

[Report 1938] / Medical Officer of Health, Newcastle-upon-Tyne City & County.

Contributors

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Publication/Creation

1938

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CITY AND COUNTY OF NEWCASTLE UPON TYNE

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON THE

Sanitary Condition of the City

DURING THE YEAR

1938.

PRINTED BY
CHRISTIE, MALCOLM, LTD.,
CHARLOTTE SQUARE, NEWCASTLE UPON TYNE.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE

ANNUAL REPORT

MEDICAL OFFICER OF HEALTH

Sanitary Condition of the City

During the year

1938.

Printed by

James W. Brown & Co.

Printers, Newcastle-upon-Tyne

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Members of Council who served on the

HEALTH COMMITTEE.

The Lord Mayor (Alderman W. R. WALLACE, J.P.)

Alderman WALTER THOMPSON, J.P., Chairman.

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

Alderman J. CHAPMAN.

„ W. LOCKE, J.P.

„ J. MOORE, J.P.

Councillor CATHERINE A. AULD, J.P.

Councillor MAY NEWTON.

„ A. E. BEDSON.

„ J. PEARSON, J.P.

„ VIOLET H. GRANTHAM.

„ R. M. ROWE.

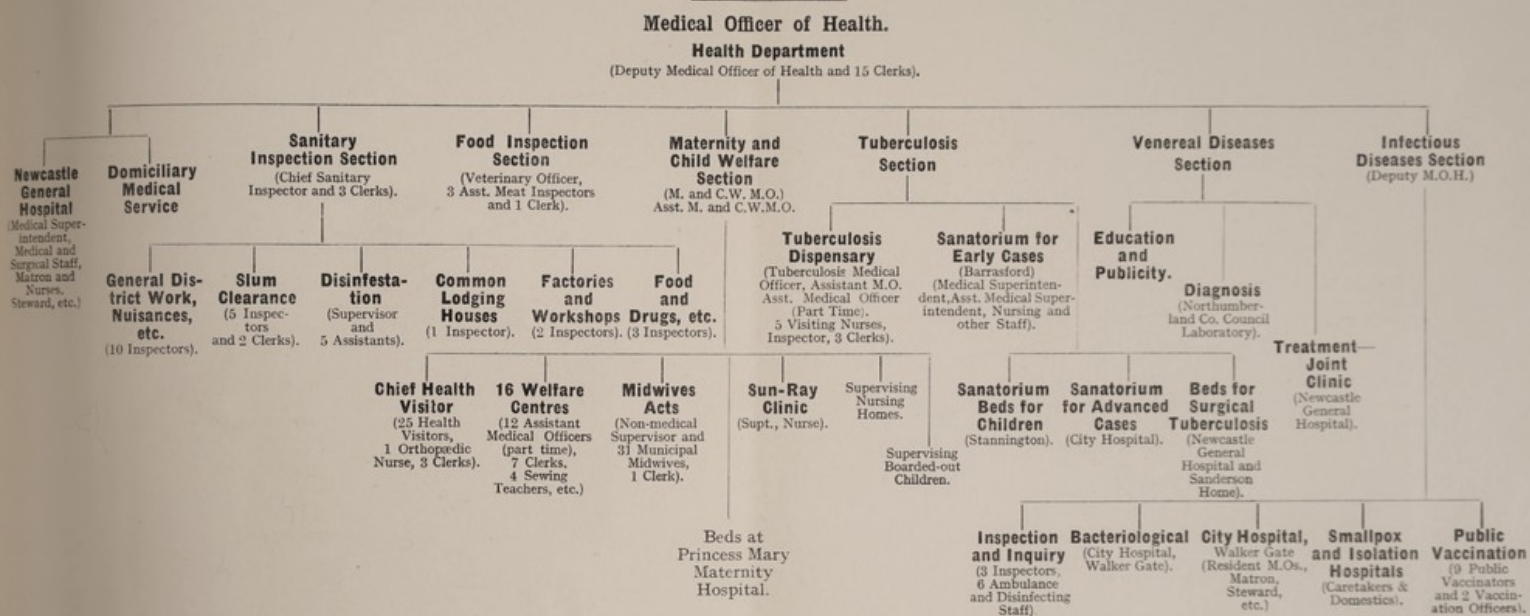
„ CATH. A. LOCKE, J.P.


„ J. E. SCANLAN,
O.B.E., J.P.

„ H. MOAT.

„ T. Sweeney.

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





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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.

* „ WALTER THOMPSON, J.P.

*Councillor VIOLET H GRANTHAM.

†Councillor FRANCES E.
TAYLOR, J.P.

* „ CATH. A. LOCKE, J.P.

†Mrs. T. A. HIGGINBOTTOM.

* „ J. PEARSON, J.P.

†Dr. R. P. RANKEN LYLE, J.P.

† „ JEANIE L. GIBBIN,
O.B.E., J.P.

†Dr. J. C. SPENCE.

* 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.

E. G. BREWIS, M.D., B.S., M.R.C.P., D.P.H., Assistant Medical Officer of Health (appointed June).

WM. GRAY, Chief Sanitary Inspector.

JAS. McNICHOL, Chief Assistant Inspector and Assistant Workshops Inspector (resigned 23rd April).

L. W. JOHNSON, Chief Assistant Inspector and Assistant Workshops Inspector (appointed April).

W. E. PERKINS, Assistant Workshops Inspector.

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

J. BROWN	}	District Inspectors.
L. WADE		
A. IBBITSON		
R. S. COOPER (resigned June)		
E. BANKS		
T. SAYER		
N. MAYNE		
F. JAMES (resigned Feb.)		
C. W. SANDILANDS		
J. SHIPLEY		
W. NICOL		

W. STEWART	}	Slum Clearance Inspectors.
F. GALTON		
E. HOUSECROFT		
S. HOLLIDAY (appointed June)		
L. OLIVER (appointed April)		

WM. BEAN	}	Infectious Diseases Inspectors.
R. CHAPMAN (Temp.)		
A. ANDERSON (resigned Nov.)		
W. TWEDDLE		
L. SMALLEY		

JAS. ROBSON, JAS. BRUCE (resigned Nov.), J. R. CRAGIE, J. W. ROBSON, THOS. MOORE, J. ROBSON, Jun. (resigned August), J. JARROLD (appointed Dec.), W. FRERIS (appointed Dec.), 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, A. CAMPBELL, L. WHITEMAN, R. A. RIDLEY, R. HARDY, M. DIXON (Temp.), R. SOUTHERN (appointed May),** 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.

H. THORNTON, M.R.C.V.S., B.V.Sc., D.V.H., Veterinary Officer and Inspector of Provisions.

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 (retired 31st August).

F. J. W. MILLER, M.B., B.S., M.R.C.P., D.C.H., Senior Child Welfare Medical Officer (appointed September).

E. G. BREWIS, M.D., B.S., M.R.C.P., D.P.H., Assistant Maternity and Child Welfare Medical Officer (appointed Assistant Medical Officer of Health, June).

SHIRLEY M. LIVINGSTON, M.B., B.S., Assistant Child Welfare Medical Officer (appointed November).

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*** (resigned May), **g** **C. N. PHILLIPS**, **b** **M. BATTY**, **b** **A. CRAGGS**, **b** **P. E. PEARCE**, **b** **R. ROXBY**, **b** **E. G. SAYER**, **b** **L. YOEUELL**, **b** **A. BRADLEY**, **b** **C. BARRON***, **b** **G. CATO**, **b** **M. E. PARKER** (appointed May), **b** **M. E. PERCY** (appointed June), Health Visitors. **EDITH RODGERS**, **MARION S. BATT**, **BLANCHE DIXON**, 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., Orthopaedic Nurse.

CATH. BARNES, **MARY E. MUSE**, **A. DOUGALL**, **VIOLET SIMPSON**, **I. WATSON**, **MARY SENIOR** (appointed Feb.), **JOYCE LAIDLER**, **B. BRADING** (appointed Dec., Temp.), Welfare Centre Clerks.

H. GLEN DAVISON, M.D.

L. MABEL R. CAMPBELL, M.B., Ch.B.
(resigned Nov.)

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.

GEO. DAVISON, M.D., M.B., B.S., M.R.C.P.,
D.C.H. (appointed Sept.)

M. GOLDSTON, M.B., B.S., (appointed
Nov.)

Assistant Medical Officers (part
time) Welfare Centres.

***MRS. E. WALKER**, Non-Medical Supervisor 31 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
(resigned June).

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

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. DITCHFIELD, Assistant Inspector.

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

BARRASFORD SANATORIUM.

- C. G. R. GOODWIN**, M.R.C.S., L.R.C.P., Medical Superintendent.
A. E. PAXTON, M.B., B.S., Assistant Medical Superintendent (appointed Feb. resigned Sept.)
P. B. CRONE, M.B., B.S., Assistant Medical Superintendent (appointed Oct.)
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., Medical Superintendent.
J. F. CAITHNESS, M.B., Ch.B., D.P.H., Senior Resident Medical Assistant (resigned June).
L. H. MURRAY, M.D., B.S., B.Hy., D.P.H., Resident Medical Assistant (resigned Oct.)
A. E. PAXTON, M.B., B.S., Resident Medical Assistant (appointed Sept.)
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 (resigned May).
HIRAM and ELIZABETH BOSWELL, Caretakers (appointed April).

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.
T. R. HARLAN, M.B., B.S., Assistant Radiologist (appointed Oct.)
JUNIOR RESIDENT HOUSE PHYSICIANS AND SURGEONS (6).
A. BARON, Matron (resigned Dec.) **J. D. R. GIBSON**, Matron (appointed Dec.)
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 (resigned 31st Oct.)
W. E. HUME, M.D., M.A., M.B., B.Ch., F.R.C.P., Medical Director (appointed Nov.)
F. J. NATTRASS, M.D., B.S., F.R.C.P., Physician.
J. C. SPENCE, M.C., M.D., M.B., B.S., F.R.C.P., Physician (appointed July).
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.
GEO. DAVISON, M.D., M.B., B.S., M.R.C.P., Medical Registrar (appointed Aug.)
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.
S. Y. FEGGETTER, M.B., M.S., F.R.C.S., Surgical Registrar.
A. LOGAN, M.B., Ch.B., F.R.C.S. (Eng. and Ed.), Surgical Registrar.
W. COWELL, M.B., B.S., Surgical Registrar (appointed Aug.)
W. E. WARDILL, M.B., B.S., F.R.C.S., Plastic and Genito Urinary Surgeon.
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.
F. MCGUCKIN, M.D., B.S., F.R.C.S., Oto-Rhinologist.
PHILIP AYRE, M.R.C.S., L.R.C.P., Anæsthetist.
W. J. PHILLIPS, M.B., B.S., Anæsthetist.
E. JOAN MILLER, M.B., B.S., D.A., Anæsthetist.
S. F. EVANS, Ph.D., M.Sc., Radiotherapist.

DISTRICT MEDICAL OFFICERS.

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

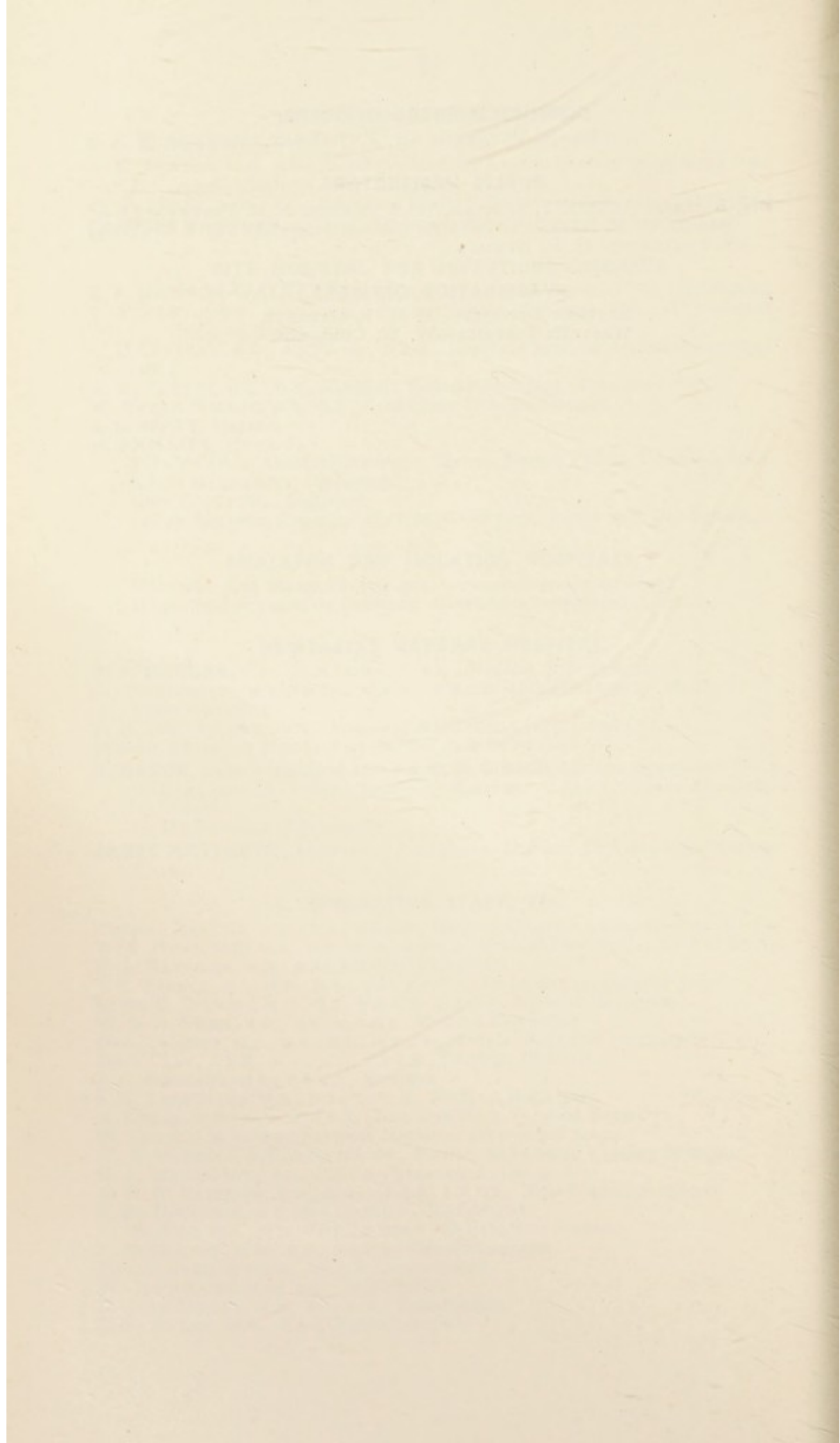
PUBLIC VACCINATORS.

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 Alderman 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-sixth 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 1938, and on the progress which was made during that period. The more urgent of our many continuing problems will also be reviewed.

Vital Statistics—Marriage and Birth Rates.

There are certain noteworthy details in the vital statistics of 1938 to which attention may well be directed.

The number of marriages was the largest in any year since 1920, and the total of 2,608 exceeded the record of 1937 by 192.

The marriage rate for the City was 17.9 per 1,000 of the population, and actually exceeds the comparable rate for England and Wales, which was 17.5. This difference between the local and the national figures, though small, probably indicates that some portion of the relatively increased prosperity which has been experienced elsewhere, has at last reached our area. The marriage rate is reputedly an index of prosperity, actual or anticipated, and it is to be hoped that its reputation in this respect will not be belied.

More concrete evidence of improved economic conditions was forthcoming in the number of male and female unemployed, which was reduced during the year by 1,736 persons. This maintenance of the higher level of employment was a very welcome and stimulating feature in the life of the City.

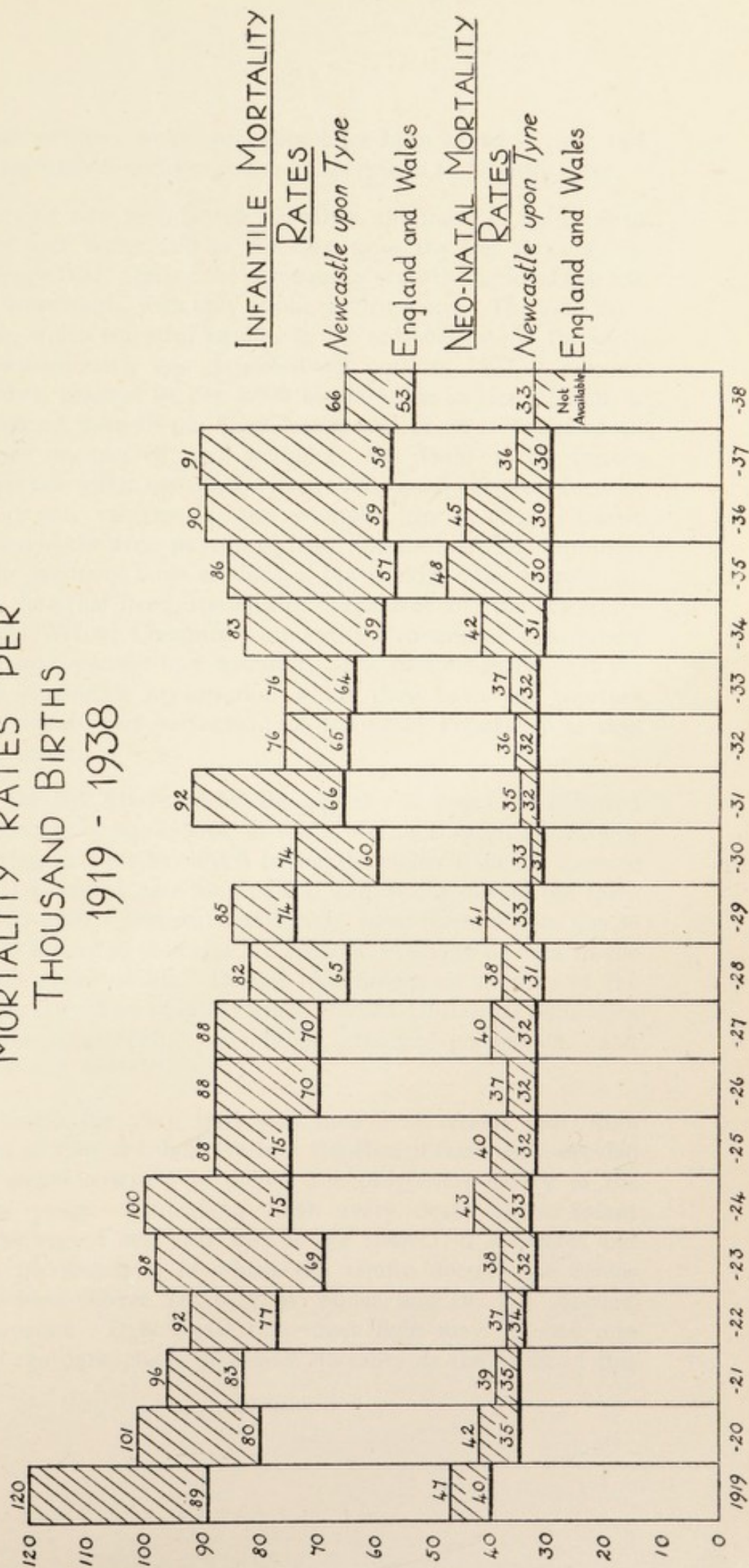
The experience of 1937, during which the birth rate reached a recent high record of 16.5, was not maintained. The number of births fell from 4,796 in 1937 to 4,678 in 1938, but it is gratifying to know that this deficiency of 118 was more than overtaken by the reduction which occurred in the number of infants dying under the age of one year. Furthermore, our local birth rate of 16.1 per 1,000 exceeds the corresponding rates for England and Wales, and for the 126 Great Towns, which in 1938 were 15.1 and 15.0 per 1,000 respectively.

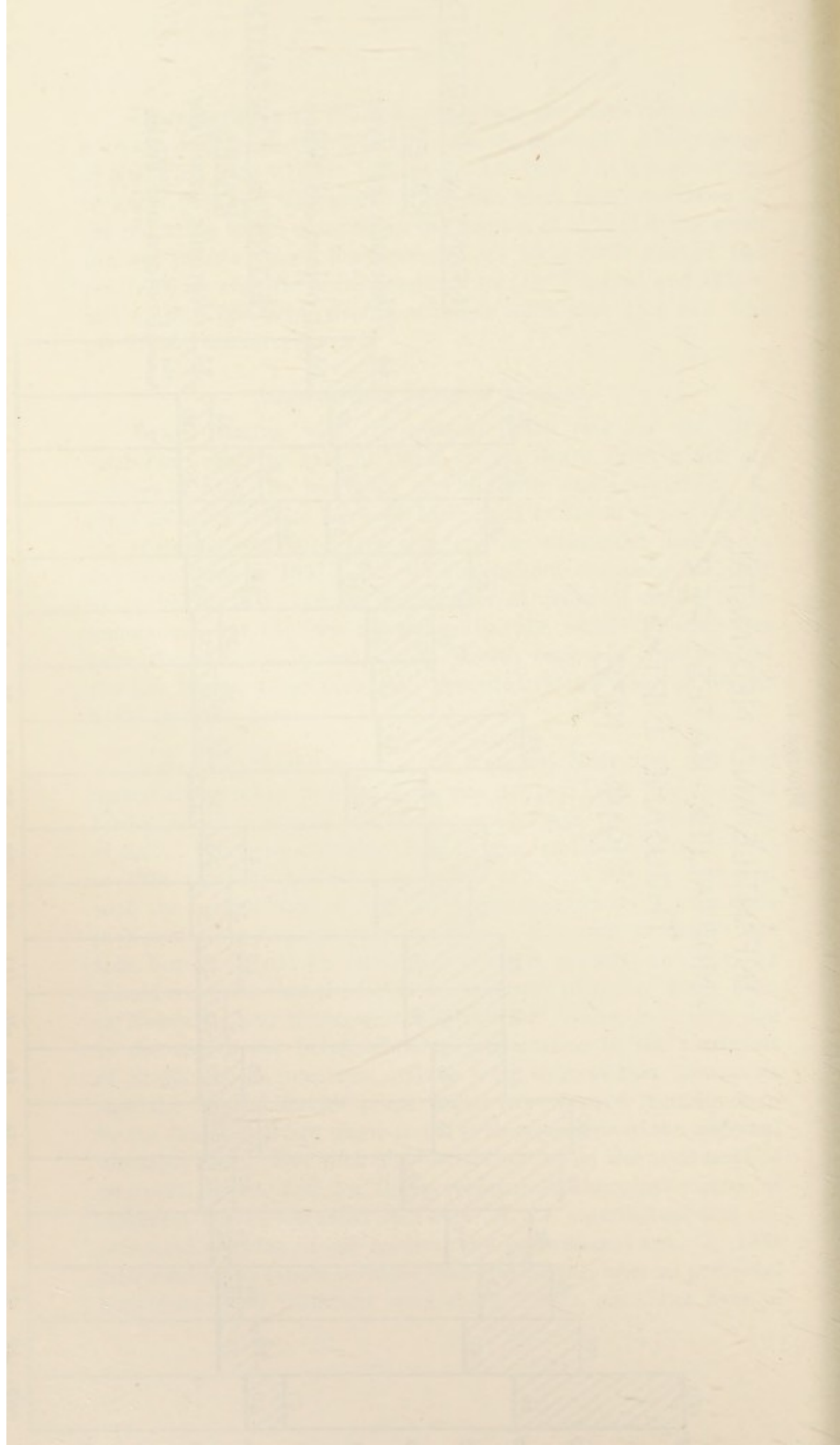
Maternal and Infantile Mortality.

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 there has been little good to say of these, though the maternal mortality rate registered a substantial decline for the first time in 1937. But on the present occasion, not only has a further reduction in the number of maternal deaths to be announced, but the infantile mortality rate, which for years has been the skeleton in our Public Health cupboard, has reached the low figure, never previously recorded in this City, of 66 per 1,000 children born.

Reverting to the question of Maternal Mortality, the local maternal mortality rate for 1938 was 3.3 per 1,000 live and still births, which contrasts not unfavourably with the national rate of 2.97. When we consider these figures, and bear in mind that in 1936 the City maternal mortality rate was 5.9 as compared with the national rate of 3.65, we realise how much has been done in Newcastle during the past two years. It is only fit and proper that honour should be attributed where it belongs, and that we should recognise that the fall in the maternal mortality rates, both in Newcastle and throughout England and Wales, is largely due to the use of the Sulphanilamide preparations in the treatment of Streptococcal infections. Since their introduction four 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 organisation and co-ordinated working of our medical and midwife services. In 1938 puerperal sepsis caused no more than two deaths, whereas puerperal convulsions and toxæmias were charged with six. The lives of

FIGURE I.
 INFANTILE AND NEO-NATAL
 MORTALITY RATES PER
 THOUSAND BIRTHS
 1919 - 1938





those six mothers would probably have been saved if they had placed themselves under ante-natal supervision sufficiently early.

Turning now to Infantile Mortality, the trend of the rates in England and Wales and in the City since the war is shewn in Fig. 1 (page 16A). During the past twenty years the national rate has moved downwards, with only minor interruptions. The local rate, however, which travelled parallel to the national rate in the early years, subsequently rose progressively until in 1937 it reached the modern peak of 91 per 1,000 births. The sudden descent in the following year to our local low record of 66 is therefore all the more unexpected and welcome. No doubt many factors which are not within our control have contributed to that reduction. We need only mention, as two examples, the excellent climatic conditions of the early months of 1938, and the generally improved economic status of large sections of the working class population. But on the other hand, the Health Committee and the Maternity and Child Welfare Committee are entitled to assume some credit for the improvement now manifest. The comprehensive and yet steadily expanding organisation which they have put together for the welfare and betterment of the Child Population is now yielding results.

Of the 307 deaths under the age of one year, 154 occurred under the age of one month, giving a neo-natal mortality rate of 33 per thousand births, which is slightly higher than the average neo-natal mortality rate for England and Wales during the three years 1935-1937. Compared with 1937, when the local rate was 36 per 1,000 births, it indicates a considerable saving of lives in the first four weeks of life. During the subsequent months of the first year, the causes of death which showed substantial reductions were whooping-cough, convulsions, broncho-pneumonia, and diarrhoea and enteritis.

Although the year 1938 was such a successful year from the point of view of Infant Welfare, the Health Committee decided that it would continue to pursue the progressive policy of the past few years. Throughout 1939, every death of an infant under the age of one year will be the subject of a careful and detailed investigation, in which the family doctor, the Senior Child Welfare Officer, Dr. F. J. W. Miller, and Dr. J. C. Spence, will co-operate. It is hoped that much light may be shed into many of the dark places of Infant Mortality as the result of this enquiry.

The General Death Rate.

The general death rate for the City fell from 13.3 per 1,000 population in 1937 to 12.4 in 1938, thus equalling the low records established in 1927 and 1932. The rate of 12.4 is the crude rate which represents the occurrence of mortality in the Newcastle upon Tyne population, without regard to the differences which exist in the age and sex distribution of that population as compared with 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 populations of individual towns 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. 1938.	General Death Rate.	Death Rate adjusted by Comparability Factor.	Compara- bility Factor.
Bristol	415,000	11.7	11.4	0.98
Leicester	263,300	11.2	11.4	1.02
London County	4,062,800	11.4	11.7	1.02
Birmingham.....	1,041,000	10.9	12.0	1.10
Portsmouth	258,400	12.2	12.1	0.99
West Ham.....	254,900	10.9	12.5	1.15
Sheffield	520,000	11.4	12.8	1.13
Nottingham	278,300	12.7	13.1	1.03
Hull	318,700	12.2	13.4	1.10
Leeds	494,000	12.7	13.5	1.07
Bradford	288,700	13.8	13.8	1.00
NEWCASTLE UPON TYNE	291,300	12.4	14.0	1.13
Liverpool	827,400	12.3	14.1	1.15
Manchester	747,318	12.3	14.1	1.14
Stoke-on-Trent	272,090	11.3	14.2	1.22
Northumberland County ...	405,900	11.8	12.5	1.06
Tynemouth	66,510	11.9	13.2	1.11
Durham County	884,000	11.6	13.3	1.15
Gateshead	117,000	12.5	14.1	1.13
Sunderland	182,400	12.7	14.3	1.12
Middlesbrough	139,800	12.3	14.7	1.18
South Shields	110,400	13.8	15.4	1.12

As regards the actual order of merit, it will be noted that we maintain our position in the lower half of the national table, while amongst the local counties and county boroughs we are superior to Gateshead, South Shields, Sunderland and Middlesbrough, 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 1937 are reprinted for the purpose of comparison.

