTIFICATIONS OF TUBERCULOSIS DURING 1937.

Part Affected.	Notifi- cations.	Attended Dispensary	Visited by Nurse but not attended Dispensary.	Received Institutional Treatment.				Totals.	Died during the Year.
				Barras- ford Sana- torium.	Sanat- orium Pav. Walker Gate.	Stann- ington Sana- torium.	New- castle Gen. Hosp.		
Pulmonary—									
Male .....	280	239	18	61	118	5	....	184	72
Female .....	209	187	11	42	93	4	....	139	42
Non-Pulmonary--									
Male .....	79	55	9	....	....	6	33	39	22
Female .....	58	41	5	....	....	4	25	29	21
TOTALS .....	626	522	43	103	211	19	58	391	157

Cases re-admitted to the Sanatorium Pavilions, Walker Gate, and those transferred to Barrasford Sanatorium during the year are counted as only receiving treatment on one occasion.

During the year 209 cases (33.4 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.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1930.

NUMBER OF CASES OF TUBERCULOSIS REMAINING ON THE NOTIFICATION REGISTER AT THE END OF YEAR.

Year.	PULMONARY.			NON-PULMONARY.			Total Cases.
	Males.	Females.	Total.	Males.	Females.	Total.	
1925.....	855	608	1,463	340	312	652	2,115
1926.....	744	515	1,259	297	263	560	1,819
1927.....	644	441	1,085	236	204	440	1,525
1928.....	720	443	1,163	294	254	548	1,711
1929.....	744	501	1,245	319	270	589	1,834
1930.....	737	495	1,232	316	264	580	1,812
1931.....	767	501	1,268	298	251	549	1,817
1932.....	801	513	1,314	292	240	532	1,846
1933.....	795	531	1,326	294	270	564	1,890
1934.....	792	538	1,330	292	237	529	1,859
1935.....	799	569	1,368	283	236	519	1,887
1936.....	776	598	1,374	267	217	484	1,858
1937.....	811	630	1,441	272	214	486	1,927

**Deaths.**—There were 324 deaths from tuberculosis of Newcastle-upon-Tyne residents. 270 pulmonary and 54 non-pulmonary, giving a death rate per 1,000 population—

	Number of Deaths.	Death Rate per 1,000 Population.
Pulmonary Tuberculosis .....	270	0.93
Non-Pulmonary .....	54	0.19
All forms of Tuberculosis .....	<u>324</u>	<u>1.12</u>

These figures show a slight increase since 1936, but they are small and therefore liable to fluctuation. The death rate is steadily falling and there is every reason to expect it to continue to do so. The factors that will influence it more than anything are the provision of good houses for the population and wages sufficient to buy a liberal diet.

The Tuberculosis Scheme has never been more efficient than at the present time, but a scheme alone cannot control the disease and, without these other factors, it is handicapped.

The old property in the City is rapidly disappearing and it is hoped that trade and industry will revive and so bring more money into the homes of the people.

Page 45A in the Report of the Medical Officer of Health gives further particulars of deaths from tuberculosis.

Of the 270 persons who died from pulmonary tuberculosis 88.5 per cent. were known to the Dispensary staff, 222 having visited the Dispensary and an additional 17 having been attended in their homes by the visiting nurses.

50.0 per cent. of the persons who died from "non-pulmonary" tuberculosis were attended at or from the Dispensary. This is much lower than the pulmonary cases; the main reason being that 33.3 per cent. of the non-pulmonary cases were not notified before death.

Of 270 deaths from pulmonary tuberculosis the diagnosis was verified bacteriologically in 201 instances, *i.e.*, 74.4 per cent.

Eight other Dispensary patients who were known to be suffering from pulmonary tuberculosis, and in whose sputum tubercle bacilli had been found, died during the year. The cause of death being registered as: suicide, 3; general tuberculosis, 1; tuberculosis of peritoneum, 1; tuberculoma, 1; diabetes mellitus, 1; renal disease, 1.

**Duration of Illness.**—Whenever possible, in pulmonary cases, enquiry was made as to the length of time the deceased had been ill, and the average duration of illness was found to be 43.0 months, the figures being 44.0 months for adult males, 45.2 months for adult females and 14.5 months for those below 15 years of age (both sexes).

The period between notification and death averaged 28.3 months for all cases, 29.2 months for adult males, 29.6 months for adult females, and 8.7 months for children.

34.5 per cent. of the patients had either not been notified prior to death (5.9 per cent.) or died within 3 months of notification (28.6 per cent.)

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.											
	Average for 1913-17.	Average for 1918-22.	Average for 1923-27.	Average for 1928-32.	1933	1934	1935	1936	1937.			Total
									M.	F.	CHD	
Persons not notified .....	43	51	33	23	17	25	8	15	9	7	...	16
" notified under 1 mth. ....	35	47	50	38	29	33	23	29	26	7	6	39
" between 1 and 3 " .....	94	48	44	45	24	22	27	35	24	13	1	38
" between 3 and 6 " .....	53	30	38	36	26	36	30	22	10	9	1	20
Total under 6 months ..	226	183	166	140	96	116	88	101	69	36	8	113
Persons notified between—												
6 and 12 months ..	47	46	40	36	31	32	22	29	17	15	...	32
" 12 and 18 " ..	28	21	25	22	27	18	24	19	8	13	1	22
" 18 and 24 " ..	15	15	17	17	17	15	16	14	10	5	2	17
" 2 and 3 years .....	20	18	22	21	25	24	25	18	15	8	2	25
" over 3 years .....	21	47	53	59	66	75	65	84	39	22	...	61
TOTALS .....	357	331	324	296	262	280	240	265	158	99	13	270

The figures for non-pulmonary forms of tuberculosis show that in 18 instances out of 54 deaths, the disease had not been notified prior to death; 8 of the 16 fatal unnotified cases of pulmonary tuberculosis, and 17 of the 18 fatal unnotified cases of non-pulmonary tuberculosis, died in hospitals; included in the 17 "other forms" were 10 cases of tuberculosis meningitis.

**Family History.**—In 91 instances amongst the 249 cases of pulmonary tuberculosis known to the Dispensary who had died during the year, *i.e.*, in 36.5 per cent., there was a history that some near relation was suffering from, or had died of pulmonary tuberculosis. The figures were 36.0 per cent. for males and 37.6 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 249 persons were as follows :—

Rooms in Dwelling.	1	2	3	4	More than 4	Common Lodging Houses.	Not Known.	Total.
Deaths .....	12	49	73	68	44	1	2	249

As regards the type of house occupied, 127 were flats, 39 tenements, 80 self-contained, 1 was a common lodging house, and in 2 cases the particulars were not known.

It is noteworthy that of the 234 patients suffering from pulmonary tuberculosis who attended the Dispensary and died in 1937, 210, or 90 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.

### INSTITUTIONAL TREATMENT.

Approximately 76 beds were provided at Barrasford Sanatorium for Newcastle upon Tyne patients suffering from pulmonary tuberculosis and 136 hospital beds at the Sanatorium Pavilions, City Hospital for Infectious Diseases, Walker Gate; 41 beds at Newcastle General Hospital for the treatment of non-pulmonary tuberculosis, and 40 beds at Stannington Sanatorium for children for both surgical and medical cases, and 12 beds at W. J. Sanderson Orthopædic Hospital School for Children, Gosforth.

**Barrasford Sanatorium.**—The report of the Medical Superintendent of Barrasford Sanatorium, which will be found under a separate heading, contains details and statistics of Newcastle patients treated in that Institution.

**Sanatorium Pavilions, City Hospital, Walker Gate.**—464 patients were admitted (267 males and 197 females) and included 46 transferred from Newcastle General Hospital who were found to be suffering from pulmonary tuberculosis.

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 1937.

		Sex	In Institu- tion on 1st January, 1937.	Ad- mitted during the Year.	Dis- charged during the Year.	Died in Institu- tion during the Year.	In Institu- tion on 31st Dec., 1937.
Number of Patients.	Adults .....	M.	33	193	158	34	34
	Do. ....	F.	25	139	107	22	35
	Children....	M.	....	3	1	1	1
	Do. ....	F.	....	10	6	1	3
Observation Cases.	Adults .....	M.	9	58	50	13	4
	Do. ....	F.	3	41	34	4	6
	Children....	M.	....	13	10	....	3
	Do. ....	F.	6	7	11	....	2
TOTALS.....	....	....	76	464	377	75	88

N.B.—28 patients were re-admitted and are counted as 56 admissions.  
1 patient was re-admitted twice and is counted as 3 admissions.

Included in the above table are 5 extra mural cases admitted and 3 discharged, 2 remaining in hospital at the end of the year.

Of the 122 patients discharged who had been under observation 45 were found to be suffering from tuberculosis. The total number of days of those who received treatment was 33,898 giving an average length of stay as 75 days.

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

	Males.	Females.	Total.
Improved .....	156	102	258
Without Improvement .....	63	56	119
Died in Hospital .....	48	27	75
TOTALS .....	267	185	452

Many of those discharged "improved" were fit for light work; 42 were transferred to Barrasford Sanatorium and 1 to Stannington Sanatorium. 21 patients were sent to the Newcastle General 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 1,796 thoracic films were taken. These included 1,059 Dispensary patients, 351 inmates of the Sanatorium Pavilions, 151 patients from the City Hospital for Infectious Diseases, 180 in connection with artificial pneumothorax treatment and 55 nurses and maids belonging to the staff of the Hospital. In addition, 2,573 routine screen examinations were made, 1,500 in connection with artificial pneumothorax refills, and 1,073 to patients in hospital.

**Artificial Pneumothorax.**—There were 39 initial inductions of artificial pneumothorax and 1,609 refills performed at the Sanatorium Pavilions, City Hospital, Walker Gate, during the year. Since the year 1922, 439 patients have received this form of treatment.

### NEWCASTLE GENERAL HOSPITAL.

121 patients were admitted (75 males and 46 females). Details are given in the following table :—

PATIENTS WHO RECEIVED TREATMENT IN NEWCASTLE GENERAL HOSPITAL DURING THE YEAR 1937.

	Sex	Institution on 1st Jan., 1937.	Admitted.	Discharged.	Died in Institution.	In Institution on 31st Dec., 1937.
Pulmonary.... Adults	M.	....	7	4	2	1
Do. .... Do.	F.	2	1	3	....	....
Non-Pulmonary Do.	M.	13	53	36	9	21
Do. .... Do.	F.	7	28	25	3	7
Do. Children	M.	17	15	25	3	4
Do. Do.	F.	4	17	15	4	2
<b>TOTALS.....</b>		<b>43</b>	<b>121</b>	<b>108</b>	<b>21</b>	<b>35</b>

4 patients were re-admitted and are counted as 8 admissions.

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

	Males.	Females.	Children.	Totals.
Improved .....	28	18	36	82
Without Improvement .....	12	10	4	26
Died in Hospital .....	11	3	7	21
<b>TOTALS</b> .....	<b>51</b>	<b>31</b>	<b>47</b>	<b>129</b>

The total number of days of those who received treatment was 24,439, giving an average length of stay of 189 days.

**Thoracic Surgery.**—The Thoracic Surgeon (Mr. G. A. Mason, F.R.C.S.) at Newcastle General Hospital has continued to operate upon suitable cases. Whenever necessary he has visited the Sanatorium Pavilions, City Hospital, Walker Gate, and seen patients, in consultation with the Tuberculosis Medical Officer, who were thought likely to benefit by operative procedure.

### STANNINGTON CHILDREN'S SANATORIUM.

Since 1st April an additional 10 beds have been maintained in this Institution for the treatment of Newcastle-upon-Tyne patients, making 40 in all. These were kept fully occupied throughout the year and 43 children completed treatment. The details appear below :—

CHILDREN WHO RECEIVED TREATMENT IN STANNINGTON SANATORIUM DURING YEAR 1937.

	In Sanatorium on 1st Jan., 1937.	Admitted.	Discharged.	In Sanatorium on 31st Dec., 1937.
Pulmonary Males .....	8	14	12	10
Do. Females.....	11	11	11	11
Non-Pulmonary Males.....	6	19	13	12
Do. Females....	5	9	7	7
<b>TOTALS</b> .....	<b>30</b>	<b>53</b>	<b>43</b>	<b>40</b>

1 female died in the institution and is included in the discharges.

The total number of days of those who received treatment was 9,035, giving an average length of stay of 210 days.

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

	Males.	Females.	Total.
Disease quiescent .....	13	10	23
Improved .....	10	7	17
Without Improvement .....	2	....	2
Died in Institution .....	....	1	1
<b>TOTALS</b> .....	<b>25</b>	<b>18</b>	<b>43</b>

**W. J. Sanderson Orthopædic Hospital School for Children.—**

12 beds were taken at the above institution on 1st April, 1937, and 14 patients have been admitted (12 males and 2 females). Details are given in the table below :—

	In Institution on 1st Jan., 1937.	Admitted.	Discharged.	In Institution on 31st Dec., 1937.
Non-Pulmonary, Males .....	....	12	1	11
Do. Females .....	....	2	1	1
<b>TOTALS</b> .....	....	<b>14</b>	<b>2</b>	<b>12</b>

The 2 children discharged were much improved.

The total number of days of those who received treatment was 315, giving an average length of stay of 157 days.

No action has been taken under the Public Health Act of 1925 (compulsory removal of patients to hospital) or under the Public Health Prevention of Tuberculosis Regulations, 1925, dealing with milk.

I wish to acknowledge the loyal support and interest of my staff.

Yours faithfully,

GEORGE HURRELL, M.D., D.P.H.,  
*Tuberculosis Medical Officer.*

*Tuberculosis Dispensary,  
91, New Bridge Street,  
Newcastle upon Tyne, 2,  
5th May, 1938.*

## BARRASFORD SANATORIUM.

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### Report of the Medical Superintendent.

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TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I beg to submit a report on the work at Barrasford Sanatorium during the year 1937.

**General.**—The number of patients accommodated remains as previously. The total is 95 ; 57 being allocated to male patients and 38 to females. This arrangement leaves a few rooms with only one occupant, and they are reserved for sick patients.

The total of 95 is more than Newcastle requires at present, and some of the surplus beds are rented to neighbouring local authorities as follows :—

Gateshead Corporation .....	10 beds for male cases.
West Hartlepool Corporation ...	6 beds—3 for each sex.

Tynemouth Corporation relinquished in June the 2 beds for female cases that they had maintained since 1919.

Dr. D. Cohen resigned from the post of Assistant Medical Officer in February, after more than a year's service, and in due course was followed by Dr. M. H. Elliott.

During the year the usual yearly sum was expended on painting. The roofs on this occasion received the major attention, with a smaller amount of interior decoration.

A further length of roadway was macadamised, and gradually the original old roads are being transformed from potholed tracks into modern hard roads, to the comfort of pedestrians and motorists alike.

The grounds have been developed still further, and there has been a very marked improvement in the appearance of the surroundings of the Institution.

Following on the replacement of the ironing callender in the laundry in 1936, a new hydro-extractor has been supplied during 1937, and the laundry equipment is gradually being brought up to date.

The most important improvement of the year however, has been in the kitchen. Here, as in the scullery, the wood and composition flooring has been taken up, the space to the ground filled in, and the floor relaid in tiling. At the same time the 2 coal fired ranges were removed and replaced by a battery of Aga Cookers, consisting of 2 of the largest sized ovens and 3 auxiliary ovens.

The result has been a very marked improvement in the conditions under which the staff worked, as well as in the appearance of the kitchen. The high room temperature caused by the old ranges has been abolished, the cooking is facilitated and there is economy in fuel.

**X-ray Plant.**—A new single valve X-ray machine was provided during the year, with a screening stand previously in use elsewhere. Films of chests can now be taken at a distance of 4 feet, and in this respect there is a considerable improvement in the work.

A film is taken of each patient on admission and subsequently when it is thought desirable, and during the year 333 films were completed and the interpretations recorded in the patients' notes.

All the cases treated by lung collapse are "screened" as a routine, and 695 screenings were performed and indicated by diagram in the patients' records.

**Dental Clinic.**—The dental work has proceeded on the usual lines. The work is in the hands of Mr. G. Hutchinson, L.D.S., who attends a clinic each fortnight. The primary purpose of the service is to clean up the state of the mouth, where dental sepsis or gum disease is likely to affect the general health, and to relieve or forestall pain.

During the year the following work was completed :—

Extractions .....	261
Fillings .....	68
Temporary fillings .....	32
Scalings .....	27
Attention to dentures.....	3
Dressings .....	4
Examinations .....	6

The total number of attendances was 324.

**Occupational Therapy.**—This branch of Sanatorium routine has been carried on as previously. It is therapeutic, and is not intended to be vocational. It is employed for patients who have completed the long walks and need some change, as well as for patients who are not able to undertake the long walks on account of more marked disability. Its value is undoubted.

It is divided into 2 types. One is handicrafts of many varieties, under the charge of a whole time instructor (Mr. J. A. Caughey) and carried out in suitable workshops. The standard of the finished articles is remarkably good, and there is little wastage of material or financial loss on the purchase thereof. The attendances numbered 4,738; the women worked 3,874 hours and the men 5,638.

The other variety is woodworking and estate work under the care of the joiner (Mr. F. C. Gerdes). Men only are employed in a specially built workshop or on the estate and buildings, helping in repairs or improvements.

In addition, men patients assist the gardener in the maintenance and development of the grounds.

**Admissions.**—The total number of cases admitted to the Sanatorium during the year was 224, 32 more than in the previous year. The number of Newcastle admissions was 170, as against 144 in 1936. Gateshead Corporation had 34, West Hartlepool Corporation had 19, Middlesex County Council had 1, and there was 1 private case.

So far as Newcastle cases are concerned, there is rarely any delay in admission; a patient is usually in the Sanatorium within a week after the receipt of his application form. In the cases of the outside authorities who have a fixed number of beds and therefore often a waiting list, there is occasionally delay in admission.

Of the 224 admitted cases, 24 had been in the Sanatorium previously as follows:—

1	of the re-admitted cases was first admitted in.....	1923
1	“ “ “ “ “ “ “ “ .....	1926
2	“ “ “ “ were “ “ .....	1928
1	“ “ “ “ was “ “ .....	1932
2	“ “ “ “ were “ “ .....	1933
3	“ “ “ “ “ “ “ .....	1934
3	“ “ “ “ “ “ “ .....	1935
4	“ “ “ “ “ “ “ .....	1936
1	“ “ “ “ was “ “ .....	1937
	1 case had been admitted 3 times previously, in 1933 1934 & 1935	
	1 case had been admitted twice previously.....in 1926 and 1935	
1	“ “ “ “ “ “ “ “ in 1928 and 1932	
1	“ “ “ “ “ “ “ “ in 1932 and 1934	
2	cases “ “ “ “ “ “ in 1933 and 1936	

Of these 24 re-admitted cases, 18 had had at some time or other tubercle bacilli demonstrated in the sputum, and in 6 cases tubercle bacilli had never been seen.

ADMISSIONS TO THE SANATORIUM DURING 1937.

Authority.	Male.	Female.	Total.
Newcastle Corporation .....	97	72	169
Gateshead Corporation .....	34	....	34
Tynemouth Corporation .....	....	....	....
West Hartlepool Corporation .....	13	6	19
Private .....	....	1	1
Middlesex County Council .....	1	....	1
	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

1 case was admitted twice during the year and is counted as two admissions.

NOTE.—Figures relating to the years 1921-1928 are given in the Report for the year 1932.

**Discharges.**—There were 216 discharges during 1937, as compared with 190 in 1936. One patient died in the Sanatorium during the year. There were no summary dismissals during the year, and the total of these is only 7 since 1921 when the Corporation acquired the Sanatorium.

## DISCHARGES FROM THE SANATORIUM DURING 1937.

Authority.	Male.	Female,	Total.
Newcastle Corporation .....	98	61	159
Gateshead Corporation .....	34	....	34
Tynemouth Corporation .....	1	1	2
West Hartlepool Corporation .....	12	8	20
Private .....	....	1	1
	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

1 case was discharged twice during the year and counts as two discharges.

NOTE.—Figures relating to the years 1921-1928 are given in the Report for the year 1932.

## SUMMARY OF MOVEMENTS OF PATIENTS DURING 1937.

Authority.	In residence night of Dec. 31st, 1936.	Admitted during 1937.	Discharged during 1937.	In residence night of Dec. 31st, 1937.
Newcastle Corporation .....	59	169	159	69
Gateshead Corporation .....	10	34	34	10
Tynemouth Corporation .....	2	....	2	....
West Hartlepool Corporation .....	6	19	20	5
Private .....	....	1	1	....
Middlesex County Council.....	....	1	....	1
	77	224	216	85

**Details in connection with Discharged Cases.**

The particulars of patients and the results of their treatments which are set out later, are based on the completed cases discharged. Of these 216, 18 exhibited no definite signs or symptom, of clinical tuberculosis, and were discharged as soon as this fact

was established, and are excluded from the particulars and results of treatment which follow. The details (*c* to *f*) are, therefore, based on the 198 cases of definite tuberculosis.

(a) Length of stay—

The average duration of treatment of all cases was 152 days.  
 Excluding the 18 non-tuberculous cases, 145 days.  
 The 159 Newcastle cases alone averaged 158 days.  
 The longest stay was 736 days, the shortest 10 days.

(b) Beds occupied and patient days—

Average number of beds occupied, 85. 55 by males, and 30 by females.  
 Total number of patient days was 30,950. 19,890 male, and 11,060 female.

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 .....	67.90	24,786
Gateshead Corporation .....	9.95	3,632
Tynemouth Corporation.....	.78	285
West Hartlepool Corporation .....	5.83	2,138
Private .....	.046	17
Middlesex County Council .....	.25	92

(c) Age—

Years.	Male.	Female.	Total.
16-20 .....	18	11	29
20-25 .....	33	18	51
25-30 .....	23	14	37
30-35 .....	20	4	24
35-40 .....	16	9	25
40-45 .....	5	5	10
45-50 .....	10	2	12
50-55 .....	2	1	3
55-60 .....	5	....	5
60-65 .....	1	....	1
65-70 .....	1	....	1
TOTAL .....	134	64	198

*(d) Social Status—*

	Male.	Female.	Total.
Single .....	78	43	121
Married .....	53	18	71
Widowers.....	3	....	3
Widows .....	....	3	3
<b>TOTAL .....</b>	<b>134</b>	<b>64</b>	<b>198</b>

*(e) Occupations of 134 Male Patients—*

Labourers .....	27
Engineering and metal workers .....	17
Clerks .....	7
Miners .....	6
Salesmen .....	4
Bar managers and barmen .....	3
Butchers .....	3
Machine men .....	3
Shop assistants.....	2
Joiners .....	2
Cartmen .....	2
Ex-soldiers.....	2
Ex-naval ratings .....	2
Patternmakers .....	2
Upholsterers .....	2
French polishers .....	2
Railway workers (outside) .....	2
Warehousemen .....	2
Bus conductors .....	2

and one each of the following :—motor driver, motor salesman, typewriter mechanic, enameller, policeman, baker, shipwright, monotype keyboard operator, tailor, coachpainter, electrician, schoolboy, electric cable worker, tailor's cutter, leaded light maker, factory worker, flower seller, traveller, grocer, van boy, pressman, draughtsman, coppersmith, cashier, machine cleaner, clay pipe maker, timber feller, brick archman, fireman, theatre attendant, glass sorter, waiter, stevedore, compositor, hairdresser, film repairer, painter, blacksmith, laboratory assistant, and two had no occupation. Total 134.