TABLE II.
INDIVIDUAL CAUSES OF DEATH.

No.	CAUSE OF DEATH.	1938.	
		Number.	Percentage of Total Deaths.
1	Diseases of the Heart	751	20.7
2	Diseases of Veins and Arteries	465	12.8
3	Cancer	444	12.3
4	Bronchitis and Pneumonia	347	9.6
5	Tuberculosis—Pulmonary	249	6.9
6	Diseases of Nervous System.....	233	6.4

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

It will be seen that the ranking of these major causes of death is the same, except that cancer has exchanged places with bronchitis and pneumonia. There are, however, four points upon which some emphasis must be laid.

In the first place the diseases of the cardio-vascular system (*i.e.*, heart, veins and arteries), maintain their pre-eminence. The lives of 1,216 individuals ended in 1938 as the result of some form of cardio-vascular disease or failure. This number is equivalent to 33.5% of the total mortality. Admittedly two-thirds of these deaths from cardio-vascular causes occur in men and women over the age of 65, and in fact nearly 50% of all deaths beyond that age are due to some form of arterial or heart disease. But these conditions are also important causes of death in middle age, and are concerned in one-third 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 substantial reduction in the number of deaths from these causes. But if little can be done as yet to remove or modify the casual factors, something can be essayed by way of advice and guidance to those who are sufferers from heart disease. The treatment of heart weakness lies not so much in the use of medicine as in the prescription of a way of life. The periodical review of patients involving perhaps the re-assessment of their physical capacity, and the re-direction of their activities is the ideal to aim at. Such should be the work of an organisation, similar in many ways to a Tuberculosis Dispensary, which could be called the "Heart or Cardio-Vascular Clinic." Its inauguration in the City would be an important addition to our Public Health Services.

Secondly, there has been a considerable diminution in the deaths from bronchitis and pneumonia, due in great part to the favourable weather conditions in the early part of the year, but also in some measure associated with the introduction of another of the Sulphanilamide preparations—"M & B. 693"—which became available in the latter half of the year. Its achievements already have been phenomenal. When, in a little while, we are

able to use this new remedy with a full knowledge both of its limitations and of its special powers in certain directions, we shall have to add one more, and perhaps even the greatest, to the list of the miracles of modern medicine.

The third point of importance to be commented upon is the increase in the deaths from cancer, which at the total of 444, have never been more numerous. A scrutiny of the types of cancer included in this total shows that there was a considerable increase of deaths from cancer of the digestive system in females, and of cancer of the respiratory tract in both sexes, and that these together were responsible for more than two-thirds of the excess over the previous year.

Thanks to the beneficence of the Schools and Charities Committee, and the keen interest of its then Chairman (the late Alderman Gilbert Oliver) and the present Chairman (Councillor James Grant), the City has received in the shape of a Deep X-ray Therapy and Radium Department at the Newcastle General Hospital, an addition to its resources and armamentarium for the treatment of cancer. The department, which was built and equipped at a cost of £9,000, and endowed to the extent of £1,500 per annum by the Schools and Charities Committee, has been inspected and approved by many distinguished visitors, including representatives of the National Radium Commission and the Ministry of Health. The City now possesses at the Royal Victoria Infirmary and the Newcastle General Hospital powerful weapons and a comprehensive organisation to mitigate as far as may be possible the dread havoc of this great scourge.

Finally, deaths from pulmonary tuberculosis, for the first time for three years, register a decline, and their total, namely 249, is with one exception the smallest recorded. We can but hope that the great schemes of slum clearance and re-housing which have been carried out in recent years are slowly but surely providing an entirely different environment, beneficial to the human, being, and detrimental to the bacillus of tuberculosis.

TABLE III.

Average Death Rates per 100,000 in England and Wales and Newcastle upon Tyne during the Eleven Year Period 1927-1937. (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	1,214	1,295	106.7
	*Infantile Mortality	63.3	84.0	132.7
1.	Typhoid and paratyphoid fevers....	0.7	0.7	100.0
2.	Measles	7.5	15.4	205.3
3.	Scarlet Fever	1.5	2.8	186.7
4.	Whooping Cough	6.9	9.8	142.0
5.	Diphtheria	7.8	5.5	70.5
6.	Influenza	34.6	26.6	76.9
7.	Encephalitis lethargica.....	2.2	3.2	145.4
8.	Cerebro-spinal fever.....	1.9	4.6	242.1
9.	Tuberculosis of respiratory system	69.2	99.1	143.2
10.	Other tuberculous diseases	18.9	23.0	121.7
11.	Syphilis	3.3	6.8	206.1
12.	General paralysis of the insane, tabes dorsalis	4.6	6.4	139.1
13.	Cancer, malignant disease	151.1	142.3	94.2
14.	Diabetes	15.2	15.3	100.7
15.	Cerebral haemorrhage, etc.	66.3	54.6	82.4
16.	Heart disease	254.6	244.6	96.7
17.	Aneurysm	3.4	3.8	111.8
18.	Other circulatory diseases	61.1	94.5	154.7
19.	Bronchitis	55.4	54.9	99.1
20.	Pneumonia (all forms)	78.5	93.9	119.6
21.	Other respiratory diseases	12.7	12.8	100.8
22.	Peptic ulcer	10.5	11.9	113.3
23.	Diarrhoea, etc. (under 2 years)	9.9	20.8	210.1
24.	Appendicitis	7.2	5.8	80.3
25.	Cirrhosis of liver	3.8	3.1	81.6
26.	Other diseases of liver, etc.	6.3	7.8	123.8
27.	Other digestive diseases	†	†	†
28.	Acute and chronic nephritis	38.5	47.9	124.4
29.	†Puerperal sepsis.....	1.5	1.8	120.0
30.	†Other puerperal causes	2.4	2.8	116.6
31.	*Congenital debility, premature birth, etc.	32.1	35.5	110.6
32.	Senility	45.9	27.4	59.7
33.	Suicide	13.0	11.9	91.5
34.	Other violence	41.9	39.1	93.3
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. is of particular interest, as it indicates at a glance the average death rates 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 eleven 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 death of which our experience is 25% greater than the average of the county 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 possible 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, fostered and perpetuated by overcrowding and poverty. They are diseases, more particularly of childhood and early manhood, which where they fail to kill, frequently maim and incapacitate. From the purely economic standpoint (which our Victoria grandparents would have stressed), they involve an enormous wastage of young lives, and deprive the community, and the individuals concerned, of many years of valuable working life. 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 391 deaths in 1938 as compared with 564 in 1937. This very substantial fall is almost entirely accounted for by the reduction in deaths from whooping cough, diarrhoea, influenza and pneumonia.

Diphtheria was notified less frequently (415 cases in 1938 as compared with 475 in 1937), but the number of deaths, namely 23, was the same, so that the case mortality rate rose to 5.5%. 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 notifications of scarlet fever were also reduced from 843 in 1937 to 704 in 1938. For the first time in the recorded epidemiology of the City there were no deaths from scarlet fever. In its present form this disease is a relatively unimportant condition, in so far as mortality is concerned. It is a far cry from 1866 when 500 persons died in one year from the virulent scarlet fever then prevailing.

The one infectious disease to appear in epidemic form in 1938 was measles, but fortunately the characteristic feature of the outbreak was its mildness. Only 21 deaths occurred amongst the 4,525 cases notified.

Re-organisation of the Health Department.

It had been obvious for some time that the organisation of the Health Department which had been approved in 1920, and had remained virtually unchanged since that date, was no longer capable of carrying the increasing weight of administrative duties and specialist functions which had been assigned to it by successive Acts of Parliament. Accordingly, coincident with the resignation of Dr. A. F. G. Spinks, the opportunity was taken to bring into effect a comprehensive re-organisation of the whole of the Medical Staff of the Department. The main features of the new arrangement are briefly as follow. The Medical Officer of Health relinquished the post of non-resident Medical Superintendent of the City Infectious Diseases Hospitals to the Deputy Medical Officer, who thereupon became the first whole-time Resident Medical Superintendent of the hospitals concerned, retaining however the style and station of Deputy Medical Officer of Health. At the same time the three posts of Resident Medical Assistant at the City Hospital for Infectious Diseases were reduced to two, and alterations were made in the terms of appointment. With a view to providing the Medical Officer of Health with additional administrative assistance, a whole-time Assistant Medical Officer was appointed, with special duties as regards Slum Clearance and Air Raid Precautions.

It was in the Maternity and Child Welfare Department, however, that the most far-reaching changes were made. Instead of appointing a successor to Dr. Spinks, with the same duties and responsibilities in both Maternity and Child Welfare, the Health Committee decided to divide the appointment, assigning to one

officer—the Senior Child Welfare Officer—the duties appertaining to Child Welfare, and to the other—the Maternity Officer—the charge of the Municipal Maternity Service as a whole. This separation of functions was approved by the Ministry of Health, and steps were taken to appoint two officers, each with the specialist experience and qualifications required for his particular appointment. In the persons of Dr. F. J. W. Miller, M.B., M.R.C.P., D.C.H., as Senior Child Welfare Officer, and Mr. Linton M. Snaith, M.S., F.R.C.S. Eng., M.R.C.O.G., as Maternity Officer, the Health Committee has happily found officers of the required calibre.

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, during the period 1st March, 1937—31st December, 1937, is in course of preparation, and will be published shortly. The new scale of remuneration, whereby the quarterly payment per patient was advanced from 5/- to 6/3 has been in operation since 1st January, 1938. Apart from this, the administrative and financial features of the scheme remain unchanged.

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 in 1930.

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
1938	8,354	3,388	694

More detailed information is given in the pages of the hospital report itself, which now incorporates special sections relating to the activities of the departments for neuro-surgery, fever therapy, diabetes, and thoracic surgery. These newer 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 such enterprises. During the year 1938 two important extensions to the hospital were made. The first of these was a Children's Department of 92 beds, which was opened by Lord Eustace Percy, Rector of King's College, in July. The Newcastle General Hospital now possesses a hospital within a hospital, for the new extension completes a full-scale Children's Department of 128 beds, with accommodation of varying types—for infants, quarantine cases, and the ordinary diseases of childhood, which has no superiors and few equals in Great Britain. Its carefully planned arrangements, perfect lighting, airiness, and general gracefulness are a lasting tribute to the skill of Mr. R. G. Roberts, F.R.I.B.A., the City Architect. It only remains to be said that the Hospitals Committee were fortunate in obtaining the services of Dr. J. C. Spence, F.R.C.P., as Physician in Charge of the new department.

The second extension, which was also designed by Mr. Roberts, was the Deep X-ray Therapy and Radium Department, to which reference has already been made. It was opened by the Lord Mayor, the late Alderman Gilbert Oliver, in October, 1938, at one of his last public appearances only a few weeks before his lamented death.

In addition to new construction, much has been done in the past year by way of the modernisation of old hospital buildings. Two have been treated in this way with eminently satisfactory results—"E" Block, which is now occupied by Skin and Venereal cases, and "D" Block, which after a depressing career as the "Lock" wards, has been completely re-organised and re-modelled to serve a much more useful purpose.

One of the most difficult questions which has perplexed surgeons for generations has been the relative lack of success attending operations upon the prostate gland. In England and Wales some 4,700 deaths among men are due annually to non-malignant diseases of the prostate, and, hitherto, the operation mortality rates have been amongst the most disappointing which

surgeons experience. It is difficult to obtain precise information on the subject, but the operative mortality is generally accepted as being about 15%. One inevitable result of this high mortality is that relief by operation is often only sought when an emergency arises, and this delay helps still further to augment the risks. Of recent years operations have been developed, particularly in America, which have as their object the removal of the prostate piecemeal. This technique has been brought to its highest perfection by Gershom Thompson at the Mayo Clinic, Rochester, Minnesota, where during the year 1936, 749 cases were operated on with 11 deaths, giving a case mortality of 1.5 per cent. Early in 1938 one of the consulting staff of the Newcastle General Hospital spent a prolonged visit at the Mayo Clinic, enlarging his interest and experience in this type of work. On his return to England it was suggested to him that the Health Committee would be glad to provide facilities for the establishment of a Prostatic Department at the Newcastle General Hospital. This offer was accepted, and resulted in the equipment of "D" Block for the purpose. A special operating suite was provided during the course of re-construction, and equipped designedly for the trans-urethral resection of the prostate. The suite, which is small and compact, possesses certain special features, notably a large water steriliser, which can deliver a continuous stream of sterile water in the vicinity of the operating table. The adjacent wards have been specially fitted out for the easy nursing of the patients, whose comfort has also been carefully considered. Each long ward is divided into bays holding two beds, and two of these bays are set aside as day-room and dining-room recesses. The ward is supervised by a female nursing sister and staff nurses, but the patients in the main are attended to by a team of four male state registered nurses. The nursing requirements of the average patient are relatively few, because after the first 48 hours, he is usually up and about. The immediate post-operative care of the patient, however, necessitates a high standard of watchfulness and of conscientious attention to detail. It is not too early to speak of the results of this method of treatment as revolutionary. The details of the first series of cases, amounting to approximately 200 will be the subject of an article in the medical press by the surgeon concerned, but even now it can be stated without hesitation that the mortality is a fraction of the mortality of the old type of operation. Incidentally, from the standpoint of the hospital administration and the Health Committee, there are other advantages and benefits. The average number of days spent in

hospital by the patient who recovered after treatment by the old method was 45. Under the new conditions a patient is discharged, on an average, after 18 days. It is claimed that this Department is unique in Great Britain at the present time, and already the interest and keenness of those concerned in its inauguration—the Surgeon, his assistants, and the Hospitals Committee—have been well rewarded.

Prevention of Blindness.

A scheme for the Prevention of Blindness was introduced in October, 1938. Provision was made thereby for the notification of eye diseases and defects liable to cause blindness, for the services of Consulting Ophthalmologists, and for the operative or other treatment of patients in the Eye Hospital, St. Mary's Place, or the Eye Department of the Royal Victoria Infirmary. The response has been singularly disappointing, and it can only be concluded that general practitioners have not fully realised the usefulness of the scheme.

Tyneside Local Government.

The amount of progress to be recorded under this heading is relatively slight. An important meeting of the representatives of the Northumberland County Council and of the City was held at the County Hall in March, 1938. Subsequently a plan for the merging of the Tuberculosis Schemes of the two Authorities was prepared by the Medical Officer of Health, and submitted for consideration by the Health and Housing Committee of the County Council. At the time of writing one feature of that scheme, namely the erection of a Joint Tuberculosis Dispensary in New Bridge Street, Newcastle, has been approved, and friendly and useful discussions are continuing on other aspects of the co-ordination of the Health Services.

Joint Hospitals Advisory Board.

The Joint Hospitals Advisory Board held its first meeting in January, 1938, and Lord Eustace Percy, Rector of King's College, and Alderman Walter Thompson, were appointed Chairman and Vice-Chairman respectively. The chief work of the Board during the past year has been carried out behind the scenes, and its achievements are by no means inconsiderable. As a sequel to many conferences and discussions, in which the powers of persuasion and of guidance exercised by the Chairman have been constantly

manifest, a very considerable unification, in effect if not in name, of a number of the smaller hospitals in the City will ultimately eventuate. In their new setting, grouped round the Royal Victoria Infirmary on the Castle Leazes site, they will constitute with that institution one of the most important and imposing Hospital Centres in the country.

Veneral Diseases Clinic.

During the year 1938, the Joint Committee's Clinic completed the first year of working. It continues to meet, more than adequately, the needs of the City, and the town and county areas nearby. Dr. A. E. W. McLachlan's Annual Report for the year 1938 is reprinted as Appendix B of this report.

Slum Clearance and Overcrowding.

During the year a public inquiry under the Housing Act of 1936 was held and 12 Clearance Orders and three Compulsory Purchase Orders were submitted for confirmation to the Minister of Health.

These orders comprised a total of 328 houses in which were accommodated 716 families, with a total population of 2,218 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. This slowing down will continue until the programme laid down in 1933 has been carried through. It is the inevitable result of the great efforts made in the earlier years, for which, having regard to our present circumstances and distractions we should be very grateful.

The following is a summary of the work which has been carried out in the campaign between 1931 and 1938.

105 Clearance Orders and 12 Compulsory Purchase Orders have been made, and have necessitated the holding of 14 public enquiries.

These Orders as confirmed by the Minister have dealt with 2,876 premises in which were housed 6,444 separate families, with a total population of 22,765. The activities of the Health

Committee so far, as represented by the 117 Orders referred to, and by action taken against individual unfit houses, will result eventually in the re-housing of no fewer than 24,720 persons or 8.5 per cent. of the total population of the City. Even this total will have been exceeded by the time the full programme has been completed.

During 1938 the requirements of the Housing Act of 1936, with regard to overcrowding, were fulfilled in so far as the Health Department was concerned.

In the actual abatement of overcrowding, which remains one of Newcastle's most serious evils, progress is still slow, though little by little through various means some progress is being made. The Housing Committee is to be congratulated upon the effective steps it has taken in attacking the problem on its own estates.

Air Raid Precautions.

Reference was made for the first time in the 1937 Annual Report to the scheme for Air Raid Precautions. The year 1938 witnessed the extension of these duties and their progressive incursion upon the time and energies of the Health Committee and staff of the department.

It should be clearly understood that the development of the A.R.P. organisation has not occasioned any falling off either in the quality or quantity of the work of the other sections of the Health Department's activities. Parallel to the creation of a new and elaborate machinery for dealing with casualties, there have continued unabated and undiminished the normal functions of Preventive and Reparative Medicine which are the *raison d'être* of the Health Committee. It is not the purpose of this report to review in order the works which have been put in hand, or to describe in detail the multitudinous activities of the last fortnight of September, 1938, but it is essential that the record should contain both a statement of fact and an expression of opinion as to the progress that has been made.

Much has been done by way of amassing material, and in the recruitment and training of personnel, but when we look for signs that our fundamental deficiency in this area—namely the lack of casualty beds—has been remedied, all that we have to console ourselves are plans and proposals for huddled hospitals, which have yet to be given real form and substance.

In July, 1938, it was first suggested to the Minister's representative that the dearth of hospital accommodation in the area, and its concentration in the limited and vulnerable zone of the City, would compel the construction of hutment hospitals elsewhere. It was in September, 1938, that these opinions were urged with emphasis by representatives of the Health Committee upon officers of the Ministry in London. These same views were again voiced with insistence at a further meeting at the Ministry in February, 1939, and on that occasion received official approval. In July, 1939, we still await erection of the first hut.

There have been other points of difference between the Ministry of Health and the Health Committee, upon which it is not intended to dilate here lest it should seem that we were lacking in appreciation of the enormity of the tasks which have confronted the officers of the Minister. But it is incumbent upon us to exculpate ourselves from any charges of lack of diligence or foresight which may hereinafter lie.

In so far as it represented the organisation of the First Aid and Emergency Hospital Services at one particular point of time in their somewhat complicated development (for variations in the higher policy have been not infrequent) the summarised report of April, 1939, is reprinted as Appendix A. It may perhaps in the future be regarded as of some historical interest.

*Resignation of Dr. A. F. G. Spinks, Maternity and
Child Welfare Officer.*

In August, 1938, Dr. A. F. G. Spinks, having reached the appointed age for retirement, relinquished the duties of Maternity and Child Welfare Officer. In this capacity, for he was the first Maternity and Child Welfare Officer, he was responsible in great part for the evolution of those services from their smallest beginnings, and saw them develop until they became one of the most fruitful of our public health endeavours. Much of Dr. Spinks, and of his enthusiasm and innate wisdom, remain in the organisation which he founded, and will continue to permeate it for many years. The City will remain indebted to one who, self-effacingly, served it so faithfully and well for nearly 20 years. His friends on the Maternity and Child Welfare Committee and colleagues in the department, will join in extending to him their best hopes and wishes for happiness and long life 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 borne the brunt of the labour, and here again I would mention particularly Dr. E. F. Dawson-Walker, Dr. E. G. Brewis and Mr. A. Hedley, I cannot say enough. They have worked at high pressure, with little respite, at tasks that were often tedious and unfamiliar, but all the time with a cheerful energy and untiring enthusiasm. I am ever increasingly in their debt, and this is one of the few occasions when I can bear witness to the value of their services and offer, inadequately but sincerely, my thanks.

I am, Sir,

Your obedient servant,

J. A. CHARLES,

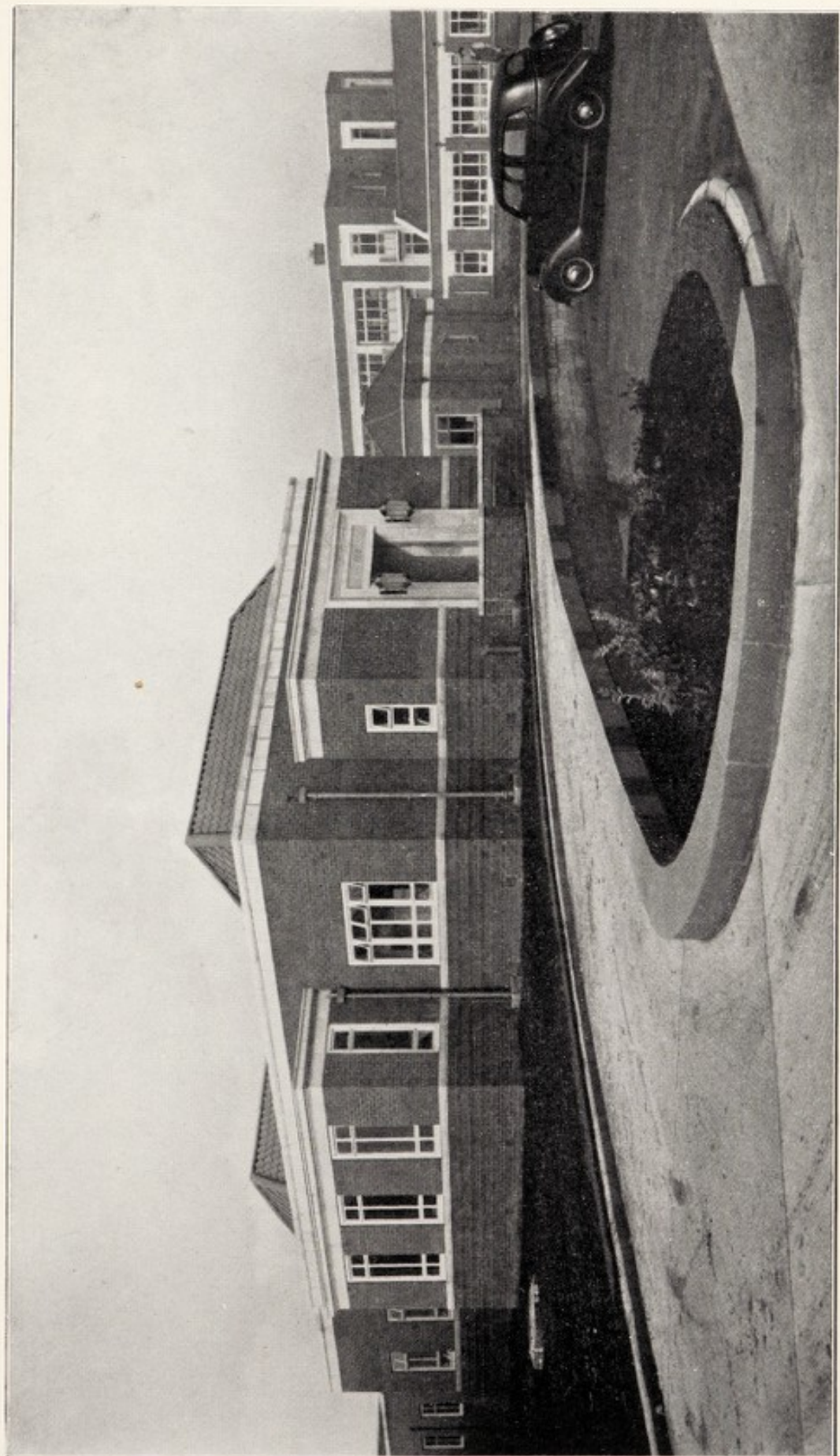
Medical Officer of Health.

Health Department,

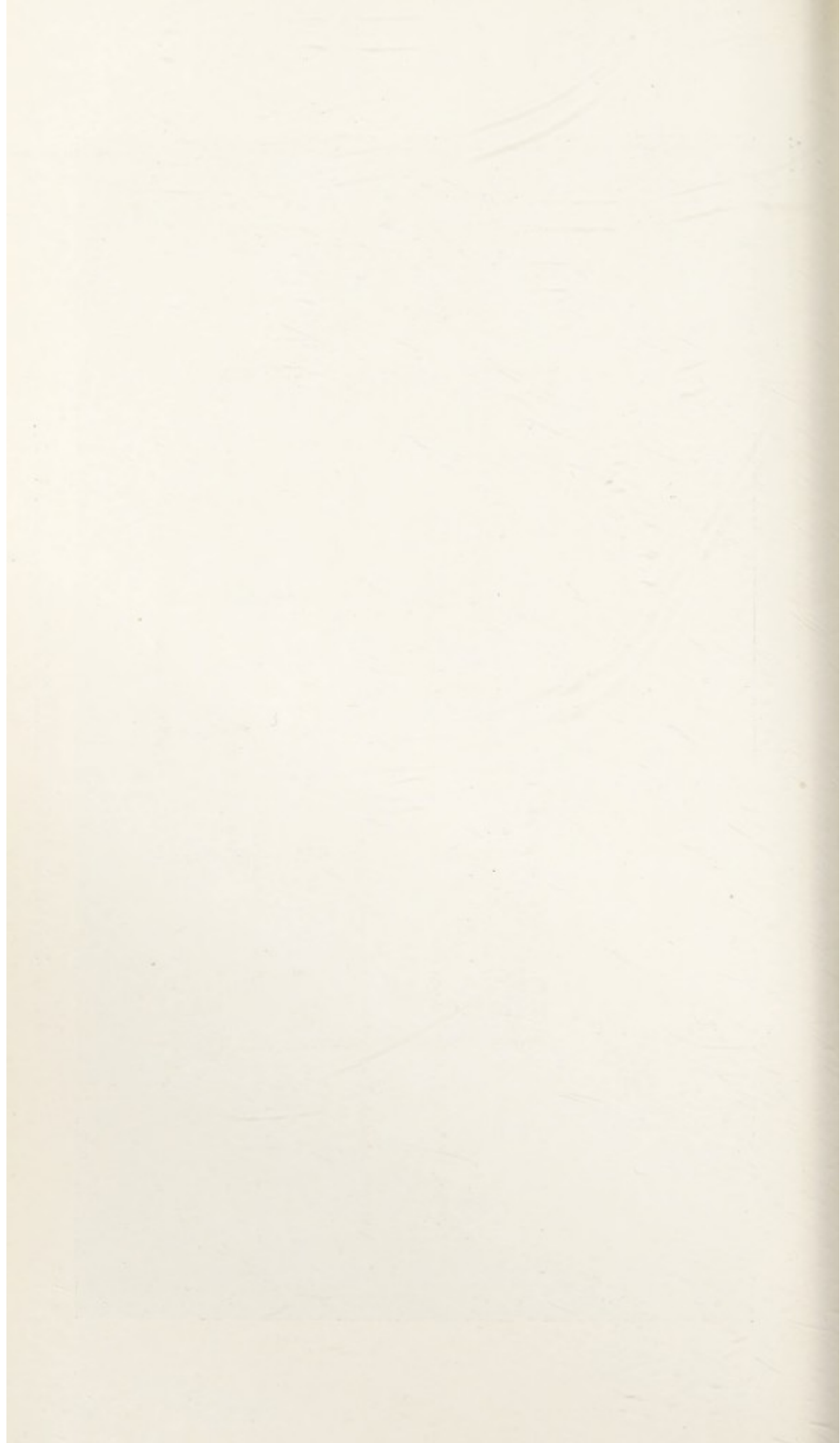
Town Hall,

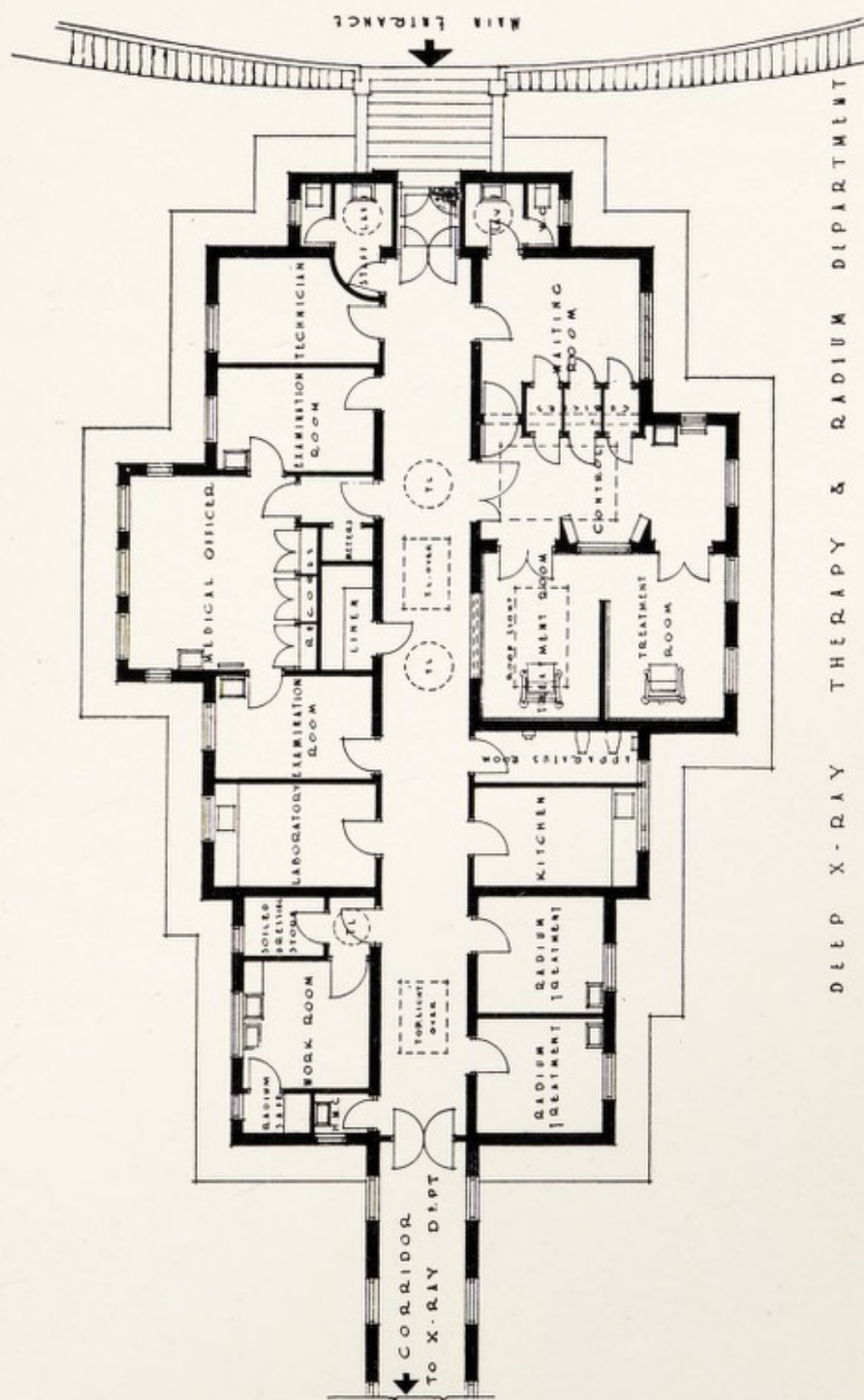
Newcastle upon Tyne,

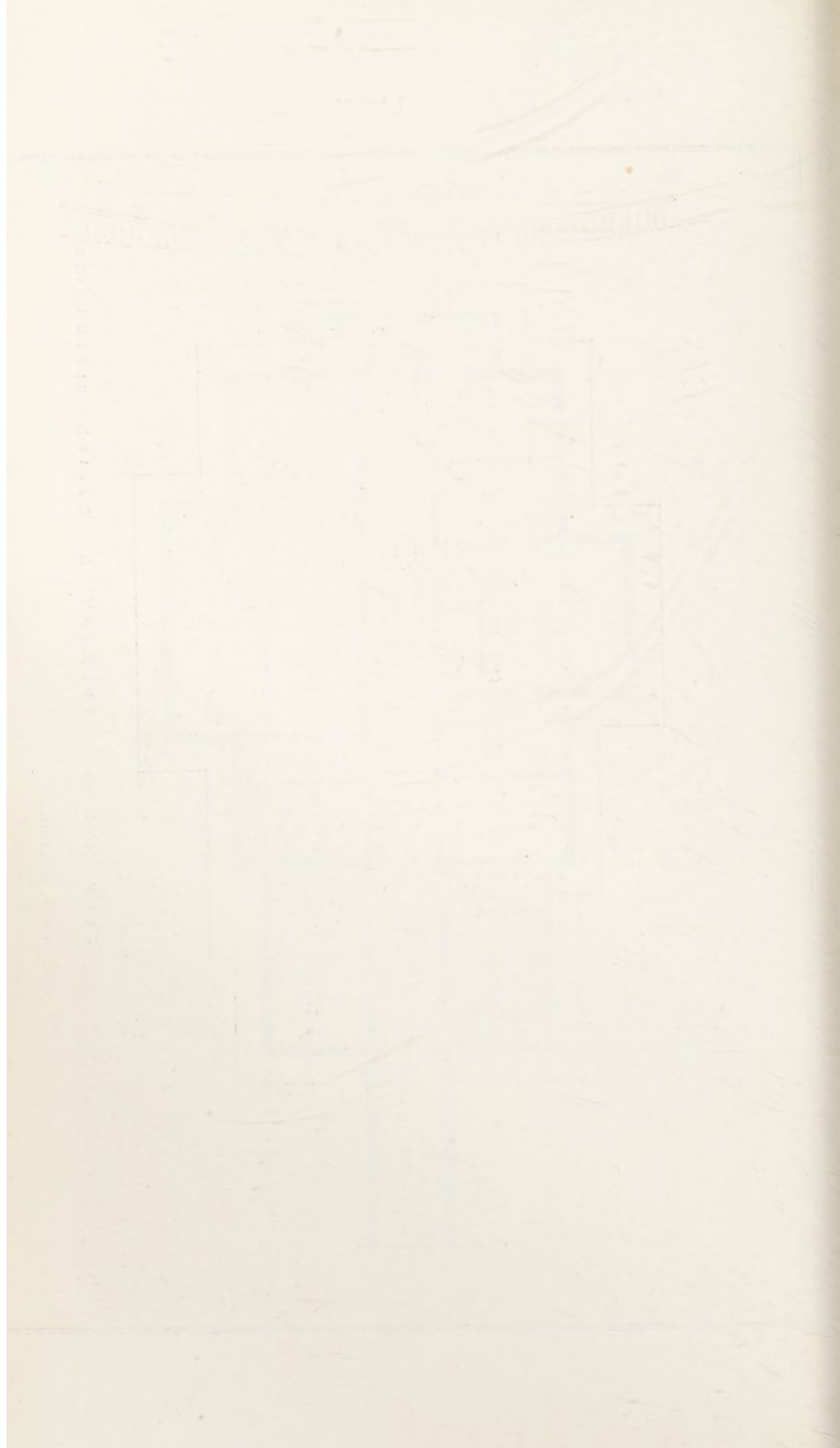
August, 1939.



DEEP X-RAY THERAPY DEPARTMENT—GENERAL VIEW.



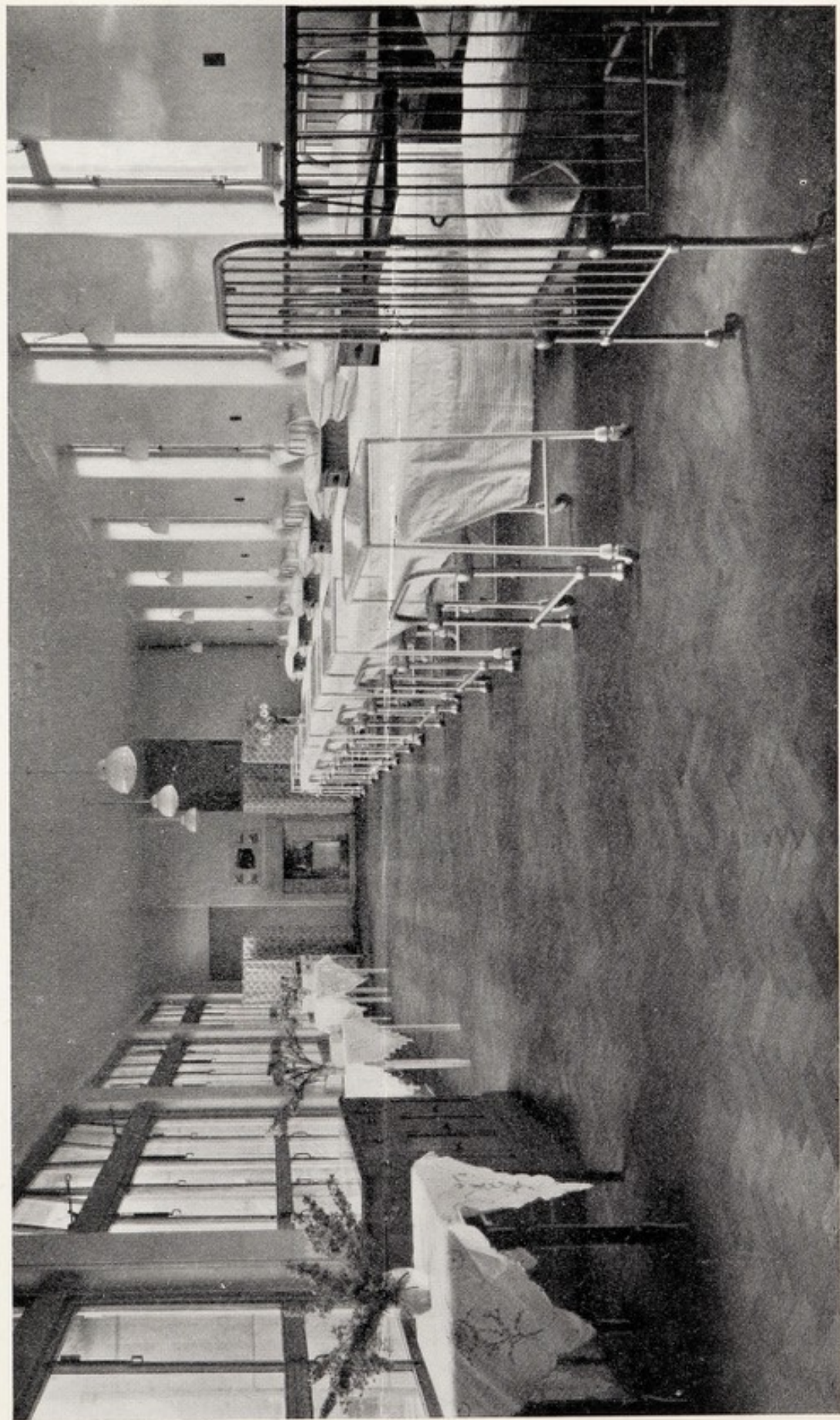






MAIN CHILDREN'S DEPARTMENT—GENERAL VIEW.



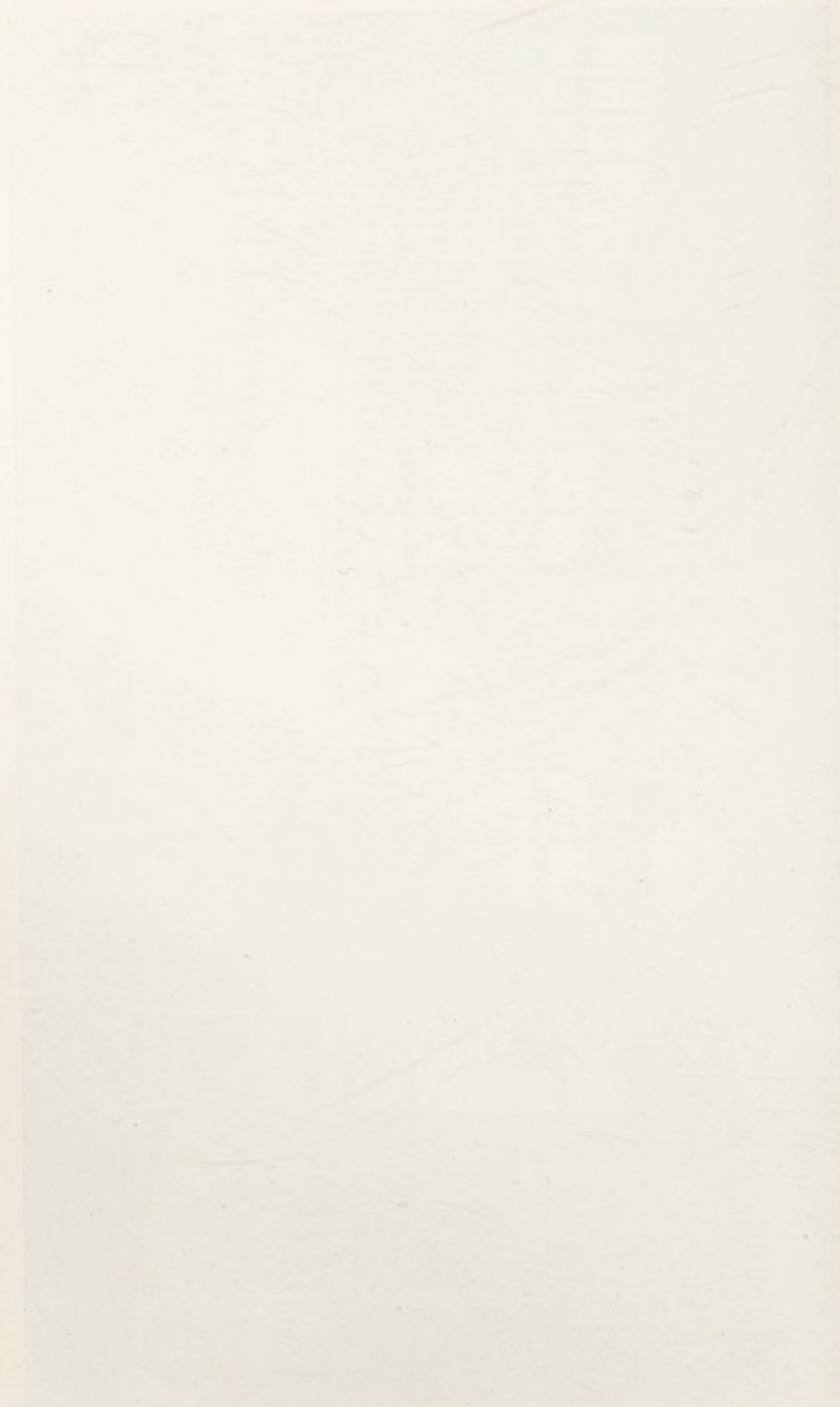


MAIN CHILDREN'S DEPARTMENT—WEST WING (FIRST FLOOR).

THE UNIVERSITY OF CHICAGO



MAIN CHILDREN'S DEPARTMENT—SIX BED WARD.

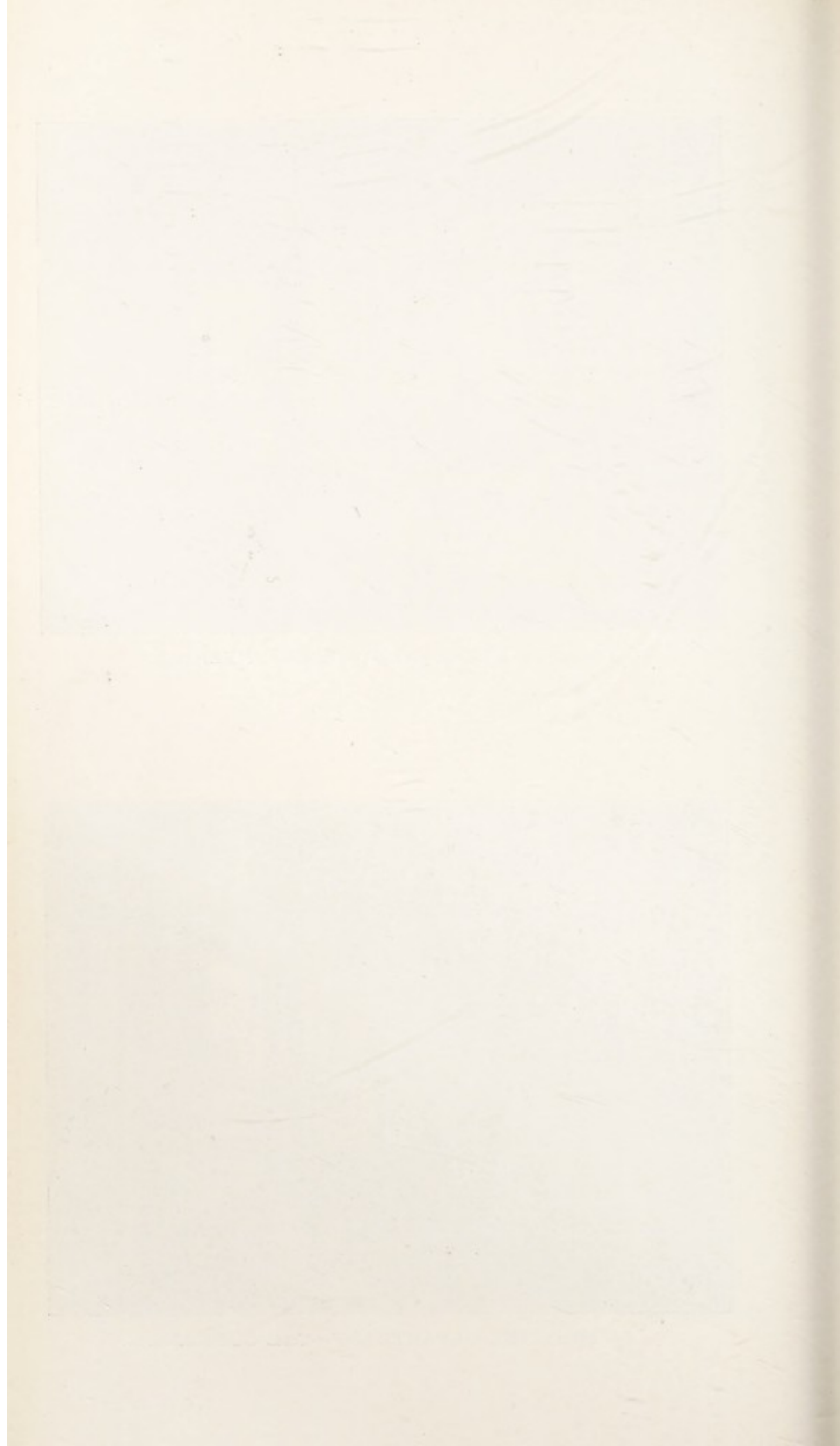




INFANTS' DEPARTMENT—WARD INTERIOR.

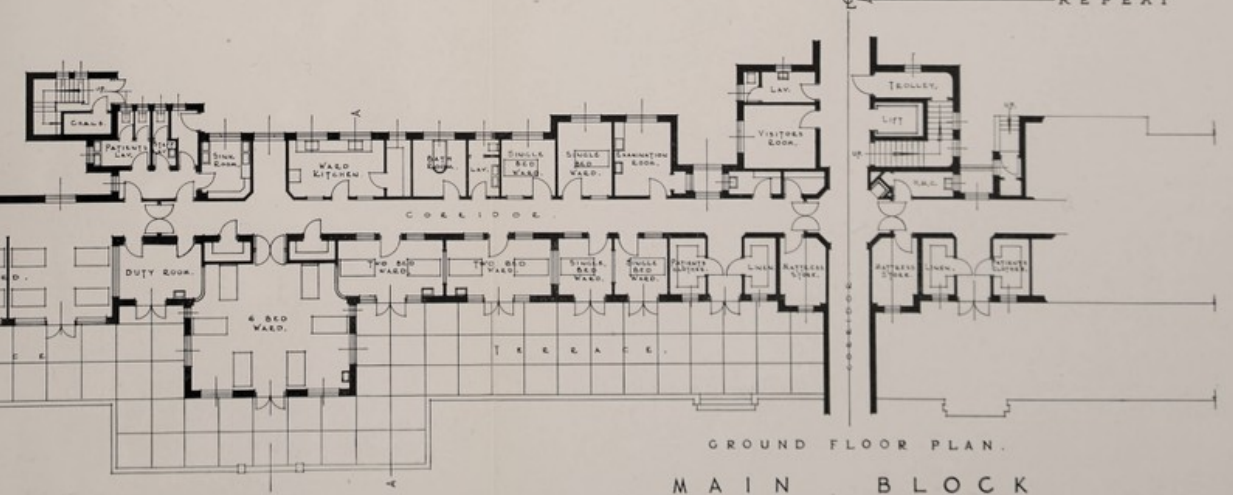
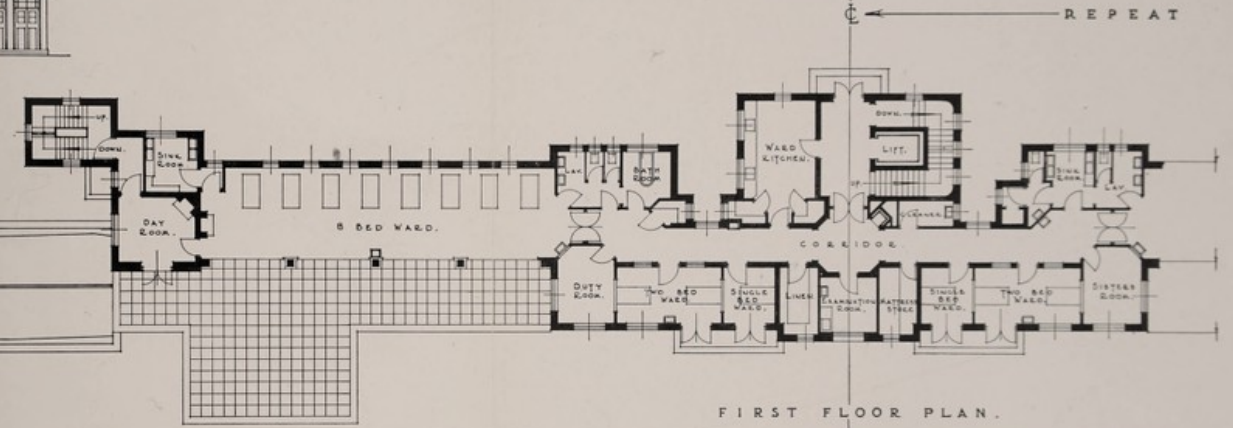
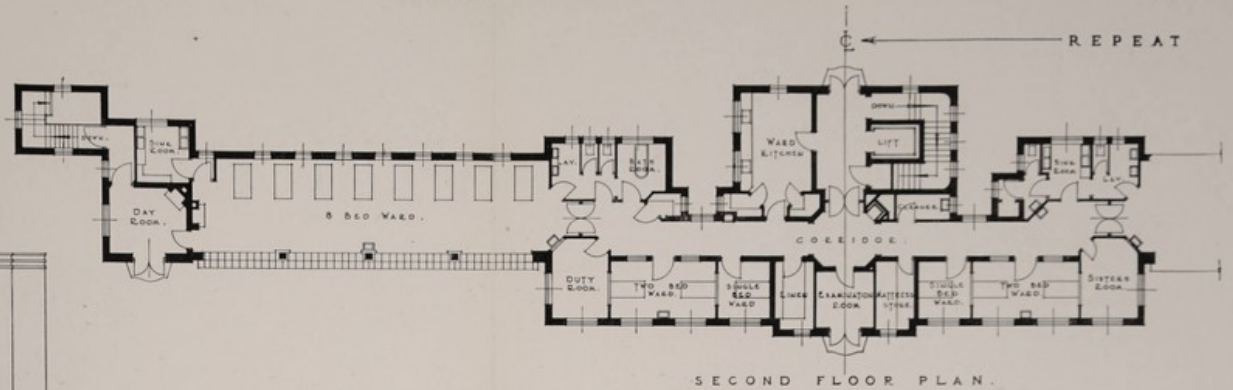


QUARANTINE DEPARTMENT—THE CUBICLES.

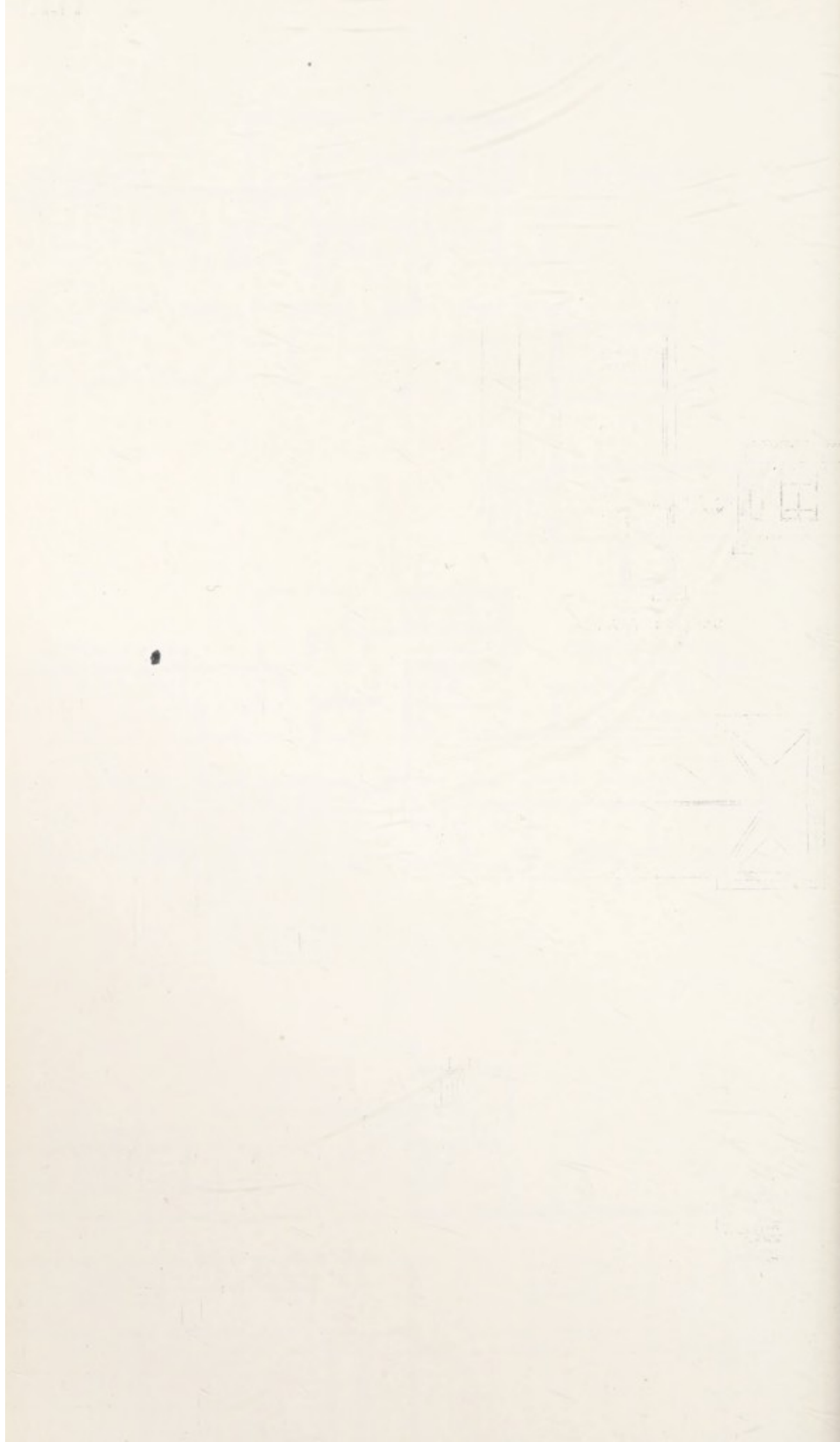


PLAN II.