*(f) Occupations of 64 Female Patients—*

Housewives .....	16
Clerks and typists .....	11
Domestic servants .....	9
Shop assistants.....	4
Factory workers .....	3
Nurses .....	3
Housework at home .....	2

and one each of the following :—school teacher, laundress, packer, bottler, tailoress, warehouse assistant, factory cleaner, ward maid, coil winder, solderer, baker's assistant, theatre attendant, telephonist, laundry packer, pottery painter, office cleaner. Total 64.

### Diagnosis.

The diagnosis of pulmonary tuberculosis was confirmed bacteriologically either before admission or during residence in 125 cases (88 males and 37 females). 46 patients (35 males and 11 females) were apparently without tubercle bacilli in the sputum, and 27 patients (11 males and 16 females) said they had no expectoration ; making 73 cases of tuberculosis in whose sputa tubercle bacilli had never been demonstrated. The clinical findings in all sputum negative cases can be divided as follows :—

Not suffering from clinical tuberculosis .....	18
Definite pleural tuberculosis without evidence of lung tuberculosis .....	36
Definite physical signs and X-ray evidence of lung tuberculosis without demonstrable bacilli.....	37

In the cases of the 37 patients in the last group, the radiographs all showed appearances suggesting the presence of deposit in the pulmonary situation for which tuberculosis shows a predilection. 215 sputum examinations were made in connection with these 37 cases, and as 12 had no sputum the average examinations in those that had, was 9 each. 1,470 sputum examinations were made at the Sanatorium during the year ; of these 535 were positive as regards the presence of tubercle bacilli, and 935 were negative. 973 complete examinations of the chest were made during the year, together with routine examinations of the larynx and urine on admission of the patient, and subsequently when necessary.

During the year 18 cases were discharged as not suffering from pulmonary tuberculosis, and the diagnoses in these cases were as follows :—

No pathological condition detected.....	13
Bronchiectasis .....	2
Chronic inflammatory lesion.....	1
Spontaneous pneumothorax (simple) .....	1
Broncho-pneumonia (non-tuberculous) .....	1

These 18 non-tuberculous cases were included in the 26 patients sent for observation for the purpose of making a diagnosis. Of the remaining eight, two were found to be suffering from pleural tuberculosis and six from pulmonary tuberculosis.

The period of observation for the purpose of diagnosis is set out below :—

	Under 1 week.		1 to 2 weeks.		2 to 4 weeks.		More than 4 weeks.	
	M.	F.	M.	F.	M.	F.	M.	F.
Tuberculous .....	1	2	....	2	1	....	....	2
Non-tuberculous	2	....	....	....	3	1	6	6

Lipiodol was employed when necessary in diagnosis, and 4 lipiodol bronchograms were produced, one of which showed the characteristic appearances of bronchiectasis and three showed normal appearances.

### Treatment.

There has been no departure from the plan of treatment in use in the past. Rest and diet are regarded as the outstanding essentials, followed by exercise and fresh air. The range of the bodily temperature gives important information. Unless there is some other cause, a raised temperature in pulmonary tuberculosis is almost always an expression of active disease, and bed rest is imperative until it has been reduced.

91 of the 198 definite cases of tuberculosis were found to have normal temperatures during the whole of their residence, whilst 107 patients were feverish at some time or other of their treatment in the Sanatorium.

Febrile throughout Treatment.	Febrile on Admission, Afebrile on Discharge.	Febrile Intermittently.	Febrile throughout Treatment.	Afebrile on Admission, Febrile on Discharge.
91	62	27	18	....

Lung collapse, or artificial pneumothorax, is used as much as possible. This form of treatment is the most effective in a large group of cases, and restores health to many patients in whom it could not be attained probably by any other means.

It is naturally most useful in cases with disease in only one lung, but has its use in the case with a cavity in one lung and disease in the other, or even in the collapse of the worse lung when both are involved considerably.

In a number of cases the lung is adherent universally to the chest wall, and collapse is not possible; in others it is adherent at one point or at several by adhesions in the form of bands of varying conformations. In some instances it is judicious to advise the severance of adhesions to allow a lung to be collapsed adequately.

In another group of cases the lung is held generally at the very part which it is desirable to collapse, and in these it seems wisest to discontinue the pneumothorax.

Severance of adhesions was recommended in 5 cases; in 3 it was successfully performed, and in 2 it could not be accomplished. In one of the latter, crushing of the phrenic nerve was subsequently done, which produced an improved degree of lung collapse.

48 of the 198 tuberculous cases discharged in 1937 were considered to be suitable for treatment by lung collapse, but in 6 of them changes in the chest in the course of the disease on the chosen side, prevented the treatment from being carried out.

Of the 42 cases treated, 28 were right sided and 14 were left. In addition to these, 10 cases had had an artificial pneumothorax induced before admission, bringing the number treated during the year to 52, 34 right and 18 left.

In connection with the above cases, all of whom were discharged during the year, 659 insufflations of air were performed, whilst during the year the total number of such operations was 622.

In 31 cases the induction of lung collapse seemed to be effective in controlling symptoms, 19 of them losing tubercle bacilli previously present in the sputum. In the remaining 12, the procedure was ineffective and was abandoned.

On discharge the lung collapse is maintained by the Tuberculosis Medical Officer in most instances.

Since 1922, 488 cases have been treated by lung collapse at Barrasford, exclusive of those cases where it was induced before admission—which total 92.

No case was treated by gold salts, as their use has been abandoned at this Sanatorium.

### **Results of Treatment.**

Most of the patients discharged were in improved general health, that is to say, the majority had gained weight, had normal temperatures and felt, as well as looked, better. In cases with tubercle bacilli in the sputum however, there is only one criterion

of real progress, and that is the obliteration of sputum, or the absence after repeated examinations, of bacilli from any sputum that may persist.

Of the 125 cases with tubercle bacilli in the sputum, 41 either had no sputum or were T.B.— on discharge. Of this number 19 were amongst the 31 cases where an effective artificial pneumothorax had been induced.

Ever since sanatorium treatment was introduced, the importance of treatment early in the course of the disease has been stressed. Disease of limited extent can be controlled with adequate treatment, especially if tubercle bacilli are not yet demonstrable; but established disease with bacilliferous sputum and cavities, is an entirely different matter, and speaking generally the ultimate outlook is not good.

Of the 198 cases discharged, only 75 could be regarded as cases of limited disease, whilst 123 were moderately advanced or advanced cases with tubercle bacilli in the sputum.

The estimation of the blood sedimentation rate was carried out as a routine during the year, being done monthly for every patient. 1,138 estimations were made and recorded. The factors affecting the rate of sedimentation of the red blood cells, have not yet been discovered, but it is a great comfort to find a normal rate in a patient with pulmonary tuberculosis, or to see a definite fall in the rate as treatment continues.

The following are the weight records of the 198 definite cases, and the 18 non-tuberculous cases.

		Gained up to 7 lbs.	Gained 7 to 14 lbs.	Gained over 14 lbs.	Remained station- ary.	Lost up to 7 lbs.	Lost over 7 lbs.	Not weighed on dis- charge.	TOTAL.
198 definite cases.	{ Gained weight...	68	62	47	....	....	....	....	177
	{ Lost weight .....	....	....	....	....	16	1	....	17
	{ Stationary .....	....	....	....	4	....	....	....	4
	{ Not weighed on discharge .....	....	....	....	....	....	....	....	....
Total .....		68	62	47	4	16	1	....	198
18 non- tuber- culous cases.	{ Gained weight...	11	4	3	....	....	....	....	18
	{ Lost weight .....	....	....	....	....	....	....	....	....
	{ Stationary .....	....	....	....	....	....	....	....	....
	{ Not weighed on discharge .....	....	....	....	....	....	....	....	....
Total .....		11	4	3	....	....	....	....	18

Under the classification of cases introduced by the Ministry of Health, patients suffering from pulmonary tuberculosis are divided into :—

- Class T.B. Minus, or those cases in which tubercle bacilli have never been demonstrated in the sputum, and,  
 Class T.B. Plus, viz., cases in which tubercle bacilli have at any time been found.

The latter class is further divided into three groups :—

- Group 1.—Cases with slight constitutional disturbance, if any, and in which the obvious physical signs are of very limited extent.  
 Group 3.—Cases with profound systemic disturbance or constitutional deterioration, with marked impairment of function, and with little or no prospect of recovery.  
 Group 2.—All cases which cannot be placed in Groups 1 or 3.

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

- “ Quiescent.”—Cases which have no symptoms of tuberculosis and no signs of tuberculous disease, except such as are compatible with a completely healed lesion, and in which the sputum, if present, is free from tubercle bacilli.  
 “ Arrested.”—In pulmonary cases the term should be applied only to cases which have been “ quiescent ” for a period of at least 2 years.  
 “ Improved.”—Cases short of “ quiescent,” in which the general health is fair and the symptoms of tuberculosis have materially diminished.  
 “ No Material Improvement.”—All other patients who are alive.

When considered in these terms, the results of treatment of the 198 cases of lung or pleural tuberculosis can be set out as follows :—

		T.B. Minus.			}	= 75	
		M.	F.	Total.			
		Quiescent .....	15	12	27		
		Improved .....	27	15	42		
		No Material Improvement..	4	....	4		
		T.B. Plus.			}		
		M.	F.	Total.			
G.1	{	Quiescent .....	....	....	....		
		Improved .....	1	1	2		
		No Material Improvement..	....	....	....		
G.2	{	Quiescent .....	....	....	....		
		Improved .....	45	23	68		
		No Material Improvement..	11	6	17		
G.3	{	Quiescent .....	....	....	....	}	= 123
		Improved .....	4	....	4		
		No Material Improvement..	27	7	34		

The number of T.B. minus cases which improved to the stage of quiescence is made up of cases of pleural tuberculosis which had no evidence of disease in the lung itself.

It is a pleasure to acknowledge the help of the Matron (Miss F. Baguley, A.R.R.C.) and the loyalty and work of the whole staff, both nursing and lay.

Yours faithfully,

CECIL G. R. GOODWIN, L.R.C.P., M.R.C.S.,

*Medical Superintendent.*

*Barrasford Sanatorium,*

*Hexham,*

*Northumberland,*

*March, 1938.*

REPORT OF THE  
MEDICAL SUPERINTENDENT  
NEWCASTLE GENERAL HOSPITAL.

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V.—GENERAL DISEASES  
HOME AND HOSPITAL.

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DOMICILIARY MEDICAL SERVICE,  
NEWCASTLE GENERAL HOSPITAL.

REPORT OF THE  
COMMISSIONER OF THE  
GENERAL LAND OFFICE

OF THE  
LANDS BELONGING TO  
THE CROWN  
IN THE  
ISLANDS OF THE  
WEST INDIES

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GENERAL DISBURSES  
IN THE  
GENERAL LAND OFFICE

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GENERAL LAND OFFICE  
GENERAL LAND OFFICE

### 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 and 1936 a further district was included in the scheme, and the eight districts are now designated the Joint Medical Relief District.

It is proposed to add to the Joint Medical Relief District any other districts which may become vacant.

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.

A report on the working of the scheme during the period 1st March, 1936—28th February, 1937, is included in this report (Appendix A).

The following table gives particulars of the work carried out during 1937 of the remaining District Medical Officers whose areas are not included in the Joint Medical Relief District.

District No.	District Medical Officer.	Number of Cases Treated.	Attendances by the M.O. at the Homes of the Patients.	Attendances by the Patients at the M.O.'s Surgery.
8	Dr. R. W. Nevin.....	1,863	2,813	3,123
10	Dr. T. J. Ryan.....	1,201	2,987	4,100

**NEWCASTLE GENERAL HOSPITAL.**

TO THE MEDICAL OFFICER OF HEALTH.

The following report on the year's work in the General Hospital is submitted for your consideration. As it includes reports on the activities of the special departments, it is unnecessary for me to refer to them, except to say that these continue to play an important part in the work of the Hospital and the services provided by them are being more and more utilised by outside authorities. Arrangements for the admission of these patients are working more smoothly. It has, however, to be realised that these admissions have contributed in no small part to the over-taxing of the available accommodation.

Again I have to report an increased activity in all departments of the Hospital, the admissions having increased by 1,094, and the discharges by 1,063. The greatest increase has been in patients under 60 and particularly in women and children. The female wards have been more crowded than the male right through the year. It has not been possible at any time to dispense with the extra beds in wards and day-rooms. It has also been found necessary to institute a waiting list, certainly small, in the case of paying patients. Dental cases also have only been admitted where there was an urgent need for treatment, this applying for the most part to prospective mothers. This is clearly reflected in the operation list, the number of extractions having fallen by more than two hundred.

Again I would suggest that some reasonable arrangement be made for dental treatment as it would appear that the present facilities in the City do not provide an adequate system.

During the year 3,301 letters were sent out to doctors, with reports regarding their patients, of these 1,305 referred to medical and 1,996 to surgical cases. I understand that this service is very much appreciated by medical practitioners.

The Sunday Morning Lectures were continued during the spring and summer months, there being a slight increase in the average attendance. An interesting feature is the number of doctors who come relatively long distances to attend these lectures.

The course of lectures and demonstrations for undergraduates was also continued, as in the previous two years, and at these there was a slight increase in the average attendance.

The number of cases of pulmonary tubercle was higher than in the previous year, the majority of these being recognised as such only after admission. The number also includes those admitted for surgical treatment. It is the rule now that patients suffering from pleurisy with effusion are notified and treated as potentially tuberculous. The experience, as reported in 1936, has been that pulmonary tubercle is fairly common in children. Again I have to place on record my appreciation of the ready co-operation of the Tuberculosis Medical Officer.

The work in the Maternity Ward continues to increase, 545 cases having been dealt with compared with 388 in the previous year. In spite of the limited accommodation available the work was carried out without any untoward happening, reflecting to the credit of the medical and nursing staff. The work could not have been carried on without the ward taken over in D. Block. Points of interest I would mention are the number of paying patients both from the City and outside districts and also the very small number of unmarried mothers. On account of the greatly increased number seeking admission it was found necessary to refuse those from outside the City. The New Maternity Block to be built shortly should greatly facilitate the work of this department.

The number of patients admitted to the Mental Wards was again high, viz. :—413, one more than in the previous year. It was found necessary to transfer to the Mental Hospital 31.4% of the males, and 37.4% of the females, these being about the usual relative proportions. A certain number were dealt with under the New Mental Treatment Act.

It has been suggested by the visitors from the Board of Control that in their opinion it would be an advantage if some closer relationship existed between the medical staff of the Mental Hospital and that of the Observation Ward. The suggestion is that the Medical Superintendent or one of his assistants should visit the Observation Wards as occasion necessitates. I have expressed my willingness to co-operate in this arrangement.

The entrance and the facilities for the storage of milk leave very much to be desired in the Male Observation Ward. This has been discussed on several occasions in the past, but so far it has not been possible to devise an improvement. It would be a great advantage if this could be considered.

The beginning of the year saw an outbreak of influenza, fortunately of a mild type. It affected for the most part adults, and also was responsible for an increase in the amount of sickness in the staff. There was, I regret to report, a large increase in the number of children affected by dysentery. This is, in my experience, one of the most elusive of the infectious diseases, calling for the most scrupulous care in nursing and medical attention. The opening of the New Children's Block has greatly facilitated the means of dealing with it. The New Infants' Ward has also been a great boon in the treatment of these patients.

The number of dental cases dealt with in the Operating Theatre was 211 fewer than in 1936. There was however an increase of over 200 in the number of other operations.

The Anæsthetists continue to play a very important part in this department, making possible operations which otherwise would be very difficult or inadvisable. As I said in the report of last year anæsthesia has become highly specialised and has been of the greatest benefit to the patient.

The installing of the shadowless lamp in the second theatre and the provision of an up-to-date operating table have been very much appreciated by the surgical staff, greatly facilitating the work.

The number of patients admitted for treatment following miscarriage increased by  $33\frac{1}{3}\%$ , a figure which is very disconcerting. One is able to say that many of these cases cannot be described as natural. It is however very difficult to get any definite evidence on which to take proceedings.

The number of children transferred to the Convalescent Home at Whitton Tower was 112. This number would have been higher but for the occurrence of several cases of diphtheria. The Home was also closed for two weeks over Christmas, allowing for some necessary cleaning and minor repairs. It also allowed children, where possible, to spend Christmas in their own homes. The improvement in health, from a residence of only four or five weeks has been very remarkable. This being so it is difficult to understand why we find a number of parents refusing to allow their children the opportunity of deriving the benefit from the sojourn in the country under such ideal surroundings and conditions. The arrangement for transport to the Home is working quite satisfactorily.

The number of paying patients admitted for treatment continues to increase as will be seen from the following returns for the last seven years :—

1931 ... 63	1934 ... 170	1936 ... 308
1932 ... 105	1935 ... 218	1937 ... 373
1933 ... 124		

This number could readily be increased provided the accommodation was available. The cases put on the waiting list are the paying patients, unless the case is an urgent one, when admission is arranged immediately.

Full use has been made of the facilities afforded by the Electrical and Massage Department, not only for patients in the Hospital, but also for out-patients. There was a considerable increase in the number of treatments particularly as regards massage. The appointment of a second full time masseuse has been fully justified. The work has been very much facilitated by the new accommodation provided during the year under review.

The work of the X-ray department has been greatly facilitated by the new installation and the increased accommodation. A slight increase in the number of cases is recorded during the year, but I anticipate that this increase will be much greater during the present year.

The number of prescriptions dispensed for Domiciliary Medical Service patients was 26,512, a reduction of 2,234 compared with the previous year. Many of these prescriptions, however, contained more than one item. As regards diabetic patients there were 753 attendances for the supply of insulin, etc. A new development during the year was the opening of the Joint Venereal Diseases Clinic, this involving quite an addition to the duties of the dispensing staff.

The number of cases admitted belonging to other districts continues to increase, the majority of these being recommended for special treatment. The procedure for the admission of these cases is working more smoothly and with greater expedition.

The number of nurses admitted to the sick ward was 101, a large increase over the previous year. Of these 5 were under treatment on more than one occasion. As is usually experienced the most prevalent sickness was septic throat, and again it usually occurred in probationers during the early months of their training. Two nurses had to be transferred to Barrasford. It is satisfactory being to state that the two nurses mentioned in the report last year as transferred to Barrasford Sanatorium have made good recoveries.

The following were the outstanding diseases :—

Septic Throats .....	25	Infectious .....	4
Septic Fingers .....	6	Jaundice .....	3
Influenza .....	11	Appendicitis .....	2
Tuberculous Phthisis	2	Renal Calculus .....	1
Mammary Tumour	1	Broncho-pneumonia ...	1

The nursing staff was increased during the year, but this increase had to be limited on account of the lack of accommodation. The arrangement permitting the sisters to live out gave a certain amount of relief, but the proposed extension of the Nurses' Home will make possible not only the bringing of the staff to the required number, but also will enable a 48 hour week to be put into operation, the principle of which has been adopted.

No serious difficulty has so far been experienced in obtaining candidates desirous of taking training, but there is a feeling that the General Knowledge Examination, instituted this year, may prevent a certain number coming forward.

An increase in the remuneration of sisters and staff nurses was decided upon by the Committee, and has been very much appreciated. The position of a sister in a Hospital Ward, Medical or Surgical, in the light of present day treatment is a most important and onerous one, and certainly calls for adequate remuneration.

Owing to the constant overcrowding of the wards, and the many special cases requiring nursing, the duties of the nursing staff have been particularly heavy and exacting, and I would be lacking in my duty if I did not express my appreciation of the manner in which they have carried on their work.

The re-decoration of the Resident Medical Officers' quarters and the provision of new and additional furniture has improved the conditions under which they are living.

As I said last year the Hospital has passed through a strenuous year, but the difficulties are gradually being overcome, and with the new buildings completed and those in course of construction, I think one is justified in looking forward, in the very near future, to a Hospital working smoothly and satisfactorily.

In concluding I would like to express to you my thanks for the constant interest you have shown and the help you have given in all pertaining to the administration of Newcastle General Hospital.

ADMISSIONS AND DISCHARGES, ETC., FOR THE YEAR  
ENDED 31st DECEMBER, 1937.

	<i>Males.</i>	<i>Females.</i>	<i>Children.</i>	<i>Total.</i>
Admissions .....	2,698	3,296	1,807	7,801
Discharges .....	2,625	3,285	1,848	7,758
Of the Discharges—Cured .....			3,166	
Relieved.....			3,498	
Died.....			1,094	
		<b>Total.....</b>	<b>7,758</b>	

(There were also 19 deaths in the Elswick Grange.)

TABLE OF AGES OF PATIENTS TREATED.

Men over 60.....	915
Women over 60.....	645
Men under 60.....	1,710
Women under 60.....	2,640
Boys, 3-16.....	403
Girls, 3-16.....	360
Children under 3.....	1,085
	<b>7,758</b>

TRANSFERS FROM OTHER HOSPITALS, HOMES AND  
AUTHORITIES.

Royal Victoria Infirmary .....	77 (Includes 29 Ob.Wd. cases)
Gateshead County Borough .....	6
Gateshead P.A.C.....	22
Gateshead Tuberculosis Care Committee	10
Shotley Bridge Colony .....	3
South Shields Health Committee.....	2
South Shields County Borough .....	1
Northumberland County P.A.C. ....	53
Northumberland County Health Committee	9
West Riding of Yorkshire .....	2
Durham County P.A.C. ....	44
Durham County Health Committee.....	8
Tynemouth County Borough.....	1
Tynemouth P.A.C. ....	2
Cumberland County .....	1
Middlesex County.....	1
Hull County Borough .....	2
West Hartlepool P.A.C. ....	2
Middlesbrough P.A.C. ....	2
PRIVATE CASES ADMITTED .....	373
INQUESTS HELD :—	
Hospital cases .....	58

**OPERATIONS**

FOR YEAR ENDED 31ST DECEMBER, 1937.