336

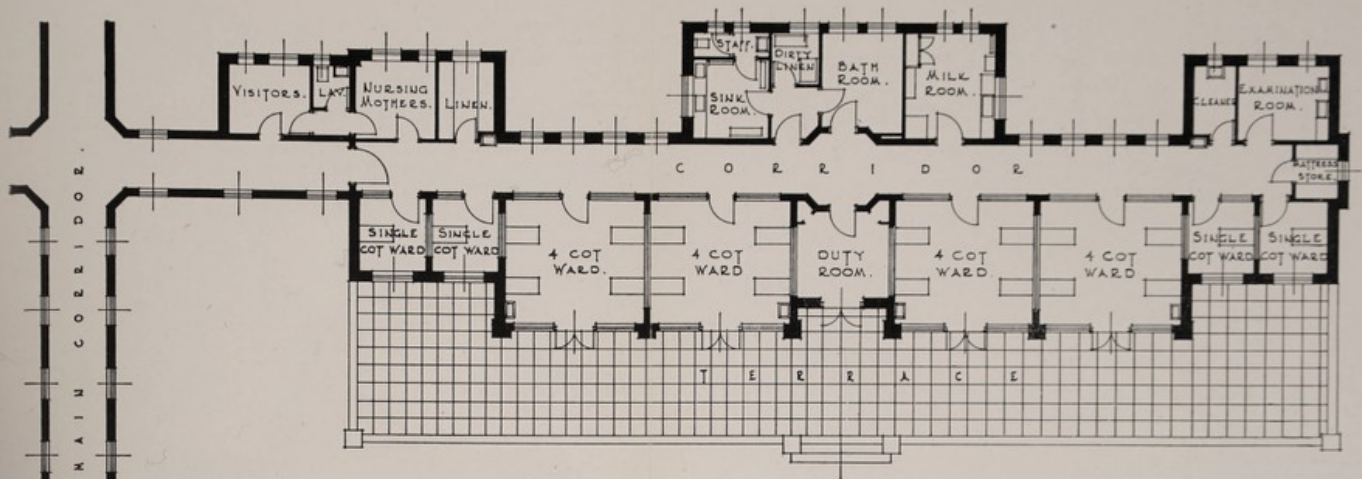


MAIN BLOCK

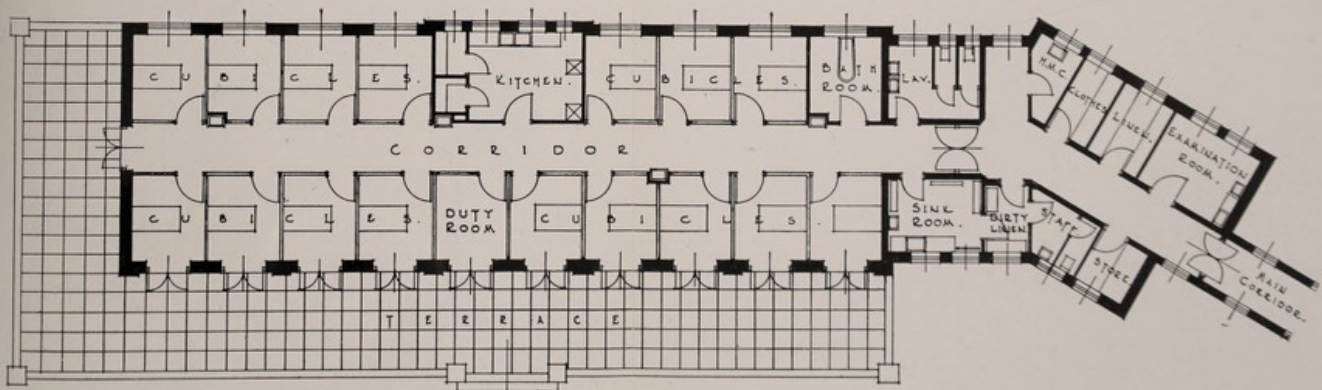


PLAN III.

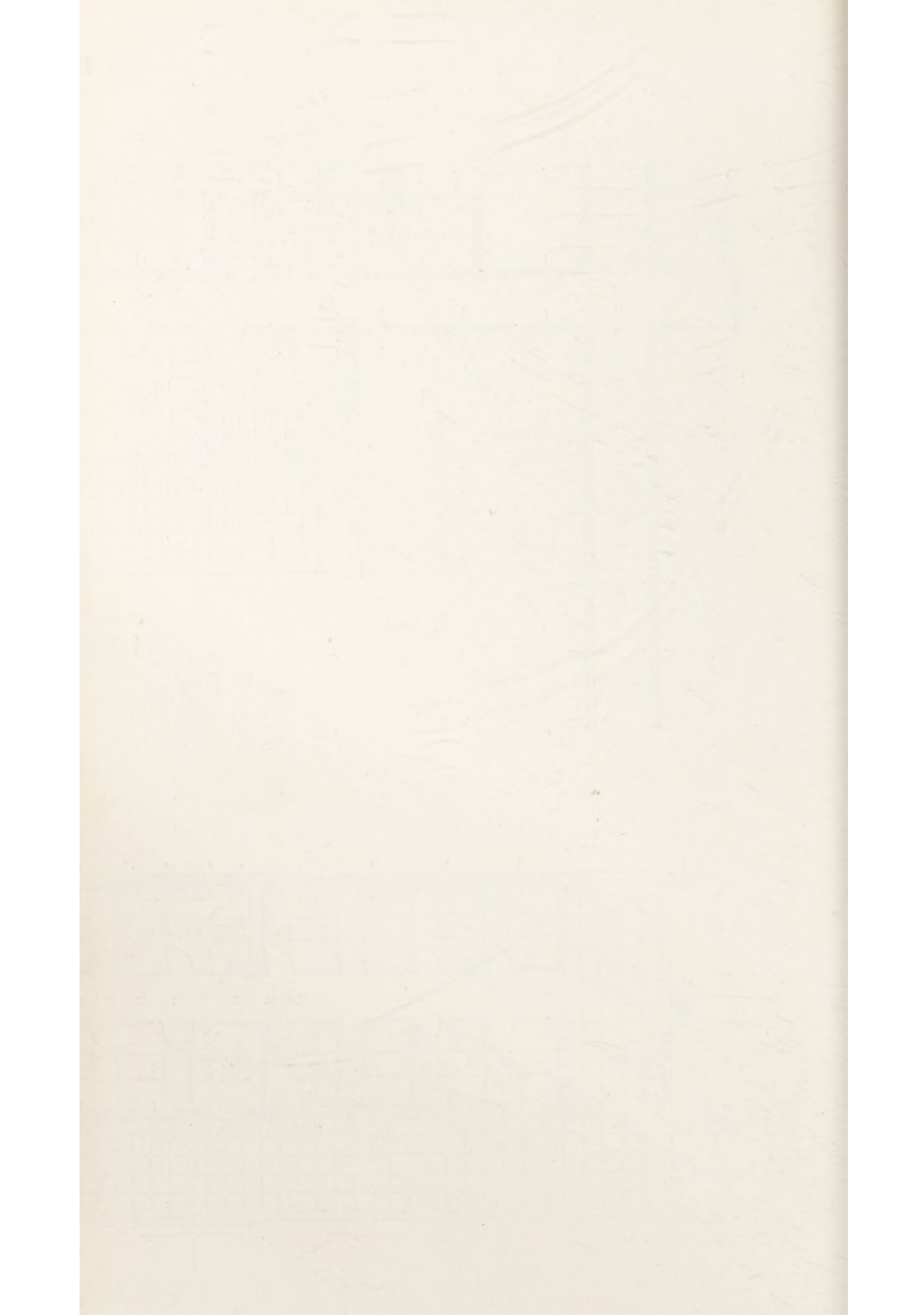
33H



INFANTS

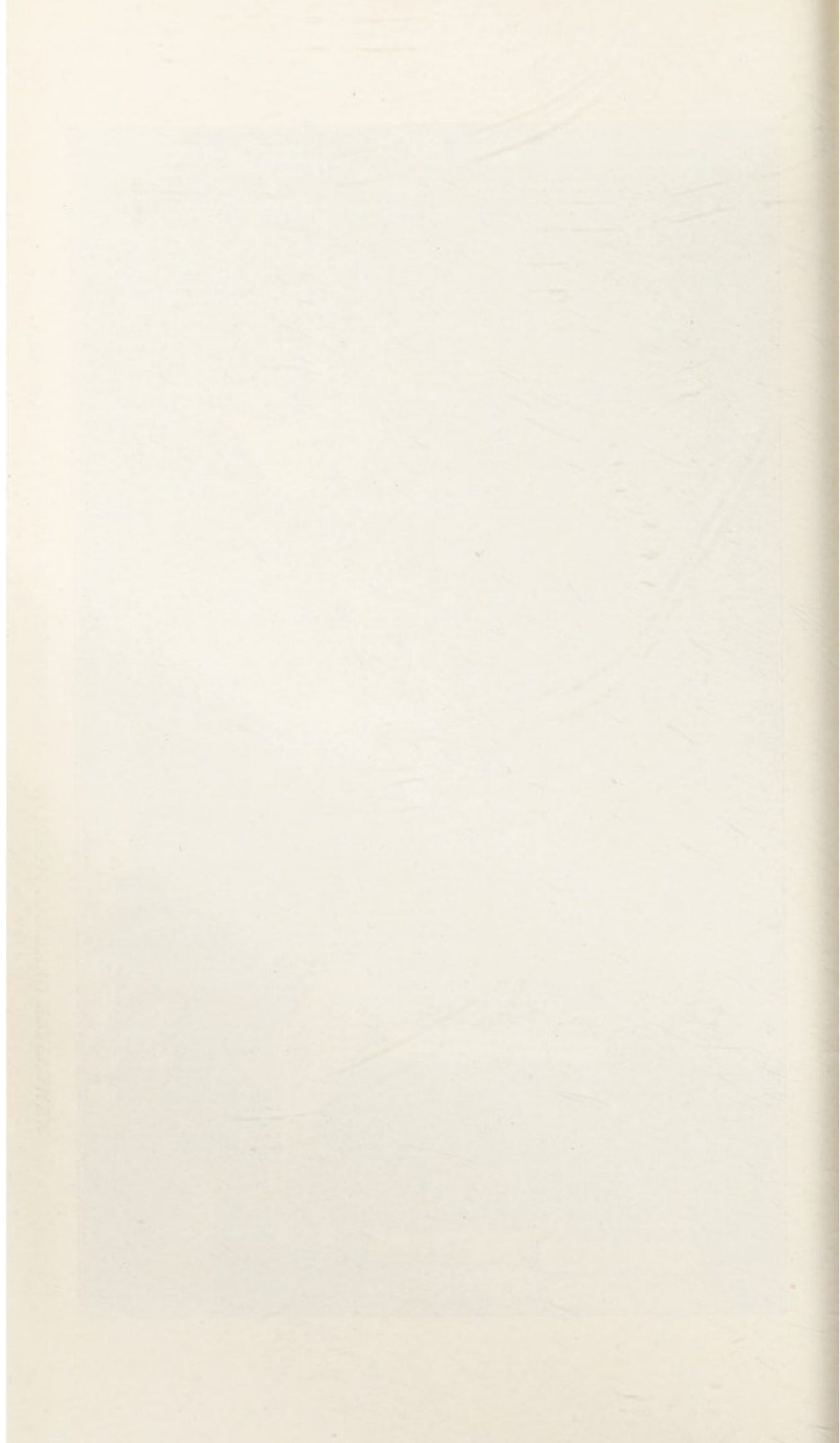


QUARANTINE





NEWCASTLE GENERAL HOSPITAL.—DEPARTMENT OF PROSTATIC SURGERY.
"D" BLOCK—SHEWING CONVERSION OF OLD WARD.





NEWCASTLE GENERAL HOSPITAL.—DEPARTMENT OF PROSTATIC SURGERY.

“D” BLOCK—OPERATING THEATRE SUITE.



SUMMARY OF STATISTICS, 1938.

Population (estimated mid. 1938)	291,300
Area of City, inclusive of river area (acres)	11,401
Estimated number of houses	79,989
Rateable value	£2,635,147
Sum produced by 1d. rate	£10,501
Births	4,678
Birth rate (per 1,000 population)	16.1
Marriages	2,608
Deaths	3,621
Death rate (per 1,000 population)	12.4
" " " adjusted by comparability factor	14.0
Infantile Mortality (deaths under one year per 1,000 live births)	66
Natural increase in population (excess of births over deaths in the year)	1,057

CHIEF CAUSES OF DEATH.

Cause.	Number.	Percentage of total deaths.
Diseases of the Heart	751	20.7
Diseases of the veins and arteries	465	12.8
Cancer	444	12.3
Bronchitis and pneumonia	347	9.6
Tuberculosis (all forms)	293	8.1
Do. (Pulmonary)	249	6.9
Diseases of the nervous system	233	6.4
Diseases of the genito urinary system	187	5.2
Diseases of early infancy, and congenital malformations under 1 year	162	4.5

INFECTIOUS DISEASES.

Disease.	Cases notified.	Number of deaths.	Death rate per 1,000 population
Scarlet fever	704	—	—
Diphtheria	415	23	0.079
Enteric fever	13	1	0.003
Erysipelas	189	1	0.003
Cerebro-spinal fever	9	8	0.027
Measles	4,525	21	0.072
Tuberculosis (all forms)	639	293	1.006

(new cases)

Whooping cough, which is not notifiable, caused 3 deaths.

Influenza, which is not notifiable, caused 22 deaths.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

Health Report, 1938.

I.—GENERAL.

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

CITY AND COUNTY OF NEWARK, NEW JERSEY

Health Report, 1933.

I. GENERAL

WATER SUPPLY, DRAINAGE AND SEWERAGE
SOCIAL CONDITIONS, CLIMATE, ETC.
MORTALITY TABLE

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

GENERAL STATISTICS.

POPULATION.—As estimated by the Registrar General at the middle of the year 1938—**291,300.**

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) acres.	(4) acres.	(5) acres.	(6)	(7)
St. Nicholas'	1,807	143	1	126	14	14
St. Thomas'	15,840	3,194	1,102	2,092	5	7
St. John's	12,134	181	2	167	72	73
Stephenson.....	17,709	249	....	212	83	83
Armstrong	14,383	213	31	145	81	99
Elswick	12,587	250	18	232	50	54
Westgate	13,533	90	....	90	150	150
Arthur's Hill	9,302	142	6	136	65	68
Benwell	22,475	608	37	520	40	43
Fenham	26,077	1,508	80	1,428	17	18
All Saints'	13,567	193	2	176	76	77
St. Andrew's	9,962	174	2	172	57	58
Jesmond	11,115	443	49	394	25	28
Dene.....	18,921	1,585	120	1,465	12	13
Heaton.....	13,262	225	28	197	59	67
Byker	14,433	139	....	139	104	104
St. Lawrence	17,714	197	7	173	98	102
St. Anthony's	16,671	649	21	577	28	29
Walker	29,808	1,218	43	1,106	26	27
CITY.....	291,300	11,401	1,549	9,547	26	30

INHABITED HOUSES.—79,989 inhabited houses, which, on the estimated population, shows an average of 3.64 persons per dwelling.

RATEABLE VALUE.—£2,635,147. A penny rate produced £10,501 6s. 4d.

SOCIAL CONDITIONS.—The principal **Trades and Occupations** are of a healthy nature, being generally engineering and machine 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, 1938, was £242,177 for out-door relief, and £38,201 for indoor maintenance, making a total of £280,378, as compared with £416,119 in the previous year.

The number of registered male unemployed was 15,128 at the beginning of the year, and 13,577 at its close, whilst the figures for females were 2,509 and 2,324 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 47.

MARRIAGES.—2,608 marriages took place during the year, as compared with 2,416 in 1937, and 2,474 in 1936.

BIRTHS.—4,678, equivalent to a rate of 16.1 per 1,000 population.

DEATHS.—(All causes)—4,866, equivalent to a gross rate of 16.7 per 1,000 population, and, after deduction of the deaths of 1,413 non-citizens and addition of 168 Newcastle residents who died elsewhere, to a net rate of 12.4 per 1,000 population. In 1937 the death rate was 13.3.

Nine Orders for Burial (Newcastle upon Tyne Improvement Act, 1882, Sec. 47) were made, one being in respect of a body lying in an inhabited room, and 8 being cases from hospitals.

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, 1938 :—

	Newcastle Residents.	From Outside of the City.	Total.
*1934	11	15	26
1935	84	104	188
1936	109	161	270
1937	142	235	377
1938	206	279	485
TOTAL	552	794	1346

* 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
1938	233	1,216	388	205	157

CANCER DEATHS IN AGES (MALE AND FEMALE), 1938.

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.	....	....	....	....	....	1	12	10	23
	F.	....	....	....	....	1	....	....	1	2
Cancer of the diges- tive system	M.	....	....	....	1	1	9	50	68	129
	F.	....	....	....	....	....	8	32	65	105
Cancer of the respi- ratory organs	M.	....	....	....	....	....	7	20	10	37
	F.	....	....	....	....	1	....	7	2	10
Cancer of the uterus	F.	....	....	....	....	....	1	20	11	32
Cancer of other fe- male genital organs	F.	....	....	....	1	....	2	7	3	13
Cancer of the breast	M.	....	....	....	....	....	1	....	....	1
	F.	....	....	....	....	....	4	20	13	37
Cancer of the male genito-urinary organs	M.	....	....	....	....	....	4	4	16	24
Cancer of the skin....	M.	....	....	....	....	....	....	....	4	4
	F.	....	....	....	....	....	....	1	1	2
Cancer of other or unspecified organs	M.	....	....	....	....	....	2	7	3	12
	F.	....	....	....	1	....	1	6	5	13
	M.	....	....	....	1	1	24	93	111	230
	F.	....	....	....	2	2	16	93	101	214
TOTAL	....	....	....	....	3	3	40	186	212	444

The average age at death for males was 62 and females 62.

INFANTILE MORTALITY.—307 infants died before completing the first year of life, representing a rate of 66 deaths per 1,000 live births.

ZYMOTIC DEATH RATE.—There were 116 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 0.40 deaths per 1,000 population.

TUBERCULOSIS.—293 persons died from various forms of tuberculosis, 249 being from pulmonary, and 44 from non-pulmonary. The equivalent death rates are: *all forms* 1.00, *pulmonary* 0.85, and *non-pulmonary* 0.15, per 1,000 population.

For comparison of death rates with previous years see large table, page 37A.

For particulars of deaths as to site of disease, age, etc., see table page 43A.

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 1938, as recorded on the instruments at the King's College.

The mean maximum and minimum temperatures were 56.2 F. and 43.5 F. respectively.

The rainfall for the year was 23.98 inches, 5.6 inches more than that of 1937 (29.68).

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

W.	on	40	days.
N.W.	on	154	"
N.E.	on	34	"
E.	on	10	"
S.E.	on	45	"
S.W.	on	74	"
S.	on	7	"
N.	on	1	"

Sunshine.

Sunshine records have been available by the courtesy of Professors G. W. Todd and J. A. Hanley, of King's College. The observations are taken at Cockle Park Farm (fifteen miles north of the City, and in a rural area), and at the College itself. During the year 1034 hours of sunshine were registered in the City, as compared with 1,292 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 page 118.

SEWERAGE.—There are 410 miles of sewers in the City discharging directly into the Tyne, which is tidal, at various points along the $8\frac{1}{2}$ miles of river frontage.

CLEANSING AND SCAVENGING.—A weekly collection of refuse is made from 72 per cent. of premises and twice weekly from the remainder.

There are 83,536 dry ashtubs and galvanised iron bins, 122 dry ashpits, and 99 conservancy system closets in the City. Four dry ashpits were removed and dustbins substituted. One school (in the area added in 1935) is served by "chemical" closets, there being no sewers available. With this exception, all the schools are served by the water-carriage system.

ADOPTIVE AND LOCAL ACTS IN FORCE.

Adopted Acts.—Infectious Disease (Prevention) Act, 1890. Section 4.

Public Health Acts Amendment Act, 1890.—Part III.—Whole of; Part IV.—Whole of.

Public Health Acts Amendment Act, 1907.—Part II.—Sections 20, 22, 28, 29, 30, 31 and 33; Part IV.—Section 53.

Public Health Act, 1925.—Part II., Sections 15, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33 and 35.

Local Acts.—Newcastle-upon-Tyne Improvement Act, 1837.

"	"	1846.
"	"	1853.
"	"	1865.
"	"	1870.
"	"	1882.
"	"	1892.

Newcastle-upon-Tyne Tramways and Improvement Act, 1899.

Newcastle-upon-Tyne Corporation Act 1911.

Newcastle-upon-Tyne Corporation Act 1926.

Newcastle-upon-Tyne Corporation (General Powers) Act, 1935.

[illegible]

CAUSE OF DEATH	AGE PERIODS																		WARDS—NET DEATHS																		TRANS-FERRABLE DEATHS		Totals for the City of Philadelphia		
	GROSS									NET																											Inward	Outward			
	Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	TOTAL (GROSS)	Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	TOTAL (NET)	St. Nicholas'	St. Thomas'	St. John's	Stephenson	Armstrong	Elwick	Wentgate	Arthur's Hill	Renewell	Fenham	All Saints'	St. Andrew's	Jessmond	Dens	Heaton	Dyker	St. Lawrence	St. Anthony's				Walter	
Brought forward	129	40	60	118	179	394	1038	1472	3430	84	29	35	71	126	298	813	1363	2819	14	110	114	163	131	186	120	102	210	251	131	114	104	209	161	123	118	205	283	124	735	1818	
IX.—DISEASES OF THE DIGESTIVE SYSTEM.																																									
Diseases of the Buccal Cavity, Pharynx, etc.	—	1	1	1	3	3	4	1	14	—	—	—	—	1	3	1	1	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcer of the Stomach or Duodenum	—	—	—	—	1	20	40	14	75	—	—	—	—	1	12	15	1	34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases of the Stomach	6	—	—	—	—	—	—	—	15	—	—	—	—	—	—	—	—	53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Diarrhoea and Enteritis (under 2 years)	60	82	—	—	—	—	—	—	71	52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Diarrhoea and Enteritis (over 2 years)	—	—	2	2	1	2	4	4	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ulceration of the Intestines	—	—	—	—	—	5	3	1	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Appendicitis	—	—	4	13	10	14	11	9	61	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hernia, Intestinal Obstruction	7	1	1	2	1	31	30	64	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other Diseases of the Intestines	1	—	—	—	2	4	8	8	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cirrhosis of the Liver (Non-Alcoholic)	—	—	—	1	5	10	7	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Acute Yellow Atrophy of Liver	—	—	—	—	1	1	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Biliary Calculi	—	—	—	—	—	1	16	9	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other Diseases of the Gall Bladder and Ducts	—	1	—	—	—	1	8	8	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Diseases of the Pancreas	—	—	—	—	—	2	10	6	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Peritonitis without stated cause	1	—	—	1	1	2	6	1	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
X.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																																									
Acute Nephritis	3	—	—	1	4	6	4	—	19	—	—	—	—	1	3	5	4	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Chronic Nephritis	—	—	1	3	6	18	49	63	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Nephritis (not stated to be acute or chronic)	—	—	—	—	—	2	5	5	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other Diseases of the Kidney and Annexa	4	1	—	1	1	4	10	5	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Calculus of the Urinary Passages	—	—	—	—	—	—	2	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cystitis	—	—	—	—	—	1	7	1	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Diseases of the Urethra, Urinary Abscess, etc.	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Diseases of the Prostate	—	—	—	—	—	2	14	53	69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Circumcision	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Diseases of the Female Genital Organs	1	—	—	—	1	2	3	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
XI.—DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE.																																									
Post-abortive Sepsis	—	—	—	—	1	7	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Abortion, not returned as Septic	—	—	—	—	1	3	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Ectopic gestation	—	—	—	—	—	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other Accidents of Pregnancy	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Puerperal Haemorrhage	—	—	—	—	—	1	5	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Puerperal Sepsis	—	—	—	—	2	10	—	—	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Puerperal Albuminuria and Convulsions	—	—	—	—	2	6	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other Toxæmia of Pregnancy	—	—	—	—	3	11	—	—	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Puerperal Phlegmasia	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other Accidents of Childbirth	—	—	—	—	1	10	—	—	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other or unspecified conditions of the puerperal state	—	—	—	—	—	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE.																																									
Carbuncle, Boil	—	—	—	—	—	1	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Cutisitis, Acute Abscess	1	—	—	—	1	2	3	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other Diseases of the Skin and Annexa	1	1	—	—	—	2	3	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																																									
Acute Infective Osteomyelitis and Periostitis	—	—	—	2	1	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Other Diseases of the Bones	1	—	—	1	1	—	1	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Diseases of the Joints	—	—	—	1	—	—	1	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
XIV.—CONGENITAL MALFORMATIONS.																																									
Congenital Malformations	48	2	2	1	3	2	—	—	58	28	2	—	—	1	1	—	—	32	1	1	2	3	2	1	—	—	5	4	—	—	—	—	—	—	—	—	—	—	—	—	
XV.—DISEASES OF EARLY INFANCY.																																									
Congenital Debility	20	—	—	—	—	—	—	—	20	15	—	—	—	—	—	—	—	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Premature Birth	114	—	—	—	—	—	—	—	114	74	—	—	—	—	—	—	—	74	—	—	—	—	—	—																	

VITAL STATISTICS, YEAR 1938.