Abdominal .....	577
Gynæcological .....	194
Thoracic .....	251
Orthopædic .....	107
Genito-Urinary .....	382
Nose, Throat, Ear and Eye.....	164
Blood Vessels .....	113
Rectum .....	4
Brain and Special Cases.....	118
Skin and Subcutaneous Tissues.....	469
Examination under anæsthetic .....	127
Amputations.....	19
Teeth .....	162
Plastic Cases.....	10
Teeth extracted under local anæsthetic.....	22
<b>Total.....</b>	<b>2,719</b>
Major Operations.....	959
Minor Operations.....	1,576
Teeth .....	184
<b>Total.....</b>	<b>2,719</b>

**RETURN OF CASES TREATED IN MASSAGE DEPARTMENT**

	<i>Massage.</i>	<i>Medical Electricity.</i>	<i>Sunlight.</i>	<i>Total.</i>
Treatments .....	5,955	2,832	2,540	11,327

**X-RAY DEPARTMENT.**

Cases X-rayed .....	2,366
"  "  T.B. Dispensary.....	806
"  "  Babies' Hospital .....	129
"  "  Barium Meals Screened ..	214
<b>Total cases X-rayed.....</b>	<b>3,515</b>

**RETURN OF MENTAL CASES, 1937.**

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
Under treatment, January 1st, 1937....	4	4	8
Admitted during 1937 .....	222	183	405
<b>Total.....</b>	<b>226</b>	<b>187</b>	<b>413</b>
Discharged during 1937 :—			
Cured.....	15	10	25
Improved .....	48	45	93
I.S.Q. ....	5	3	8
Transferred to :—			
Mental Hospital .....	71	70	141
General Hospital .....	35	25	60
A. and I. Wards .....	10	12	22
House (Able-bodied) .....	2	4	6
" (Chronic) .....	11	1	12
" Epileptic .....	3	2	5
City Hospital. Walkergate.....	1	....	1
Deaths .....	14	6	20
Under treatment, December 31st, 1937 .....	11	9	20
<b>Total.....</b>	<b>226</b>	<b>187</b>	<b>413</b>

## PATHOLOGICAL DEPARTMENT.

## MATERIAL TESTED AND REPORTED ON IN HOSPITAL LABORATORY.

	Reports.	Specimens.
Sputa .....	763	763
Fæces .....	440	440
Blood Sugars .....	66	90
Blood Ureas.....	385	385
Blood, Microscopical .....	236	236
Gastric Contents .....	185	980
G.C. Smears .....	99	132
Pus and Effusions .....	163	165
Cerebro-Spinal Fluid .....	144	147
Complete Urinary examinations .....	1,479	1,834
Out-patient Blood Microscopical .....	180	180
Diabetic Clinic Specimens.....	806	839
	<hr/>	<hr/>
Total Hospital Laboratory....	4,946	6,191
	<hr/>	<hr/>

## BY ARRANGEMENT WITH OTHER LABORATORIES :—

Blood Wassermann's .....	699
Bacteriological Examinations .....	536
Histological Sections .....	369
Miscellaneous .....	24
	<hr/>
Total .....	1,628
	<hr/>

## ADULTS.—CLASSIFIED LIST OF DISEASES TREATED.

## MEDICAL.

## RESPIRATORY.

Bronchitis .....	191	Broncho pneumonia .....	44
Asthma .....	44	Lobar pneumonia.....	87
Pleurisy.....	60	Hypostatic pneumonia .....	5
Bronchiectasis.....	22	Others .....	29
Bronchitis and Emphysema .....	14		

## DIGESTIVE.

Gastritis .....	52	Dyspepsia.....	18
Gastric Ulcer .....	40	Gastro-Enteritis .....	24
Constipation .....	15	Cirrhosis of Liver .....	8
Duodenal Ulcer.....	46	Jaundice .....	2
Colitis .....	5	Others .....	14
Alcoholism .....	8		

## NERVOUS.

Cerebral Hæmorrhage.....	91	Vertigo .....	10
Cerebral Thrombosis .....	66	Neuritis .....	7
Functional .....	22	Neurasthenia .....	30
Disseminated Sclerosis.....	15	General Paralysis .....	19
Epilepsy .....	43	Mental.....	340
Locomotor Ataxy .....	16	Neuralgia .....	12
Paralysis Agitans .....	4	Others .....	45

## DEFICIENCY DISEASE.

Scurvy .....	2
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## INFECTIOUS DISEASES.

Encephalitis Lethargica .....	28	Dysentery .....	6
Influenza .....	40	Scarlet Fever .....	1
Erysipelas .....	9	Others .....	6

## CIRCULATORY.

Valvular Disease of Heart .....	147	Aneurysm .....	4
Myocarditis .....	152	Pernicious Anæmia .....	21
Pericarditis .....	7	Leukæmia .....	4
Arterio-sclerosis .....	105	Secondary Anæmia .....	36
Acute Endocarditis .....	2	Senility .....	50
Hyperpiesia .....	46	Debility .....	21
Angina Pectoris .....	14	Others .....	13
Coronary Thrombosis .....	19		

## RHEUMATIC.

Acute Rheumatism .....	46	Sciatica .....	19
Chronic Rheumatism .....	22	Acute Arthritis .....	13
Rheumatoid Arthritis .....	28	Chorea .....	6
Lumbago .....	8	Others .....	12
Gout .....	2		

## EXCRETORY.

Acute Nephritis .....	8	Uraemia .....	26
Chronic Nephritis .....	33	Cystitis .....	22
Pyelitis .....	21	Others .....	4

## INTERNAL SECRETORY.

Myxœdema .....	4	Diabetes Mellitus .....	60
Goitre .....	4	Others .....	7

## FOR OBSERVATION.

Cases for Observation .....			35
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## TUBERCULOSIS.

Pulmonary .....	85	Non-Pulmonary .....	150
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**ADULTS.—CLASSIFIED LIST OF DISEASES TREATED.****SURGICAL.**

Malignant .....	251	Cellulitis .....	29
Hernia .....	161	Abscess .....	46
Appendicitis .....	185	Gangrene .....	21
Gall-bladder .....	94	Mastitis .....	34
Gastric Ulcer .....	22	Carbuncle .....	23
Duodenal Ulcer .....	32	Varix .....	7
Intestinal Obstruction .....	20	Phlebitis .....	9
Diverticulitis .....	8	Hæmorrhoids .....	63
Brain and Spinal Cord .....	63	Empyema .....	28
Plastic cases .....	9	Diseases of Bone .....	17
Renal Calculus .....	17	Diseases of Rectum .....	46
Kidney .....	36	Cystitis .....	20
Lung Diseases .....	12	Displaced Cartilage .....	11
Fractures .....	105	Bursitis .....	16
Dislocations .....	4	Deformities .....	12
Injuries, Wounds, etc. .....	66	Post operative .....	18
Burns .....	13	Simple Tumours .....	18
Prostate .....	45	Teeth .....	28
Hydrocele .....	16	Toxic Goitre .....	6
Urethral Stricture .....	11	Osteo Arthritis .....	10
Retention of urine .....	5	Intestinal Colic .....	9
Other Diseases, Male Organs .....	22	For Observation .....	33
Septic conditions .....	41	Glands .....	6
Ulcers .....	24	Others .....	46

## PREGNANCY AND DISEASES OF WOMEN.

Pregnancy .....	603	Ovarian Cyst .....	19
Albuminuria of Pregnancy .....	8	Salpingitis .....	38
Hyperemesis Gravidarum .....	17	Uterine Fibroid .....	15
Pyelitis of Pregnancy .....	18	Pelvic Cellulitis .....	4
Placenta Praevia .....	2	Diseases of Uterus .....	69
Disorders of Pregnancy .....	11	Disorders of Menstruation .....	18
Miscarriage .....	216	Menopause .....	4
Puerperal Infection .....	8	Others .....	54
Ectopic Pregnancy .....	3		

## DISEASES OF THE SKIN.

Dermatitis .....	39	Scabies .....	7
Psoriasis .....	4	Impetigo .....	13
Erythema .....	2	Eczema .....	8
Sycosis .....	1	Others .....	15

## VENEREAL DISEASES.

Syphilis .....	7	Gon. Rheumatism .....	4
Gonorrhœa .....	30	Late Syphilis .....	28
Congenital Syphilis .....	7	Mixed Infection.....	3
Gonococcal Ophthalmia .....	1		

## DISEASES OF THE EYE .... 8.

## DISEASES OF THROAT, NOSE AND EAR.

Tonsillitis .....	27	Deflected Septum .....	5
Tonsils and Adenoids .....	48	Mastoid .....	10
Otitis Media .....	9	Others .....	9

**CHILDREN.—CLASSIFIED LIST OF DISEASES TREATED.**

## MEDICAL.

Bronchitis .....	102	Asthma .....	3
Pleurisy.....	15	Digestive .....	83
Lobar Pneumonia.....	56	Diabetes Mellitus .....	5
Broncho Pneumonia .....	87	Epilepsy .....	9
Bronchiectasis .....	25	Prematurity .....	19
Circulatory .....	19	Marasmus .....	4
Acute Nephritis .....	12	Rickets .....	4
Acute Rheumatism .....	11	Nursing .....	576
Chorea .....	21	For Observation .....	24
Excretory .....	13	Others .....	32

## SKIN.

Impetigo .....	78	Tinea .....	1
Scabies .....	38	Verminous .....	3
Dermatitis .....	18	Congenital Syphilis .....	8
Eczema .....	6	Others .....	3

## DISEASES OF THE EYE .... 1.

## WHITTON TOWER—CONVALESCENT .... 25.

## DISEASES OF THE THROAT, NOSE AND EAR.

Otitis Media .....	20	Tonsils and Adenoids .....	52
Tonsillitis .....	13	Others .....	4
Mastoid .....	8		

## SURGICAL.

Appendicitis .....	51	Abscess .....	57
Hernia .....	11	Septic conditions .....	16
Intussusception.....	5	Cellulitis .....	6
Empyema .....	7	Deformities .....	4
Enlarged Glands .....	16	Osteomyelitis .....	12
Fractures .....	10	Phimosis .....	10
Brain Tumours etc.,.....	15	Teeth .....	8
Burns and Scalds .....	10	Others .....	23
Injuries, Wounds, etc. ....	11		

## INFECTIOUS.

Scarlet Fever .....	2	Paratyphoid B. ....	1
Influenza .....	1	Cerebro-Spinal Meningitis .....	3
Pertussis .....	13	Erysipelas .....	4
Measles .....	3	Dysentery .....	59
Acute Anterior Poliomyelitis ....	1	Diphtheria.....	9

## TUBERCULOSIS.

Pulmonary.....	15	Non-Pulmonary.....	54
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GEO. P. HARLAN, M.D.,

*Medical Superintendent.**Newcastle General Hospital,**April, 1938.*

### Report of Department of Neurosurgery.

In 1937 a detailed analysis of the work of this department was made for the past year and for the three preceding years. In making brief allusion to that report one may mention that it aimed at establishing a standard by which the work of future years may be judged. Since the commencement of routine neurosurgical work at this hospital in 1933 there has been a progressive increase in every class of case which falls within the scope of this branch of surgery.

In reviewing the work of 1937 the increase of work, which from past experience was to be expected, is evident, but the actual statistics show certain trends, the value of which it is easy to assess. One may however be justified in accepting the figures for 1936 as affording a standard of comparison since the work of this year was not attended by any interruption, nor was the incidence of clinical material influenced by any personal interest in certain restricted branches of neurosurgery.

The figures for 1937 are presented, employing the same classification as that employed in reviewing the work of previous years. A slight adjustment of the figures is however entailed, in that for 1937 the figures are based upon the number of patients discharged from the department, whereas in previous years they have depended upon the number of patients admitted. The present year affords a convenient opportunity of making this adjustment since only two patients were in hospital at the year's end.

VERIFIED INTRACRANIAL TUMOURS—			
1936	....	28	1937 .... 32
VERIFIED SPINAL CORD TUMOURS—			
1936	....	2	1937 .... 2
UNVERIFIED INTRACRANIAL TUMOURS—			
1936	....	3	1937 .... 7
INTRACRANIAL TUMOUR SUSPECTS—			
1936	....	9	1937 .... 3
INTRACRANIAL VASCULAR DISEASE—			
1936	....	13	1937 .... 6
TRIGEMINAL NEURALGIA—			
1936	....	3	1937 .... 5 (including 1 old case).
ARACHNOIDITIS—			
1936	....	4	1937 .... 9     "     "
EPILEPSY—			
1936	....	13	1937 .... 21
UNCLASSIFIED—			
1936	....	16	1937 .... 15

The increase of work, which the foregoing figures illustrate, is roughly proportionate to the increase shown in previous years. The only diminution seen is that in the groups of intracranial tumour suspects and intracranial vascular disease. These groups represent those cases in which investigations have proved to have a negative rather than a positive value, and the reduction in these few cases is to be explained by the fact that patients admitted to the department have already been submitted to more complete investigations than heretofore. One is now justified in regarding the majority of the cases as consisting of selected material, with the result that the beds available for neurosurgical cases have been used to a greater advantage, the pre-operative period for most cases having been greatly shortened.

The operative work shows an increase which is parallel to the number of cases dealt with.

<b>Major Operations.</b>	1936.	1937.
Osteoplastic explorations .....	40	27
Suboccipital explorations .....	5	17
Subtemporal decompressions .....	6	6
Trigeminal nerve sections, etc.....	5	9
Auditory nerve sections .....	1	3
Ventriculograms .....	43	49
Laminectomies.....	3	7
Unclassified .....	13	14
Total .....	116	132

From the technical point of view the year 1937 has its landmarks. The operative mortality in the case of intracranial tumours has shown a substantial reduction, partly as a result of many hopeless cases having been rejected before their admission to this hospital, but to a greater extent as a result of improved operative technique and better team work. In this connection it is a pleasure for me to mention that the new anæsthetic technique developed by Dr. Philip Ayre in 1936, has reaped a rich reward, and the present standard of anæsthesia is as near perfect as it is possible to conceive. As a result of the speeding up of operative technique it is now possible to deal in comfort with two major cases in a single operative session which would formerly have been more than fully occupied with a single case.

The year under review has seen the trial and decline of opaque ventriculography. The use of thorotrast as a contrast medium had been under extensive trial in 1936, and in January, 1937, a paper was read before the Society of British Neurological Surgeons upon the experiences of 57 cases of opaque ventriculography from

the Newcastle neurosurgical unit. The greatly improved radiographic technique as a result of the installation of the new X-ray apparatus in May, 1937, has gone far to render opaque ventriculography superfluous and this technique is now employed in only a small group of selected cases.

The highly successful results which have been obtained in certain cases of epilepsy have led to the expansion of work in this field and during the past year the number of cases dealt with has almost doubled itself. The figures in this branch of neurosurgery are even more impressive in view of the diversion of many cases of this class to the neurosurgical unit which has recently been established at the Sunderland Municipal Hospital where the surgical treatment of epilepsy has become a subject of special interest. The establishment of a parallel neurosurgical unit in Sunderland has relieved the Newcastle unit of many cases of a minor type thus allowing more time for concentration upon the major problems of intracranial tumours.

In concluding my report it is again a pleasure to place on record my appreciation to Dr. Harlan for his constant help and encouragement and to my medical, surgical and nursing assistants for the help which they have so ungrudgingly given.

A. R. D. PATTISON, F.R.C.S.,

*Surgeon-in-Charge,*

*Department of Neurosurgery.*

*Newcastle General Hospital,*

*May, 1938.*

### Report of Fever Therapy Department.

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Routine treatment, especially of cases of nervous disease, has continued throughout the past twelve months with results which justify confidence in this method of treatment for certain conditions.

In addition, much time has been spent in installing new apparatus used for producing fever, and at the present time a second instrument for this purpose is being constructed. Both these machines are designed on lines which we consider most efficient after inspecting various centres of fever therapy in America.

A new apparatus for local application of short waves has also been built in the department.

During the year the Committee sanctioned the appointment of a Nursing Sister and a Staff-nurse for this department. The work is exacting and requires special nursing experience and we are grateful for the allocation of the permanent staff.

We appreciate highly the co-operation of Dr. McLachlan in the investigation and treatment of certain of the cases dealt with in the department.

F. J. NATTRASS.

S. F. EVANS.

*Newcastle General Hospital,  
March, 1938.*

### Report of the Department of Thoracic Surgery.

As was to be expected, 1937 saw a considerable increase in the work done in this Department. Three hundred and three cases have been dealt with since it was established in May, 1934, and on these, five hundred and sixty-two operations have been performed. The rate at which this work has expanded is strikingly shown by the following figures :—

YEAR.	CASES.	OPERATIONS.
1934..... (May-Dec.)	17	27
1935.....	65	118
1936.....	92	195
1937.....	129	249
TOTALS.....	303	589

Although primarily intended and maintained for the benefit of those citizens of Newcastle upon Tyne, who may suffer from thoracic diseases requiring surgical treatment, its facilities are available when necessary for those who live elsewhere, if arrangements for defraying the cost of their treatment can be made privately, or through the co-operation of their own Public Authority. Naturally the bulk of these patients admitted from other areas have been from the two neighbouring counties—Durham and Northumberland—but the extent to which the Department's facilities have become known is indicated by recalling that during the year, cases have come from places as widely apart as South Yorkshire, Lancashire, Cumberland and Perthshire. Almost half the cases admitted were normally domiciled beyond the City's boundaries, showing how "Regional" is the service provided. The following table shows the sources of the clinical material dealt with. 162 of the cases were domiciled in Newcastle upon Tyne, and 141 lived elsewhere.

DOMICILE.	1934-36.	1937.	TOTAL.
Newcastle upon Tyne .....	101	61	162
Gateshead .....	22	17	39
Durham County.....	21	18	39
Northumberland.....	20	20	40
Middlesbrough, Hartlepool and Billingham	5	6	11
Darlington .....	2	.....	2
South Shields .....	3	2	5
Tynemouth .....	.....	1	1
Other Areas .....	.....	4	4
TOTALS .....	174	129	303

Cases in other hospitals have been seen in consultation whenever requests for such co-operation have been made and when necessary steps have been taken to facilitate their transference to the Department. A high proportion of the cases admitted have been first seen in this way, hence the practice, although "unofficial" is a very useful one which it is hoped will continue to the benefit of all concerned.

Towards the end of the year, formal arrangements were concluded with the Public Health Departments of both Durham County and South Shields whereby approved cases from these areas could be admitted to the Department with the minimum delay. These arrangements had no effect upon the work done during 1937 but are having a very definite one on that of the present year (1938).

An increasing number of cases has been referred directly to the Department both by the patients' own doctors and by the Medical Officers of the various Public Authorities in the district. Accordingly, since the spring of 1937 it has been necessary to set Wednesday mornings apart for such consultations; cases can usually be seen then without previous appointment but where possible this should be arranged. During the last nine months of the year, there were over one hundred of these consultations.

It has been necessary to arrange an additional regular operating day each week, and probably, before 1938 is ended, a third will be required. The demand for beds has been such that thirty or more have been constantly occupied; the increase in the number of cases coming for treatment during the latter part of 1937, and since then, suggest that extra accommodation will almost certainly be required very soon and although the extensions at present in

progress may ease the situation somewhat, the sooner the Department is permanently housed, the better.

Our experience continues to demonstrate that the belief—still widely held—that thoracic surgery is principally concerned with the treatment of phthisis is quite erroneous. A glance at the table given below shows that of 303 cases dealt with by us, only 74 were suffering from tuberculosis.

TYPE OF CASE.	1934-36.	1937.	TOTAL.
Thoracic forms of Tuberculosis .....	50	24	74
Pneumonitis, lung cysts, bronchiectasis, etc.	67	52	119
Other inflammatory conditions of pleura, chest wall and subdiaphragmatic spaces, etc. ....	27	27	54
Malignant growths of lungs and pleura .....	12	9	21
Benign growth of lungs and pleura .....	.....	1	1
Mediastinal conditions .....	4	1	5
Oesophageal conditions .....	7	2	9
Diseases of the heart and great vessels.....	7	9	16
Diaphragmatic conditions.....	.....	2	2
Unclassified conditions .....	.....	2	2
TOTALS .....	174	129	303

The largest individual group of cases dealt with is composed of such non-tuberculous inflammations of the lungs as bronchiectasis, hence it is gratifying that many of the sufferers from this distressing and offensive complaint can be restored to normal life; a paper at present in the course of preparation for publication will show the comparative safety with which children especially can be treated for this disease by radical operation.

Although only 9 cases of cancer of the lung were admitted during the year, this is no indication of the prevalence of the disease. Many more cases have been seen in consultation, but in the great majority the cancer has been so extensive as to render operation obviously useless. As a matter of fact, every case in which operation has seemed likely to offer any prospect of success has been operated upon, but the growth has been found in such an advanced state as to preclude its successful removal. It is to be hoped that soon the thoracic surgeon will be called in to these cases before they are so far advanced. Once again, it cannot be too strongly repeated that when the occurrence of abnormal expectoration—notably blood—is regarded as a symptom urgently requiring investigation, just as urgently as either the vomiting of

blood, or its passage in the urine, more cases will be diagnosed during a phase amenable to surgical cure. It is a consolation, perhaps, to know that the "deep" X-ray treatment instrument will be working in the immediate future; this may be of some use in relieving temporarily some of the more distressing symptoms from which these cases of lung cancer suffer.

#### **Academic Activities.**

It has not yet proved possible to arrange for any systematic instruction in thoracic surgery in connection with the curriculum at the Medical School of King's College but such students as have cared to visit the Department have been welcome.

As in previous years, there has been participation in the various Post-Graduate classes and intensive courses arranged for practitioners by the College Authorities.

Lecture-demonstrations to groups of medical practitioners in the district, arranged by the British Medical Association, have proved invaluable in bringing before doctors the scope of the Department's work and have, no doubt, been partly accountable for the increase in the volume of that work.

Early in the year, a number of cases, including four patients from each of which a whole lung had been successfully removed and an elderly man completely relieved of Angina Pectoris by operation, were demonstrated before a meeting of the Clinical Section of the Royal Society of Medicine in London. Later in the year, a larger number of similar cases were shown at a meeting of the Newcastle and Northern Counties Medical Society, as well as to those foreign surgeons who have visited the Department from time to time. Your Thoracic Surgeon participated by invitation in a discussion on the "Surgical Closure of Tuberculous Cavities" at the annual meeting of the British Medical Association held in Belfast during July.

During the year, visits were made to similar clinics in London, Lancashire, Paris, Lille, Heidelberg and Berlin. Meetings of the Tuberculosis Association, held in Paris, and of the Association of Thoracic Surgeons, held in Berlin, were also attended. Experimental work has been continued whenever possible at the Royal College of Surgeons' Research Farm at Downe, but opportunities to get away for this purpose have been fewer because of the increased clinical work.

Contributions to the literature relevant to the work of the Department include the following :—

- “ Thoracoplasty in the Treatment of Pulmonary Tuberculosis ”  
Tubercle . . . . February, 1937. (Reprinted in the *Journal of the Royal Naval Medical Service* . . . . October, 1937.
- ‘ Four Typical Cases after Pneumonectomy for Bronchiectasis. Case of Angina Pectoris treated by Cardio-Omentopexy.’  
*Proceedings of the Royal Society of Medicine*, April, 1937.
- “ Service Aspects of Pulmonary Tuberculosis.” *Journal of the Royal Naval Medical Service*, January, 1938.

A departmental library has been started and the following technical journals are available therein :—

*British Journal of Surgery.*  
*Surgery, Gynaecology and Obstetrics.*  
*Journal of Thoracic Surgery.*  
*Journal Internationale de Chirurgie.*

Similarly a collection of pathological specimens is being gathered and already more than thirty have been mounted and are proving of considerable help at demonstrations.

In addition to those to whom acknowledgment for their invaluable help was made in the previous report, I wish to record my appreciation of the incalculable assistance in organising this work given by both Dr. Harlan and Dr. Charles.

GEORGE A. MASON, M.B., B.S. (DUNELM), F.R.C.S. (ENG.),  
*Surgeon in Charge of the*  
*Department of Thoracic Surgery.*

*Newcastle General Hospital,*  
17th July, 1938.

### Report of Diabetic Clinic.

SIR,

I have pleasure in submitting my report on the Diabetic Out-patient Clinic at Newcastle General Hospital for the year ended 1st March, 1938. The work of the Clinic shows an increase over last year, there being 109 patients on the books for this period as against 85 for 1936 and 1937 up to March 1st, 1937. Of these 109 diabetics 22 are males and 87 females.

78 are on insulin and 31 on diet only.

Seven clinic patients died during the period under review and are not included in the above figures.

The facts are as follows :—

SEX.	AGE.	CAUSE OF DEATH.
F.	63	Urinary infection.
M.	27	Pulmonary tuberculosis.
F.	71	Angina pectoris.
F.	64	Heart failure.
F.	22	Diabetic Coma.
F.	47	" "
M.	22	" "

W. G. A. SWAN,

*Medical Registrar and  
Physician in Charge of the Diabetic Clinic.*

*Newcastle General Hospital,  
March, 1938.*

**MAINTENANCE IN OTHER INSTITUTIONS.**

Nine persons were maintained in various special institutions in different parts of the country during the year. The details are as follows :—

Institution.	M.	F.	Type of Case.
Home for Epileptics, Maghull .....	2	1	Epileptic.
St. Elizabeth's School for Epileptics, Much Hadham .....	....	1	Epileptic.
St. Vincent's Hospital for the Dying, Liverpool .....	....	1	Advanced Phthisis.
St. John's Institution for the Deaf and Dumb, Boston Spa .....	....	1	Blind, Deaf and Dumb.
St. John's Home, Birmingham .....	....	†1	Deformity.
Hospital of St. John of God, Scorton.....	*2	....	Cripples.
<b>TOTAL .....</b>	<b>4</b>	<b>5</b>	

† Transferred to a situation at St. John's Institution for Deaf and Dumb, Boston Spa, 29th August, 1937.

\* 1 Case admitted 11th January, 1937.

MAINTENANCE OF RECORDS

The following information is to be maintained in the records of the institution:

1. The names and addresses of all persons who have been admitted to the institution.

2. The names and addresses of all persons who have been discharged from the institution.

3. The names and addresses of all persons who have been transferred to another institution.

4. The names and addresses of all persons who have been committed to the institution.

5. The names and addresses of all persons who have been committed to the institution by the court.

6. The names and addresses of all persons who have been committed to the institution by the state.

7. The names and addresses of all persons who have been committed to the institution by the federal government.

8. The names and addresses of all persons who have been committed to the institution by the military.

9. The names and addresses of all persons who have been committed to the institution by the navy.

10. The names and addresses of all persons who have been committed to the institution by the air force.

11. The names and addresses of all persons who have been committed to the institution by the coast guard.

12. The names and addresses of all persons who have been committed to the institution by the marine corps.

13. The names and addresses of all persons who have been committed to the institution by the army.

14. The names and addresses of all persons who have been committed to the institution by the navy.

15. The names and addresses of all persons who have been committed to the institution by the air force.

16. The names and addresses of all persons who have been committed to the institution by the coast guard.

17. The names and addresses of all persons who have been committed to the institution by the marine corps.

**REPORTS OF THE VETERINARY OFFICER  
AND INSPECTOR OF PROVISIONS,  
AND OF THE INSPECTOR UNDER THE FOOD AND  
DRUGS ACTS (CHIEF SANITARY INSPECTOR).**

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**VI.—FOOD.**

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**BOVINE TUBERCULOSIS.  
INSPECTION OF MEAT AND PROVISIONS,  
FOOD AND DRUGS.**

REPORT OF THE VETERINARY OFFICER  
AND OFFICE OF HEALTH  
AND OF THE TROPICAL COUNCIL THE FOOD AND  
DRUG ACTS WITH REGARD TO THE TROPICAL

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VI-FOOD

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ROYAL VETERINARY  
INSPECTION OF MEAT AND PROVISIONS  
FOOD AND DRUGS

**BOVINE TUBERCULOSIS,  
AND THE INSPECTION OF MEAT  
AND PROVISIONS  
AND FOOD AND DRUGS.**

**TUBERCULOUS MILK.**

During the year 393 samples of milk were taken for bacteriological examination, 30 of which were reported by the Bacteriologist to contain tubercle bacilli. Thirteen of the thirty positive samples however were check samples. The positive samples were from the supplies of seventeen different farms, nine of which were situated in the County of Northumberland, five in the County of Durham, two in the County of Cumberland and one in the North Riding of Yorkshire.

The following table shows the percentage of milk samples found to contain tubercle bacilli during the past 18 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

NOTE :—Figures relating to the years 1907–1919 are given in the Annual Report for the year 1932.

*Report of the*  
**Veterinary Officer, Inspector of Meat, etc.**

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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 1937.

**Tuberculosis.**

During the year, four animals, housed in registered cowsheds within the City, were found affected with one of the forms of the disease which required them to be dealt with under the Tuberculosis Order of 1925.

The animals, three of which were giving tuberculous milk, were subsequently slaughtered and the owners compensated according to the valuation before slaughter, as agreed upon by the Veterinary Officer, on behalf of the Corporation, and the owners. In no case was it found necessary to appoint an independent valuer. Upon examination of the carcasses and internal organs, the disease in two cases was found to come within the category of "tuberculosis not advanced," as defined by the Order, whilst in the remaining two cases, the animals were found to have been suffering from "tuberculosis advanced," necessitating the condemnation and destruction of the entire carcase and organs of both as unfit for human consumption.

The administration of this Order, during the year under review, showed a balance of £8 13s. 10d. in favour of the local authority.

In the course of milk and meat inspection within the City during the year, 1,834 animals were found on slaughter to be affected with tuberculosis, this being an increase of 42.06 per cent. as compared with the number found diseased during the previous year.

In 1,549 cases some part of the carcase or internal organs was condemned and destroyed as diseased, whilst in the case of the remaining 285 animals it was found necessary, owing to the extent and distribution of the disease, to destroy the entire carcase and internal organs of each.

*The Milk and Dairies Order of 1926.*

Within the City there are 19 cow-keepers, registered as occupying 20 premises, and on the registered premises there is a total of 31 cowsheds, in which are housed 477 milch cows.

Of these registered premises, one is licensed for the production of Tuberculin Tested Milk, and 7 for the production of Accredited Milk, no licence for the production of Accredited Milk being granted unless a steam steriliser has been installed.

Although many milk producers have installed milking machines largely on the grounds of economy of labour it is regrettable that such producers do not always produce milk of the high standard of cleanliness that would be expected.

During the year, 205 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)*
					Of Udder.	Other than Udder.	Udder.	Other than Udder.	
†1920	26	26	40	565	....	....	....	....	....
1921	25	25	38	575	....	....	....	....	....
1922	25	25	39	489	....	....	....	....	....
1923	25	25	39	484	2	....	8	....	1
1924	22	22	34	436	3	2	2	....	4
1925	21	21	33	337	9	....	1	....	4*
1926	20	20	31	410	5	2	1	3	5*
1927	18	18	29	334	2	4	2	3	6*
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*

† Figures relating to the years 1907-1919 are given in the Annual Report for the year 1936.

**Anthrax.**

No animals within the City have been found affected with the disease during the year under review. It will be recalled, however, that after nearly ten years' freedom from the disease, an outbreak occurred in 1935, involving three bovine animals, and again in 1936, involving one bovine animal and one horse.

Within Great Britain, 743 outbreaks of the disease were confirmed, in which 879 animals were attacked, as compared with 468 outbreaks during the previous year, involving 549 animals.

Within the City there are a number of firms engaged in the wholesale meat trade, and it is not uncommon for the carcasses of animals slaughtered on farms in the adjoining counties to be sent to these firms for sale on commission. Such carcasses frequently show evidence of congestion or imperfect bleeding, and in these cases smears are taken from the carcasses and examined microscopically to rule out the possible presence of anthrax. In the year under review 14 smears were taken from carcasses but all proved negative.

### INSPECTION OF MEAT AND OTHER FOODS.

The number of animals slaughtered within the City for food purposes during the year was 244,271. Whilst there were 771 more cattle and 2,794 more pigs, there were 45 fewer calves and 16,477 fewer sheep slaughtered than during the previous year, as indicated in the following table :—

ANIMALS SLAUGHTERED ON LICENSED PREMISES WITHIN THE CITY.

YEAR 1937.	1936.	1935.	1934.	1933.
Horses ..... 1,450	1,565	1,610	982	950
Cows .... 3,444 )	28,499	27,486	21,623	20,278
Heifers.. 16,172 )				
Bulls .... 437 )				
Bullocks 9,217 )				
Calves ..... 7,313	7,358	7,478	4,705	3,475
Sheep ..... 156,367	172,844	173,481	163,556	167,653
Pigs ..... 49,871	47,077	44,871	37,737	41,281
Total Animals.... 244,271	257,343	254,926	228,603	233,637

Six hundred and forty carcasses, together with 1,055 lbs. of meat (excluding offal, etc.) were condemned and destroyed as being unfit for human consumption, as compared with 571 carcasses and 2,168 lbs. of meat condemned and destroyed during the previous year. Of the 640 carcasses, 285 were condemned on account of tuberculosis, comprising 208 carcasses of beef, 69 carcasses of pork and 8 carcasses of veal.

Of the 49,871 pigs slaughtered, 1,284 were found affected with tuberculosis, approximately 23 per 1,000. In the majority of cases of tuberculosis in the pig the disease is confined to the region of the throat, the disease in the year under review being so localised in 86.6 per cent. of cases.

Cattle, Calves and Pigs Slaughtered within the City. (See also previous Table).	Number of Animals found Diseased, Unsound or otherwise unfit for Human Consumption.		Number of Animals found Tuberculous.		
	Whole Carcases Condemned.	Parts or Organs Condemned.	Whole Carcases Condemned.	Parts or Organs Condemned.	
Year 1937.	Year 1937.				
Cows .....	3,444	132	160	120	151
Heifers.....	16,172	63	107	56	81
Bulls .....	437	2	12	1	11
Bullocks .....	9,217	34	63	31	49
Sex not known....	....	....	472	....	42
Totals .....	29,270	231	814	208	334
Calves .....	7,313	44	11	8	....
Pigs .....	49,871	143	2,093	69	1,215

CARCASSES OF BEEF CONDEMNED WITHIN THE CITY DURING THE PAST EIGHTEEN YEARS.

Total condemned.		Numbers condemned on account of Tuberculosis.	Percentage Tuberculous.
Year.	Carcases.	Carcases.	Per Cent.
*1920	198	171	86.36
1921	90	78	86.66
1922	85	79	92.94
1923	69	58	84.05
1924	66	61	92.42
1925	157	130	82.80
1926	126	102	80.95
1927	123	107	86.99
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

NOTE.—The above refers to whole carcasses and quarters, but does not indicate the total number of animals found tuberculous, and therefore does not include those carcasses in which only the organs or parts were found diseased and condemned. See preceding table.

\*Figures relating to the years 1910-1919 are given in the Annual Report for the year 1936.

*Public Health (Meat) Regulations of 1924.*

These Regulations are comprehensive and of great value in enforcing the cleanly handling of foodstuffs. Visits, numbering 6,791, were made to meat and provision shops, restaurants, stalls, vehicles, etc., in the enforcement of the Regulations. The chief contraventions found during these visits are those of meat conveyed in dirty vehicles, and of butchers' shops not kept in a cleanly condition.

INSPECTION OF CARCASSES FROM OUTSIDE DISTRICTS, INCLUDING ANIMALS SENT IN UNDER THE TUBERCULOSIS ORDER, 1925, BY SURROUNDING LOCAL AUTHORITIES, WITH REQUEST FOR POST-MORTEM EXAMINATION AND REPORT.

Material Examined.	Condition Found.	Material Condemned.
*11 Cow carcasses and organs	Tuberculosis .....	Carcasses and organs.
*3 " " .....	" .....	Lungs and udders.
*2 " " .....	" .....	Lungs.
*1 Cow carcass and organs	" .....	Head, lungs, liver, udder and mesenteric fat.
*1 " " .....	" .....	Head and lungs.
*1 " " .....	Normal .....	—
1 " " .....	" .....	—
1 " " .....	Tuberculosis .....	Head.
1 " " .....	Mastitis .....	Carcass and organs.
1 " " .....	Congestion .....	Lungs.
1 heifer carcass and organs	" .....	Liver.
1 " " .....	Normal .....	—

\* Slaughtered under the Tuberculosis Order, 1925, certificate of examination in each case being sent to the local authority concerned.

### Imported Foodstuffs.

During the year, 236 vessels carrying meat and other foodstuffs from Denmark, Holland, America, Canada, Australia, Russia and New Zealand, arrived at the Quayside, this being an increase of twenty-six as compared with the number of arrivals during the previous year.

Three hundred and thirteen visits were made to the wharves and vessels alongside, 3,367 packages, containing meat, etc., being opened and examined. Regarding these visits, 13 were in response to official notices received from the Customs House concerning foodstuffs detained for our inspection and certification. Both before and while being discharged from the vessel, it is not practicable to make more than a general survey or superficial

inspection of frozen beef quarters and carcasses of mutton, but these, as well as imported meat arriving by rail and road within the City, are subjected to supervision and inspection within the cold storage depots and wholesale meat shops.

*Caseous Lymphadenitis.*

During the year, of 86,839 carcasses of mutton and lamb, comprising ten separate consignments, arriving at the Quayside direct from Australia, 1,348 were examined, three carcasses being found affected with the disease.

The condemnation of only three carcasses compares very favourably with that of 110 carcasses detected in 1929, when this routine inspection was first instituted, and indicates a more rigorous inspection by the exporting countries.

**Foreign Meat, etc., arriving by Vessel.**

*Salted Pig Offals.*

Barrels.—497 heads, 2 cheeks, 20 tongues, 1,299 maws, 748 feet and 17 casings.

*Frozen Meat.*

BEEF.—17,599 fore and hind-quarters and 18,044 crops.

(Packages).—13,868 boneless and 50 buttocks.

Offals (packages).—70 cheeks, 72 tongues, 220 hearts, 279 kidneys, 408 livers, 137 tails, 40 skirts and 35 tripes.

VEAL.—100 hind-quarters and 1,136 packages.

Offals (packages).—12 kidneys, 25 hearts, 35 livers and 18 (mixed) offals.

MUTTON AND LAMB.—86,839 carcasses.

Offals (packages).—2,129 livers, 25 hearts and 37 sweetbreads.

PORK.—20,470 carcasses and 3,550 sides.

Offals (packages).—40 kidneys, 135 livers and 13 hearts.

*Other Goods.*

548,857 sides Danish, Dutch, Canadian, etc., bacon. Cases.—1,313 American bacon and hams, 49,179 tinned meats and 49 sausages.

## NUMBER AND ORIGIN OF VESSELS ARRIVING WITH FOOD.

Denmark.	Holland.	America.	Canada.	Australia.	Russia.	New Zealand.
104	79	6	31	6	6	4

**Exported Foodstuffs.**

The number of horses slaughtered within the City, for the purpose of the carcasses being exported for consumption on the Continent, was 1,450 or 115 fewer than during the previous year.

## NUMBER OF VISITS AND INSPECTIONS OF PREMISES DURING THE YEAR 1937.

	Central Markets.	Meat Shops.	Fish Shops.												
Slaughterhouses.															
Meat and Provisions.															
Fruit and Vegetables.															
Fish.															
Wholesale.															
Retail.															
Wholesale.															
Retail.															
Wholesale Provision Shops.															
Wholesale Fruit Shops.															
Wharves and Vessels.															
Cold Stores.															
Stalls, Carts, etc.															
Food Preparing Factories.															
Goods Station.															
	17,344	368	249	243	3802	551	15	1		9	313	6	1963	99	1

POULTRY, GAME, FISH, FRUIT AND VEGETABLES, PROVISIONS, &C., DESTROYED AS BEING UNFIT FOR HUMAN CONSUMPTION DURING THE YEAR 1937.

Cause of Unfitness.	Poultry and Game.	Fish.	Fruit and Vegetables.	Provisions, etc.
	Chickens ..... 19	Catfish ..... lbs. 120	Bananas ..... 49 bundles	Bacon ..... lbs. 35
	Geese ..... 11	Cod ..... 119	Cabbages ..... 157 crates	Biscuits ..... 1 tin, 1 carton
	Pheasants ..... 2	Haddock ..... 28	Grape Fruit ..... 48 cases	Pies ..... 1 case
	Pigeons ..... 41	Halibut ..... 52	Potatoes ..... 15 cwts.	Raisins ..... 14 boxes
	Rabbits ..... 330	Ling ..... 42	Oranges ..... 916 cases	Smoked Sausage ..... 453
		Plaice ..... 103		Yeast ..... 11 cwts. + 16 cases + 5 tins
		Salmon ..... 2		TINNED GOODS.
		Soles ..... 1,077		Apples ..... tins 19
				Apricots ..... 3
				Beans ..... 11
Unsound and unwholesome.			Brawn ..... 24	Brawn ..... 2,889
			Crab ..... 10	Crab ..... 2,889
			Cream ..... 13 bottles	Cream ..... 10
			Damsons ..... 1	Damsons ..... 1
			Fruit Salad ..... 7	Fruit Salad ..... 7
			Fruits (mixed) ..... 510	Fruits (mixed) ..... 510
			Ham ..... 3,703	Ham ..... 3,703
			Ham Roll ..... 1	Ham Roll ..... 1
			Ham and Tongue Roll ..... 7	Ham and Tongue Roll ..... 7
			Jellied Veal ..... 3,047	Jellied Veal ..... 3,047
		Ketchup ..... 2	Ketchup ..... 2	
		Lunch Tongue ..... 4,387	Lunch Tongue ..... 4,387	
		Milk ..... 769	Milk ..... 769	
		Mutton ..... 45	Mutton ..... 45	
		Olive Oil ..... 24 bottles	Olive Oil ..... 24 bottles	
		Oranges ..... 1 jar	Oranges ..... 1 jar	
		Peas ..... 5	Peas ..... 5	
		Plums ..... 8	Plums ..... 8	
		Pineapple Cubes ..... 74	Pineapple Cubes ..... 74	
		Pork ..... 190	Pork ..... 190	
		Pork and Beans ..... 31	Pork and Beans ..... 31	
		Prunes ..... 1	Prunes ..... 1	
		Roast Turkey and Ham ..... 31	Roast Turkey and Ham ..... 31	
		Salmon ..... 22	Salmon ..... 22	
		Sausage ..... 74	Sausage ..... 74	
		Shrimps ..... 2	Shrimps ..... 2	
		Strawberries ..... 6	Strawberries ..... 6	
		Tongue and Veal ..... 4	Tongue and Veal ..... 4	
		Tomato Soups ..... 4	Tomato Soups ..... 4	





### Total Weight of Meat and Other Foodstuffs Condemned.

The approximate total weight of meat and other foodstuffs condemned during the year was 109 tons 7 cwts. 3 qrs. 23 lbs., comprising :—

	tons.	cwts.	qrs.	lbs.
Beef, Mutton, Veal, Pork .....	82	17	3	25
Offal and Provisions .....	26	9	3	26
	109	7	3	23

### Microscopical Examinations.

During the year, microscopical examinations were carried out as an aid to, or confirmation of, diagnosis in connection with 32 cases under investigation.

The material examined comprised specimens of milk, blood and swabs taken from the throats of cows. Of the samples of milk examined for tuberculosis, three were found positive and eleven negative; and of the throat swabs examined for the same disease, both were negative. Of the specimens of blood and other tissues examined for anthrax all were found negative. Two specimens of milk examined for mastitis were found positive.

#### MICROSCOPICAL EXAMINATIONS.

	Specimens Examined.	Result of Examination.	
		Positive.	Negative.
Samples of Milk examined for Tuberculosis	14	3	11
Throat Swabs examined for Tuberculosis..	2	....	2
Blood, etc., examined for Anthrax.....	14	....	14
Milk examined for mastitis .....	2	2	....
	32	5	27

### Slaughterhouses.

During the year, 74 separate premises were licensed for slaughtering purposes, this being one fewer than during the previous year.

Of the 74 licensed premises, 15 were vacant during the whole or part of the year and 22 were occupied by wholesale firms, the remainder being occupied by retail butchers.

Of the total animals dealt with within the City, 175,906, or 72.01 per cent., were slaughtered by wholesalers, the remaining 68,365, or 27.99 per cent., being slaughtered by retailers.

#### *Licensed Slaughtermen.*

Under the Slaughter of Animals Act, 1933, slaughtermen's licences were granted during the year to 26 persons, making a total of 160 licensed slaughtermen within the City. All applications for these licenses are submitted to, and approved by, the Health Committee.

#### **The Merchandise Marks Act, 1926.**

Under this Act a number of Merchandise Marks (Imported Goods) Orders have been made. The Orders, as applied to bacon and ham, dead poultry, certain classes of chilled, frozen, boneless and salted meats and edible offals, and of salmon and sea trout, are administered by this Department, and they provide that such foodstuffs shall bear an indication of origin. A further object of these Orders is to ensure that the above foodstuffs shall be easily identified when exposed for sale.

#### **Rats and Mice (Destruction) Act, 1919.**

During the year, 181 visits were made to premises in respect of 140 complaints received, 258 premises, including others than those complained of, being inspected and dealt with.

Of the 258 separate premises, rats were found infesting 161, the remaining 97 being found free from any evidence of infestation. As will be seen in the following Table, the premises most frequently invaded by the pests were dwellings and food shops, these accounting for 77.9 per cent. of the whole.

Advice is given regarding baits, traps, etc., but it should be pointed out that the rat problem is one which invariably involves the question of building construction. Where necessary, the testing of drains is carried out in conjunction with an inspector of the Health 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.

Complaints received .....	140
Number of premises inspected and dealt with in connection with the above .....	258
Number of premises infested with rats .....	161
Number of visits .....	181
KIND OF PREMISES DEALT WITH.	
Bakeries .....	2
Builders' Yards .....	4
Dwelling Houses .....	164
Factories and Workshops .....	4
Farm .....	1
Garages .....	7
Gardens .....	6
Halls (institutions, etc.) .....	3
Hospital .....	1
Offices .....	3
Public Houses .....	2
Sewage Works .....	1
Shed .....	1
Shops (food) .....	37
Shops (other than food) .....	8
Stables .....	3
Warehouses .....	10
Wasteland .....	1
Total .....	258

## PROSECUTIONS.

Offence.	Result of Hearing.
<i>Public Health (Meat) Regulations of 1924.</i> Failing to give notice to the Local Authority of disease in the carcase and internal organs of a cow .....	Fined £5 and two guineas costs.
<i>The Public Health Act, 1875.</i> Exposing for sale, and being in possession of, two forequarters and offals of a cow which was diseased .....	Case dismissed.
<i>Slaughter of Animals Act, 1933.</i> Slaughtering two sheep without the same having first been stunned by means of a mechanically operated instrument .....	Fined £5.

HORACE THORNTON, B.V.SC., M.R.C.V.S., D.V.H.,  
*Veterinary Officer.*

*Town Hall,  
Newcastle upon Tyne,  
14th June, 1938.*

Samples taken for Analysis during the Year 1937.