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	15.1	11.6	...	53	0.15	†
126 Great Towns (including London)	15.0	11.7	...	57	0.16	†
NEWCASTLE UPON TYNE...	16.1	12.4	14.0	66	0.16	1.00
Hull	18.1	12.2	13.4	69	0.31	0.89
Leeds	15.4	12.7	13.5	64	0.16	0.80
Bradford	13.5	13.8	13.8	58	0.18	0.63
Sheffield	15.7	11.4	12.8	50	0.13	0.58
Manchester	14.7	12.3	14.1	69	0.17	0.97
Salford	15.8	13.1	15.5	74	0.28	1.08
Liverpool	18.7	12.3	14.1	73	0.44	0.89
Nottingham	15.6	12.7	13.1	71	0.09	0.82
Leicester	14.7	11.2	11.4	50	0.17	0.75
Stoke-on-Trent	16.3	11.3	14.2	52	0.19	0.83
Birmingham	16.6	10.9	12.0	61	0.16	0.78
Cardiff	15.8	12.0	12.7	52	0.08	0.99
Bristol	14.6	11.7	11.4	42	0.12	0.66
Portsmouth	14.7	12.2	12.1	60	0.13	0.74
West Ham	16.2	10.9	12.5	57	0.21	0.76
London (County)	13.4	11.4	11.7	57	0.15	0.72
Gateshead	17.1	12.5	14.1	66	0.37	1.15
South Shields	17.2	13.8	15.4	66	0.69	1.09
Tynemouth	16.6	11.9	13.2	61	0.27	1.06
Sunderland	19.2	12.7	14.3	67	0.19	0.87
Middlesbrough	19.8	12.3	14.7	75	0.12	1.09
*County of Northumberland...	15.0	11.8	12.5	64	0.24	0.56
*County of Durham	17.1	11.6	13.3	61	0.30	0.67

* Administrative County.

† Not available.

Vital Statistics of Whole District during 1938 and previous Years.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NET DEATHS BELONGING TO THE DISTRICT.			
		Uncorrected Number	Net.		Number	Rate.	of Non-residents registered in the District	of Residents not registered in the District	Under 1 Year of Age.		At all Ages.	
			Number	Rate.					Number	Rate per 1,000 Nett Births.	Number	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
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
1938	291,300	6,101	4,678	16.1	4,866	16.7	1,413	168	307	66	3,621	12.4

* Calculated on a population of 282,200.

† Rates calculated on a population of 291,025.

Corrected Death Rates in different Wards, 1938.

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.
11.1	9.9	11.5	12.0	12.2	17.8	11.5	12.6	12.3	12.0	12.3	13.4	12.6	14.7	15.2	10.8	9.2	15.8	11.1	12.4

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 1938.

(REGISTRAR GENERAL'S RETURN).

CAUSES OF DEATH.	Sex	All Ages	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
All Causes	M. F.	1973 1656	169 139	25 16	26 15	49 43	77 76	104 74	131 82	220 142	367 264	471 408	334 397
1—Typhoid and para-typhoid fevers	M. F.	..... 1	..... 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2—Measles	M. F.	12 11	2 3	5 5	3 1	2 2	.....	.....	.....	.....	.....	.....	.....
3—Scarlet fever	M. F.	1 .....	.....	1.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4—Whooping cough	M. F.	..... 3	..... 2	.....	..... 1	.....	.....	.....	.....	.....	.....	.....	.....
5—Diphtheria	M. F.	12 11	.....	.....	5 3	7 7	..... 1	.....	.....	.....	.....	.....	.....
6—Influenza	M. F.	15 15	1 .....	.....	.....	1	2 1	1	1	2 2	3 2	1 7	3 3
7—Encephalitis lethargica	M. F.	3 3	.....	.....	.....	.....	.....	1 1	.....	1 1	1 1	.....	.....
8—Cerebro-spinal fever	M. F.	4 4	1 3	..... 1	1	1 .....	.....	1.....	.....	.....	.....	.....	.....
9—Tuberculosis of respiratory system	M. F.	153 98	.....	.....	1 1	..... 3	31 37	29 30	37 13	26 9	16 4	13 1	.....
10—Other tuberculous diseases.	M. F.	30 17	1	3	5 1	4 6	6 5	4 2	5 1	2 .....	.....	1 .....	..... 1
11—Syphilis	M. F.	17 10	.....	..... 1	.....	..... 1	1	1 .....	.....	7 4	4 1	4 2	.....
12—General paralysis of the insane, tabes dorsalis	M. F.	15 4	.....	.....	.....	.....	.....	1	2	2	7 2	3 2	.....
13—Cancer, malignant disease	M. F.	235 225	.....	.....	.....	2 2	1 3	9 3	13 17	33 43	63 51	82 69	32 37
14—Diabetes	M. F.	18 30	.....	.....	.....	2 .....	..... 1	.....	.....	2	5 12	7 10	2 7
15—Cerebral hæmorrhage, etc.	M. F.	69 89	.....	.....	.....	.....	.....	.....	1 3	6 4	17 23	30 42	15 17
16—Heart disease	M. F.	432 402	.....	.....	.....	..... 1	7 4	7 11	19 12	46 36	106 67	133 124	114 147
17—Aneurysm	M. F.	16 8	.....	.....	.....	.....	1 1	2 1	1 3	1 2	7	4 .....	..... 1
18—Other circulatory diseases	M. F.	169 134	.....	.....	.....	.....	.....	.....	1	7 5	26 21	70 50	65 58

Causes of Death at different periods of life
for 1938—*continued.*

CAUSES OF DEATH.	Sex	All Ages	0—	1—	2—	5—	15—	25—	35—	45—	55—	65—	75—
19—Bronchitis	M. F.	71 46	6 7	2 2	.... ....	.... ....	1 2	1	2 3	9 1	10 4	20 9	20 18
20—Pneumonia (all forms)	M. F.	133 85	25 13	7 3	2 3	6 4	8 1	6 1	15 3	17 4	21 12	18 22	8 19
21—Other respiratory diseases	M. F.	14 12	1	2 ....	.... ....	.... ....	.... 1	2 ....	.... ....	2 3	3 2	3 3	1 3
22—Peptic ulcer	M. F.	31 3	.... ....	.... ....	.... ....	.... ....	1	3	6	6 1	9 1	5	1 1
23—Diarrhœa (under 2 years)	M. F.	28 19	26 19	2....	........	........	........	........	........	........	........	........	........
24—Appendicitis	M. F.	10 8	.... ....	.... ....	1	1 3	.... 1	3 ....	.... ....	2 2	1 1	2 1	........
25—Cirrhosis of liver	M. F.	14 7	.... ....	.... ....	.... ....	1	1 ....	.... 1	1	3	4 3	2 3	2
26—Other liver diseases	M. F.	2 13	.... ....	.... ....	.... ....	.... ....	.... ....	1 ....	.... 1	.... ....	.... 8	1 4	........
27—Other digestive diseases	M. F.	33 33	4 2	.... 1	1 3	.... 2	2	2 2	2 1	5 3	3 11	10 5	4 3
28—Acute and chronic nephritis	M. F.	57 65	1 1	.... ....	.... ....	2	2 1	5 3	2 5	8 5	18 10	10 18	9 22
29—Puerperal sepsis	F.	6	....	....	....	....	2	3	1	....	....	....	....
30—Other puerperal causes	F.	11	....	....	....	....	1	5	5	....	....	....	....
31—Congenital debility, premature birth, malformation, etc.	M. F.	84 74	84 72	.... 2	........	........	........	........	........	........	........	........	........
32—Senility	M. F.	21 33	.... ....	.... ....	.... ....	.... ....	.... ....	.... ....	.... ....	.... ....	.... 1	4 3	17 29
33—Suicide	M. F.	17 12	.... ....	.... ....	.... ....	.... ....	1 2	.... 2	4 2	5 5	4 1	3....	........
34—Other violence	M. F.	87 47	3 2	.... 1	2 1	8 3	6 1	14 1	9 3	8 2	11 5	14 10	12 18
35—Other defined diseases	M. F.	163 115	14 14	3	5 1	12 9	6 11	11 8	10 8	17 10	25 20	32 22	28 12
36—Causes ill-defined or unknown	M. F.	7 2	.... ....	.... ....	.... ....	.... ....	.... ....	.... ....	.... ....	3	3 1	.... ....	1 1

Resident Population 291,300.

UNDER 1 YEAR.

	<i>Legitimate.</i>	<i>Illegitimate.</i>
M.	154	15
F.	130	9

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 346 Women 393 Children 165	904	....
Barrasford Sanatorium, Barrasford	Tuberculosis	95	75	20
Newcastle Mental Hospital, Gosforth	Mental	1,067	1,067	....
Shotley Bridge Colony, Shotley Bridge	Mental Defectives	568	568	....
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	125	....	....
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 Women	Women	Out patients	only.	
Sanderson's Home for Crippled Children, Gosforth	Children	134	67	67

**REPORT OF THE
SENIOR CHILD WELFARE
MEDICAL OFFICER.**

II.—THE CHILD.

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

INFANTILE MORTALITY.

SUMMARY OF BIRTHS AND DEATHS, 1938.

	LEGITIMATE.			ILLEGITIMATE.			Grand Total.
	M.	F.	Total.	M.	F.	Total.	
Total Births in the year	3,001	2,805	5,806	167	128	295	6,101
Net „ „ „ „	2,328	2,156	4,484	102	92	194	4,678
Net Deaths under 1 year	154	130	284	15	9	24	398
Death Rate per 1,000 births	66	60	63	147	98	124	66

BIRTHS AND DEATHS SHOWING THE DISTRIBUTION.

WARD.	Births.	Deaths under 1 year of age.	Children under 1 year of age— Death rate per 1,000 births.	Birth rate per 1,000 population.
St. Nicholas'	8	3	375	4.4
St. Thomas'	178	8	45	11.2
St. John's	168	13	77	13.8
Stephenson	301	23	76	17.0
Armstrong	251	26	104	17.5
Elswick	175	14	80	13.9
Westgate	196	17	87	14.5
Arthur's Hill.....	83	3	36	8.9
Benwell	595	38	64	26.5
Fenham.....	490	24	49	18.8
All Saints'	163	12	74	12.0
St. Andrew's.....	108	5	46	10.8
Jesmond.....	96	3	31	8.6
Dene	274	13	47	14.5
Heaton	133	8	60	10.0
Byker	188	13	69	13.0
St. Lawrence.....	325	23	71	18.3
St. Anthony's	414	22	53	24.8
Walker	532	40	75	17.8
CITY	4,678	308	66	16.1

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	1938
Death-rate of Infants under 1 year per 1,000 births	82	85	74	92	76	76	83	86	90	91	66
Death-rate of Infants under 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	45.1
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	15.8
Death-rate of Infants under 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	33.8
Death-rate of Infants under 1 year per 1,000 births, from <i>Diarrhoea</i> and all other <i>Digestive Diseases</i> † ..	13.4	15.0	11.3	12.5	9.2	12.9	13.4	13.7	22.2	19.0	12.2
Death-rate of Infants under 1 year per 1,000 births, from <i>Infantile Atrophy</i> , <i>Debility</i> and <i>Marasmus</i>	4.4	3.7	4.6	2.2	4.9	4.7	4.5	5.6	5.7	1.9	3.2
Death-rate of Infants under 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	1.1
Death-rate of Infants under 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	0.4
Death-rate of Infants under 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	10.9
Death-rate of Infants under 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	0.2

For particulars of deaths, as to causes, etc., see Table on page 52A.

* "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 31ST DECEMBER, 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.	
EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.																					
Enteric Fever	1	....	1	....	....	....	....	....	....	....	1	....	1	....	1
Measles	1	....	3	4	....	....	....	....	....	....	1	1	3	5	2
Whooping Cough	1	....	1	....	2	....	....	....	....	....	....	1	....	1	....	....
Influenza	1	....	....	1	....	....	....	....	1	....	1	....	....	1	....	....	....	....	1	....
Cerebro-Spinal Fever	1	2	2	3	8	....	....	....	....	....	....	1	....	3	4	7
Tuberculosis of the Respiratory System	1	1	....	....	....	....	....	....	....	....	....	....	1
" " Central Nervous System	2	1	2	5	....	....	....	....	....	....	1	....	....	1	5
TOTAL TUBERCULOSIS	2	1	3	6	....	....	....	....	....	....	1	....	....	1	6
Pyæmia Septicæmia	2	....	....	2	....	....	....	....	....	....	1	....	....	1	2
Other Infectious or Parasitic Diseases	3	3	6	....	....	....	....	....	....	....	2	....	2	3
RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.																					
Other general diseases.....	1	....	....	1	....	....	....	....	....	....	1	....	....	1	....
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.																					
Hæmorrhagic Conditions.....	1	....	....	....	1	....	....	....	....	1	1	....	....	....	1	....	....	....	....	1	....
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																					
Meningitis	2	2	2	....	6	....	....	....	....	....	....	1	....	....	1	5
Infantile Convulsions.....	2	2	1	4	9	1	1	1	1	13	2	1	1	3	7	1	1	1	1	11	2
Diseases of the Ear and Mastoid Sinus	1	1	2	4	....	....	....	....	....	....	1	1	....	2	3
DISEASES OF THE RESPIRATORY SYSTEM.																					
Diseases of the Larynx	1	1	....	....	....	....	....	....	....	....	....	....	1
Bronchitis	8	1	4	1	14	....	....	....	....	....	8	1	3	1	13	2
Broncho Pneumonia	1	2	....	3	14	14	14	6	51	....	1	1	....	2	10	9	10	3	34	35
Lobar Pneumonia.....	1	....	....	1	....	1	....	1	3	....	....	....	....	....	....	1	....	1	2	3
Pneumonia (not otherwise defined)	2	1	....	1	4	....	....	....	....	....	1	....	....	....	1	3
Other Diseases of the Respiratory System	1	....	1	....	....	....	....	....	....	....	1	....	1	1
Carried forward	3	5	3	4	15	29	29	31	25	129	3	3	2	3	11	21	19	21	12	84	76

Deaths in Institutions in the City of "Residents" or "Non-Residents."

RETURN OF DEATHS UNDER ONE YEAR OF AGE DURING THE 52 WEEKS ENDED 31ST DECEMBER, 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>	3	5	3	4	15	29	29	31	25	129	3	3	2	3	11	21	19	21	12	84	76	
DISEASES OF THE DIGESTIVE SYSTEM.																						
Other Diseases of the Stomach.....			1		1	2	3			6						1	1			2	2	
Diarrhoea and Enteritis		3	6	4	13	21	22	7	6	69		2	2	2	6	18	17	5	5	51	49	
Hernia, Intestinal Obstruction						1	3	3		7						1	2	1		4	7	
Other Diseases of the Intestines								1		1											1	
Peritonitis without stated cause			1		1					1												
NON-VENEREAL DISEASES OF GENITO-URINARY SYSTEM AND ANNEXA.																						
Acute Nephritis				1	1		1	1		3							1	1		2	3	
Other Diseases of the Kidney and Annexa							3	1		4							2			2	2	
Diseases of the Male Genital Organs	1				1					1												
Diseases of the Female Genital Organs						1				1						1				1	1	
DISEASES OF THE SKIN AND CELLULAR TISSUE.																						
Cellulitis, Acute Abscess							1			1											1	
Other Diseases of the Skin and Annexa		1			1					1												
DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																						
Diseases of the Bones.....						1				1											1	
CONGENITAL MALFORMATIONS.																						
Congenital Malformations	15	5	3	2	25	11	4	3	5	48	14	3	2	1	20	4	2	1	1	28	36	
DISEASES OF EARLY INFANCY.																						
Congenital Debility	9	1	1	4	15	2	1	1	1	20	9	1	1	2	13	2				15	8	
Premature Birth.....	88	6	10	3	107	4	3			114	54	5	9	2	70	2	2			74	72	
Injury at Birth	32	1	1		34	3				37	16		1		17	2				19	22	
Atelectasis	13				13	1				14	10				10					10	6	
Icterus Neonatorum.....	1		2		3					3	1				1					1	2	
Other Diseases peculiar to Early Infancy	8	1	3	4	16	8	5			29	2		2	1	5	3	3			11	28	
DEATHS BY VIOLENCE.																						
Accidental burns (conflagration excepted)									1	1											1	
Accidental Mechanical Suffocation		1			1	2	1			4		1			1	2				3	3	
ILL-DEFINED DISEASES.																						
Cause of Death Unstated or Ill-defined								1		1											1	
TOTAL	170	24	31	22	247	86	76	49	38	496	109	15	19	11	154	57	49	29	18	307	322	

Report of the Senior Child Welfare Medical Officer.

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I have the honour to submit my first Annual Report.

The report has been divided into two sections, the first dealing with the maternity services, and the second with the child welfare services.

During the year 947 expectant mothers attending the Ante-Natal Centres were supplied with extra food through the generosity of the Joint Council of Midwifery. They received :—

Ostermilk.....	5,682 lbs.
Yeast Extract	2,841 lbs.
Ovaltine	5,682 lbs.

The maternal mortality rate of 3.3 per 1,000 shows a further decrease on that for 1937 (4.21 per 1,000).

The infantile mortality rate fell from 91 to 66, the fall being due largely to the decreased mortality of children after the first week of life.

The Ante-Natal and Child Welfare Centres showed an increase in the number of attenders and attendances. Approximately 800 more expectant mothers and 800 more children attended during the year.

THE MOTHER.

Maternity Service.

The Ante-Natal Centres.

Attendance.—During the year the Ante-Natal Centres were attended by 3,319 expectant mothers, this figure being an increase of 683 on the previous year. There was also an increase of 154

women who attended for consultation after the birth of the child, bringing the figure to 263. The following table shows the attendances at the Ante-Natal and Post-Natal Clinics :—

CENTRE.	ANTE-NATAL		POST-NATAL.	
	Attendances.	Individuals.	Attendances.	Individuals.
Benwell	1,348	390	122	120
Byker	2,430	541	2	1
Fenham.....	836	241	1	1
Diana Street	1,170	338	11	10
Elswick	1,432	395	6	5
Heaton	817	166	2	2
Scotswood.....	1,043	288	119	117
St. Lawrence	1,216	294	4	4
Walker	1,124	391	2	2
Wharncliffe St.	1,375	275	1	1
	12,791	3,319	270	263

Source of Attendance.—There were 2,644 confinements of women attending the Ante-Natal Centres, these women being referred to the Centres from the following sources :—

	<i>Cases.</i>	<i>Percentage.</i>
Doctors	304	11.5
Midwives	676	25.6
Health Visitors on Districts.....	123	4.7
Welfare Centres and Voluntarily.....	1,541	58.2
	<u>2,644</u>	

The results of these confinements are given in the following table :—

Type of Confinement.	Number of Cases.	Resulting in		
		Living Children.	Still-born Children.	Sets of Twins.
Normal.....	2,232	2,160	49	23
Instrumental	253	216	30	7
Cæsarian Section	22	20	1	1
Induction.....	5	5	1	....
Abortion	26	....	....	....
	2,538	2,401	80	31
Not Pregnant.....	52	....	....	....
Left City.....	54	....	....	....
Total	2,644			

Abnormalities were found in 152 or 6.0 per cent. of the cases, and the ultimate results were as follows :—

Abnormality.	No.	Normal Confinements.			Instrumental Confinements.			Cæsarian 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.
Breech Presentation	60	46	45	1	8	5	3	4	3	1	2	2	..
Deformed Pelvis ..	20	7	7	..	6	4	2	6	6	..	1	1	..
Albuminuria.....	55	51	46	5	4	4	...	..	..	..	..	..	...
Ante-partum Hæmorrhage	17	14	10	4	3	...	3	..	..	..	...	..	...

5 mothers subsequently died :—Sepsis, 1 ; Cardiac Disease, 1 ; A. P. H., 1 ; P. P. H., 1. Toxæmia, 1.

Work under the 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 septicæmia were carefully and thoroughly investigated and supervised.

For these various purposes 216 visits were made and 1,109 interviews were held. 90 visits were made to septic patients, and 89 to cases of ophthalmia neonatorum.

Sixty-five midwives notified their intention to practise midwifery in the City :—

31 Permanent Municipal Midwives.

4 Temporary Municipal Midwives.

9 voluntarily surrendered their certificates in June, 1938, and were compensated according to the terms of the 1936 Midwives Act.

10 Private Midwives.

11 Employed in Institutions, permanent or temporary.

Work of Municipal Midwives.

Attendances.—The following table shows the work of the midwives practising in the City during 1938 :—

	1937.	1938.
Births attended, as Midwives	1,764	1,577
" " Maternity Nurses	348	796
Total Net Births	2,112	2,373
Percentage of Net Births in City	41.8	51.6

Of the total of 2,373 net births, the Municipal Midwives attended either as midwives or as maternity nurses 2,276 cases. During the same period, 7,931 ante-natal visits and 38,122 nursing visits were paid.

Still-births.—Of the 1,577 births attended by the midwives, 42 (net) still-births, 7 more than in 1937, occurred. In the 796 cases where midwives attended in the capacity of maternity nurses, 24 still-births occurred.

Notices for medical aid sent by midwives :—

FOR THE MOTHER.		<i>During Puerperium—</i>	
<i>During Pregnancy—</i>		Rise of Temperature.....	19
Ante Partum Hæmorrhage....	26	Undefined Illness of Mother	15
Abortions.....	7		<u>34</u>
Illness	20	Total calls for mother	<u>405</u>
Albuminuria & Puffiness of			
hands and feet	19		
	<u>72</u>		
<i>During Labour—</i>		FOR CHILD.	
Uterine Inertia	96	Prematurity	15
Malpresentations	29	Discharging Eyes	21
Retained Placenta	7	Congenital Defects	9
Post Partum Hæmorrhage....	9	Illness of Baby	40
Ruptured Perineum.....	158	Still-births	3
	<u>299</u>	Rashes	11
			<u>99</u>
		Total calls for mother and child	<u>504</u>

In 31.1 per cent. of the midwives' cases the services of a doctor were requisitioned.

Complications of Child-birth.

Puerperal Pyrexia.—101 cases were notified during the year. Details of these are given in the following table :—

	Total Cases Notified.	Newcastle Cases.	Extra Mural Cases.	Admitted to Hospital.	TOTAL DEATHS.
Puerperal Pyrexia	101	39	62	84	Newcastle.... 5 Extra Mural 15 <u>20</u>

All of the 39 City cases were visited and the attendants at the confinements are indicated in the following table :—

	<i>Puerperal Pyrexia.</i>
Doctors	1
Doctors and Midwives	12
Midwives	12
Princess Mary Maternity Hospital Staff	8
Newcastle General Hospital.	6
	<hr/>
	39
	<hr/>

Maternal Mortality.—4,678 live and 166 still-born births in families belonging to the City occurred during the year. 16 women died as a result of child-birth, a mortality rate of 3.3 per 1,000 live and still-births as compared with 4.21 in the previous year.

CAUSES.	1938	1937	1936	1935	1934	1933
Abortions (Septic)	3	3	4	....	1	1
Abortions (Not Septic) .....	....	3	3	1	1	4
Accidents of Pregnancy	1	....	1	....	1	....
Puerperal Hæmorrhage	3	4	1	3	3	4
Other Accidents of Childbirth .....	....	3	1	2	2	2
Puerperal Fever	2	2	6	12	7	7
Other Toxæmias of Pregnancy	5	3	1	1	1	2
Puerperal Phlegmasia .....	....	1	....	4	1	....
Ectopic Gestation	1	....	1	....	1	....
Unspecified conditions of puerperal state .....	....	....	3	....	2	2
Puerperal Albuminuria and Convulsions	1	2	7	2	6	....
	16	21	28	25	26	22

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

	<i>Cases.</i>
For forceps delivery	113
For post partum hæmorrhage.....	12
For ante partum hæmorrhage.....	20
For illness of mother	61
For illness of child	58
For premature birth.....	9
For discharging eyes	14
Other	145
Specialists called in.....	15
	<hr/>
Total cases	447
	<hr/>

Consultants' Services.—The services of Obstetrical Specialists were asked for and provided on fifteen occasions and the Midwifery Emergency Service was sent to seven cases during the year.

Births.

Total Births.—Of the 4,678 infants born alive in 1938 and belonging to Newcastle residents, 2,430 were boys and 2,248 were girls. Of the former 70 per 1,000, and of the latter 62 per 1,000 died during their first year.

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

Nursing Homes	131
Princess Mary Maternity Hospital.....	541
Gables Maternity Home.....	149
Newcastle General Hospital.....	680
	<hr/>
	1,501
	<hr/>

Illegitimate Births.—194 illegitimate children were born during the year, and the death rate in this group of children was 124 per 1,000 as compared with 63 per 1,000 legitimate children.

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

Notification of Births.—Of the 6,101 live and 349 still-births (gross) which were registered in the City in 1938, 6,246 or 96.8 per cent. were notified as follows :—

<i>Notified by.</i>	<i>Gross Living Births.</i>	<i>Gross Still Births.</i>
Medical Practitioners.....	218	12
Medical Practitioners and Midwives	415	13
Midwives	2,073	53
Princess Mary Maternity Hospital....	2,247	226
Newcastle General Hospital.....	646	40
Gables Maternity Home.....	295	8
	<hr/>	<hr/>
	5,894	352
	<hr/>	<hr/>

Still-births.—Of the total net notifications of 4,589 births received, 165 were of still-births, which gives a rate of 34.7 per 1,000 of net live and still-births.

Still-births Registered (net).....	166
Still-births Notified.....	165
Percentage Notified.....	100.0
Still-births Visited.....	154

<i>Duration of Pregnancy.</i>	<i>No.</i>	<i>Percentage to Total.</i>
At or under 7 months.....	32	20.8
At 7-8 months.....	25	16.2
At full time.....	97	63.0

Suggested causes of the still-births :—

	Cases.
(a) Ill-health of the mother.....	24
(b) Foetal deformities and malpresentations and uterine inertia.....	38
(c) Premature delivery, ante-partum hæmorrhage, etc.	19
(d) Other causes, including albuminuria and accidents	73

Ophthalmia Neonatorum.—The number of notified cases was 23, of which 22 were City residents. They were all visited and they all made complete recoveries.

Doctors	3
Midwives	6
Princess Mary Maternity Hospital.....	4
Doctor and Midwife.....	6
Newcastle General Hospital	3
	<hr/>
	22
	<hr/>

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

1933	11.0
1934	11.5
1935	12.3
1936	11.2
1937	8.4
1938	4.7

AUXILIARY SERVICES.**Maternity Hospital.**

Free beds in the Princess Mary Maternity Hospital were placed at the disposal of 52 women and 86 other women 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 105 women. The necessary orders were given by the Medical Officers at the Centres.

Home Helps Service.

The Staff of Home Helps, all of whom were employed on a part-time basis, numbered twelve, and during the year they rendered service to 126 lying-in women. In 93 instances con-

tributions towards the cost of the services were received from the families concerned; in the remaining cases the services were supplied gratis.

During the period of service, the Home Helps were supervised, and the reports were generally satisfactory.

Whalton Rest Home.

Twenty-two mothers accompanied by 24 children were sent through the Centres for two weeks' holiday at the Rest Home during the year.