ARTICLE.	No. of Samples obtained.			Result of Analysis.		Action Taken.				REMARKS.
	Formal.	Informal.	Total.	Genuine.	Not Genuine.	Prosecutions	Convictions	Cases Dismissed.	Cases With-drawn.	
New Milk	751	5	756	682	74	13	8	5		In 37 of the remaining 61 cases (of the 74 samples "not genuine") the vendors were cautioned by order of the Health Committee, and in 24 no action was taken, these including slight deficiencies, "appeal to cow" samples, etc.—not for proceedings.
Condensed Milk		6	6	6						
Cream (Tinned and Fresh)		12	12	12						
Butter		13	13	13						
Margarine		14	14	14						
Lard		1	1	1						
Cocoa		5	5	5						
Tea		4	4	4						
Coffee (including "Coffee Extract")		5	5	5						
Sugar		6	6	6						
Baking Powder		1	1	1						
Custard Powder and Egg Powder		3	3	3						
Jams, Jellies and Marmalade	2	12	14	9	5					Of the 5 samples "not genuine," 2 (informal and formal respectively) were deficient in soluble solids, and 2 contained sulphur dioxide above the limit allowed. The vendors were cautioned. The remaining sample (informal) was deficient in fruit. It was not possible to obtain a formal sample, local stocks being exhausted. The Inspector of the District in which the jam was alleged to be manufactured was communicated with, drawing his attention to the circumstances.
Lemon Curd		1	1	1						
Rice, Ground Rice, Tapioca, Sago, Semolina, Corn Flour, Arrowroot		7	7	7						
Flour, Wholemeal and Oatmeal		6	6	6						
Split Peas, Barley, Lentils, Haricot Beans and Baked Beans		7	7	7						
Dried Fruits		14	14	14						
Tinned Fruits		2	2	2						
Candied Peel, Glacé Cherries, Almonds (Ground and Whole)		17	17	17						
Mince-meat		6	6	6						
Soups (Tinned)		4	4	4						
Vinegar, Mustard and Pepper	1	12	13	11	2					The 2 samples (informal and formal respectively) "not genuine" were of Vinegar, which consisted entirely of artificial or imitation vinegar. There being a declaration (by means of a printed label on the bottle) which protected the seller, no further action was taken.
Pastes (Meat, Fish, etc.)		8	8	8						
Tinned Fish (Salmon and Brisling)		2	2	2						
Fish Cakes		5	5	5						
Biscuits (Assorted)		15	15	15						
Bacon		1	1	1						
Cheese		1	1	1						
Tripe		6	6	6						
Sausage	27	7	34	28	6	2	2			The 6 samples "not genuine" all contained sulphur dioxide either undeclared or in excess of the limit allowed. Of the remaining 4 samples (of those "not genuine") the vendors were cautioned in 3 instances, the other being an informal sample taken preliminarily to one of the prosecutions referred to. (See also page 198.)
Table Jellies and Gelatine		10	10	10						
Golden Syrup		1	1	1						
Honey		1	1	1						
Ice Cream		12	12	12						6 of the samples were poor in their fat content. No action was taken, there being no fixed standard for "ice cream."
"Potato Crisps"		3	3	3						
Pickles		1	1	1						
Tinned Mushrooms		1	1	1						
Essences (Lemon, Raspberry, Vanilla and Almond)		5	5	5						
Suet and Frying Fat		1	1	1						
Household Drugs, etc. :— (Including Camphorated Oil, Castor Oil, Chemical Food, Cream of Tartar, Cod Liver Oil (and "Extracts"), Composition Essence, Crushed Linseed, Epsom Salts, Eucalyptus Oil, Glauber Salt, Glycerine, Gregory Powder, Iodine, Licquorice Powder, Liquid Paraffin, Olive Oil, Paregoric, Syrup of Figs, Syrup of Rhubarb, Tincture of Rhubarb, Syrup of Squills, Tartaric Acid, and Ointments (Sulphur and Boracic)	1	49	50	49	1					The sample "not genuine" (Syrup of Squills—taken informally) was deficient in vinegar of squills. A subsequent (formal) sample was genuine, and no further action was taken.
Beer		2	2	2						
Wines (a) (Alcoholic)	5	4	9	9						
(b) (Non-alcoholic)		6	6	6						
Spirits (Whisky, Rum and Gin)	2	7	9	9						
TOTALS	789	311	1,100*	1,012	88	15	10	5		Amount of Penalties :—£18 0s. 0d.

\* Includes 206 samples taken in course of delivery (at railway stations, hospitals, etc.).

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 350

LECTURE 1

MECHANICS

1.1 Kinematics

1.2 Dynamics

1.3 Energy

1.4 Momentum

1.5 Angular Momentum

1.6 Oscillations

1.7 Relativity

1.8 Quantum Mechanics

1.9 Statistical Mechanics

1.10 Thermodynamics

**FOOD AND DRUGS ADULTERATION, Etc.**

*Total Samples.*—The number of samples of foods and drugs obtained for analysis during the year was 1,100, as against 1,038 in 1936. They were of a varied nature, and included most articles in common use in the household. All of these were submitted to the Public Analyst, who certified that 1,012 were genuine and 88 not genuine.

Notwithstanding the large number of samples taken (of over 90 different articles of foods and drugs), it was only necessary to institute legal proceedings in 15 cases.

*Informal Samples.*—311 informal samples were taken, as against 295 last year. Legal proceedings cannot be taken if these samples are found not genuine; this method is, however, a useful guide to the general quality of foodstuffs sold in any particular district. Any adulterated samples are followed up by "formal" samples, so that legal proceedings may be taken if necessary.

*Milk Samples.*—The greatest number of samples obtained has been of milk. 756 samples were taken, and of these 74 were certified to be below the minimal limits fixed by the "Sale of Milk Regulations, 1901." Of this number 30 were deficient in non-fatty solids, 41 in milk-fat and 3 in both. The percentage of deficiency in fat varied from 1.0 to 23.0 (the average being 5.70), and of solids not fat from 0.3 to 29.0 (average 4.12).

*"Appeal to Cow" Samples.*—Seven farms were visited and, after witnessing the milking operations, 16 samples were taken, and submitted to the Public Analyst for analysis. 12 of these were up to the standard, whilst the remaining 4 fell below. No action could be taken in respect of these 4 samples, as the milk was "as it came from the cow." The deficiencies varied from 3.6 to 8.0 per cent. in milk-fat.

*Samples not Genuine, etc.*—The percentage of all samples not genuine to the total number taken was 8.0 (compared with 7.13 for the previous year). The percentage of non-genuine milk samples to the total number of milk samples obtained was 9.79 (as against 8.10 in 1936). The total number of samples taken was at the rate of 3.79 per 1,000 of the population

(estimated) of the City for the year 1937. This is in excess of the number suggested by the Ministry of Agriculture (viz., 3 per 1,000 of the population).

*Margarine.*—14 samples of margarine were purchased and analysed. All were genuine, free from preservatives, and in compliance with the requirements of the law in all other respects.

*Margarine Warehouses.*—44 visits were made to the registered margarine warehouses in the City. In one instance offences were disclosed, packages of margarine being improperly labelled and the warehouse not being registered as required. The case was met by a caution, and the firm concerned took immediate steps to remedy their inadvertence. In all other cases the packages examined were found to comply with the Act.

*Preservatives in Food.*—Of the total samples obtained for analysis (1,100), only 43 contained preservative, the quantity in most instances being well within the limits allowed.

24 samples of sausage contained preservative (sulphur dioxide), the quantity in 21 instances being within the permissible limit.

In two instances the vendors were summoned, in one fined 10/- in respect of the excessive amount and 40/- for failing to declare the presence of the preservative and, in the other, 40/- in regard to the excess quantity; the third case was met by a caution.

In two instances, offenders were cautioned for not declaring the presence of the preservative (the quantity of which was within the permissible limit).

Two samples of jam (informal and formal from one vendor) also contravened the Regulations, containing an excess quantity of preservative (sulphur dioxide). With respect to these the vendor was cautioned.

## OFFENCES OTHER THAN ADULTERATION.

Offence.	No. of Cases.	Action Taken, etc.
<p><i>Milk and Dairies (Consolidation) Act, 1915 ; Section 6.—</i> Name and address of vendor not inscribed on vehicle.</p>	1	Offender cautioned.
<p><i>Milk and Dairies Order, 1926 ; Section 28.—</i> Milk vessels not properly cleansed before being returned.</p>	5	Offenders cautioned.
<p><i>Section 29 (2).—</i> Milk churns in a condition contravening the Order.</p>	3	Offenders cautioned.
<p><i>Section 31 (2).—</i> Milk bottles filled and closed on other than registered premises and disc or other device used for closing the bottles removed or tampered with, etc.</p>	3	Offenders cautioned.
<p><i>Section 33.—</i> Van used for conveyance of milk in an offensive condition.</p>	1	Offender cautioned.
<p><i>Food and Drugs (Adulteration) Act, 1928 ; Section 16 (5).—</i> Refusal to sell a sample of milk to the sampling officer.</p>	1	Offender summoned. Case dismissed (with a caution).
<p><i>Milk (Special Designations) Order, 1936.—</i> Contraventions of the requirements of the Order as to the sealing, labelling, etc., of churns containing designated milk.</p>	9	Offenders cautioned.
<p><i>Milk (Special Designations) Order, 1936 ; Section 11 (2).—</i> Caps of bottles containing "Accredited" milk not in accordance with Order.</p>	1	Offender cautioned.
TOTAL .....	24	

### **The Public Health (Condensed Milk) Regulations, 1923-1927.**

Six samples of condensed milk were obtained. All were genuine and in compliance with the Regulations.

### **Artificial Cream Act, 1929.**

There are two premises (retail shops) on the register and, during the year, no further applications have been received for registration.

### **BACTERIAL IMPURITY OF MILK AND WATER.**

For details of examinations under this heading see pages 112, 113, 121, 122 and 183.

**Cleanliness of Milk Churns.**—During the year 21,430 churns awaiting return to the farmers were examined at the various railway stations in the City. Of this number, 19 (from 2 different dealers) were found in an uncleansed condition. These cases were met by cautions.

In addition, 2,063 churns in course of transit through the City were examined ; all were found to have been rinsed as required.

**Water.**—Samples were collected from all parts of the City and at the water works, and examined for the presence of *bacillus coli*.

The results are described on pages 113 and 122.

### **PREMISES ON WHICH FOOD IS PREPARED.**

**Bakehouses.**—There are in the City 213 bakehouses, of which 53 are factories (*i.e.*, places in which mechanical power is used), and 160 are workshops.

The number of "domestic" bakehouses, or private dwelling houses in which the occupier makes bread for sale amongst the neighbours, is 78, an increase of 12 as compared with 1936. Domestic bakehouses are under the same supervision as when the business is carried on in an ordinary bakehouse, and all are kept in a cleanly state.

**Restaurant Kitchens** (including hotels, cafés and dining rooms).—Regular inspection and strict supervision are exercised over these places, in order to ensure the handling and preparation of

food under hygienic conditions. The number on the register is 112 (an increase of 1 during the year). 6 notices were served on occupiers in regard to lime-washing and general cleansing. In each case the notice was immediately complied with.

*Fried Fish Shops.*—The number of these is 153 (as against 158 in the previous year). For comments see "Offensive Trades" (Section VII.)

*Manufacture and Sale of Ice Cream.*—Section 4 of the Newcastle upon Tyne Corporation (General Powers) Act, 1935, compels registration of all ice cream manufacturers, vendors, dealers, and premises. Applicants who are refused registration are afforded an opportunity of appearing before the Health Committee to show cause why registration should not be refused. If aggrieved by refusal, appeal may be made to a court of summary jurisdiction.

During the year 61 applications for registration were received, of which 57 were granted by the Committee, and 4 refused owing to the unsuitability of the premises.

Registrations granted now number 299, as follow :—

(a) manufacturers, vendors, and owner-occupiers of the premises.....	45
(b) manufacturers, vendors and occupiers .....	39
(c) vendors and owner-occupiers .....	62
(d) " " occupiers.....	146
(e) street vendors .....	6
(f) owners of premises .....	1

The powers under Section 4 are strictly enforced, ensuring sanitary conditions for the preparation, storage, and handling of this delectable foodstuff. Each year consumption is increasing and, as no legal standard is fixed for the milk-fat content, it is permissible to market this commodity devoid of cream. 12 samples were submitted for analysis and 6 of these were found to be poor in their milk-fat content. The percentage (in all samples) varied from 1.0 to 14.4.

*The Milk and Dairies (Amendment) Act, 1922, Sec. 2, and The Milk and Dairies Order, 1926, Sec. 6.*—During the year 108 applications were received for permission to retail milk, 99 being granted and 9 refused on sanitary grounds. At the close of the year there were 724 retail milk-shops in the City, including

70 belonging to the 9 larger dairy companies. Of the total, 59 were shops in which only dairy products and like commodities were retailed, 628 were shops selling other articles, and 37 were hawkers. All milk-shops and dairies were regularly inspected, and the conditions generally found to be satisfactory.

W. GRAY,

*Inspector under the Food and Drugs Acts, etc.*

*Health Department,*

*Town Hall,*

*11th June, 1938.*

**REPORT OF THE  
CHIEF SANITARY INSPECTOR.**

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**VII.—THE HOME AND THE  
WORKSHOP.**

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**NUISANCES, HOUSING, FACTORIES AND  
WORKSHOPS, Etc.**

THE UNIVERSITY OF CHICAGO  
LIBRARY

---

THE HOME AND THE  
WORKSHOP

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THE UNIVERSITY OF CHICAGO  
LIBRARY

**NUISANCES, HOUSING, FACTORIES AND WORKSHOPS,  
ETC.**

**The following is the  
Report of the Chief Sanitary Inspector.**

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I have the honour to submit the following report on the work carried out by my section of the Department during the year 1937.

The duties with regard to Food, Drugs, Milk, etc. (detailed on pages 196A and 202), show increased activity in comparison with 1936. Unfortunately, the percentage of samples returned by the City Analyst as "not genuine" shows an increase of 0.87, as compared with the preceding year.

Slum clearance has continued with unabated vigour, with the result that it is confidently anticipated that the last of the areas scheduled for demolition by the City Council in September, 1933, will be presented to the Minister of Health for inquiry towards the end of 1938. The completion of the schedule, however, only marks the end of the printed list, many "nests" of unfit houses still remaining to be dealt with.

The Disinfestation Station commenced operations on the 16th September. As from this date, the contents of every condemned slum house are ridded of vermin before being placed into the new house. All furniture, etc., is disinfested at the station with hydrogen cyanide gas, whilst bedding, etc., is disinfected by steam, the whole of the process being carried out by the Department. The occupiers' only obligation is to proceed with their food to the new house, where adequate furniture and utensils for one day's use are on loan.

The value of this work may aptly be summed up in the words of a woman whose home was a holding in an old, rambling, vermin-infested tenemented house :—" New house, bath, hot water and no bugs—it's heaven ! "

The work of the other sub-sections has been well maintained throughout the year. Nothing arises for special comment, except it is of interest to state that the advice and aid of the Inspectorial Staff are invoked by the general public to an ever-increasing degree.

COMMON LODGING HOUSES :—The number of common lodging houses registered in the City during 1937 is the lowest in the records of the Department. In bygone years, the houses, judged by to-day's standard, were absolutely unfit, yet accommodation was at its maximum. To-day the registered houses are good, and the accommodation is at its minimum.

It is not my intention to state definitely why these houses are decreasing in number, except to record the disappearance of the travelling gangs of navvies and labourers who so regularly inhabited these houses in pre-war days. The residents to-day are of a different type and generally of more settled and quieter habits. The Public Assistance Committee, in their system of affording relief to poor persons, have certainly caused many occupiers to leave the houses, as otherwise relief would be withheld from them. Again, in 1905 and 1906, two large working men's hostels were opened in the City, with accommodation for 754 persons.

During the year 1891 the control of 72 common lodging houses passed from the Police to the Health Committee. Between 1891 and 1906, the number of registered houses fluctuated between 72 and 57, the maximum and minimum accommodation being 2,489 lodgers in 1906, and 1,624 in 1892. In 1907, 67 houses were registered, with accommodation for 2,348 lodgers, next year the number dropped to 63, and for 7 years the numbers hovered between 60 and 63. 62 houses were on the register in 1916 and, from this date, the number of houses registered has diminished each succeeding year, until to-day there remain only 15 houses, with accommodation for 533 lodgers. Throughout the whole of the period, the accommodation has been amply sufficient to meet the demand, although on one occasion (in 1927) 1,472 lodgers occupied beds one night when the total accommodation was 1,474.

During the 46 years' control by the Health Department, 158 houses have been refused registration, voluntarily closed, or demolished (under Slum Clearance Orders), and 101 new houses registered.

The following table, in quinquennial periods, shows the position from 1892 up to the end of the year now under report :—

Year.	Number of Houses.	LODGERS (PER NIGHT).			
		Registered number.	Number occupying the houses.		
			Average.	Highest.	Lowest.
1892 .....	71	1,624	1,045	1,098	952
1897 .....	73	2,058	1,507	1,597	1,372
1902 .....	57	2,022	1,702	1,792	1,546
1907 .....	67	2,348	1,768	1,966	1,526
1912 .....	61	2,006	1,524	1,739	1,437
1917 .....	57	2,010	1,445	1,517	1,277
1922 .....	47	1,593	1,318	1,424	1,230
1927 .....	42	1,474	1,320	1,472	1,178
1932 .....	31	1,029	633	697	574
1937 .....	15	533	361	406	334

**New Legislation.**—The Housing Act, 1936, and the Public Health Act, 1936, came into force on the 1st January and 1st October, respectively. Both are consolidating Acts, and bring into force many new and important provisions with respect to Housing and Public Health.

### NUISANCES.

The number of nuisances reported upon and dealt with during the year was 13,957.

Analysis of the reports reveals them to be much in accord with previous years.

An increased number of complaints has been received from occupiers of poor type property who desire Council houses.

### Notices Served.

The following are the numbers of notices and letters issued during the year :—

Number of notices served :—	
Informal.....	4,023
Statutory .....	210
	4,233
Number of special letters sent .....	2,282*
Number of circular letters sent .....	1,954
	8,469
Total.....	8,469

\*In addition, 918 special letters were sent relative to the "Overcrowding Survey."

### **Magisterial Proceedings.**

It was necessary to report 48 cases of statutory " Notices not complied with " and other contraventions to the Health Committee, who ordered legal proceedings to be taken, but in only 17 cases were summonses issued. The work in the other instances was carried out before making application for summonses.

Details of this part of the work are given on page 219.

### **The Rent and Mortgage Interest Restrictions Acts.**

No application was received from tenants for a certificate under the above Acts certifying that the house was not reasonably fit for habitation.

### **Conversion of " Dry " Closets to Water-closets.**

During the year, 20 combined privies and ashpits were removed and replaced by water-closets. In addition, 8 privies and ashpits and 1 " cell " privy were abolished in the demolition of Slum Areas. Ten years ago upwards of 1,800 privies were in existence, whereas to-day only 9 remain within the boundaries of the City as before the extension in 1935. These remaining closets, which are situate in the semi-rural areas of the City, are generally in good structural condition and, in certain instances, no sewer is available to enable conversion to be effected.

In addition, 33 " waste-water " closets have been abolished and replaced by up-to-date conveniences. These " waste-water " closets consist of a trapped stoneware shaft of 12 in. to 18 in. diameter in the w.c., and from 4 ft. to 9 ft. deep. The solids in the trap are flushed away by slop- and rain-water from the yard drains, the shafts (usually caked with excreta) being only cleansable by scraping.

One dry ashpit was also removed and replaced by a regulation dustbin (which was supplied free of charge).

## RETURN OF PRIVIES, ETC., IN THE VARIOUS WARDS OF THE CITY.

WARDS.	Total No. Privies.	Pail-Closets.	" Cell " Privies.	Combined Privies and Ashpits.
St. Nicholas' .....	....	....	....	....
St. Thomas' .....	55	9	....	46
St. John's .....	....	....	....	....
Stephenson .....	....	....	....	....
Armstrong .....	....	....	....	....
Elswick .....	....	....	....	....
Westgate .....	....	....	....	....
Arthur's Hill .....	....	....	....	....
Benwell .....	3	1	2	....
Fenham .....	21	5	....	16
All Saints' .....	....	....	....	....
St. Andrew's .....	....	....	....	....
Jesmond .....	....	....	....	....
Dene .....	19	....	17	2
Heaton .....	....	....	....	....
Byker .....	....	....	....	....
St. Lawrence .....	....	....	....	....
St. Anthony's .....	....	....	....	....
Walker .....	1	....	....	1
Total in City .....	99	15	19	65

**Smoke Abatement.**

Byelaws are in operation with regard to smoke nuisances, which allow 3 minutes' emission of black smoke during a period of 30 minutes, anything exceeding this being deemed to be an offence and a nuisance. Whenever this permissible amount is found to be exceeded, and also where a heavy emission of "medium" smoke is observed, the cause is inquired into and advice given, wherever possible, to remedy the fault.

It is pleasing to record the decreased number of offences, as compared with the previous year.

671 observations were made of 107 factory and other chimneys.

16 informal and 2 statutory notices were served during the year. Drivers of 4 steam wagons were verbally cautioned about the quantity of black smoke given off whilst proceeding through the City.

The following table gives details as to smoke inspection :—

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 for the abatement of smoke nuisances.		No. of Prosecutions.
				Informal.	Statutory.	
107	671	10	34	16	2	....

## ATMOSPHERIC POLLUTION.—NEWCASTLE RECORDS, 1937.

## TOWN MOOR GAUGE.

MONTH.	RAIN (Millimetres).	METRIC TONS OF DEPOSIT PER SQUARE KILOMETRE PER MONTH.									
		Insoluble Matter.			Soluble Matter.		TOTAL SOLIDS.	Included in Soluble Matter.			
		Tar.	Other Carbonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as $S_2O_3$ .	Chlorine as Cl.	Ammonia as $NH_3$ .	Lime as Ca.O.
January ..	105.1	0.07	2.09	3.15	3.15	6.09	14.55	2.16	1.86	0.27	0.34
February	120.7	0.17	0.88	1.36	5.55	1.93	9.89	1.82	1.46	0.11	0.40
March .....	92.3	0.10	0.98	1.35	2.77	3.14	8.34	1.21	1.05	0.10	0.38
April.....	86.6	0.45	1.09	1.36	2.07	2.60	7.57	1.42	0.31	0.09	0.07
May .....	92.3	0.21	1.72	1.89	2.40	2.40	8.62	1.39	0.45	0.10	0.16
June .....	99.4	0.57	1.95	1.53	2.78	1.59	8.42	1.02	0.53	0.04	0.24
July.....	82.4	0.17	1.48	1.22	1.65	1.47	5.99	0.57	0.30	0.09	0.27
August ....	86.6	0.13	3.20	1.22	2.21	1.88	8.64	1.35	0.24	0.11	0.21
Sept. ....	54.0	0.26	1.32	1.22	1.62	2.27	6.69	0.74	0.38	0.03	0.23
October ..	71.0	0.03	1.60	1.28	2.13	2.56	7.60	1.22	0.55	0.04	0.30
Nov. ....	45.4	0.18	0.82	1.19	2.36	1.28	5.83	0.68	0.74	0.03	0.16
Dec. ....	205.9	0.17	1.16	0.94	2.88	5.35	10.50	3.54	1.89	0.21	0.17
Total, 12 months....	1141.7	2.51	18.29	17.71	31.57	32.56	102.64	17.12	9.76	1.22	2.93
Average per month	95.1	0.21	1.52	1.48	2.63	2.71	8.55	1.43	0.81	0.10	0.24

An average of 8.55 metric tons per square kilometre per month=8.2 cwts. per acre per annum, or 262 tons per square mile per annum, as compared with 7.7 cwts. per acre, or 247 tons per square mile in 1936.

## WESTGATE CEMETERY GAUGE.

MONTH.	RAIN (Millimetres).	METRIC TONS OF DEPOSIT PER SQUARE KILOMETRE PER MONTH.									
		Insoluble Matter.			Soluble Matter.		TOTAL SOLIDS.	Included in Soluble Matter.			
		Tar.	Other Carbonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as S.O <sub>3</sub> .	Chlorine as Cl.	Ammonia as N.H <sub>3</sub> .	Lime as Ca.O.
January ..	84.2	0.25	5.32	5.04	2.53	3.54	16.68	1.39	1.38	0.17	0.48
February	80.2	0.24	2.30	2.90	1.60	2.73	9.77	1.82	0.96	0.12	0.33
March .....	88.2	0.24	2.73	2.98	1.95	2.99	10.89	1.34	1.00	0.09	0.15
April.....	65.5	0.28	1.82	2.62	1.44	1.44	7.60	0.99	0.23	0.07	0.11
May .....	66.8	0.25	2.18	2.83	1.20	1.34	7.80	0.87	0.28	0.07	0.39
June .....	64.1	0.33	1.72	2.38	1.15	1.28	6.86	0.71	0.27	0.03	0.37
July.....	66.8	0.19	1.88	1.96	1.60	1.97	6.70	0.60	0.24	0.04	0.28
August ....	53.4	0.19	2.88	4.60	1.39	2.03	11.09	1.28	0.31	0.04	0.35
Sept. ....	40.1	0.19	1.44	2.23	0.88	1.20	5.94	0.55	0.23	0.03	0.23
October ..	46.8	0.15	2.70	2.98	1.21	1.50	8.54	0.94	0.29	0.04	0.35
Nov. ....	40.1	0.25	1.31	1.72	1.52	1.76	6.56	0.88	0.91	0.05	0.33
Dec. ....	149.6	0.37	3.67	3.03	2.08	4.20	13.35	2.15	3.39	0.08	0.24
Total, 12 months....	845.8	2.93	29.95	35.27	18.55	25.08	111.78	13.52	9.49	0.83	3.61
Average per month	70.5	0.24	2.50	2.94	1.55	2.09	9.32	1.13	0.79	0.07	0.30

An average of 9.32 metric tons per square kilometre per month=8.9 cwts. per acre per annum, or 284 tons per square mile per annum, as compared with 9.2 cwts. per acre, or 294 tons per square mile in 1936.