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.
Benton	St. Francis Church Hall.....	Thursday (Afternoon only)	Dr. S. M. Livingston	Miss Pearse	Heaton (see below)
Benwell	Y.W.C.A. Club, Buddle Road	Monday.....	Dr. S. M. Livingston	Miss Batty	Friday, 2 p.m.
Byker	Sun Ray Clinic, Brinkburn Street	Thursday	Dr. Dorothy Hopkinson	Miss Roxby	Mr. F. E. Stabler.
City	Princess Mary Maternity Hospital, Jubilee Road	Monday.....	Dr. Anne Fairweather	Miss Johnson	Thursday, 2 p.m.
		Tuesday.....	Dr. C. N. Armstrong		Friday, 2 p.m.
		Monday.....	Dr. F. J. W. Miller ...	Miss Pritchard....	Dr. Mabel Campbell.
					Tuesday and Friday, 2 p.m., Mr. Way.
					Wednesday, 2 p.m.
					Mr. F. E. Stabler
					Thursday, 2 p.m.
					Mr. W. Hunter
Cowgate	Methodist Church Hall, Stamfordham Road	Wednesday (All Day) ...	Dr. Elsie Wright, p.m.	Miss Willson	
Diana Street, Westgate.....	25, Diana Street	Tuesday.....	Dr. Elsie Wright	Miss Hastie	Wednesday, 10 a.m.
Elswick	Elswick Wesleyan Church Hall, Malvern Street	Friday.....	Dr. A. G. Ogilvie.....		Mr. F. E. Stabler
	Church Hall, Grange Road	Monday.....	Dr. H. Glen Davison	Miss Hatfield	Tuesday, 2 p.m.
Fenham		Thursday	Dr. F. J. W. Miller.....		Mr. W. Hunter
		Friday.....	Dr. Gertrude Hickling	Miss Craggs	Monday, 10 a.m.
Heaton	St. Gabriel's Parish Hall, Chillingham Road	Wednesday	Dr. Geo. Davison.....	Miss Lewis	Mr. Hunter.
Scotswood	St. Margaret's Church Hall, Norland Road	Friday, p.m.	Dr. Anne Fairweather	Miss Carr	Friday, 10 a.m.
Shieldfield	St. Jude's Parish Hall, Dinsdale Road	Tuesday.....	Dr. S. M. Livingston	Miss Mason	Dr. Mabel Campbell.
Spital Tongues	Benson Memorial Chapel, Ancrum Street	Thurs. a.m.	Dr. S. M. Livingston	Miss Simpson	Friday, 10 a.m.
		Tuesday (Afternoon only)	Dr. C. C. Ungley		Mr. F. E. Stabler.
{ St. Anthony's	St. Anthony's Road.....	Wednesday	Dr. S. M. Livingston	Miss Bradley	Byker (see above).
{ Walker	Do.	Friday.....	Dr. Glen Davison.....	Miss Youell	Diana St. (see above).
		Monday.....	Dr. C. N. Armstrong	Miss Hisco.....	or Wharnccliffe Street (see below).
		Thursday	Dr. A. G. Ogilvie.....		Tuesday, 2 p.m.
Walkergate	Conservative Assoc. Hall, Walpole Street, Walkergate	Thursday	Dr. Gertrude Hickling	Miss Phillips.....	Dr. Mabel Campbell.
Wharnccliffe Street, Scotswood Road	18, Wharnccliffe Street	Wednesday Thursday (Afternoon only)	Dr. F. J. W. Miller.... No Doctor	Miss Shell	Tuesday, 10 a.m.
		Friday	Dr. W. G. A. Swan.....		Dr. Mabel Campbell.

Deaths of Infants.

Infants.	1933	1934	1935	1936	1937	1938
Deaths of Infants during first week of life.....	126	112	109	102	101	109
Deaths of Infants aged 1 to 4 weeks	51	85	117	106	73	45
Deaths of Infants aged 1 to 12 months	182	192	174	200	261	154
Deaths from Prematurity	96	101	104	106	93	74
Deaths of Twins and Triplets ..	39	33	29	23	30	31

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
1938.....	137,404	10,577	13.0	61.3

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 nineteen 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 137,404 attendances at the Centres during 1938, more than half, 79,812, were made by children of 1-5 years of age.

TODDLERS ATTENDING THE CENTRES.

Year.	Number of Children.
1933	4,351
1934	4,198
1935	4,288
1936	4,315
1937	4,806
1938	5,224

TOTAL ATTENDANCES AT THE MATERNITY AND CHILD WELFARE CENTRES, 1938.

93

CENTRE.	Ante-Natal Sessions.		Ante-Natal.		Post-Natal.		New Children.			Individuals.			Attendances.			Medical Sessions.		Individuals.	
	Individ- uals.	Attend- ances.	Individ- uals.	Attend- ances.	Individ- uals.	Attend- ances.	Under 12 months	Over 12 months	Total.	Under 12 months	Over 12 months	Total.	Under 12 months	Over 12 months	Total.	Number.	Average Attendance	Boys.	Girls.
Benton .....	...	...	...	...	...	...	128	15	143	185	99	284	2159	962	3121	49	63.9	146	138
Benwell	43	390	1348	120	122	306	306	52	358	460	543	1003	5032	9024	14056	190	73.9	489	514
Byker	96	541	2430	1	2	413	74	487	590	518	1108	13338	7580	186	71.7	568	540	540	540
City .....	...	...	...	...	...	...	94	9	103	145	161	306	1565	3181	4746	94	50.5	158	148
Cowgate .....	...	...	...	...	...	...	77	11	88	123	120	243	1487	1616	3103	98	31.7	115	128
Diana Street	49	338	1170	10	11	259	43	302	384	512	567	1079	5205	8227	13432	190	70.7	526	553
Elswick	47	395	1432	5	6	336	75	411	512	567	1079	5205	8227	13432	190	70.7	526	553	553
Fenham	46	241	836	1	1	257	20	277	380	241	621	621	4270	2475	6745	95	71.0	325	296
Heaton	47	166	817	2	2	214	30	244	312	214	526	526	3272	2138	5410	96	56.4	271	255
Scotswood	48	288	1043	117	119	209	28	237	321	317	638	638	3396	5040	8436	141	59.8	319	319
Shieldfield .....	...	...	...	...	...	168	26	194	282	307	589	589	3407	5337	8744	186	47.0	297	292
Spital Tongues .....	...	...	...	...	...	77	10	87	115	71	186	186	1403	887	2290	47	48.7	89	97
St. Anthony's	47	294	1216	4	4	213	53	266	355	406	761	761	4015	6745	10760	193	55.8	397	364
Walker	47	391	1124	2	2	302	72	374	451	507	958	958	3925	6818	10743	190	56.5	503	455
Walkergate .....	...	...	...	...	...	158	42	200	281	297	578	578	2785	4335	7120	98	72.6	298	280
Wharnccliffe Street	47	275	1375	1	1	299	102	401	441	472	913	913	5373	9852	15225	198	76.9	448	465
Total	517	3319	12791	263	270	3510	662	4172	5353	5224	10577	57583	79821	137404	2240	61.3	5366	5211	5211

Dried Milk.

During the year 149,300 lb. cartons of dried milk were given gratis, and vouchers for 18,704 were given for cost price milk, the latter being distributed by the chemists as formerly. 50.5 per cent. of the children and 395 ante-natal + 273 nursing = 668 women attending the Centres were given free milk.

The following table shows the quantity of dried milk distributed each month during the year 1938 :—

MONTH.	FREE.	AT COST PRICE.
	lbs.	lbs.
January.....	6,401	
February	13,223	
March	10,877	
April	14,623	
May.....	10,047	
June	12,028	
July	13,632	
August	11,576	
September.....	14,870	
October	12,230	
November	12,472	
December.....	17,321	
TOTAL	149,300	18,704

Children attending Centres.....	10,577	
Children given free milk.....	5,342	
Percentage.....	50.5	
Expectant and nursing mothers given milk	668	
Free milk given to children (lbs.).....	146,579	} = 149,300
Free milk given to expectant mothers (lbs.).....	2,721	

Work of the Health Visitors.

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 1938 made a grand total of 77,283 visits.

4,513 births were visited, and 17,722 re-visits were paid, an average of about 4 re-visits per child. These gave a total of 22,235 visits to children under 1 year.

SUMMARY OF VISITS.

	Primary.	Subsequent.	Total.
Births.....	4,513	17,722	22,235
Measles	4,288	5,775	10,063
Pneumonia	542	659	1,201
Diarrhœa	82	70	152
Children over 1 year.....			30,925
Hospital Cases.....			372
Expectant Mothers.....			980
Special Visits.....			1,051
Visits to Boarded-out or Nursed-out Children.....			386
Unsuccessful Visits (Outs and Removals)			7,114
Orthopædic Work including treatments.....			2,416
Tuberculosis Contacts			130
Home Helps			258
			77,283

Infants on Visiting List.

Of 4,576 children born in the City in 1937, 3,569 completed their first year in 1938 and of the remainder :

291 died,
283 left the City,
293 could not be traced,
140 were visited only once.

The following figures are therefore based on the 3,569 who completed the first year, *plus* the 291 who died, making in all a total of 3,860, and of that total 2,638, or 68.3 per cent., attended the Welfare Centres.

Illnesses.—Among the children visited 251, or 6.5 per cent., contracted measles; 89, or 2.3 per cent., contracted whooping cough; 108, or 2.8 per cent., contracted diarrhœa; 343, or 8.9 per cent., contracted bronchitis or pneumonia.

Details as to the stated **Feeding** of the 3,860 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	3,323	86.1	171	4.4	366	9.5
Those who died in First Year of above Children	201	6.0	17	9.9	73	19.9
Surviving Children(3,569) at 9 months	1,011	28.3	667	18.7	1,891	53.0

Details as to children who should have attained the age of 5 years during 1938 :—

Well and attending school.....	2,544
Ill and not attending school	13
Left City or failed to trace.....	1,487
Died in 2nd year	61
Died in 3rd year	22
Died in 4th year	9
Died in 5th year	2
Total surviving whose whereabouts are known....	2,557
Total deaths.....	94
Total reported on.....	4,138

The addresses of 226 children who left the City were sent to the Medical Officers of Health for the districts to which they had gone.

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.

Average number attending twice weekly for treatment —Massage and Exercises.....	32
Admitted to the W. J. Sanderson Orthopædic Hospital School.....	9
Refused institutional treatment.....	2
Photographic Records.....	3

SURGICAL APPLIANCES :—

During the year 502 children including 115 new cases were visited. Of these

leaving 295 on visiting list at end of 1938.

Classification of 115 New Cases Visited.

CONGENITAL DEFORMITIES :—

TOTAL..... 115

Dental, Aural and Nasal Treatment.

Under the arrangements made with the Education Authority 323 nursing or expectant mothers and 570 children were referred for dental treatment. Of these 228 women and 420 children were treated.

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

Similarly 252 children were sent for aural and nasal treatment and of these 112 were treated, resulting in 95 operations.

Diphtheria Immunisation.

CLINICS HELD AS FOLLOWS :—

Mondays.

St. Joseph's R.C. School	9
East Walker School	6
Raby Street School	4
Royal Jubilee School	9
Welbeck Road School.....	5
Christ Church School	3
Wharrier Street School	3

Tuesdays.

Chillingham Road School	6
*St. Anthony's Clinic (Babies)	35

Wednesdays.

St. John's C.E. School	4
Bolam Street School	6
North View School.....	3
Ouseburn School	3
St. Peter's School	5
Sandyford Road School	9
West Walker School	6
St. Anthony's C.E. School	3

Thursdays.

Fenham R. C. School	1
Heaton Park Road School	4
North Heaton Junior and Infants' School	6
Cragside School.....	10
West Jesmond School.....	6
Victoria Jubilee School	5
Walker Gate School	8

Saturdays.

*Diana Street Centre (Babies)	41
-------------------------------------	----

200

124 School Clinics.

* 76 Infant Clinics.

200 Total Clinics for the year.

TOTALS FOR 1938.

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, 962	2,206	2,048	1,915	6,169
Over 1 year, 5,207				

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...	407	128	535
Number of treatments given	9,539	1,247	10,786

Nursery School.

This was conducted by members of the Voluntary Association in Diana Street Centre, and was much appreciated and enjoyed by the parents and scholars respectively.

Sewing Classes.

A total number of 532 classes were held at 12 Centres. The number of attendances was 6,210, an average of 12 mothers at each class.

Voluntary Workers.

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

Children Acts, 1908-1933.

At the beginning of the year there were 83 nursed-out children in the City, and 81 at the close of the year. Of these 31 were with foster mothers and 50 were in Institutions.

CHILDREN IN INSTITUTIONS.

The Teresa Nursery	30
Convent of La Sagesse.....	8
The Northern Counties Orphanage	5
Northern Counties Institution for the Deaf and Dumb.....	3
Nazareth Home.....	2
Salvation Army Home	—
Jesmond Nursery School	2
	<hr/>
	50
	<hr/>

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

Municipal Training Course for Health Visitors.

The eighth Training Course for Health Visitors commenced in September, 1937, and ended with the examination at the College of Medicine in April, 1938. Of the 12 students enrolled ten qualified in April and two in July.

The ninth Training Course commenced with 12 students in October, 1938.

I am, Sir,

Your obedient servant,

F. J. W. MILLER,

Senior Child Welfare Medical Officer.

Maternity and Child Welfare Department,

10, Bigg Market,

Newcastle upon Tyne, 1,

June, 1939.

MATERNITY AND NURSING HOMES.

REPORT OF THE BOARD OF INSPECTION.

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 this purpose. Dr. F. J. W. Miller succeeded Dr. A. F. G. Spinks as a member of the Board.

As suggested in the report of the Ministry of Health, 1937-1938, a number of brief visits of inspection at short notice was made by one member of the Board during the year.

2.—Record of Inspection.

Sixteen homes were inspected as compared with seventeen last year, one home, which on the last inspection was classed as "Unsatisfactory" having since closed down.

Of these sixteen homes, fourteen could be classified as "Satisfactory" in a broad sense. The standard of efficiency and equipment varied in some degree, but the term "satisfactory" implies that there were no marked deficiencies in staff or equipment, and that there was evidence of satisfactory supervision.

Two of the homes were classified as "unsatisfactory" in certain aspects.

In one case there was evidence of a general lack of supervision, as shown by untidiness, lack of ventilation, and a general "drabness" of the staff quarters. The nursing staff did not appear to contain the requisite proportion of trained personnel, and there were several omissions in the records.

In the other the chief cause for complaint lay in the quarters provided for the domestic staff. These were overcrowded, very comfortless and appeared to be damp.

Attention had previously been drawn to these criticisms but no action had been taken.

3.—Observations.

In general it can be said that the improvement in the conditions prevailing in the Nursing Homes in the City during the last year has been maintained, sometimes in the face of considerable difficulties.

In common with the hospitals, the proprietors of the Homes are experiencing considerable difficulty in obtaining suitable persons for their nursing and domestic staffs.

4.—**Recommendations.**

It is suggested that the findings of the Board be communicated to the keepers of the two Homes listed as unsatisfactory, with an intimation that the defects must be remedied.

E. F. DAWSON-WALKER,

Deputy Medical Officer of Health.

F. J. W. MILLER,

Senior Child Welfare 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.
1.	1a, Clayton Road
2.	1, Park Terrace
3.	Saville Nursing Home, Clayton Road
4.	4, Bentinck Terrace
5.	10, Fernwood Road
6.	"The Minories," Jesmond Road
7.	"The Gables," Elswick Road
8.	24, Grosvenor Road
9.	6, Osborne Road
10.	"Elswick Lodge," Park Road
11.	5, Osborne Terrace
12.	9, Windsor Terrace
13.	"Catherine House," 63, Osborne Road
14.	"The Cheviot," Bowland Lodge, Western Avenue
15.	"Cairney House," 10, Osborne Villas
16.	Fernwood House, Clayton Road
17.	*Walker Accident Hospital, Airey Terrace, Walker
18.	*Northern Women's Hospital, 1a, Osborne Avenue

* Exempted from Registration under Section 192.

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

III.—INFECTIOUS DISEASE.

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

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

WARD.	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Pneumonia.	Cerebro-spinal Fever.	Encephalitis Lethargica.	Polioencephalitis.	Polio-myelitis.	Measles and Rubella.	Puerperal Fever.	Small-pox.	Whooping Cough.	Diarrhoea (under 2 years of age).	Dysentery.	Tuberculosis. All forms.
St. Nicholas' .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
St. Thomas' .....	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	9
St. John's .....	...	...	...	...	12	...	1	...	...	...	...	...	...	3	...	17
Stephenson .....	...	...	...	...	16	...	...	...	...	3	...	...	...	7	...	15
Armstrong	3	...	...	...	12	...	...	...	...	2	...	...	...	4	...	17
Elswick .....	...	...	...	...	15	1	...	...	...	...	...	...	...	...	...	4
Westgate .....	...	...	...	...	10	1	1	...	...	...	...	...	...	2	...	10
Arthur's Hill .....	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	4
Benwell	2	...	...	...	24	...	...	...	...	1	1	...	...	6	...	24
Fenham	1	...	...	...	16	1	...	...	...	...	...	...	1	...	...	33
All Saints'	1	...	...	...	7	2	...	...	...	1	...	...	...	5	...	12
St. Andrew's	1	...	...	...	11	...	...	...	...	...	...	...	...	5	...	13
Jesmond .....	...	...	...	...	6	...	...	...	...	...	...	...	1	...	...	5
Dene	5	...	...	...	15	...	...	...	...	1	1	...	...	4	...	19
Heaton	1	...	...	...	6	...	1	...	...	1	1	...	...	2	...	11
Byker	1	...	...	...	19	1	...	...	...	2	...	...	...	2	...	9
St. Lawrence .....	...	...	...	1	13	1	...	...	...	4	...	...	...	3	...	19
St. Anthony's	5	1	...	...	16	1	2	...	...	3	...	...	1	5	1	30
Walker	3	...	...	...	21	...	...	...	...	3	2	...	...	5	...	41
CITY	23	1	...	1	232	8	5	...	...	21	5	...	3	53	1	293

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 1938.

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 up-wards.		Ages not known.		1938.		1937.			Cases.*	Deaths.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.			
Diphtheria (including Membranous Croup)	4	...	107	9	222	16	59	1	29	...	3	1	1	...	425	27	495	34	415	23	266		
Erysipelas	2	...	5	...	10	...	17	...	51	2	93	...	30	...	208	2	181	11	189	1	84		
Scarlet Fever.....	4	...	216	3	387	1	81	1	28	...	3	...	...	...	719	5	854	2	704	...	662
Enteric Fever .....	...	1	4	...	1	...	4	1	3	1	1	...	...	...	13	4	8	1	13	1	25
Cerebro-Spinal Fever	2	8	4	4	2	3	...	...	2	4	...	...	...	...	10	19	8	11	9	8	21
Acute Poliomyelitis.....	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...	2
Acute Polioencephalitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Encephalitis Lethargica .....	...	...	...	...	...	...	...	3	...	17	...	4	...	...	...	5	20	6	...	5	...
§Puerperal Fever .....	...	...	...	...	...	...	41	...	60	...	...	...	...	...	101	...	107	15	39	...	7
Puerperal Pyrexia .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23	...	44	...	22	...	1
Ophthalmia Neonatorum	23	...	...	...	...	...	...	...	28	...	...	...	...	...	622	285	818	367	608	232	152
Pneumonia	62	58	168	26	104	12	62	14	90	28	88	71	48	76	1	1	...	...	1	...	...
Malaria .....	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Dysentery	5	...	15	...	6	...	2	...	4	...	4	...	...	...	36	...	114	1	36	1	28
†Measles and Rubella.....	239	4	2472	14	1793	3	27	...	9	...	2	...	...	...	4545	21	1873	14	4525	21	120
‡Chickenpox	70	...	658	...	830	...	26	...	6	...	...	...	...	...	1590	...	1008	...	1584	...	12
	411	71	3652	56	3355	35	320	20	282	53	194	77	79	77	3	8296	389	5540	463	8148	298	1380	

* 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 Pyrexia.	Ophthalmia Neonatorum.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Smallpox.	Chickenpox.	Malaria.	Dysentery.	Tuberculosis (all forms).	Total.
St. Nicholas'	1	1		1					10				2			3			1	20
*St. Thomas'	15	8	3	52					117	3	1	2	15			39		1	17	273
St. John's	3	7		20					150			2	19	1		70		4	13	289
Stephenson	26	9	1	18					368	7			43			134		1	33	640
Armstrong	16	10		23		1			216	7	4	2	37			77			41	434
Elswick	18	13	1	29	2	1			116	5			18	1		71		4	21	300
Westgate	16	6		25					104	3		1	35	2		108			35	335
†Arthur's Hill	13	7		20					77	4	5	3	12	2		36		3	16	198
Benwell	40	25		107					372	26	7	2	49	4		187		5	69	893
Fenham	23	19	3	161	2				230	20	4	2	43	2		180		2	74	765
All Saints'	15	4		12	2				116		7	1	13	1		38		1	23	233
St. Andrew's	5	4		15					94	1			15			28			25	187
Jesmond	14	1		18					92	8	1		9	3		38		2	5	191
Dene	35	9	1	47					304	9	3	2	24	1		58		4	39	536
Heaton	6	12		20		1			126	3	1	1	15	3		47		2	20	257
Byker	21	7		13					289	2	1		34	2		42			36	447
St. Lawrence	22	13	2	28	1				305	7	1	2	40	1		66		1	35	524
St. Anthony's	46	17	1	40	2				602	6	4	1	69	4		154		2	62	1010
†Walker	80	17	1	55					716	10		1	80	9		208	1	3	74	1255
CITY	415	189	13	704	9	3			4404	121	39	22	572	36		1584	1	36	639	8787

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

† Elswick Grange and Newcastle General Hospital.

‡ City Hospital for Infectious Diseases, Walker Gate.

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.
	1 Single Cases.	2 Cases each.	3 Cases each.	4 Cases each.	5 Cases each.	6 Cases and over					
Diphtheria (including Membranous Croup)	329	23	6	1	...	...	...	28	425	10	415
Erysipelas.....	165	4	...	...	...	...	...	35	208	19	189
Scarlet Fever	544	47	12	...	...	...	...	45	719	15	704
Enteric (or Typhoid Fever)	12	...	...	...	...	...	...	1	13	...	13
Cerebro-Spinal Fever	5	...	...	...	...	...	...	5	10	1	9
Poliomyelitis	2	...	...	...	...	...	...	1	3	...	3
Puerperal Pyrexia	28	...	...	...	...	...	...	73	101	62	39
Ophthalmia Neonatorum..	17	1	...	...	...	...	...	4	23	1	22
Pneumonia	581	11	...	...	...	...	1	18	622	14	608
Dysentery.....	28	...	...	...	...	...	...	8	36	...	36
Malaria .....	...	...	...	...	...	...	...	1	1	...	1
TOTAL	1,711	86	18	1	...	...	1	219	2,161	122	2,039

* See next page.

INFECTIOUS DISEASES.

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

PUBLIC INSTITUTIONS AND INFECTIOUS DISEASE.

The following notifications were received during the year:—

INSTITUTIONS, &c.	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Cerebro-Spinal Fever.	Measles and Rubella.	Puerperal Pyrexia.	Pneumonia.	Poliomyelitis.	Ophthalmia Neonatorum.	Malaria.	Dysentery.	Total.
Royal Victoria Infirmary	6	20	9	1	1	10	1	9	...	...	1	...	58
Fleming Memorial Hospital	7	1	7	...	...	9	...	4	...	...	...	...	28
Newcastle General Hospital	9	6	4	...	3	...	5	3	...	3	...	8	41
City Hospital for Infectious Diseases	2	...	1	...	...	1	1	...	...	1	...	...	5
Princess Mary Maternity Hospital .....	...	1	...	...	...	...	64	1	...	...	...	...	67
Military Barracks .....	...	...	...	...	...	...	...	1	...	...	...	...	1
Eye Infirmary	1	...	1	...	...	...	...	...	...	...	...	...	2
National Children's Home .....	...	...	1	...	...	...	...	...	...	...	...	...	1
Throat, Nose and Ear Hospital	1	5	2	...	...	...	...	...	...	...	...	...	8
Common Lodging Houses	1	1	...	...	...	1	...	...	...	...	...	...	2
Royal Victoria School for the Blind .....	...	...	2	...	...	5	...	...	...	...	...	...	7
Babies' Hospital, West Parade .....	...	...	1	...	1	...	2	...	1	...	...	...	3
Nursing Homes .....	...	...	1	...	...	1	...	...	...	...	...	...	4
Hostels, etc.	1	...	1	...	...	...	...	...	...	...	...	...	2
Deaf and Dumb Institution .....	...	...	11	...	...	...	...	...	...	...	...	...	11
St. Vincent's Home .....	...	...	...	...	...	1	...	1	...	...	...	...	1
Teresa Nursery .....	...	...	2	...	...	...	...	...	...	...	...	...	3
St. Joseph's Home .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Northern Counties Orphanage .....	...	...	2	...	...	...	...	...	...	...	...	...	2
La Sagesse Convent	1	...	...	...	...	1	...	...	...	...	...	...	2
TOTAL	28	35	45	1	5	29	73	19	1	4	1	8	249

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

SCARLET FEVER.

Notifications of 704 cases were received during the year. There were no deaths.

DIPHTHERIA.

415 cases were notified during the year, and 23 died, a case mortality of 5.5 per cent., as compared with 4.8 in 1937.

MEASLES AND RUBELLA.

4,525 cases (including 121 of rubella) were notified, and there were 21 deaths (net) in 1938, representing a death rate of 0.07 per 1,000 population, as compared with 0.05 in 1937, and a case mortality of 0.46 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'
St. Thomas'
St. John's
Stephenson	1	2	....	....	....	....	3
Armstrong	1	....	....	....	....	1	....	2
Elswick
Westgate
Arthur's Hill
Benwell	1	....	....	1
Fenham
All Saints'	1	....	....	....	....	....	1
St. Andrew's
Jesmond
Dene	1	....	....	....	....	....	1
Heaton	1	....	1
Byker	2	....	....	....	....	....	2
St. Lawrence	1	....	2	1	....	....	....	....	4
St. Anthony's	1	....	....	2	....	....	....	....	....	3
Walker	2	....	....	....	....	1	....	3
TOTAL	1	1	3	9	3	....	1	3	....	21

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 1938.

Cases notified by Medical Practitioners	3,756
Cases found by Health Visitors	780
Cases notified by Parents and others	9
	<hr/>
	4,545 gross.
Less 20 cases from outside the City :—	<u>4,525 net.</u>

Of the total number of measles cases notified, 4,288 in 3,419 households (or 94.8 per cent.) were visited by the Health Visitors, and 5,775 revisits were paid, a total of 10,063 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	77	936	1,104	993	309	3,419
Children	153	2,134	2,486	2,367	629	7,769
Cases	103	1,253	1,406	1,175	351	4,288
Percentage of Cases to						
Children	67.1	58.7	56.6	49.6	55.8	55.2
Cases developing Pneumonia	4	38	16	13	2	73
Percentage of Cases develop-						
ing Pneumonia	3.9	3.0	1.1	1.1	0.6	1.7
Deaths from Measles	1	10	5	3	....	19
Cases, notified Measles,						
Deaths certified Pneumonia..	....	1	....	1	....	2
Case Mortality per cent.	1.0	0.9	0.3	0.3	....	0.5

Total unvisited cases 257, including 228 better-class houses in which no deaths occurred, and 29 in institutions, with 1 death.

Medical Attendance.—In 97.9 per cent. of the cases visited a doctor was in attendance.

Condition of Patient.—In 92.1 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.—1,616, or 37.7 per cent., of the affected children had previously attended school, and 2,672, or 62.3 per cent., had never attended school. In connection with 1,361 of the latter cases, however, other children in the infected houses were scholars, equivalent to 31.7 per cent. of the total cases.

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

Under 1 year	235
1-2 years	552
2-3 years	611
3-4 years	618
4-5 years	631
5-6 years	865
Over 6 years	776
	<hr/>
	4,288
	<hr/>

FOOD POISONING.

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

The types of organism and the number of cases due to each are set out below :—

B. Aertrycke	...	...	...	14 cases.
B. Salmonella (Newport)	...	2	„	
B. Salmonella (Thompson)	...	1	case.	

The case infected with B. Salmonella (Thompson) was an extra-mural case notified from the Royal Victoria Infirmary.

Seven of the cases of B. Aertrycke infection occurred during an outbreak in a children's ward at the Newcastle General Hospital in the months of May and June.

A sister of one of these patients developed the disease at home, but apart from this the remaining cases were of the sporadic type and the source of the infection could not be traced.

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

ENTERIC GROUP OF FEVERS.

During the year 1938, 22 cases of the enteric group of infections were notified, eighteen of these proved to be true cases, the remaining three being cases of influenza, broncho-pneumonia, and empyema of the gall bladder. 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 1938.

	EXTRA-MURAL.		NEWCASTLE.	
	Typhoid.	Para-typhoid B.	Typhoid.	Para-typhoid B.
January	1	1	....	3
February .....	....	....	....	6
March	1 (1)	1	....	2
April .....	....	....	....	1
May .....	....	....	....	....
June .....	....	....	....	....
July .....	....	....	....	....
August .....	....	....	....	1
September .....	....	....	....	....
October .....	....	....	....	....
November .....	....	....	....	....
December	1	....	....	....
Totals.....	3 (1)	2	....	13

It will be seen that five patients came from without the City's boundaries, the remaining thirteen 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 thirteen City patients who were all admitted to Hospital were Paratyphoid B. infections. All these patients made good recoveries.

In the last fortnight of January and early part of February there was a small outbreak of Paratyphoid B. fever in the City. There were nine cases scattered in different districts, and a careful enquiry only revealed the milk supply as a common factor between five of the cases. This milk supply was pasteurised and was known to be marketed under careful control and up-to-date methods.

As a precaution samples of blood were taken for Widal tests from each member of the staff, 174 in all. Eleven of these persons reacted to some degree, and although nine of them had previously been inoculated, they were laid off work while specimens of faeces and urine were bacteriologically examined. In every case these were negative, and the search for a possible carrier was fruitless. The source of the outbreak was not ascertained.

The remaining cases were of the sporadic type.

Twenty-five cases were admitted to the City Hospital. These include the eighteen cases mentioned above, and seven cases notified in the area of neighbouring Local Authorities, which were admitted to the City Hospital at the request of the Local Authority concerned.

Four of these latter patients were suffering from typhoid fever and three from paratyphoid B. infection.

Of the twenty-five admissions seven were cases of typhoid and eighteen of paratyphoid B. infections. In the former group there were two deaths, one due to toxæmia, and the other to intestinal perforation for which laparotomy had been carried out. In the latter group there was one fatal case. One infant, who was admitted with broncho-pneumonia contracted paratyphoid B. fever and died.

DIARRHŒA.

There were in all 68 deaths from the disease, equal to a death rate of 0.23 per 1,000 population, and this number included 53 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	6,010	3,377	26	1,495	24.9	1,013
§1938	6,101	3,356	18	1,632	26.7	....

* 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.

1,584 cases were notified. There were no deaths.

ERYSIPELAS.

189 cases of this disease were notified and there was one death.

PUERPERAL PYREXIA.

39 cases were notified, and there were 5 deaths from puerperal fever. Inquiries were made concerning all the notified cases.

INFLUENZA AND PNEUMONIA.

These diseases accounted for 254 deaths as against 400 last year.

Total deaths at age periods.

Under 5 years.	5-15.	15-25.	25-45.	45-65.	65 and over.	Total.
54	11	12	28	63	86	254

As will be seen from the above figures, 54, or 31.3 per cent., of the deaths occurred below the age of 5 years.

622 cases of pneumonia, including influenzal-pneumonia, were notified. For the ages and ward distribution, see pages 78 and 79.

Of that number 542, or 87.1 per cent., were visited by Health Visitors. It was found that 342, or 63.1 per cent., were primary pneumonia, 94, or 17.3 per cent., were cases of influenzal-pneumonia, and 106, or 19.5 per cent., were cases of pneumonia following other diseases.

Ages.—The ages of the 542 cases visited were as follows :—

Under 1 year	61
1-5 years	162
5-15 years	95
15-25 years	55
25-45 years	66
45-65 years	72
and over 65 years	31
	<hr/>
	542

Housing.—10 cases occurred in 1 roomed dwellings, 127 cases occurred in 2 roomed dwellings, 183 cases occurred in 3 roomed dwellings, and 222 cases occurred in dwellings with more than 3 rooms.

Type of House.—291 cases occurred in flats, 77 cases in tenements, and 174 in self-contained houses.

Previous History.—

There was a previous history of	Measles	in 244 cases.
"	"	Whooping Cough in 164 cases.
"	"	Influenza in 99 cases.
"	"	Frequent winter
		Coughs and Colds in 313 cases.
"	"	Pneumonia in 104 cases.
"	"	Tuberculosis in 8 cases.

Hospital Treatment.—152 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. 40 of these patients died, giving a case mortality of 26.3 per cent.

Deaths.—87, or 16.1 per cent., of the visited cases of pneumonia died.

ENCEPHALITIS LETHARGICA.

No proved case of encephalitis lethargica was admitted during the year.

ACUTE POLIOMYELITIS .

Two proved cases of poliomyelitis were admitted to the City Hospital during the year.

CEREBRO-SPINAL MENINGITIS.

During 1938 ten cases of cerebro-spinal fever were notified. Nine of these were Newcastle residents and one was an extra-mural case.

This figure is almost the same as that for 1937 when eight cases were notified in Newcastle. These figures show a definite decline on those for 1935 and 1936 which were 27 and 17 respectively.

Twenty-one cases of this disease were nursed in the City Hospital during the year. Six 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 13 deaths among these 21 cases, equivalent to a case mortality rate of 61.9 per cent. The corresponding figures for 1936 and 1937 were 38.4 per cent. and 68.7 per cent.

Three 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 53%. 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 .....	....	2 (2)	2 (2)
February	1 (1)	1 (1)	2 (2)
March .....	....	2 (2)	2 (2)
April	1 (1)	....	1 (1)
May	1 (1)	2 (1)	3 (2)
June .....	....	2	2
July .....	....	....	....
August	1	....	1
September .....	....	2 (1)	2 (1)
October .....	....	2 (1)	2 (1)
November	1 (1)	....	1 (1)
December	1 (1)	2	3 (1)
Totals	6 (5)	15 (8)	21 (13)

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.

More than 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.	Total.
Males.....	1 (1)	1 (1)	3 (2)	5 (3)	....	5 (3)	....	15 (10)
Females	2 (2)	1 (1)	....	....	2	1	....	6 (3)
Total	3 (3)	2 (2)	3 (2)	5 (3)	2	6 (3)	....	21 (13)

Figures in parentheses indicate deaths.

The high mortality rate in children under the age of five is strikingly shown this year. Young persons and adults from 5 to 25 years of age have the best chance of recovery.

During the second half of the year the treatment of these cases was somewhat radically altered. Cases were reported in the medical press which indicated that Sulphonilamide preparations, and particularly the derivative known as M. & B. 693 have a marked bactericidal effect on the meningococcus.

Frequent lumbar and cistern punctures, with the administration of intrathecal serum, have now been abandoned in favour of anti-meningococcal serum or meningococcal antitoxin given intravenously or intraperitoneally, together with M. & B. 693 by the mouth. Lumbar puncture is done occasionally to obtain specimens of cerebro-spinal fluid for examination and culture.

While the number of cases treated as yet is too small for any definite conclusion to be drawn, the results including a few cases in the early months of 1939, have been encouraging.

BACILLARY DYSENTERY.

Bacillary dysentery, which had been prevalent in the City since 1928, showed a distinct decline in 1938. 81 cases were notified as compared with 205 in 1937.

In thirty-six of these cases the diagnosis was confirmed bacteriologically whereas in 1937 this figure was 117.

Three of the cases died, one at home, one at the Newcastle General Hospital, and one at the Babies' Hospital. All were infected with the Sonne type of bacillus.

There was one outbreak at the Newcastle General Hospital during the month of January involving ten cases, all of the Sonne type.

The remainder of the cases occurring during the year were of the sporadic type.

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

Sonne Type	...	...	...	28
Flexner Type	...	...	...	7
Newcastle Type	...	...	...	1

Twenty-eight proved cases of dysentery were admitted to the City Hospital during the year. These included the twenty-five City cases mentioned above, and three extra-mural cases which were notified in neighbouring districts and admitted at the request of the Local Authority concerned. The age and sex incidence of these cases is given in the following table :—

Ages.	0-1	1-2	2-5	5-15	15-25	25-45	45 and up-wards	Total.
Males.....	1	2	3	4	1	1	....	12
Females	2	1	6	4	1	2	....	16
Total	3	3	9	8	2	3	....	28

There were no fatalities among the cases admitted to hospital.

Twenty-one were infected with the Sonne type of organism and seven with the Flexner type.

CITY HOSPITAL FOR INFECTIOUS DISEASES.

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I beg to submit a report on the work at the City Hospital for Infectious Diseases during the year 1938.

This report, which is my first in the capacity of Medical Superintendent, covers the period during which the fiftieth anniversary of the opening of the hospital fell. The opening took place on 28th September, 1888, but in view of the circumstances on 28th September, 1938—the Wednesday of the “ crisis ” week—it is not surprising that the anniversary passed unnoticed.

For this reason a brief survey of the main stages by which the hospital has developed from that opening day through a period of fifty years may be of interest.

A full account of the methods adopted in this City for dealing with infectious sick in the past and the events which led up to the building of the hospital is given in an appendix to the report of the Medical Officer of Health for the year 1888.

Prior to 1804 the only arrangement for the nursing and segregation of infectious illness had been the provision of separate rooms in other institutions. This year saw the establishment at Bath Lane of the “ Institution for the Cure and Prevention of Contagious Fevers ” which lasted until the opening of the present hospital.

Dr. Armstrong in his report stated that as far as he was aware this hospital in Bath Lane was the first Fever Hospital in the provinces to be built and worked on an independent basis, and he noted that by a curious coincidence the site of this hospital was in the very area outside the town wall on which the infected sick used to encamp long ago.

In 1873 this hospital, which before that date had been under the management of a body of governors, was handed over to the Corporation. Even before the transfer its accommodation had been overtaxed, and from the year 1878 onwards the Medical Officer of Health in successive reports drew attention to the urgent need for the provision of a larger and more modern institution for the reception of infectious cases.

The matter was first brought before the Council in 1880, when a report was presented suggesting the erection of extensions on the site of the existing Fever Hospital, but before confirming the report the Council resolved to advertise for a different site on which to build. This was done freely but produced no response.

The next four years were occupied in a search for a suitable site. Several were considered but in each case local opposition was so strong that the proposal had to be abandoned.

In 1884 the Council fixed on a site already belonging to the Corporation and situated to the north of the Tynemouth Branch of the North Eastern Railway near to Walkergate Station.

The original part of the present hospital, with accommodation for 105 patients and built at a cost of £17,887, was opened on the 28th September, 1888. A dance to celebrate the event was held in one of the wards and the hospital was kept open for public inspection for a week, all classes being invited.

The accommodation thus provided was a vast improvement on what had hitherto existed, but as soon as April, 1896 the Medical Officer of Health was compelled to draw the attention of his Committee to the inadequate size of the City Hospital for the work it was required to do.

The shortage of accommodation for the staff became acute and in 1905 two sets of temporary buildings, containing cubicles for nurses were erected. Since their construction these two structures have served as overflow accommodation for staff at various periods until 1936, when one was demolished, and the other converted into a rough store.

The year 1908 saw extensive additions to the hospital. On 20th August two new Pavilions, a new Isolation Pavilion, and two new Observation Blocks were opened, increasing the number of beds available by 71 to a total of 176. At the same time the existing administrative block was enlarged, a new Nurses' Home was opened, and additional cottages were built in the grounds for certain members of the male staff.

This was the extent of the hospital at the commencement of the Great War in 1914.

Considerable demands were made on the hospital by the Military Authorities, and to meet these two additional temporary pavilions were erected on the East side of Benfield Road by

arrangement with the War Office, and were opened on 7th April, 1915. These pavilions though intended as temporary structures are still in use at times of pressure at the present day. Their addition raised the number of beds available for fever cases to 232, the figure at which it stands to-day.

In April, 1916, a Sanatorium Section of 62 beds for advanced cases of tuberculosis was completed and opened, the usefulness of which section was much increased by the installation of an X-ray apparatus in 1924.

In 1924 a scheme was undertaken for the re-organisation of the hospital's interior economy. The lighting had previously been largely by gas, with a small section using electricity. Under this scheme an electric generating plant was provided and a complete electric lighting installation fixed in all parts of the hospital, while the heating and hot water supply services were centralised in the main boiler house.

At the same time a new building comprising dining rooms for nursing and domestic staffs was built adjacent to the administrative block, and the existing staff kitchens and dining rooms in the Nurses' Home were converted into recreation rooms and a lecture room. A pantry and crockery store was also built. The total cost of the scheme was estimated at £14,078.

The heavy pressure on the beds allocated to tuberculosis cases, and the impending re-organisation under the Local Government Act of 1927 made it imperative that further accommodation for this type of patient should be provided, and on 1st May, 1929, a new block for 44 female patients was opened, thus increasing the total available bed accommodation for infectious diseases, including tuberculosis, to 338.

The years 1932 and 1933 saw the completion of two further additions.

In the former year a new boiler house and chimney were built, and two new boilers were installed, while in the latter year two wings were added to the existing Nurses' Home, giving much needed further accommodation for staff.

Such is the story of the structural development of the hospital through its first fifty years, but no institution which is alive and efficient can ever stand still. The year 1938 saw plans laid, and a beginning made with a programme, not so much of extension

but of replacement and modernisation. This programme it is the hope and intention of the Council to complete in five years, and the item allotted to the first year, a cubicle isolation block is now nearing completion.

Along with the structural growth of the hospital other small improvements too numerous to mention in detail have been made. Many new methods of treatment have been discovered during the period under review and subsequently adopted, while at the same time the conditions of service of the staff have been greatly improved.

The hospital has perhaps been fortunate in that the changes in its Senior Officials have been few. Fifty years have seen only three Medical Superintendents. Dr. H. E. Armstrong, Dr. H. Kerr and yourself. Three Matrons have controlled the Nursing Staff in the same period, Miss B. N. Ogston, Miss H. E. Cook and Miss J. L. Watt.

For the last six months of 1938, I have held the position of full time Medical Superintendent.

I should like to express appreciation of the great assistance given to me by the Matron and the Steward in this year of transition which has not been without its difficulties, and also of the work of the staff, medical, nursing and lay.

In conclusion, I wish to express my sincere thanks to you for your encouragement and helpful advice during this period.

Yours faithfully,

E. F. DAWSON-WALKER,

Medical Superintendent.

City Hospital for Infectious Diseases,

Newcastle upon Tyne,

10th June, 1939.

CITY HOSPITALS FOR INFECTIOUS DISEASES.

Report of the 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
1938	291,300	*232	1,940	98.1

* 30 of these beds temporarily appropriated for Tuberculosis patients.

CITY HOSPITAL FOR INFECTIOUS DISEASES,
WALKER GATE.

96A

Diseases Admitted—1938.

		PROVED TO BE :—																										
SENT IN AS	Number.	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	725	654	2	.....	.....	.....	8	10	1	.....	1	.....	.....	.....	4	.....	.....	1	1	2	.....	12	1	.....	.....	28		
Diphtheria	420	5	262	.....	.....	.....	3	.....	.....	.....	.....	.....	1	.....	4	2	.....	12	.....	.....	.....	101	3	.....	.....	24		
Diphtheria Carriers	106	.....	.....	106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enteric Group of Fevers...	44	.....	.....	.....	25	1	.....	.....	.....	.....	.....	.....	2	.....	4	.....	3	1	.....	.....	.....	.....	5	.....	1	.....	2	
Dysentery	56	.....	.....	.....	.....	25	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....	.....	23	.....	1	.....	3
Measles	99	.....	.....	.....	.....	.....	93	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	2
Rubella	3	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Varicella	13	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Mumps	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Pertussis	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Epidemic Cerebro-Spinal Meningitis...	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Other forms of Meningitis	23	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	8	.....	5	.....	.....	1	.....	1	.....	.....	.....	.....	.....	2	.....	2
Poliomyelitis	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Encephalitis Lethargica	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia	165	.....	1	.....	.....	.....	3	.....	.....	.....	2	.....	1	.....	127	20	1	8	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Bronchitis	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Influenza	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....
Other Respiratory Diseases	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Erysipelas	96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	83	10	.....	.....	.....	.....	1	.....	2
Skin and Septic Conditions	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	.....	.....	.....	.....	.....	.....	3
Puerperal Pyrexia	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	.....
Tonsillitis	19	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17	1	.....	.....	.....	.....
Other Gastro-Intestinal Diseases	40	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	32	.....	.....	.....	3
Ophthalmia Neonatorum..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
General Diseases	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Injuries	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Unclassified.....	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	3	34
TOTALS.....	1,940	662	266	106	25	28	108	12	12	....	14	21	13	2	....	152	27	13	24	84	36	7	131	66	1	17	4	109

CITY HOSPITAL, WALKER GATE.

(Fever Pavilions.)

Admissions during the year—1,940.

The *average daily number* of patients in the hospital was 145, exclusive of 99 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	1938
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	96.9
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	100.0
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	100.0
All cases of the above, } together with Con- } tinued 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	97.6

**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
1935-1938.									
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	....
1938	662	266	25	4	26	3	0.6	9.7	12.0

Admissions and Deaths, 1938.

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.....	78	72	44	52	50	37	38	30	43	71	82	65	662	1	1			1	1			1	4		4	4
Diphtheria	15	24	24	17	26	11	23	13	13	22	39	39	266	3	4		3	3		4				1	3	26
Diphtheria Carriers.....	11	17	12	7	10	8	5	5	10	7	7	7	106			1					1					3
Enteric Group of Fevers	7	7	4	1	1			3			2		25													
Dysentery	5	4	4	3		1		1	1	1	5	3	28					4								10
Measles.....	5	17	17	33	24	5	5			2		1	108		1	2	2	4	1							
Rubella	1	3	3	1		2			1	1	1	1	12													
Varicella		2	2	2	1	3							12													
Pertussis		1	1	1	1		1		1	1	2	4	14													
Epidemic Cerebro-Spinal Meningitis	2	2	2	1	3	2		1	2	2	1	3	21	2	2	2	1	2				1	1	1		13
Other forms of Meningitis.....	2			5	1	1		1	1	1	1		13	2			5	1	1			1	1	1		12
Poliomyelitis								1	1				2							3						
Pneumonia	14	15	23	9	16	14	11	5	13	8	16	8	152	6	6	7	2	6	2	3		5	1	2		40
Bronchitis		1			2	3		2	3	3	6	7	27													
Influenza	1	5	4								1	2	13													
Other Respiratory Diseases.....	3	3	4	2	1	2	5	1	1			2	24					1						1	2	
Erysipelas	9	7	4	9	11	4	9	8	2	4	10	7	84								1				1	
Skin and Septic Conditions.....	7	3	3	1	2	5	3		2	5	1	4	36			1	1								1	
Puerperal Pyrexia		1	2	1	1			1	1				7			2									2	
Tonsillitis.....	17	21	10	10	8	5	17	7	7	12	10	7	131													
Other Gastro-Intestinal Diseases	5	2	1	3	11	6	1	10	5	9	6	7	66	1		1			2		1				5	
Ophthalmia Neonatorum						1							1													
General Diseases	3		2	2	1		4	1	1	2	1		17	1		1		1		2	1		1		7	
Injuries									1			3	4													
Unclassified	2	6	17	11	5	10	5	3	2	10	33	5	109	2			1			1				1	5	
TOTALS	188	213	183	171	175	120	127	93	111	161	224	174	1940	19	14	17	14	18	8	10	4	8	7	6	6	131

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>
Diphtheria	8	....
Measles .....	....	3
Typhoid Fever .....	....	1
Epidemic Cerebro-spinal Meningitis.....	3	1
Pneumonia	9	2
Other forms of Meningitis .....	....	2
Puerperal Pyrexia	1	....
Gastro-Intestinal Conditions.....	2	1
General Diseases	2	1
Unclassified .....	....	1
Total	25	12
	—	—

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
1938	1,940	27.5	662	33.1	372	42.8	25	40.6	881	16.4

PSITTACOSIS.

During the year two cases of psittacosis were admitted to the City Hospital. The diagnosis in the first case was definite, while in the second it was based on strongly presumptive evidence.

The former case was originally admitted to the Newcastle General Hospital for investigation. A tentative diagnosis of psittacosis was made and the patient was transferred to the City Hospital.

A specimen of serum which was sent to Professor S. P. Bedson at the London Hospital was reported as giving a strongly positive result for psittacosis.

The patient was seriously ill for a fortnight subsequent to his admission to hospital. After a lengthy but uneventful convalescence he made a good recovery. Enquiries had elicited the fact that the patient kept canaries, and these were first suspected as being the source of infection. All his canaries were, however, in good condition, and further enquiries showed that he had had in his aviary for a period of two months four budgerigars which he had subsequently sold.

In view of the known fact that these birds are not infrequently carriers of the psittacosis virus, efforts were made to trace these four birds. These were successful and the bodies were sent to Professor for examination. Mouse inoculation tests showed that the birds were infected with the psittacosis virus.

The second of the two cases was also admitted to the Newcastle General Hospital for investigation.

Enquiry revealed that at the local Race Week Festival on the Town Moor he had purchased two budgerigars from one of the stalls. After about ten days both these birds sickened and died. A fortnight later the patient became suddenly unwell and was thought to have influenza.

In view of the history a tentative diagnosis of psittacosis was made and the patient was removed to the City Hospital, Walker Gate, where he made a fairly rapid and uneventful recovery.

A specimen of serum which was sent to Professor Bedson gave a result, which, while not definite, was sufficiently positive to be highly suspicious.

The history of the case and the seriological findings make it appear very probable that this case was one of psittacosis. The bodies of the two respective birds were retrieved, but were in such an advanced state of decomposition as to make further examination useless.

DIPHTHERIA.

The decline in the incidence of diphtheria in Newcastle from the high figures reached in 1936 was continued in 1938. The patients admitted to hospital numbered 372 as contrasted with 462 in 1937 and 751 in 1936.

Of these admissions 266 were cases and 106 were carriers. The type of diphtheria together with the number of fatal cases and mortality rate in each group is set out in the following table :—

Types.	Cases.	Deaths.	Mortality Rate per cent
Nasopharyngeal.....	72	20	27.7
Faucial	175	4	2.3
Laryngeal	8	2	25.0
Nasal	7	Nil	Nil
Other Forms	4	Nil	Nil
Total	266	26	9.7

Eight of the fatal cases died within twenty-four hours of admission.

Of the deaths in the tonsillar group, one developed an acute myocarditis, another an acute heart block, a third developed measles a few days after admission, and the fourth was a very toxic case which died within twenty-four hours of admission.

Four of the laryngeal cases were obstructed to such a degree that tracheotomy was performed shortly after admission to hospital. Two of these cases died.

The following table indicates the incidence of the various types in age groups :—

	0-1	1-2	2-5	5-10	10-15	15-25	25-45	Over 45	Total
Nasopharyngeal		1	12 (6)	31 (10)	16 (1)	7 (1)	4 (1)	1 (1)	72 (20)
Faucial		1	31 (2)	73 (2)	31	27	12	.....	175 (4)
Laryngeal		1	5 (1)	2 (1)	.....	.....	.....	.....	8 (2)
Nasal .....		.....	2	3	2	.....	.....	.....	7
Other Forms..	1	.....	2	1	.....	.....	.....	.....	4
Totals	1	3	52 (9)	110 (13)	49 (1)	34 (1)	16 (1)	1 (1)	266 (26)

The death rate for diphtheria this year is identical with that for the previous year, namely 9.7 per cent. This is in contrast with 7.5 per cent. in 1936, and 7.4 per cent. in 1935.

Though the incidence of the disease is declining the virulence is in no way diminished, and the proportion of severe cases is still considerable.

In forty-two 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.

The scheme, inaugurated in 1934, whereby free immunisation against diphtheria of all children is offered to parents, has been continued throughout 1938. 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 1938. 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, 76 being for infants and 124 for school children.

During the year 304 infants and 1,611 school children completed immunisation, a total of 1,915.

The typing of the bacilli isolated from cases of diphtheria was continued during 1938. 493 cultures were typed with the following results :—

Gravis type	...	...	255 = 51.2%
Intermedius type	...	...	99 = 20.3%
Mitis type	...	...	104 = 21.3%
Atypical type	...	...	35 = 7.2%
			— — —
			493 = 100.0%
			— — —

Among the 26 fatal cases, 15 were due to the Gravis type of organism, seven to the Intermedius, and two to the Mitis type. In two cases they were not typed. The two Mitis cases were of the laryngeal type.

SCARLET FEVER.

The decline in the incidence of scarlet fever in the City which has been evident since 1933 was again marked this year, when the admissions to hospital numbered 662, as compared with 1,236 in 1935, 929 in 1936, and 834 in 1937.

The prevailing type of scarlet fever remained mild, and in the 662 admissions there were four fatal cases, a mortality rate of 0.6 per cent.

Of these four cases two were admitted late in the disease from the area of a neighbouring Local Authority. One of these died from myocardial failure and the other from a cerebral abscess following a lateral sinus thrombosis.

The third case developed laryngeal diphtheria and died following tracheotomy, while the fourth was admitted from the Fleming Memorial Hospital with a discharging empyema, the death being probably due more to the lung condition than to the scarlet fever.

The numbers and relative proportions of patients receiving scarlet fever antitoxin together with the complications rate and case mortality rate per cent. for the period 1928-1938, are as follows :—

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Scarlet Fever Cases admitted	452	543	584	989	1,120	1,934	1,669	1,236	929	834	662
Number treated with Antitoxin...	177	169	249	483	380	436	331	260	243	335	178
Percentage treated with Antitoxin...	39.2	31.1	42.6	48.8	33.9	22.5	19.8	22.0	26.1	40.2	26.7
Percentage with Complications *	24.3	23.8	30.0	40.4	40.0	32.0	35.0	38.4*	33.8	31.3	28.4
Mortality Rate percentage	0.44	0.74	0.69	0.5	0.8	1.4	1.8	0.7	1.3	0.2	0.6

* Calculated on total scarlet fever admissions.

Considerable use has been made of Sulphonilamide during the year in the treatment of scarlet fever, but the results have been disappointing. The drug has very little effect on the early toxæmia of the disease, and can in no way replace antitoxin. As far as could be ascertained it was not effective in preventing the onset of complications even when used in conjunction with antitoxin.

Certain of these complications, notably otorrhœa, appeared to clear up somewhat more rapidly when treated with this drug than was previously the case.

Complications are few in number when the wards are quiet and it is possible to "space out" the patients in a satisfactory manner. When numbers increase and an even slight element of overcrowding is evident, the complications also increase.

It would seem that the theory that these complications of scarlet fever are largely caused by patients becoming re-infected by strains of *Str. Pyogenes* other than the one with which they were originally infected, is probably correct.

Until such time as the admissions of scarlet fever to hospital are so limited that each patient can be nursed in a cubicle, or under equivalent conditions, the complications rate of scarlet fever is unlikely to be greatly reduced.

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.....	662	26.7	28.4	0.6%	2.5%	33.1	12.5	20.6
Antitoxin Cases	178	100	27.0	Nil.	3.4%	34.3	11.8	20.3
Non-Anti-toxin Cases	484	Nil.	28.9	0.8%	2.3%	32.7	12.7	20.7

PERCENTAGE INCIDENCE OF COMPLICATIONS.

	Rhin-orrhœa.	Ot-orrhœa.	Adenitis	Rheumatism.	Albuminuria.	Nephritis.	Cardiac.	Other Complications.
All Cases..	8.1	8.6	5.4	1.2	2.3	0.3	0.3	2.3
Antitoxin Cases	7.9	4.5	7.3	1.1	2.2	Nil.	0.6	3.4
Non-Antitoxin Cases	8.3	9.8	4.8	1.2	2.3	0.4	0.2	1.9

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. 110 cases occurred in 662 admissions—a complication rate of 16.6 per cent., as contrasted with 20.7 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	40	42.5
	Otorrhœa	48	50.6
Antitoxin Cases	Rhinorrhœa	14	46.3
	Otorrhœa	8	55.3
	Total	110	48.6

The average stay per patient of cases in this group was 48.6 days, as contrasted with the figure given for 1937, namely, 60.4 days.