## WELBECK RESERVOIR GAUGE.

MONTH.	RAIN (Millimetres).	METRIC TONS OF DEPOSIT PER SQUARE KILOMETRE PER MONTH.									
		Insoluble Matter.			Soluble Matter.		TOTAL SOLIDS.	Included in Soluble Matter.			
		Tar.	Other Carbonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as S.O <sub>3</sub> .	Chlorine as Cl.	Ammonia as N.H <sub>3</sub> .	Lime as Ca.O.
January ..	49.5	0.01	1.55	2.12	1.09	2.37	7.14	1.42	1.30	0.13	0.40
February	74.2	0.17	1.56	2.54	2.53	4.15	10.95	1.33	1.80	0.12	0.36
March .....	59.9	0.22	1.12	2.15	2.75	2.16	8.40	1.11	1.07	0.12	0.44
April.....	Out of order.										
May .....	do.										
June .....	69.8	0.23	1.34	2.20	2.10	0.56	6.43	0.67	0.35	0.13	0.40
July.....	79.2	0.04	1.49	1.30	1.10	0.95	4.88	0.54	0.23	0.04	0.52
August ...	34.9	0.03	1.64	1.87	1.11	0.98	5.63	0.73	0.20	0.01	0.28
Sept. ....	29.5	0.42	1.92	1.41	0.94	1.18	5.87	0.48	0.52	0.03	0.09
October ..	41.6	0.09	1.29	2.19	2.59	1.83	7.99	0.86	0.42	0.04	0.35
Nov. ....	33.6	0.16	0.74	1.36	2.75	2.35	7.36	0.67	2.91	0.04	0.26
Dec. ....	134.3	0.23	2.15	2.74	1.34	5.37	11.83	2.31	3.72	0.13	0.34
Total, 10 months....	606.5	1.60	14.80	19.88	18.30	21.90	76.48	10.12	12.52	0.79	3.44
Average per month	60.6	0.16	1.48	1.99	1.83	2.19	7.65	1.01	1.25	0.08	0.34

An average of 7.65 metric tons per square kilometre per month = 7.3 cwts. per acre per annum, or 235 tons per square mile per annum, as compared with 7.8 cwts. per acre, or 250 tons per square mile in 1936.

## TOTAL IN THREE GAUGES IN THE CITY, 1937.

MONTH.	RAIN (Millimetres).	METRIC TONS OF DEPOSIT PER SQUARE KILOMETRE PER MONTH.									
		Insoluble Matter.			Soluble Matter.		TOTAL SOLIDS.	Included in Soluble Matter.			
		Tar.	Other Carbonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as S.O <sub>3</sub> .	Chlorine as Cl.	Ammonia as N.H <sub>3</sub> .	Lime as Ca.O.
*Total, 12 months...	2594.0	7.04	63.04	72.86	68.42	79.54	290.90	40.76	31.77	2.84	9.98
Average per month	228.9	0.62	5.56	6.43	6.04	7.02	25.67	3.60	2.80	0.25	0.88
*Average per gauge, 12 mths.	864.7	2.35	21.01	24.29	22.81	26.51	96.97	13.59	10.59	0.95	3.33
Average per gauge per month	76.3	0.21	1.85	2.14	2.02	2.34	8.56	1.20	0.93	0.08	0.29

\* One gauge was out of order for two months.

An average of 8.56 metric tons per square kilometre per month=8.1 cwts. per acre per annum, or 260 tons per square mile per annum, as compared with 8.3 cwts. per acre, or 264 tons per square mile in 1936.

For comparison with the foregoing, the following returns of sunshine recorded at the King's College, Newcastle, and at Cockle Park, near Morpeth (about 15 miles from the City), are given :—

Month.	King's College. Sunshine (hours).	Cockle Park. Sunshine (hours).
January .....	36.31	45.3
February .....	67.90	97.4
March.....	46.16	78.9
April .....	53.16	75.9
May .....	118.87	148.2
June .....	128.44	156.7
July .....	123.35	132.18
August .....	125.08	133.65
September .....	97.69	119.4
October.....	46.91	64.6
November .....	36.06	55.9
December .....	10.32	31.5
Total for year .....	890.25	1139.63
Average per month .....	74.19	94.97

### CINEMAS, THEATRES, AND OTHER PLACES OF PUBLIC ENTERTAINMENT.

A certificate of sanitation must be submitted to the Licensing Justices in support of an application for a music or dancing licence to premises. Sanitary Authorities are directed by a Ministry of Health Circular, issued in 1920, to give particular attention to premises holding a licence for music, dancing, etc., special regard being had to sanitary accommodation, ventilation, dressing rooms, and means of escape in case of fire.

11 applications were received for certificates of sanitation and, after careful inspection of the premises, 10 were granted and 1 refused owing to inadequate sanitary accommodation. Re-application was made, with proposals for improved accommodation, and the certificate was subsequently granted.

The number of places certified is now 4 theatres and music halls, 43 cinemas, and 124 concert halls, billiard rooms, cafés, etc., 219 visits were made during the day and also at night-time, and the conditions generally found to be in order.

Testing (with the "Kata" thermometer) of the air and ventilating system of all theatres, music halls and cinemas has been carried out.

In 2 cinemas, conditions were found to be unsatisfactory, due to inattention to the varying climatic conditions (alternating hot and cold spells) and the proper use of efficient appliances. This state was immediately brought to the attention of the responsible persons, who rectified matters.

In all other cases the conditions were satisfactory.

In addition, tests for demonstration purposes were made at the Durham University College of Medicine and at the Rutherford College.

### OFFENSIVE TRADES.

9 applications for permission to establish the trade of a fish fryer were received during the year. Of that number 7 were granted and 2 refused, the proposed premises not being suitable for the purpose.

This class of "offensive trade" predominates in the City, there being 153 premises on the register. As compared with the previous year there is a decrease of 5 fish fryers, the other trades remaining as before.

The fried fish shops are regularly inspected by day and occasionally at night-time. It was necessary to serve notices for the abatement of nuisances in only 8 cases.

With the exception of a few minor contraventions, all the offensive trades have been conducted in a satisfactory manner.

The number of offensive trades now on the register is :—

Fish fryers .....	153
Rag and bone dealers.....	8
Tripe boilers .....	6
Gut scrapers .....	7
Dealers in hides and skins.....	4
Bone boilers.....	2
Fat melters and extractors.....	1
Glue and size makers.....	2
Soap boiler .....	1

All are systematically inspected, 1,240 such visits being made during the year.







SUMMARY OF LEGAL PROCEEDINGS ORDERED TO BE TAKEN BEFORE THE  
MAGISTRATES FOR THE ABATEMENT OF NUISANCES, ETC.,  
DURING THE YEAR 1937.

NATURE OF COMPLAINT.	No. of Cases.	Work done and Nuisances abated without the Summonses ordered being applied for.	Summonses issued.	
			Work done and Summonses withdrawn.	Other Results.
<i>Public Health Acts :—</i>				
Roofs and/or spouting defective .....	6	3	3	
Dampness in rooms, etc. ....	11	8	3	
Rooms inadequately ventilated (broken sash-cords, etc.) .....	5	3	2	
Smoke emitted into rooms (from defective fireplaces, obstructed flues, etc.) .....	3	2	1	
Scullery sink woodwork saturated and foul.....	1	....	1	
Sink waste-pipe untrapped....	1	....	1	
Rear door defective, allowing rain to enter .....	1	....	1	
Drains defective, imperfectly trapped, etc. ....	6	5	1	
Yard pavements defective.....	5	4	1	
Water-closets defective .....	2	2	....	
<i>Newcastle upon Tyne Corporation Act, 1911, Sec. 55 :</i>				
Want of or defective dustbins for house refuse .....	3	3	....	
<i>Shops Act, 1934, Sec. 10 :—</i>				
A reasonable temperature not maintained .....	1	1	....	
<i>Housing Act, 1936, Sec. 59 (1), (5), (b) :—</i>				
Causing or permitting a certain dwelling to be overcrowded .....	1	....	....	Case dismissed.
<i>Housing Act, 1936, Sec. 62 :—</i>				
Using in relation to two separate dwellings in the house rent books which did not contain a summary in the prescribed form of Sections 58, 59 and 61 of the said Act and a statement of the permitted number of persons in relation to the dwellings.....	2	....	....	1 case withdrawn and 1 dismissed on payment of costs.
TOTAL .....	48	31	14	3

## HOUSING.

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### Housing Act, 1936.—Overcrowding.

A report on the survey of dwelling-houses, showing the extent of overcrowding therein, was submitted to the Minister of Health in 1936. Arising out of this report, the Minister of Health fixed the 1st January, 1937, as the "appointed day" with respect to overcrowding and, in consequence, the 1st July, 1937, became the date on and after which offences in relation to overcrowding commenced.

It is the duty of the Local Authority, upon request from a landlord or occupier, to state (in writing) the "permitted number" in relation to a dwelling-house, *i.e.*, the maximum number of persons who may normally sleep in the dwelling-house in accordance with the appropriate provisions.

All "permitted numbers" were required to be inserted in the rent books or similar documents by the landlord on or before the 1st July, 1937.

The "permitted numbers" are ascertained in a prescribed manner, which includes the measurement of rooms.

In view of the number of working-class dwelling-houses in the City, the City Council authorised the appointment of a temporary staff for a period of six months, commencing in January, to carry out the work of ascertaining the "permitted numbers." Subsequently, this work has been absorbed into the routine duties of the Department and is now carried out by the general inspectorial staff.

The total number of dwellings in respect of which the "permitted numbers" were supplied (on request) during the year was 33,212.

In order to obtain this information, 51,057 visits were made to 38,145 separate dwellings, 128,074 rooms being measured up.

All houses owned by the Corporation, on their various estates, were dealt with by the City Treasurer.

*Abatement of Overcrowding.*—282 families, of 1,725 persons, have been re-housed by the City Treasurer in suitable dwellings.

It is of interest to record that genuine efforts are being made by many occupiers of private dwelling-houses to obtain for themselves houses suitable to their needs, and whose numbers were in excess of the "permitted number" prior to the 1st July, 1937.

*Offences.*—The first prosecution under the overcrowding provisions was ordered in an instance wherein a landlord of a tenemented house, who had requested and received the "permitted number" for the separate dwellings therein, after receiving the information re-let a dwelling to a family whose numbers were in excess of the "permitted number," and also failed to insert in the rent books of two separate dwellings in the house the "permitted number" in relation to each case. Details are on page 219.

#### **The Housing Act, 1936.**

The total number of inspections carried out under the Housing Act during the year was 11,166.

## MINISTRY OF HEALTH TABLE.

1.— <i>Inspection of Dwelling Houses during the Year :—</i>	
(1) (a) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts).....	7,008
(b) Number of inspections made for the purpose.....	26,195
(2) (a) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 .....	3,453
(b) Number of inspections made for the purpose.....	11,166
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .....	*1,554
(4) Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation .....	2,698
* ( <i>Dealt with as Clearance Areas or as Individual Unfit Houses</i> ).	
2.— <i>Remedy of Defects during the year without Service of formal Notices :—</i>	
Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers .....	1,153
3.— <i>Action under Statutory Powers during the Year :—</i>	
(a).—Proceedings under Sections 9, 10 and 16, of the Housing Act, 1936—	
(1) Number of dwelling houses in respect of which notices were served requiring repairs .....	165
(2) Number of dwelling houses which were rendered fit after service of formal notices :—	
(a) By owners .....	159
(b) By Local Authority in default of owners.....	....
(b).—Proceedings under Public Health Acts :—	
(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied .....	1,380
(2) Number of dwelling houses in which defects were remedied after service of formal notices :—	
(a) By owners .....	1,368
(b) By Local Authority in default of owners.....	....
(c).—Proceedings under Sections 11 and 13 of the Housing Act, 1936 :—	
(1) Number of dwelling houses in respect of which Demolition Orders were made .....	13
(2) Number of dwelling houses demolished in pursuance of Demolition Orders.....	8
(d).—Proceedings under Section 12 of the Housing Act, 1936 :—	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made .....	80
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit .....	....

MINISTRY OF HEALTH TABLE—*Continued.*4.—*Housing Act, 1936, Part IV.—Overcrowding :—*

(a).—(i) Number of dwellings overcrowded at the end of the year .....	8,270
(ii) Number of families dwelling therein .....	8,270
(iii) Number of persons dwelling therein .....	‡25,189
(b).—Number of new cases of overcrowding reported during the year .....	....
(c). (i) Number of cases of overcrowding relieved during the year .....	282
(ii) Number of persons concerned in such cases .....	1,725
(d). Particulars of any cases in which dwelling-houses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding .....	....
(e). Any other particulars with respect to overcrowding conditions upon which the Medical Officer of Health may consider it desirable to report .....	....

‡ This number is calculated in accordance with the Ministry of Health's formula.

**Housing Act, 1936 ; Section 9.**

1,318 houses (self-contained and flat type) have been inspected within the 10 sanitary districts. Very considerable difficulty has as usual been experienced, at times, with a certain type of owner regarding the requirements of notices. However, obstacles were overcome without recourse to report for statutory action.

Under this valuable Section, owners are required by notice to carry out works or repairs, making houses reasonably fit for habitation.

The nature and number of the defects so dealt with are shown in the following summary :—

**HOUSING ACT, 1936 ; SECTION 9.****DETAILS OF WORKS CARRIED OUT UNDER NOTICE.**

No. of houses involved .....	1,318
Roofs repaired (including chimney stacks).....	785
Spouting repaired, renewed, etc. ....	496
External walls repaired, re-pointed, etc. ....	799
Under-floor ventilation provided.....	145
Yard pavements repaired or renewed .....	466
Dampness remedied (from causes other than those defined above)	547
Drains repaired, reconstructed, etc. ....	498
Water-closets repaired .....	833
„ ; additional conveniences provided.....	44
Dustbins provided .....	290
Accommodation for washing clothes, provided, repaired, etc. ....	225
Coalhouses repaired .....	248
Ceiling- and wall-plaster repaired or renewed.....	887
Floors repaired or renewed.....	286
Window sash-cords renewed or repaired.....	531
Windows repaired or renewed .....	237
Doors repaired or renewed.....	534
Cooking accommodation provided.....	68
Fireplaces repaired or renewed.....	553
Ventilated food stores provided.....	266
Water supply and/or sinks provided, waste-pipes repaired, etc.....	724
Staircases.—Stairs, handrails, etc., repaired or renewed .....	248
Light (natural and/or artificial) provided.....	58
Ventilation of rooms, etc., improved.....	43
Rooms, staircases, etc., cleansed .....	23
Minor repairs (not included in the above) .....	796
<b>TOTAL.....</b>	<b>10,630</b>

**Housing Act, 1936 ; Sections 11 and 12.  
Individual Unfit Houses.**

These sections give a local authority power to order the demolition (Sec. 11) or closure as dwellings (Sec. 12) of insanitary houses. The owner has the right to appear before the Health Committee and, if aggrieved by their decision after hearing his case, may appeal to the County Court.

Houses are reported monthly. The numbers dealt with and the results are given in the following table :—

	Number of		Popula- tion.
	Houses.	Separate Holdings (or Families).	
Demolition Orders made .....	13	23	98
Closing Orders made .....	33	80	138
Premises retained for business purposes (owners finding alternative accommo- dation for tenants displaced) .....	5	11	20
Action pending .....	3	4	12
TOTALS.....	54	118	268

**Housing Act, 1936 ; Sections 51 and 52.**

Section 51 affords the owner of a working class dwelling the opportunity of submitting to the local authority proposals for the improvement of the house (other than decoration or repair).

When the proposals are agreed and the works satisfactorily completed, a certificate is issued to the owner, covering a period of from five to ten years, exempting the house from any action under "slum clearance," as an unfit house.

Under Section 52, any proposals submitted under Section 51 in regard to a house scheduled in a "slum" area may be transmitted to the Minister of Health for his consideration. No proposals may be made in respect of houses confirmed as "unfit" houses by the Minister.

One application was received under this Section, and a certificate of fitness granted for a period of ten years.

### Slum Clearance.

In February and July the Minister of Health held Inquiries into 17 areas. The February Inquiry, in respect of 9 clearance areas, comprised 135 houses, 270 separate dwellings, and a population of 877 persons. The July Inquiry concerned 4 clearance orders and 4 compulsory purchase orders, of 260 houses, 523 separate dwellings, and a population of 1,700 persons.

13 areas were fully confirmed by the Minister and 4 with slight modifications.

The first Inquiry only lasted 1 day, the second 1½ days. Both were largely attended by the owners and others acting for them.

Details of the confirmations are appended in the following tables :—

AREA.	(a) (As originally represented by the Medical Officer of Health).			(b) (As confirmed by the Minister of Health).		
	Houses.	Dwell- ings.	Popu- lation.	Houses.	Dwell- ings.	Popu- lation.
Russell Terrace .....	15	33	115	15	33	115
Ingham Place.....	24	47	150	23	45	139
Coutts Road .....	4	26	97	4	26	97
Billy Pit Cottages .....	17	19	81	17	19	81
Elswick Street.....	51	121	359	51	121	359
Kenton Bar .....	7	7	19	7	7	19
Kenton Bank Top .....	6	6	19	6	6	19
Kenton Lane, No. 1 .....	7	7	25	4	4	19
"    "    No. 2 .....	4	4	12	4	4	12
Edward Street (Compulsory Pur- chase Order) .....	191	380	1,221	191	380	1,221
Edward Street .....	15	31	106	15	31	106
Cottenham Street (Compulsory Purchase Order) .....	6	13	36	6	13	36
Cottenham Street .....	25	47	160	23	45	156
Bayley Street (Compulsory Pur- chase Order) .....	4	6	22	4	6	22
West Street .....	7	14	42	5	12	31
Worley Street .....	7	22	82	7	22	82
Wesley Street (Compulsory Pur- chase Order, No. 2).....	5	10	31	5	10	31
TOTAL .....	395	793	2,577	387	784	2,545

## EXCLUSIONS.

	Houses.	Dwellings.	Population.
(a) Unconditionally .....	3	4	22
(b) For re-conditioning .....	3	3	6
(c) Subject to formal action under Section 11, Housing Act, 1936 .....	2	2	4
TOTAL .....	8	9	32

The houses in all the areas were very old, damp, dilapidated, congested, and beyond repair or reconstruction.

The outstanding defects were :—

*Structures.*—Defective brick- or stone-work, cracked and bulging walls, damp-proof courses either defective or non-existent, chimney stacks burst and in many cases in danger of falling.

*Roofs.*—Slates and tiles broken, loose and missing ; timbers sagging and broken, flashings and spouts defective.

*Floors.*—Broken, rotted, worn and out of level.

*Staircases.*—Dark, badly ventilated, and difficult of access. Treads broken, worn, out of level, handrails loose, broken and missing.

*Windows.*—Rotting and perished frames and sashes, broken sash-cords, etc.

*Doors.*—Dilapidated, badly fitting, warped.

*Grates and Stoves.*—Badly set, defective, fire-bars missing, ovens out of order.

*Sanitary accommodation.*—W.C.'s used in common by several tenants in bad structural condition.

*Water supplies and Sinks.*—Insufficient and not conveniently accessible to all the tenants.

*Overcrowding.*—Both in the houses and on space, prevalent in every area.

### Tenemented Houses.

The demolition of houses in slum areas has again reduced the number of tenemented houses. The conversion of large self-contained houses into the maximal number of separate dwellings, without submission of plans or notification to the Department, which was a feature of the preceding few years, has noticeably decreased.

The plans submitted with respect to these houses now show generally a desirable dwelling.

The number of tenemented houses in the City at the end of the year was 2,505, consisting of :—

1,519	....	One-room holdings.
4,392	....	Two-room holdings.
786	....	Three-room holdings.
59	....	Four-room holdings.
4	....	Five-room holdings.

A total of 6,760 separate holdings. During the year 8,821 inspections have been made of this type of dwelling.

#### Tenement Bye-laws.

25 new tenemented houses, comprising 106 separate holdings, have been inspected and reported upon in detail during the year, with a view to the bye-laws being put in force. In every case the work was carried out without recourse to legal proceedings.

#### Common Lodging Houses.

At the end of the year there were on the Register 15 common lodging houses, as compared with 17 in 1936, two houses having been closed and removed from the register, one owing to lack of lodgers, and the other for slum clearance.

The total number of lodgers for which the houses are registered is 533, showing a decrease of 62 from last year, due to the removals above-mentioned. 1,061 inspections during the day-time and 99 at night-time have been made, and it is satisfactory to note that it was unnecessary to resort to legal proceedings to remedy contraventions of the bye-laws governing the management of the houses.

The average number of lodgers per night was 361, the highest number being 406, and the lowest 334.

The following summary shows in detail the accommodation as at the end of the year :—

Description of Lodgers.	No. of			Accommodation.			Total.
	Houses.	Single Beds.	Double Beds.	Married Couples.	Single Women.	Single Men.	
Married couples and single women .....	2	60	10	10	60	....	80
Women only .....	1	18	....	....	18	....	18
Men only .....	12	435	....	....	....	435	435
<b>TOTAL</b> .....	<b>15</b>	<b>513</b>	<b>10</b>	<b>10</b>	<b>78</b>	<b>435</b>	<b>533</b>

(20 persons)

## Summary of inspections, contraventions found, etc. :—

Number of houses on the register at the end of the year.....	15
Applications for registration (Newcastle Corporation Act, 1911, Sec. 63) ; all granted .....	16
Houses ceased to be occupied as common lodging houses.....	1
Inspections made in the day-time .....	1,061
Inspections made in the night-time.....	99
Notices served { <i>re</i> washing of bed-clothes, 62, { <i>re</i> lime-washing of houses, 31 } .....	93
Defects and Contraventions of Bye-laws, etc. :—	
Structural defects in houses.....	7
Defective water-closets.....	2
Defective roofs and defective or choked spouting.....	13
Choked w.c.s and drains .....	4
Soil- and vent-pipes defective .....	2
Dust-bins defective or insufficient.....	4
Lack of efficient ventilation (broken sash-cords, etc.).....	4
Beds defective .....	1
Windows not opened during prescribed hours .....	1
Slops not emptied .....	2
Floors not swept.....	3
Male lodgers occupying house registered only for married couples and single women .....	1
Deaths reported.....	5
Cases of infectious disease reported (pneumonia).....	3

**Tents, Vans, Sheds and Similar Structures.**

There are 4 vans in the City occupied as dwellings. These are on isolated plots of land, are in a clean state, and comply with the bye-laws.