In the treatment of these patients it was found necessary to perform twenty-nine operations—eight for the removal of tonsils and adenoids, and twenty-one 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 96 cases of this type have been visited at varying intervals. The result of these visits showed that amongst 54 cases of rhinorrhœa, two, or 3.7 per cent., still had slight nasal discharge, whilst one or 2.4 per cent., of 42 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 662, produced 17 "Return" cases, a percentage of 2.5. These arose from 16 "Infecting" cases, a percentage of 2.4.

SEASONAL OCCURRENCE.

QUARTER.	Total Scarlet Fever Admissions.	"Infecting" Cases.		"Return" Cases.	
		No.	Percentage.	No.	Percentage.
January to March	194	3	1.6	1	0.5
April to June	139	2	1.4	4	2.8
July to September	111	2	1.8	Nil.	Nil.
October to December	218	9	3.1	12	5.4

Of the 16 "Infecting" cases (a) 10 had no complications or discharges whilst in hospital, and remained "clean" after reaching home, (b) one had no complications whilst in hospital, but developed discharges after reaching home, while (c) five had complications whilst in hospital, but were "clean" on discharge.

The figure of 2.4 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 1906-1938.

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
1938	662	16	2.4	17	2.5

PNEUMONIA.

One hundred and fifty-two cases of pneumonia were admitted to hospital during the year.

These cases included both lobar and broncho-pneumonic types of the disease.

During the last three months of the year extensive use was made of the new chemotherapeutic compound M. & B. 693.

The following table contrasts the figures for the first nine months and the last three months of the year :—

	<i>Cases.</i>	<i>Deaths.</i>	<i>Mortality rate per cent.</i>
June—Sept. ..	120	37	30.8
Oct.—Dec.	32	3	9.4

These figures are too small to be significant but taken in conjunction with reports from other sources they are of interest, and tend to confirm the opinion that the discovery of M. & B. 693 is an important advance in the treatment of infection due to the pneumococcus.

Serial X-ray photographs were taken of a number of selected cases of the lobar type of the disease.

ERYSIPELAS.

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 1926-1938. 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 Notifica- tions.	Deaths.	Mor- tality Rate. Per cent.	CITY HOSPITAL.			
				Admis- sions.	Deaths.	Mor- tality Rate. Per cent.	Dura- tion of stay in Hospital. (days).
1938	189	1	0.5	84	1	1.2	12.7
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 1938 was 1.2 per cent., the lowest rate recorded in the last decade.

This fatal case was one of erysipelas occurring after an extensive operation for the removal of a portion of the lower jaw in a patient suffering from malignant disease. There was also a terminal pneumonia and the fatal issue could not accurately be attributed to the erysipelas.

This striking fall in the mortality rate is in a large part due to the success which attended the use of Sulphonilamide compounds in the treatment of this disease.

In no other conditions are the results of their administration so consistently effective as in erysipelas, and all the previous forms of treatment have been superseded.

Mixed Infections.

25 patients, or 1.3 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	1
Scarlet Fever with Measles	4
Scarlet Fever with Varicella	5
Scarlet Fever with Pertussis	2
Scarlet Fever with Erysipelas	1
Diphtheria with Scarlet Fever	2
Diphtheria with Pertussis	1
Diphtheria with Measles	1
Measles with Diphtheria	1
Measles with Pertussis	2
Measles with Diphtheria (Carrier)	3
Pneumonia with Pertussis	1
Typhoid Fever with Measles	1
Total	25

Cross Infections.

During the year 51 patients, or 2.6 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	1
Scarlet Fever with Diphtheria	4
Scarlet Fever with Varicella	25
Diphtheria with Scarlet Fever	5
Diphtheria with Pertussis	1
Pneumonia with Diphtheria	2
Pneumonia with Paratyphoid	1
Pneumonia with Scarlet Fever	1
Measles with Chicken Pox	1
Measles with Diphtheria	6
Measles with Scarlet Fever	2
Typhoid Fever with Measles	1
Tonsillitis with Chicken Pox	1
Total	51

There were two deaths.

Staff Sickness.

Nursing Staff.—72 members of the nursing staff were off duty owing to sickness for a total of 1,376 days. Six nurses contracted diphtheria, all of whom were nursed in the City Hospital. One nurse became a diphtheria carrier for a period, and required tonsillectomy to free her from infection.

Thirteen suffered from tonsillitis, nine from various skin and septic conditions, seven from influenza, and three sustained minor injuries. One nurse developed middle ear discharge and required a mastoidectomy. Two nurses had tonsillectomy performed.

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

Domestic Staff.—75 members of the domestic staff were off duty through sickness for a total of 1,008 days. Eleven developed tonsillitis, twelve influenza, one diphtheria, six suffered from skin and septic conditions, and five 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 again higher than usual, but all cases 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 borderline 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. It has, however, been extensively used for the storage of Air Raid Precaution material.

E. F. DAWSON-WALKER, M.D.,

Medical Superintendent.

City Hospital for Infectious Diseases,

Newcastle upon Tyne,

10th June, 1939.

DISINFECTION, Etc.

6,203 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, 682 houses, including 784 rooms, were similarly disinfected. 814 visits were made, and disinfection was also carried out in 272 special cases.

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

ARTICLES FROM CITY.		ARTICLES—HOSPITAL PROPERTY.	
1938.	1937.	1938.	1937.
21,317	22,292	16,704	14,506

6,390 articles were also disinfected at the Smallpox Hospital.

The staff have thus dealt with 44,411 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—1938.

FROM	FOR, INFECTIOUS DISEASES.	FOR PHTHISIS.
	FLUID ($\frac{1}{2}$ pint tins.)	FLUID ($\frac{1}{2}$ pints.)
Health Department.....	67	....
Tuberculosis Dispensary .....	....	640
Corporation Yard, Benwell	8	....
TOTAL.....	75	640

BACTERIOLOGICAL EXAMINATIONS.

1st January to 31st December, 1938.

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	3,541	266	7.51%
(b) Routine swabs from patients in Hospital	3,406	....	....
Sputum for tubercle bacilli (microscopically)			
(a) from practitioners	466	65	13.94%
(b) from patients in C.H.I.D.	6	....	....
Swabs for hæmolytic streptococci—			
(i) from City I.D. Hospital.....	272	141	51.84%
(ii) from Newcastle General Hospital	4	1	25.00%
(iii) routine swabs from staff at the Babies' Hospital.....	131	11	8.4%
(iv) other sources	86	41	47.67%

Positive or doubtful cultures from suspected cases of diphtheria were subjected to detailed examination.

The following results were obtained :—

DIPHTHERIA TYPES.				B. Hofmanni.	Other bacilli, etc.	TOTAL.
Gravis.	Mitis.	Intermedius.	Atypical.			
257	105	99	35	18	125	639

VIRULENCE TESTS :—

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

76 cultures were submitted and the following results obtained :

Virulent	65
Non-virulent	9
<i>C. diphtheriæ</i> not isolated	2
	76

The following specimens were also submitted to the County Laboratory, Newburn, for animal inoculation and reports were received :—

For B. tuberculosis	Sputum	7
do.	Pus from bronchus	5
For sterility test	1 x 5 cc. Pooled human serum for measles	1
Total		13

AGGLUTINATION REACTIONS :—

(a) Enteric group	304
(b) Food-poisoning group ...	11
(c) Dysentery group	11
(d) Abortus-melitensis group	20
(e) Patient's own organism	3

349

349 specimens of blood were examined involving 739 agglutination reactions. The following table gives detailed results :—

	City Infectious Diseases Hospital.		Newcastle General Hospital.		General Practitioners, and Health Department.		TOTAL.	
Total No. of specimens received..	56		51		242		349	
	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.
B. typhosus H.	19	25	3	30	12	214	34	269
do. O.	4	9	....	3	....	1	4	13
B. paratyphosus A.	5	3	....	....	1	9	6	12
do. B.	14	31	2	31	16	210	32	272
Salmonella group	....	3	....	3	....	5	....	11
B. enter : gaertner	....	2	....	3	....	....	....	5
B. ærtrycke H.	1	4	1	3	....	5	2	12
do. O.	....	2	....	....	....	....	....	2
B. newport .....	....	2	....	1	....	....	....	3
B. dysenteriae	....	....	....	....	....	....	....	....
do. Sonne .....	....	2	....	4	....	5	....	11
do. Flexner W.	....	....	....	4	....	....	....	4
do. do. Z.	....	....	....	4	....	....	....	4
Brucella abortus.	2	4	....	8	1	5	3	17
do. melitensis	....	6	....	8	1	5	1	19
Patient's own organism .....	....	....	....	3	....	....	....	3
Total agglutinations	45	93	6	105	31	459	82	657
	138		111		490		739	

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.	TOTAL.
<i>B. typhosus</i> (fæces)	7	....	....	....	4	11
<i>B. paratyphosus</i> B. do.	33	1	....	....	3	37
<i>B. ærtrycke</i> do.	8	13	....	1	5	27
<i>B. thompson</i> do.	3	....	....	....	....	3
<i>B. newport</i> do.	5	1	....	....	2	8
<i>B. dysenteriae</i>						
Flexner do.	6	2	....	....	....	8
Sonne do.	19	10	1	1	17	48
Newcastle do.	....	1	....	....	....	1
Total positive (fæces, etc.)	81	28	1	2	31	143
Total negative (fæces)	200	192	23	11	74	500
(urine)	27	1	....	....	12	40
Aggregate number of fæces and urines ex- amined TOTAL	308	221	24	13	117	683

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

Cerebro-Spinal Fluids.—114 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.	Newcastle Dispensary.	Barrasford Sanatorium.	
Meningococci isolated	14	1	2	....	....	....	17
Tubercle bacilli isolated	8	1	1	....	....	1	11
Pneumococci isolated ....	....	1	....	....	....	....	1
Microc. flavus infection	....	....	1	....	....	....	1
Meningitis with incon- clusive indication of infecting organism	14	4	2	1	1	....	22
No definite evidence of meningitis	23	6	....	....	....	....	29
Cases undergoing treat- ment re-tested	27	4	2	....	....	....	33
TOTAL	86	17	8	1	1	1	114

MISCELLANEOUS EXAMINATIONS :—

These may be summarised as follows :—

CLASSIFICATION.	City Infectious Diseases Hospital.	Newcastle General Hospital.	Other sources.	TOTAL.
Blood cultures for organisms..	15	12	7	34
Pus, fluids, etc., for organisms	60	58	24	142
Smears from various sources, i.e., direct examinations for C. diphtheriæ, Vincent's An- gina, Malarial parasites, etc.	45	22	16	83
Urines for bacteriological ex- amination.....	21	28	1	50
Preparation of autogenous vac- cines from material supplied	....	12	....	12
Sputum, etc., cultured on Lowenstein-Jenson medium for tubercle bacilli	18	9	....	27
Sputum, etc., for isolation of pneumococci and type	3	5	....	8
(Where necessary mouse in- oculation was carried out by Dr. W. R. Logan, Royal Infirmary, Edinburgh.)				
Blood for hydatid complement fixation test .....	....	1	....	1
(Confirmed by Dr. F. A. Knott, Guy's Hospital, Lon- don.)				
Blood, sputum, etc., for evid- ence of psittacosis	1	2	1	4
(Examinations were carried out by Professor S. P. Bedson, Hale Clinical Lab- oratory, London Hospital, London.)				
TOTAL	163	149	49	361

Measles Serum.—One batch was prepared during the month of February.

Streptococci.—Grouping of streptococci according to Lancefield's classification was done in the laboratory on several occasions. Serum for this purpose was kindly provided by Dr. J. E. McCartney, Director of Research and Pathological Services, London County Council.

MILK EXAMINATIONS :—

Milk (Special Designations) Order, 1936.

During the year 1938, 927 samples of milk were examined at this laboratory according to the technique prescribed in Memo. 139/Foods (January, 1937), and the following results were obtained :—

	(a) Methylene blue test.				(b) Bacillus coli test.				Pasteurised (plate count only).		
	Total.	Satis- factory.	Unsatis- factory.	Percentage Unsatis- factory.	Total.	Satis- factory.	Unsatis- factory.	Percentage Unsatis- factory.	Total.	Satis- factory.	Percentage Unsatis- factory.
Tuberculin Tested or T.T. (Certified)	215	201	14	6.5%	215	187	28	13.0%	67	62	7.5%
Accredited.....	104	100	4	3.8%	104	99	5	4.8%			
Undesignated— (a) test only	185	170	15	8.1%	....	....	....	....
Undesignated— (a) and (b) tests	356	296	60	16.8%	356	280	76	21.3%			

Tuberculin Tested or T.T. (Certified)	215
Accredited	104
Undesignated	541
Pasteurised	67
TOTAL	927

WATER EXAMINATIONS :—

i. Weekly routine examinations of samples of water gave the following results in a total of 254 examinations :—

Class I.	B. coli not found in 100 ml. or less	177
Class II.	„ found in 100 ml. but not in less	58
Class III.	„ „ 10 ml. „	17
Class IV.	„ „ 1 ml. „	2
		<hr/>
		254
		<hr/>

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. As in previous years the number of organisms present was exceedingly low, and bacillus coli was not found in 100 ml. or less in any of the samples.

iii. In addition 36 samples of water were received for detailed examination, as follows :—

February.	From property at Fawdon.....	3
May.	From property at Kenton and Brunton Bridge	6
May.	From a private residence	1
June.	From various private residences.....	6
August.	„ „ „	3
August.	From various sources at Wylam.....	2
September.	From a well at Barrasford Sanatorium....	1
November.	Routine samples	6
December.	„ „	8
		<hr/>
		36
		<hr/>

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

CLASSIFICATION.	(1) City Infectious Diseases Hospital.	(2) Newcastle General Hospital.	(3) Newcastle Health Dept. and Practitioners.	TOTAL.
Swabs for <i>C. diphtheriae</i>	3,406	135	3,406	6,947
Swabs for Hæmolytic streptococci ...	272	4	217	493
Sputa for tubercle bacilli	6	....	466	472
Detailed examination and typing of <i>C. diphtheriae</i>	639	....	....	639
Agglutination tests :—				
(i) Enteric group	45	33	226	304
(ii) Food-poisoning group	3	3	5	11
(iii) Dysentery group	2	4	5	11
(iv) <i>Abortus-melitensis</i>	6	8	6	20
(v) Patient's own organism .....	....	3	....	3
Fæces, urine, etc., for the enteric- dysentery-food-poisoning groups ..	308	221	154	683
Blood cultures for organism	15	12	7	34
Cerebro-spinal fluids	86	17	11	114
Cultures on Lowenstein-Jensen med- ium for tubercle bacilli	18	9	....	27
Blood for hydatid complement fix- ation test .....	....	1	....	1
Material from suspected psittacosis..	1	2	1	4
Isolation and typing of pneumococci	3	5	....	8
Pus, fluids, etc., for organisms	60	58	24	142
Smears, for microscopical examina- tion for Vincent's angina, etc.	45	22	16	83
Urines for bacteriological examina- tion	21	28	1	50
Preparation of autogenous vaccines	....	12	....	12
Milk examinations :—				
(1) Combined methylene blue- coli test .....	....	....	675)	927
(2) Methylene blue test only .....	....	....	185)	
(3) Pasteurised (plate count) .....	....	....	67)	
Water examinations :—				
(1) for bacillus coli .....	....	....	254)	320
(2) for complete examination .....	....	....	36)	
(3) from the City Baths .....	....	....	30)	
Shell-fish (mussels) .....	....	....	3	3
<i>Specimens sent to County Laboratory, Newburn :—</i>				
Virulence tests on <i>C. diphtheriae</i>	76	....	....	76
Sputum for tubercle bacilli by animal inoculation .....	....	7	....	7
Pus from bronchus for tubercle bacilli by animal inoculation .....	....	5	....	5
Test for sterility of measles serum	1	....	....	1
TOTAL	5,013	589	5,795	11,397

RICHARD NORTON, M.B., Ch.B., D.P.H.,
Bacteriologist.

*Bacteriological Laboratory,
City Hospital for Infectious Diseases,
Walker Gate,
Newcastle upon Tyne,
31st May, 1939.*

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

IV.—TUBERCULOSIS.

**TUBERCULOSIS DISPENSARY,
BARRASFORD SANATORIUM.**

MEMORIAL OF THE
AMERICAN MEDICAL ASSOCIATION
AND THE
AMERICAN SURGEON-GENERAL
HARRISON C. SARGENT

IV-TUBERCULOSIS

TUBERCULOSIS
HARRISON C. SARGENT

TUBERCULOSIS.

Report of the Tuberculosis Medical Officer.

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I beg to submit my annual report for the year 1938. The arrangement of this report has been altered from that of previous years by its division into a preface and statistical report. This has been done because it is believed that by this method it can be made more interesting and readable.

PREFACE.

Clinics were held at the Tuberculosis Dispensary on weekday mornings, Tuesday and Thursday afternoons and Wednesday evenings. At these clinics both new and old patients were seen and no distinction was made at them between the sexes and adults and children. The new patients attended as sent by their own doctors and the old patients by a system of appointment in order to avoid unnecessary waiting.

Amongst the new patients were 512 "contacts." A contact is a person who is or has been recently living with a patient suffering from tuberculosis. It is important that contacts should be examined because amongst them there are always some unsuspected cases of tuberculosis. To arrange to carry out this examination is in many cases a difficult matter because most of the contacts are without symptoms and many are working and therefore cannot attend a clinic at the usual time, moreover a number adopt the attitude that they would rather not know if there is anything wrong.

The following were the different procedures adopted in order to get contacts examined. When a new case of tuberculosis was found the Tuberculosis Medical Officer seeing the patient advised that all contacts should be examined. Within a week of this, the patient's home was visited by a nurse who obtained the names and ages of all the people living with the patient. She also advised that these people, "the contacts," should be examined. The patient's general practitioner was also asked in many cases if he would help and send some of the contacts to the Dispensary.

When a death from tuberculosis occurred and the contacts in the house had not all been examined, a letter was sent to the head of the family pointing out the necessity for such examinations.

Contacts visiting the Sanatorium Pavilions, City Hospital for Infectious Diseases, Walker Gate, were interviewed on Wednesday afternoons and asked to submit to examination and X-ray while at the Hospital.

The Tuberculosis Medical Officer made routine visits to houses of patients and saw and examined contacts in the houses and also advised others to come to the Dispensary.

Every week a list of the names of children, who were contacts, was sent to the Senior Child Welfare Medical Officer and School Medical Officer who took special note of the children. The Senior Child Welfare Medical Officer carried out tuberculin tests in many cases and the School Medical Officer paid special attention to the children during routine medical examinations.

Each of these procedures was instrumental in getting some contacts examined.

New patients who attended the Dispensary for the first time were subject to a routine procedure with regard to their history taking and various examinations and tests. This was briefly as follows: A clerk first completed the necessary case papers and entries in registers, then a nurse interviewed the patient and obtained more medical details, finally she recorded the temperature and pulse and made the patient strip to the waist for physical examination. The patient was then seen by the doctor and examined, and if, as well as thoracic disease any other part of the body was suspect, this was also investigated. The patient then dressed and before going from the Dispensary was asked to leave a sample of urine and to take away a small bottle into which to expectorate the next morning before breakfast. This specimen of sputum was returned to the Dispensary for examination for tubercle bacilli. In many cases too, a sample of the patient's blood was taken by the doctor for a blood sedimentation test. During the year 214 of these tests were done. They were valuable in assessing the activity of a tuberculous lesion or, if normal, excluding the presence of tuberculosis in conjunction with the

other findings and X-ray evidence. Under ideal conditions this test would be done as a routine on all new patients, but pressure of work compelled a selection to be made.

The patient left the Dispensary with an appointment card marked for a return visit in one week and with an appointment to be X-rayed within a day or two at either the Sanatorium Pavilions, City Hospital for Infectious Diseases, Walker Gate, or Newcastle General Hospital. At whichever Hospital the X-ray was taken it was immediately interpreted by the Dispensary Medical Officer dealing with the patient and indexed and filed at the City Hospital for Infectious Diseases, Walker Gate. The total number of films thus filed is more than 12,000.

The patient's sample of sputum was examined and the records in the Dispensary completed by the writing up of the laboratory findings and X-ray film notes. If the evidence collected was then of urgent importance, the patient's doctor was communicated with at once by letter or telephone, otherwise the patient returned at the end of the week according to the appointment and received a letter which he took to his doctor. In both instances if treatment was necessary that which was suggested was detailed and the approval of his doctor obtained.

Suppose the sample of sputum was found to be free from tubercle bacilli, further specimens were obtained in every case possible and in some instances if the examination was still negative, culture on Loenstein's medium was carried out in the Health Department Laboratory. If the sample contained tubercle bacilli and the clinical and X-ray findings confirmed that result, one examination was sufficient at that time, but in all instances many subsequent examinations of sputum were made, especially in patients who had been attending the Dispensary for a number of years.

In a small number of children tuberculin tests were done and through the co-operation of the Senior Child Welfare Medical Officer some of these were carried out at the Welfare Centres. Any children with positive tuberculin reactions were X-rayed.

Many patients had several X-ray films taken at short intervals and a number were individually screened and the movements of the diaphragm recorded. Lateral views were also taken as necessary. The notes of the findings were in every case recorded

on the patient's folder and the films indexed and filed so that they are easily available at any time for reference. During the year 2,413 X-ray films were taken in connection with Dispensary work.

When the new Tuberculosis Dispensary is built much of this work will be done centrally in it and by this means time and unnecessary travelling of patients will be saved.

By arrangements with the Watch Committee all City Police Recruits are examined and X-rayed to exclude the possibility of tuberculous disease being present on enlistment. During the year 39 of these attended the Dispensary and all were found to be healthy.

Treatment was given to patients as necessary in one or other of the institutional beds controlled by the department. These 308 beds were distributed amongst the following institutions :—

<i>Institution.</i>	<i>No. of beds available for Newcastle patients.</i>	<i>Type of case admitted.</i>
Sanatorium Pavilions, City Hospital, Walker Gate	136	Pulmonary tuberculosis (Adults and Children).
Barrasford Sanatorium	79	Pulmonary tuberculosis (Adults).
Stannington Sanatorium....	20	Pulmonary tuberculosis (Children).
Stannington Sanatorium ...	20	Surgical tuberculosis (Children).
Newcastle General Hospital	41	Surgical tuberculosis (Adults and Children).
W. J. Sanderson Ortho- pædic Hospital School	12	Surgical tuberculosis (Children).

The Report of the Medical Superintendent of Barrasford Sanatorium will be found under a separate heading after this report of the Tuberculosis Medical Officer. It contains full details of all the patients treated in the Institution during the year.

All patients who returned home from any of the above institutions during the year and all persons on the Dispensary register were kept under careful observation and encouraged to attend the Dispensary by appointment at intervals. Each was examined on an average twice during the year. Most of them also had one or two radiographs taken. In addition, their homes were kept under supervision by the Dispensary visiting nurses. Those patients with tubercle bacilli in their sputum were visited once a month.

No medicinal treatment was carried out from the Dispensary. Leaflets dealing with the prevention of tuberculosis and other health matters were distributed. The magazine of the Health Department "Better Health" was issued monthly and was always in demand by patients and visitors.

A free supply of disinfectant was issued to cases of pulmonary tuberculosis for the disinfection of sputum mugs and flasks.

During the year there was an average of 70 out-patients receiving artificial pneumothorax treatment, and, while they were under supervision at the Dispensary, their treatment was done at the Sanatorium Pavilions, City Hospital, Walker Gate. Each case was screened before a refill. Refills were given on an average every two weeks and all cases had three or four routine radiographs taken during the year. This work is highly valuable but it absorbs a lot of the time of the medical and nursing staff. During the year there were three afternoon clinics and one evening clinic every week at which patients received their refills. Two or three cases were admitted from other neighbouring local authorities in order that artificial pneumothorax treatment could be carried out.

Thoracic Surgery.—The facilities offered by the Department of Thoracic Surgery at Newcastle General Hospital were used when it was thought that surgical intervention would benefit the patient. During the year the following cases were dealt with in that way :—

	<i>No. of cases.</i>
Division of adhesions.....	1
Phrenic evulsion	1
Thoracoplasty	1
Lobectomy	1

In addition, the Thoracic Surgeon visited the Sanatorium Pavilions, City Hospital, Walker Gate, in consultation with the Tuberculosis Medical Officer when occasion arose.

The work of the Voluntary Tuberculosis Care Council continued in a most satisfactory manner and, as the Secretary is the chief clerk of this department, the co-operation between the Care Council and Dispensary was very close. The following table sets out the chief activities of the Care Council which, however, issues

a separate report, copies of which may be obtained from the Honorary Secretary, Newcastle upon Tyne Voluntary Tuberculosis Care Council, 91, New Bridge Street, Newcastle upon Tyne, 2. During the year 235 new patients were referred to the Care Council for consideration. A summary of assistance given is tabulated below :—

	Number of Patients.
Loan of bed and bedding	20
Total number of beds and bedding on loan	108
Milk and Eggs	54
Outfits of clothing	93
Other assistance	15
Referred to other societies for help	15
Convalescent home treatment	11
Miscellaneous enquiries	26

During the year the Tuberculosis Medical Officer made 334 domiciliary visits in the City.

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 the latter and the Medical Services in the City has, as formerly, been most satisfactory.

The home conditions of every tuberculous patient were carefully considered and any living in overcrowded or unhealthy houses were particularly investigated. During the year 41 letters dealing with these people were sent to the Housing Department and Medical Officer of Health. As a result of these applications many received better houses. At the end of the year approximately 574 patients suffering from tuberculosis were living in Corporation Housing Estates.

Disinfection was carried out by the Sanitary Inspectors as necessary in houses after a death or change of address of a person suffering from pulmonary tuberculosis. Bedding and clothing were removed for steam disinfection, and attention was given to overcrowding and sanitary defects. During the year the Sanitary Inspectors made 1,184 visits and disinfected 784 rooms.

During the year the Tuberculosis Medical Officer gave 22 class lectures dealing with tuberculosis and in many cases these were illustrated with lantern slides and specimens. The lectures were as follows :—

Post-Graduate General Practitioners	2
Medical Practitioners (Diploma in Public Health Class)	5
Student Health Visitors	5
Student Sanitary Inspectors	5
Medical Students	2
Hospital Nurses	2
Nursing Association	1

In November the Tuberculosis Medical Officer had the pleasure of attending a Post-Graduate Course lasting one week at Brompton Hospital, London, which was interesting and helpful. He wishes to again tender thanks to the Health Committee for sending him.

STATISTICAL REPORT.

The remainder of this report gives the statistical details of notifications, deaths, family history, home accommodation, institutional treatment and some of the tables given in the Annual Returns to the Ministry of Health.

Notifications.—692 notifications were received during the year, but some were duplicates, so that the total number of new cases was 639, of whom 481 were certified to be suffering from “pulmonary” and 158 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, 1938.

(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.....		8	14	6	53	22	55	45	55	30	12	300	319
Females		9	7	10	40	32	38	24	13	8	....	181	198
Non-Pulmonary--													
Males.....	2	13	9	13	15	5	2	8	3	....	2	72	79
Females	1	10	21	18	15	6	6	4	3	....	2	86	96
TOTALS	3	40	51	47	123	65	101	81	74	38	16	639	692

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 639 cases notified, 556 attended the Dispensary and 29 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 25 patients in this category, and 13 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 16 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 1938. 320 of the 481 patients notified as suffering from pulmonary tuberculosis were treated in beds belonging to, or controlled by the City Council, and 73 out of a total of 158 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 137 (equal to 21 per cent.) of all the new cases died in the same year as they were notified.

NOTIFICATIONS OF TUBERCULOSIS DURING 1938.

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	300	276	11	