**New Buildings and Sanitary Alterations.**

474 plans were examined by the Medical Officer of Health before their submission to the Town Improvement and Streets Committee and, where necessary, suggestions forwarded to the City Engineer for his consideration, as compared with 431 during the previous year.

**Houses built during the year 1937.**—The City Engineer reports that there were 1,095 self-contained houses, and 659 flats (tenancies), built privately during the year under report. In addition, 685 dwellings were provided under housing schemes.

**Houses Demolished, etc.**—Apart from action by the Health Committee, 6 self-contained houses, 9 flats, and 7 tenemented houses (comprising 12 holdings) have been demolished, or have ceased to be used as dwellings, for various reasons (conversion to business premises, dilapidations, etc.)

## Disinfestation.

### ERADICATION OF BED BUGS.

*Council Houses.*—In the case of houses found or reported to be infested, the skirtings, architraves, and other wood mouldings are removed, the house and contents being then treated with a liquid insecticide. All woodwork, before re-fixing, is coated on the back with creosote, and thorough cleansing and decoration follow.

All unoccupied houses are treated in a similar manner, kept vacant for a week, and given an additional treatment with the insecticide.

*Private Dwelling-houses.*—Wall-papers are stripped off by the occupiers, and wood mouldings, skirtings, etc., eased or removed by the owners. Rooms and contents are then treated with a liquid insecticide, which is followed by the thorough cleansing of the house. Recurrence of infestation after this treatment has been negligible.

*Re-housing from Slum Areas.*—The belongings of tenants from condemned houses are removed by the Corporation to the Disinfestation Station, treated with hydrogen cyanide gas (bedding, etc., is disinfected by steam), and afterwards returned to the new houses.

Number of council houses disinfested.....	217
Number of private dwelling-houses disinfested.....	58
Number of tenants' belongings disinfested.....	181

### Factories and Workshops.

The inspection of these has been well maintained during the year, the total number of inspections being 9,009. Visits include workshops, domestic workshops, workplaces, laundries and bake-houses, also factories on receipt of complaint from H.M. Inspector. Generally speaking, their condition as regards sanitary accommodation, ventilation, cleanliness, water supply, and other matters of a hygienic nature, was found satisfactory.

During the year 52 lists of outworkers were received, 16 employers having sent in their lists in February and August, as required by the Factory and Workshop Act, 1901, and 20 employers only once. Included in the lists were the names and addresses of nine outworkers residing in other towns, and these, in accordance with the requirements of the Act, were forwarded to the Local Authorities of the districts concerned. No contravention of the Act was found in any of the 89 outworkers' premises inspected.

101 notices as to insanitary conditions in factories and workshops were received from H.M. Inspector of Factories, 67 of which related to factories (which are visited by the Health Department staff only on receipt of a complaint from H.M. Inspector), and 34 to workshops. Some of the latter had, however, been found and dealt with by the District Inspectors prior to receipt of the complaint. The others received due attention and the necessary works were carried out without having to resort to legal proceedings.

ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901, IN  
CONNECTION WITH FACTORIES, WORKSHOPS AND WORKPLACES,  
DURING THE YEAR 1937.

**Home Office Tables.**

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.  
INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS.

PREMISES. (1)	NUMBER OF		
	Inspections. (2)	Written Notices. (3)	Occupiers Prosecuted (4)
Factories ..... (Including Factory Laundries.)	435	153	....
Workshops ..... (Including Workshop Laundries.)	6,733		
Workplaces..... (Other than Outworkers' premises.)	1,841		
<b>TOTAL</b> .....	9,009	153	....

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND  
WORKPLACES.

PARTICULARS.  (1)	NUMBER OF DEFECTS.			Number of Offences in respect of which Prosecu- tions were institu- ted. (5)
	Found.  (2)	Re- medied.  (3)	Referred to H.M. In- spector.  (4)	
<i>*Nuisances under the Public Health Acts :—</i>				
Want of cleanliness .....	166	165	....	....
Want of ventilation.....	30	30	....	....
Overcrowding .....	1	1	....	....
Want of drainage of floors .....	2	2	....	....
Other nuisances .....	78	78	....	....
Sanitary accommodation	47	46	....	....
{ insufficient .....	92	91	....	....
{ unsuitable or defective .....	7	6	....	....
{ not separate for sexes .....				
<i>Offences under the Factory and Workshop Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101) .....	....	....	....	....
Other offences .....	....	....	9	....
(Excluding offences relating to out-work and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Work- shops Transfer of Powers Order, 1921.)				
TOTAL .....	423	419	9	....

\* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.

NATURE OF WORK.  (1)	Instances.  (2)	Notices served.  (3)	Prosecu- tions.  (4)
As per Home Office List .....	None.	None.	None.

## LIST OF TRADES.

	TRADES.	Work-shops.	Domestic Work-shops.	Work-places.
1	Athletic Outfitters (comprises : the making and repairing of bats, rackets, guns, cycles, billiard tables, golf clubs, etc.) ....	58	....	....
2	*Bakehouses.....	213	....	....
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, sugar boilers, egg-sorters, wholesale fish dealers, potato stores, etc.)	81	....	92
4	Laundries.....	7	2	....
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.).....	392	12	34
6	Restaurant kitchens .....	....	....	112
7	Wood workers (comprises : saw mills and timber yards, joiners, cabinet-makers, wood carvers, picture framers, undertakers ; boat builders and repairers, ladder makers, coopers, toy makers, box makers, etc.) .....	217	13	....
8	Wearing apparel (comprises : Dress-makers, milliners, costumiers, mantle and gown makers, underclothing, bed linen, furriers, shirt makers, tailors, etc.) .....	328	21	....
9	Workers in leather (comprises : boot-makers and repairers, bookbinders, bag and trunk makers, belt makers, harness and saddlery, etc.) .....	143	12	....
10	Watchmaking and jewellery (comprises : watchmakers, opticians, instrument makers, etc.) .....	58	8	....
11	Miscellaneous trades (comprises : store yards, stable yards, transport workers, hide and skin dealers, hay and corn dealers, marine stores, scrap metal works, grease and oil stores, bottle washers, photographers, painters and decorators, bouquet and wreath makers, soap boilers, wholesale chemists, cosmetic makers and packers, etc.) .....	287	6	161
	TOTALS.....	1,784	74	399

\* Includes 53 " Factory " and 78 " Domestic " Bakehouses.

### **Inspection of Council and other Schools.**

During the year 266 inspections were made. In four cases minor defects were found in connection with sanitary conveniences and water supplies. These were brought to the attention of the Education Authorities and subsequently remedied.

### **Rag Flock Acts, 1911 and 1928.**

There are no manufacturers of rag flock in the City, the principal users being upholsterers and bedding makers. The number of these who use (or are likely to use) rag flock is 17, in 7 workshops and 10 factories. To the former (which are also inspected under the Factory and Workshop Acts) 92 visits were made, factory premises being only visited on receipt of complaint from H.M. Inspector.

Eleven samples of rag flock were purchased and submitted for analysis. All were found to conform to the standard of cleanliness prescribed by the Regulations.

### **Exhumations.**

One exhumation and re-interment was carried out under the supervision of the Department during the year, as authorised by Home Office Licence. The operations were carried out in the early morning in a sanitary and reverent manner and with due regard to the conditions set out in the Licence.

### **Fertilisers and Feeding Stuffs Act, 1926.**

In pursuance of this Act, 27 visits were made to factories, warehouses, and retail shops where fertilisers or feeding stuffs were prepared or stored for sale, for the purpose of seeing that the requirements were carried out as to the marking of packages, inspection of registers, etc.

Five samples of fertiliser and 4 of feeding stuff were obtained (mostly informally) and submitted for analysis to the Agricultural Analyst.

One informal sample of feeding stuff was found to be deficient in certain constituents as compared with the "statutory statement." A formal sample was then taken (in 1938) and also found to be deficient.

In view of the slight difference in the constituents of these samples as compared with the "statutory statement," a letter of caution was sent to the offender.

The remaining samples all complied with the requirements.

### **Merchandise Marks Act, 1926.**

In the administration of this Act, 423 inspections and personal visits were made to shopkeepers, stall-holders, hawkers, etc., in order to ascertain whether imported goods were properly marked with the "indication of origin" required by the Act and the Orders made thereunder. Attention was drawn to the requirements where necessary, in 71 instances there was left a copy of a printed notice to traders (setting out the principal provisions of the Act), and in 59 cases cautions were administered (51 verbally and 8 by special letter).

### **Agricultural Produce (Grading and Marking) Act, 1928.**

During the year, a firm already registered applied for registration in respect of an extension of their premises, which was granted. There are now 4 premises on the Register for the cold storage or chemical storage of eggs, under the above Act.

125 inspections of markets, shops and stores, were made as to the grading and marking of eggs. No contravention of the Regulations was found.

### **Pharmacy and Poisons Act, 1933.**

#### LISTED SELLERS OF PART II POISONS.

The number of registered persons is 105.

During the year, 7 applications for registration were received and granted, whilst 3 persons' names were removed from the Register, the sale of scheduled poisons having been discontinued.

The persons registered are :—

Grocery, Provisions and General Stores	....	47
Hairdressers	....	19
Druggists	....	14
Hardwaremen, etc.	....	9
Seed and Agricultural Merchants	....	11
Chemical Disinfectant Manufacturers	....	3
Electrical Supplies	....	1
Manufacturing Chemists	....	1

*Offences.*—10 letters of caution were sent and 21 verbal cautions given in respect of minor contraventions of the Act and the Poisons Rules, 1935.

308 visits were made to registered premises to ascertain that the Act and Rules were being complied with, and to unregistered premises suspected of selling poisons listed under Part II.

#### **Shops Act, 1934 ; Section 10.**

The duties which fall upon the Health Department under this Section are in respect of ventilation, temperature, sanitary accommodation, lighting, washing facilities, and accommodation for the taking of meals, for persons employed in or about the business of the shop.

481 inspections have been made, and 130 contraventions of the Act and Section found and dealt with. Details of the contraventions are given on page 217.

In 1 case where premises were not provided with suitable and sufficient washing facilities and such accommodation was otherwise conveniently available, a certificate of exemption was issued under the provisions of the appropriate sub-section.

#### **Staff Changes.**

Messrs. F. J. Thompson and D. Wilkinson resigned to take up similar appointments under other Local Authorities. The filling of these vacancies, together with additional staff authorised by the Health Committee in connection with the work of slum clearance, resulted in the appointment of Messrs. W. T. Nicol, W. Tweddle, A. Anderson, E. Housecroft, W. Ditchfield and L. Smalley. The latter was previously on the clerical staff of the Department.

#### **Conclusion.**

In conclusion, Sir, I desire to record my sincere appreciation of your unfailing guidance and support afforded to me at all times, and to the whole of the Staff I tender thanks for their unwearying attention to their various duties.

I am, Sir,

Your obedient servant,

W. GRAY,

*Chief Sanitary Inspector.*

*Health Department,  
Town Hall,*

*11th June, 1938.*



**CITY AND COUNTY OF NEWCASTLE UPON TYNE.**

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**Domiciliary Medical Services.**

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**Joint Medical Relief District.**

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Report of the Medical Officer of Health  
on the Working of the Domiciliary  
Medical Services in the Joint Medical  
Relief District during the period  
1st March, 1936 — 28th February, 1937.

CITY AND COUNTY OF NEWCASTLE UPON TYNE

Domiliary Medical Services

Joint Medical Relief District

Report of the Medical Officer of Health  
on the Working of the Domiliary  
Medical Services in the Joint Medical  
Relief District during the period  
1st March 1936 - 28th February 1937

# CITY AND COUNTY OF NEWCASTLE UPON TYNE.

## DOMICILIARY MEDICAL SERVICES.

### JOINT MEDICAL RELIEF DISTRICT.

REPORT OF THE MEDICAL OFFICER OF HEALTH ON THE WORKING OF THE DOMICILIARY MEDICAL SERVICES IN THE JOINT MEDICAL RELIEF DISTRICT DURING THE PERIOD 1ST MARCH, 1936—28TH FEBRUARY, 1937.

1. **Introductory.** Previous reports on this subject were presented to the City Council in March, 1935, and October, 1936.

The first of these reports recorded the establishment of the "open choice" method of providing domiciliary medical services in the City, and described the working of the scheme during the initial period of approximately ten months—*i.e.*, from 8th November, 1933, to 31st August, 1934. It will be recollected that the main features of the original scheme were briefly as follows :—

- (a) It applied to six of the ten medical relief districts, which together were designated the Joint Medical Relief District.
- (b) Drugs and dressings were provided from municipal dispensaries and not at the cost of the medical officers.
- (c) The medical officers on the panel, by which the scheme was operated, derived their remuneration, apart from certain special fees, from a fixed pool of £1,200 per annum. The yield from this pool was equivalent to 5.656 pence per unit service given.

The second report described the re-organisation of the financial basis of the scheme and its working on the new lines during the period 1st March, 1935, to 29th February, 1936. The principal differences between the original and modified schemes were :—

- (a) The service was extended to include an additional medical relief district, making seven in all.
- (b) Payments to practitioners, apart from special fees for certificates, confinements and fractures, were fixed at the rate of 5/- per quarter per patient treated. Where a patient had received treatment during two consecutive periods of three months, and was still found to require further medical attention at the end of the second quarter, he or she was regarded as a "chronic" case, and was paid for at the rate of £1 for twelve months medical care and supervision.\*

\* As from the 1st January, 1938, these fees have been increased *vide* footnote on page 18.

The present report deals with the operation of the scheme during the further period of twelve months from 1st March, 1936, to 28th February, 1937. During this period no alterations have been made either in the remuneration paid to the participating medical practitioners, or in the administrative procedure. The area in which the "open choice" method applies was further extended on the 2nd February, 1936, and eight of the ten original medical relief districts were included in the Joint Medical Relief District as from that date.

2. **Administrative Procedure.** The administrative procedure and the method of assessing the payments due to medical practitioners on the panel are described in the Appendix (page 19).

3. **Number of persons in receipt of Public Assistance.** The average number of persons in the City who were in receipt of Public Assistance during the twelve-month period 1st March, 1936—27th February, 1937, is stated in Table I., where the corresponding numbers for the ten- and twelve-month periods reviewed in the previous reports are also given.

TABLE I.

PERIOD.	Average number of Persons receiving Public Assistance.			
	Men.	Women.	Children.	Total.
30th Oct., 1933 } 25th Aug., 1934 }	6,274	6,611	8,510	21,395
2nd March, 1935 } 29th Feb., 1936 }	6,379	6,758	7,549	20,687
1st March, 1936 } 27th Feb., 1937 }	5,979	6,582	6,554	19,115

(It will be appreciated that these numbers indicate the **average** number of persons receiving Public Assistance in each of the quoted periods. The **total** number of individuals who received Public Assistance at one or another time during the period is obviously greater.)

It will be noted that the average number of persons receiving Public Assistance has fallen since 1934, but still represents a considerable proportion of the total population of the City. The reduction in the number of children is very considerable indeed, but as will be seen later, there has been no corresponding change in the number of children receiving medical treatment.

The Public Assistance population was not evenly distributed throughout the medical relief districts of the City. The two districts excluded from the scheme and still worked by part-time salaried officers had an unduly high proportion of their inhabitants on relief. Taking this fact into consideration, it is estimated that during the period under review, the average number of persons in receipt of relief in the eight medical relief districts comprised in the Joint Medical Relief District was approximately 15,095 out of a grand total for the City of 19,115.

**4. Record of patients treated, etc.** Between 1st March, 1936, and 28th February, 1937, in the area of the Joint Medical Relief District, 10,707 persons were attended by medical practitioners under the Domiciliary Medical Scheme.

These 10,707 patients fell into three main groups, both from the medical and the statistical standpoint :—

- (a) **ACUTE CASES.**—All the patients in this group received treatment during one or more separate three-month periods.
- (b) **SUB-CHRONIC CASES.**—These patients received treatment during two, but not more, consecutive periods, each of three months duration.
- (c) **CHRONIC CASES.**—These patients had been under treatment continuously for a period of over six months. In certain instances the period of treatment had commenced before the 1st March, 1936.

More complete details of the groups, and sub-groups, to which the various types of cases were allocated are given in Table II., together with other relevant information.

TABLE II.

Group and Sub-group of case.	Medical Grouping (approximate).	Duration of Treatment.	Number of three monthly Record Cards issued.	Cost of Patient to Local Authority.
<i>Group A—</i>				
A1 ....	Acute.	One period not exceeding three months.	1	5/-
A2 ....	Acute.	Two separate periods, each not exceeding three months.	2	10/-
A3 ....	Acute.	Three separate periods, each not exceeding three months.	3	15/-
<i>Group B.—</i>				
B1 ....	Sub-chronic.	Two consecutive periods of three months, not exceeding six months.	2	10/-
B2 ....	Sub-chronic.	One period not exceeding three months, followed or preceded by a separate period not exceeding six months.	3	15/-
<i>Group C.—</i>				
C1 ....	Chronic.	More than six months consecutively.	3 or 4	£1-0-0
C2 ....	Chronic.	Becoming chronic this year from continuation of treatment last year (1935-6).	1 to 4	10/- to £1-0-0
C3 ....	Chronic.	Chronic stage last year (1935-6) continuing for a further period of chronicity this year.	1 to 4	Nil to £1-0-0

In Table III. the 10,707 patients treated under the "open choice" scheme are distributed amongst the various groups and sub-groups already referred to. The average number of medical services rendered to each patient is also recorded, together with the average remuneration received by the medical practitioners per unit service.

TABLE III.

Medical Grouping and Sub-group of case.	Number Treated.	Total number of services rendered.	Cost to Local Authority.	Average number of Unit services per patient.	Average remuneration per unit service.
<i>Acute—</i>			£ s. d.		s. d.
A1 ....	7,391	32,023	1,847 15 0	4.3	1 1.22
A2 ....	1,110	9,905	555 0 0	8.9	1 1.44
A3 ....	113	1,610	84 15 0	14.2	1 0.63
Total ....	8,614	43,538	2,487 10 0	5.1	1 1.71
<i>Sub-chronic—</i>					
B1 ....	721	10,448	360 10 0	14.5	— 8.28
B2 ....	224	4,329	168 0 0	19.3	— 9.31
Total ....	945	14,777	528 10 0	15.6	— 8.58
<i>Chronic—</i>					
C1 ....	394	12,061	394 0 0	30.6	— 7.84
C2 & C3....	754	19,100	540 15 0	25.3	— 6.79
Total ....	1,148	31,161	934 15 0	27.1	— 7.20
<b>Total of All Cases</b> ....	10,707	89,476	3,950 15 0	8.4	— 10.60

One further item of information, which is necessary for the understanding of these data, namely, the nature of the services given to the various categories of patients, is supplied in Table IV.

TABLE IV.

Designation.	Number of Patients.	Attendances at Doctor's surgery.	Visits at patient's home.	Total Units of Medical Service.
<i>Acute Cases</i> .....	8,614	25,394	18,144	43,538
Average per patient .....	—	3.0	2.1	5.1
<i>Sub-chronic Cases</i> .....	945	10,807	3,970	14,777
Average per patient .....	—	11.4	4.2	15.6
<i>Chronic Cases</i> .....	1,148	23,387	7,774	31,161
Average per patient .....	—	20.4	6.7	27.1
<b>All Cases</b> .....	10,707	59,588	29,888	89,476
Average per patient .....	—	5.6	2.8	8.4

Ratio of Attendances to Visits :—

<i>Acute Cases</i> ... ..	1.4 to 1
<i>Sub-chronic Cases</i> ... ..	2.7 to 1
<i>Chronic Cases</i> ... ..	3.3 to 1
<b>All Cases</b> ... ..	2.0 to 1

5. **Expenditure.** Expenditure upon the Domiciliary Medical Services falls under three heads—Medical Practitioners' Services, Dispensary Services and Administrative Charges.

Details of these for the twelve months ending 28th February, 1937, are given in the following paragraphs.

**Medical Practitioners' Services.**

(a) *Remuneration of Medical Practitioners upon the panel of the Joint Medical Relief District.*—The quarterly and annual rates of remuneration are stated in paragraph 1 of the present report. The cost for the twelve months under consideration was £3,950-15-0, equivalent to 7s. 4½d. per patient treated.

(b) *Fees for Certificates.*—6,536 certificates were completed by Medical Practitioners at the request of Relieving Officers. The cost of these at 1/- per certificate amounted to £326-16-0.

It will be noted that this expenditure is equal to 8.3% of the ordinary remuneration of the Panel Practitioners. If this £326-16-0 is spread over the 89,476 unit medical services rendered to patients it is equivalent to an additional 0.88d. per unit service. Added to the average fee per unit service it increases this from 10.60d. to 11.48d.

(c) *Confinement and other Special Fees.*—Under this heading £33-0-0 was disbursed during the year. This amount represents payment for 27 confinements.

Owing to the miserable housing conditions of many of the families in receipt of Public Assistance, the great majority of confinements take place at the Princess Mary Maternity Hospital and the Newcastle General Hospital.

No payments in respect of special fees, *e.g.*, fractures, etc., were made during the period under review.

(d) *Emergency Medicines.*—Claims for the cost of emergency medicines were received to a total of £8-13-10.

The total expenditure under heads (b), (c) and (d) was £368-9-10, equivalent to 8.3d. per patient treated.

**Summary of Expenditure on Medical Practitioners' Services :—**

	£	s.	d.
Remuneration of Medical Practitioners on the Panel	3,950	15	0
Fees for Certificates	326	16	0
Fees for Confinements	33	0	0
Emergency Medicines	8	13	10
	<hr/>		
	£4,319	4	10
	<hr/>		

**Dispensary Services.** These services continue to be provided from the two municipal dispensaries which have been established at the Newcastle General Hospital and the Newcastle Dispensary, New Bridge Street, respectively. The fact that only two dispensaries are available under the Domiciliary Medical Scheme in the Joint Medical Relief District has not proved to be a serious inconvenience either to the patients or their relatives. The extension of the scheme to the Eastern portion of the City, in which are situated the two remaining medical relief districts which are administered under the old arrangements, would necessitate the establishment of an additional dispensary for those areas.

During the year ending 28th February, 1937, there has been a slight increase in the number of prescriptions dispensed, but having regard to the fact that the area of the Joint Medical Relief District has been extended by the addition of a further medical relief district, the increase is only apparent. The exact position will be seen from Table V., in which are recorded the total number of prescriptions dispensed and the number of prescriptions per patient treated, for the periods covered by the present and earlier reports.

TABLE V.

Period.	Districts in Scheme.	Patients treated.	Prescriptions dispensed.	Prescriptions per patient.	Cost per prescription.
8th Nov., 1933— 31st Aug., 1934 ....	6	6,360	30,219	4.7	6.1d.
1st Mar., 1935— 29th Feb., 1936 ....	7	8,193	61,357	7.5	5.7d.
1st Mar., 1936— 28th Feb., 1937 ....	8	10,707	63,383	5.9	6.2d.

This marked fluctuation in the average number of prescriptions per patient is difficult to explain. There is at present a tendency on the part of a few practitioners to write two or more prescriptions on one prescription form and this form hitherto has been counted as one prescription. This practice is probably responsible to some extent for the slight increase which has occurred in the average cost of a prescription during the third period.

The costs of the two dispensaries are stated separately in the following summaries, together with other information of interest.

**Summary of Dispensary Services Costs :—***(a) Municipal Dispensary, Newcastle Dispensary, New Bridge Street.*

	£	s.	d.
Rent, Cleaning, Light, Water, etc. ...	200	0	0
Dispensers' Salaries ... ..	325	0	0
Special Saturday afternoon duty ...	26	0	0
Drugs, Dressings, etc. ... ..	426	0	0
	<hr/>		
	£977	0	0
	<hr/>		

Prescriptions dispensed, 35,310. Average cost per prescription, 6.6d.

*(b) Newcastle General Hospital.*

	£	s.	d.
Transfer from Hospital Account for Drugs and Dispensary Services ...	634	0	0
Special Saturday afternoon duty ...	26	0	0
	<hr/>		
	£660	0	0
	<hr/>		

Prescriptions dispensed, 28,073. Average cost per prescription, 5.6d.

*(c) General.*

Total cost of Dispensary Services = £1,637.

Total number of prescriptions dispensed, 63,383.

Average cost per prescription, 6.2d.

Average cost per patient treated = 3s. 0.7d.

The average cost per prescription dispensed, namely 6.2d., contrasts very favourably with the average cost per prescription under the National Health Insurance Scheme, which locally is 7.9d.\* The National Formulary is used in both schemes.

**Administrative Charges.***(a) Clerical Services.*—The clerical staff employed on the supervision of the Domiciliary Medical Services consists of:—

One intermediate grade clerk (salary £220) who gives two-fifths of his time—*i.e.*, 14 hours weekly—to the work.

One temporary clerk (salary £184) who is employed full-time on these duties.

\* This figure has been kindly supplied by the Clerk to the Newcastle upon Tyne Insurance Committee.

(b) *Printing, Postages, etc.*—Apart from the salaries of the clerical staff, the only items chargeable as administrative expenditure are printing, postages and petty cash disbursements, totalling £90.

#### Summary of Administrative Charges.

Salaries	...	...	...	...	...	£272
Printing, Postages, etc.	...	...	...	...	...	90
						£362
						£362

Average cost per patient treated = 8.1d.

The following table summarises the expenditure under the various heads already enumerated :—

TABLE VI.

ITEM.	ACTUAL COST YEAR ENDED 31/3/37.			AVERAGE COST PER PATIENT TREATED.	
	£	s.	d.	s.	d.
Capitation Fees	3,950	15	0	7	4.5
Special Fees (Certificates, Confinements, Emergency Medicines)	368	9	10	—	8.3
Dispensing Services	1,637	0	0	3	0.7
Administrative Charges :					
Printing, Postages, etc.	90	0	0	}	— 8.1
Clerk's Salary, £184	272	0	0		
Proportion of Intermediate Grade Clerk's Salary, £88					
TOTAL	£6,318	4	10	11	9.6

**6. Number of Practitioners on the Panel of the Joint Medical Relief District.** The number of medical practitioners on the panel was 61 on 1st March, 1936, and had decreased to 56 by 28th February, 1937. Practically 55% of the National Health Insurance practitioners in the area of the Joint Medical Relief District serve on the Domiciliary Medical Services panel.

**7. Medical Records.** The medical record cards are kept with a degree of accuracy and completeness not inferior to the standard of record-keeping under the National Health Insurance Scheme.

Some administrative inconvenience is caused occasionally by doctors failing to return expired record cards to the Health Department promptly.

**8. Complaints against Practitioners.** No complaints were preferred by patients against practitioners on the panel during the period under review. The right to change their doctor is rarely exercised by patients on the grounds of dissatisfaction with the services provided.

These two facts only serve to confirm what has been the invariable experience of all who have been concerned with the working of the "open choice" method. No other scheme of domiciliary medical service has ever achieved so large a measure of acceptance and popularity amongst those members of the community whom it is intended to serve.

**9. Relations with Relieving Officers.** The relations between Medical Practitioners and Relieving Officers have continued excellent throughout the year. There is now a very complete and mutual understanding of their respective rôles in the scheme.

**10. Certification of Fitness.** Here again, experience has given the panel practitioner an increased knowledge of his duties in this matter. Complaints as to laxity in certifying fitness have been relatively few, and it is the considered opinion of the Public Assistance Department that the members of the "open choice" panel discharge this duty even more conscientiously than did their predecessors, the salaried part-time district medical officers. In the few doubtful cases the services of the Medical Referee (Medical Superintendent of the Newcastle General Hospital) are called upon.

**11. Recommendations for Medical Extras.** Table VII. states the expenditure on medical extras, and the average cost per patient treated for each of the four periods.

- (a) 1st November, 1932, to 31st August, 1933 (ten-month period operated by part-time salaried district medical officers in six districts).
- (b) 1st November, 1933, to 31st August, 1934 (ten-month period operated by medical practitioners serving on the panel of the Joint Medical Relief District—comprising six districts).

- (c) 1st March, 1935, to 29th February, 1936 (twelve-month period in Joint Medical Relief District—now comprising seven districts).
- (d) 1st March, 1936, to 28th February, 1937 (twelve-month period in Joint Medical Relief District—now comprising eight districts).

TABLE VII.

Period.	No. of Patients treated.	MEDICAL EXTRAS.			Average Cost per Patient treated.	
		Milk and Eggs.	Cod Liver Oil, etc.	Total Cost.		
a. { 1st Nov., 1932 } { 31st Aug., 1933 }	4,957	£ 297	£ 42	£ 339	s. 1	d. 4.4
b. { 1st Nov., 1933 } { 31st Aug., 1934 }	6,360	513	56	569	1	9.5
c. { 1st Mar., 1935 } { 29th Feb., 1936 }	8,193	657	72	729	1	9.4
d. { 1st Mar., 1936 } { 28th Feb., 1937 }	10,707	1,001	74	1,075	2	0.1

It will be noted that the cost of medical extras increased during the second and third periods as compared with the first, and further advanced during the fourth period.

Inasmuch as it has frequently been suggested that the "open choice" method predisposed to excessive recommendation of medical extras, the causation of this increased expenditure has been carefully investigated. The initial increase of the expenditure, *i.e.*, in the second period, is attributable to:—

- (a) the introduction of a number of medical officers with no prior knowledge of the administration of the Poor Law;
- (b) the increase in the price of milk by  $\frac{1}{2}$ d. per pint;
- (c) the large number of children who became patients under the scheme and for whom medical extras were undoubtedly prescribed more frequently.

With regard to the latest period the causes which are assigned for the increase in the cost per patient treated are as follows:—

- (a) a large and increasing number of patients of the "chronic" type are being treated under the scheme and are in receipt of extra nourishment;

- (b) an increased number of tuberculous patients on discharge from hospital or sanatorium are being recommended for milk and eggs ;
- (c) a few practitioners tend to be liberal, rather than extravagant, in their recommendations of medical extras. This is the opinion of the Relieving Officers, but has not been supported by any factual statement.

12. **Association with the Newcastle General Hospital.** There has been a marked advance in the work of the Newcastle General Hospital since 1930 (Table VIII.) To this the success of the Domiciliary Medical Services has certainly contributed but the main cause is the steady progress which the hospital has made in the regard of the inhabitants of the City. There is no evidence that panel practitioners refer cases to hospital unnecessarily.

The hospital provides a general consultative service for out-patients and has established two important clinics for diabetic and anæmia cases. These latter are particularly useful in the case of Public Assistance patients. For example, diabetic patients attend the hospital for blood sugar examinations and the regulation of their insulin dosage. The necessary information on these points is communicated to the panel practitioners together with any suggestions as to special dietetic requirements, which can be recommended for issue as medical extras.

TABLE VIII.

Year.	Admissions.	Operations.	Maternity Cases.
1930 .....	3,048	596	97
1931 .....	3,598	1,125	99
1932 .....	4,522	1,428	161
1933 .....	4,776	1,560	194
1934 .....	5,544	2,076	225
1935 .....	6,245	2,722	273
1936 .....	6,707	2,722	388

13. **Relations with Statutory Health Services.** The association of the Domiciliary Medical Services with the other organised health services of the Local Authority, particularly the Maternity and Child Welfare and Tuberculosis services is being steadily developed.

14. **Relations with District Nursing Associations.** The arrangement which was made by the Health Committee with the local Nursing Associations whereby the latter would provide domiciliary nursing for any Public Assistance patient at the request of the medical practitioner in attendance, has continued to function satisfactorily. During the period under review, 159 requests for nursing assistance were received from practitioners on the panel of the Joint Medical Relief District. These 159 patients received <sup>2,999</sup>~~2,115~~ visits from the nurses of the various associations or 18.9 visits per patient.

The importance and value of this co-operation cannot be overstated, and the assistance of the nursing associations has been greatly appreciated by all concerned.

15. **Incidence of Sickness, etc.** It has frequently been observed that while the statistics of births and mortality are now adequately recorded by the Registrar-General, there is still but little information regarding the incidence of sickness. From a number of sources—the notification of infectious and industrial diseases, the medical record cards of the National Health Insurance Scheme—it is possible to compile data, which though complete in themselves, relate only to the incidence of a series of diseases, or to the illness experience of special categories and age groups of the population.

The medical record cards of the Domiciliary Medical Scheme constitute another such source of information, and though here again it may be argued that we are dealing with a definite grouping of the population, with its own social and economic background, yet the group has the advantage, that it is made up of males and females of all ages.

It should be possible to obtain from a careful analysis of the sickness records of this population, some clearer knowledge of many matters which are of importance in Preventive Medicine. With proper statistical methods the effect of bad housing conditions, and low income levels upon the health of the Public Assistance community could be investigated. The epidemiology of many of the minor infectious disorders could also be studied, as well as the incidence of those common causes of incapacity, which are diagnosed or rather labelled as anæmia, gastritis, nervous debility and rheumatism.

The essential statistical details are given in Tables IX. and X. in which are recorded respectively :—

- (a) the age and sex distribution of the patients treated under the scheme ; and
- (b) the classified distribution of the diseases experienced.

With a view to providing some information as to the incidence of the Rheumatic Conditions, both acute and chronic, in this special community which had been asked for by Dr. F. John Poynton, the records for the year under review were scrutinised and the details shown in Table XI. were extracted.

It is not proposed to comment further on these various tables, except to point out that the number of children treated under the scheme increased from 3,386 or 41.4% in the year ended 29th February, 1936, to 4,654 or 43.5% in the year ended 28th February, 1937. In addition, one would stress the importance of having available such a body of statistical and epidemiological material, and express the hope that facilities may be afforded for its more detailed study, analysis and interpretation.

**16. Comparison with previous periods.** The medical record keeping of the part-time medical officers who operated the service prior to 8th November, 1933, was not sufficiently reliable to permit of any real comparison with data collected during the working of the "open choice" method. In view of the inadequate remuneration paid to the medical officers under the old arrangement, any comparison of the cost of the two systems is also quite fallacious.

A comparison of the work and costs of the "open choice" method at the various stages of its development is, of course, possible and Table XII. has been prepared to show the more important data for the three periods dealt with in this and the previous reports on the subject.

TABLE IX.  
AGE AND SEX DISTRIBUTION OF PATIENTS TREATED.

AGE PERIODS.	ACUTE PATIENTS.						SUB-CHRONIC PATIENTS.						CHRONIC PATIENTS.						TOTAL OF ALL PATIENTS.					
	Males.		Females.		Total Persons		Males.		Females.		Total Persons		Males.		Females.		Total Persons		Males.		Females.		Total Persons	
	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.	No.	% of Total.
0-5	1,194	33.9	1,109	21.8	2,303	26.7	74	27.1	68	10.1	142	15.0	33	9.2	48	6.2	81	7.1	1,301	31.2	1,225	18.7	2,526	23.6
5-15	1,022	29.0	918	18.0	1,940	22.5	51	18.7	70	10.4	121	12.8	27	7.3	40	5.1	67	5.8	1,100	26.5	1,028	15.7	2,128	19.9
15-25	213	6.1	396	7.8	609	7.1	12	4.4	34	5.1	46	4.9	17	4.6	31	4.0	48	4.2	242	5.8	461	7.0	703	6.6
25-45	621	17.7	1,465	28.7	2,086	24.2	68	24.9	203	30.2	271	28.7	106	28.7	185	23.7	291	25.3	795	19.1	1,853	28.3	2,648	24.7
45-65	325	9.2	783	15.4	1,108	12.9	53	19.4	191	28.4	244	25.8	148	40.1	255	32.7	403	35.1	526	12.7	1,229	18.8	1,755	16.4
Over 65	144	4.1	424	8.3	568	6.6	15	5.5	106	15.8	121	12.8	37	10.1	221	28.3	258	22.5	196	4.7	751	11.5	947	8.8
TOTAL...	3,519	100	5,095	100	8,614	100	273	100	672	100	945	100	368	100	780	100	1,148	100	4,160	100	6,547	100	10,707	100

TABLE X.

Proportional distribution of disease amongst acute, sub-chronic and chronic Public Assistance patients. The information for insured persons as set out in the Annual Report of the Chief Medical Officer of the Ministry of Health for 1933 is given for comparison.

DISEASE.	Representative Areas, England and Wales, Chief Medical Officer's Report. (Year 1933.)		NEWCASTLE UPON TYNE. 1ST MARCH, 1936—28TH FEBRUARY, 1937.							
			Acute Patients.		Sub-chronic Patients.		Chronic Patients.		All patients.	
	No.	Per 1,000 of Total.	No.	Per 1,000 of Total.	No.	Per 1,000 of Total.	No.	Per 1,000 of Total.	No.	Per 1,000 of Total.
1. Influenza .....	14,905	118.6	304	25.2	39	19.0	21	8.9	364	22.1
2. Tuberculosis, all forms .....	905	7.2	87	7.2	22	10.7	54	22.9	163	9.9
3. Organic Heart Disease .....	1,589	12.6	457	37.9	178	86.7	285	120.8	920	55.9
4. Anæmia .....	1,578	12.6	555	46.0	158	77.0	176	74.6	889	54.0
5. Bronchitis, tonsillitis, nasal catarrh cold, etc.....	29,698	236.4	3,281	272.1	448	218.3	452	191.6	4,181	253.8
6. Pneumonia and other diseases of the respiratory system	1,699	13.6	268	22.2	48	23.4	86	36.5	402	24.4
7. Diseases of the digestive system .....	13,915	110.7	1,428	118.4	200	97.5	242	102.6	1,870	113.5
8. Diseases of the genito-urinary system .....	3,854	30.7	452	37.5	131	63.8	133	56.4	716	43.5
9. Diseases of the nervous system and special senses .....	7,046	56.1	693	57.5	176	85.8	225	95.3	1,094	66.4
10. Skin Diseases .....	6,112	48.6	577	47.8	59	28.7	62	26.3	698	42.4
11. Injuries and accidents .....	10,809	86.0	346	28.7	24	11.7	24	10.2	394	23.9
12. Abscess, boils, and other septic conditions .....	8,808	70.1	430	35.7	56	27.2	54	22.9	540	32.8
13. Lumbago, rheumatism, etc. ....	11,329	90.2	548	45.5	126	61.4	189	80.1	863	52.4
14. Debility, neuralgia and headache.....	6,115	48.7	614	50.9	128	62.4	126	53.4	868	52.7
15. Malignant Disease .....	221	1.8	27	2.2	13	6.3	25	10.6	65	3.9
16. Other Diseases .....	7,063	56.1	568	47.1	126	61.3	153	64.8	847	51.4
17. Infectious Diseases.....	—	—	1,141	94.6	72	35.0	28	11.9	1,241	75.4
18. Puerperal state .....	—	—	283	23.5	49	23.8	24	10.2	356	21.6
TOTAL .....	125,646	1,000	*12,059	1,000	†2,053	1,000	‡2,359	1,000	§16,471	1,000

\* This figure represents illnesses suffered by 8,614 acute patients.  
† " " " " " 945 sub-chronic patients.  
‡ " " " " " 1,148 chronic patients.  
§ " " " " " 10,707 total patients.

TABLE XI.  
RHEUMATISM.

CLASSIFICATION, Males - M Females - F Persons - P	AGE GROUPS.																																			
	0-5			5-10			10-15			15-20			20-25			25-35			35-45			45-55			55-65			65-75			Over 75			Total.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.			
Acute Rheumatic Fever .....	—	—	—	5	1	6	—	1	1	1	—	1	—	1	1	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	7	3	10
Chorea .....	—	6	6	6	9	15	1	7	8	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	23	30
Chronic Myocarditis, etc., Endocarditis .....	—	—	—	1	1	2	2	3	5	—	3	3	1	—	1	6	16	22	1	5	6	—	5	5	2	2	4	—	—	—	—	—	—	13	35	48
Chronic arthritic conditions .....	1	—	1	1	—	1	—	—	—	—	—	—	1	3	4	6	2	8	3	10	13	5	20	25	10	25	35	2	24	26	1	4	5	30	88	118
With a diagnosis of rheumatism only (presumed to be sub-acute rheumatism).....	—	—	—	2	—	2	3	5	8	—	—	—	—	1	1	2	—	2	3	3	6	—	7	7	4	12	16	—	—	—	—	—	—	14	28	42
Conditions (sciatica, myositis, etc.) presumed to be rheumatism .....	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	3	7	10	3	2	5	4	10	14	1	10	11	—	1	1	—	—	—	11	31	42
Total of above two groups .....	—	—	—	2	—	2	3	5	8	—	—	—	—	2	2	5	7	12	6	5	11	4	17	21	5	22	27	—	1	1	—	—	—	25	59	84
Diagnosis of rheumatism occurring in connection with other diseases (with bronchitis, hyperpiesia, neurosis, senility, menopause, etc.) .....	1	—	1	1	—	1	3	2	5	—	3	3	3	5	8	9	25	34	7	24	31	6	36	42	10	42	52	5	24	29	—	1	1	45	162	207
Diagnosis of rheumatism and rheumatic conditions presumed to be wrong diagnoses (cards usually with two or three attendances and then reported cured).....	—	—	—	2	3	5	2	7	9	—	2	2	5	2	7	10	14	24	10	11	21	5	10	15	10	19	29	4	19	23	2	3	5	50	90	140
GRAND TOTAL .....	2	6	8	18	14	32	11	25	36	1	9	10	10	13	23	36	64	100	28	55	83	20	88	108	37	110	147	11	68	79	3	8	11	177	460	637



TABLE XII.

## COMPARATIVE STATEMENT OF COSTS AND STATISTICS.

SUBJECT.	PERIOD.		
	8th Nov., 1933, to 31st Aug., 1934 (10 months). (1)	1st Mar., 1935, to 29th Feb., 1936. (2)	1st Mar., 1936, to 28th Feb., 1937. (3)
	Average number of persons receiving Public Assistance in the City....	21,395	20,687
Medical Relief Districts in the Scheme.....	6	7	8
Estimated number of persons receiving Public Assistance in Medical Relief Districts in the Scheme .....	12,850	13,500	15,095
Number of cases treated ..	6,360	8,193	10,707
Total Services rendered ..	42,432	63,113	89,476
Attendances .....	19,114	40,151	59,588
Visits .....	23,318	22,962	29,888
<b>EXPENDITURE.</b>			
<i>Medical Practitioners.</i>			
	£ s. d.	£ s. d.	£ s. d.
Fees for cases treated .....	1,000 0 0	2,992 0 0	3,950 15 0
" " certification.....	185 9 0	281 14 0	326 16 0
" " confinements, etc.	40 10 6	50 11 6	33 0 0
" " emergency medicines .....	4 17 5	4 16 0	8 13 10
Total .....	1,230 16 11	3,329 1 6	4,319 4 10
Unit cost per service rendered on fees for cases treated only.....	5.656d.	11.38d.	10.6d.
<b>DISPENSARY SERVICES.</b>			
Prescriptions dispensed ..	30,219	61,357	63,383
Cost of dispensary services ..	£770	£1,474	£1,637
Average cost per prescription .....	6.1d.	5.7d.	6.2d.
<b>ADMINISTRATIVE CHARGES</b>			
Salaries.....	£75	£250	£272
Printing, Postages, etc. ..	£100	£76	£90
<b>TOTAL COST OF DOMICILIARY MEDICAL SERVICES IN THE JOINT MEDICAL RELIEF DISTRICT .....</b>	<b>£2,175</b>	<b>£5,129</b>	<b>£6,318</b>
Average cost per patient treated .....	6/10	12/6	s. d. 11 9.6

NOTE.—Period 1. Payments to Practitioners were from a pool of £1,000.  
Periods 2 and 3. Payments to Practitioners were based on a capitation payment of 5/- per quarter per patient treated.

17. **Conclusions.** The essential features of a model Domiciliary Medical Scheme can be variously stated but the following are probably its main requirements :—

- (a) The Scheme should supply to public assistance patients a complete range of medical, dispensing and ancillary services not inferior to those provided under the National Health Insurance Acts.
- (b) Its administration should be identified as little as possible with the Poor Law, and wherever feasible it should allow free choice of doctor by the patient.
- (c) From the administrative standpoint it should be efficient, convenient, elastic and not unnecessarily expensive.
- (d) It should work in close co-ordination with the statutory health and hospital services of the local authority, and should co-operate effectively with the voluntary organizations which are concerned with the nursing and medical treatment of the sick poor.
- (e) It should offer a reasonable remuneration to those medical practitioners engaged in its service.\*
- (f) Its medical records should be capable of throwing light upon the problems of sickness and invalidity in the community.

It would be premature to suggest that at the present stage of its development the Newcastle Scheme complies with all these requirements, but it is submitted that during the period covered by this report it has been steadily approximating to the ideal which was present in the minds of its originators.

J. A. CHARLES,  
*Medical Officer of Health.*

*Health Department,  
Town Hall,  
Newcastle upon Tyne,  
April, 1938.*

\* Since the foregoing report was prepared, an increase of 25% in the standard quarterly scale of fee—i.e., 5/-, has been granted by the Health Committee, to take effect from the 1st January, 1938.

## Appendix.

**Administrative Procedure.** The administrative procedure under the present arrangements, and the method of assessing the payments due to members of the panel is as follows :—

A patient requiring treatment presents to the panel practitioner of his choice the relieving officer's order, together with a medical record card which is valid for a period of three months from the date of issue. At the end of that period the record card is forwarded to the Health Department, and if the treatment of the patient has been completed, the practitioner is credited with a fee of 5/-. If, in the opinion of the doctor, treatment is still necessary, a note to that effect is made on the record card, and the Public Assistance Officer is instructed by the Health Department to issue a renewal of treatment card, valid for a further period of three months.

All cards returned to the Health Department are carefully scrutinised by a medical member of the staff, and in certain cases where it is found that a recommendation for further treatment has been made in error, the issue of an additional record card is not authorised. Where the necessity for the continuance of treatment would appear to be open to question, the case is reviewed by the Medical Referee (*i.e.*, Dr. G. P. Harlan, Medical Superintendent of the Newcastle General Hospital) in the presence of the panel practitioner, if the latter so desires. In actual practice recommendations of the panel practitioners as to continuance of the treatment are usually confirmed by the Medical Referee.

The amounts payable to members of the panel are based primarily on the number of three-monthly record cards which they send to the Health Department, each card being valued at 5/-. Practitioners are also credited with one shilling in respect of every medical certificate issued by them at the request of a Relieving Officer, with the fees payable for confinements and other special services, and with the actual cost of emergency drugs dispensed by them to patients.

The financial statement of accounts is made quarterly.

Administrative Procedure

The administrative procedure... the patient's records and the medical history... that to members of the panel is as follows:

A patient's record... The panel... to his choice the following officer... record card which is valid for a period... to the Health Department... from the patient's... in the patient's... to the Health Department... Office is... for a period of three months.

The panel... to the Health Department... by a medical member of the staff... it is found that a... the patient's... not sufficient... treatment would... to the Medical... records of the... the panel... treatment... the medical history.

The answer... to the panel... on the number of... they send to the Health Department... 5. Practitioners... of every other... Office with the... other special... dispensed by them to patients.

The financial statement of... should contain: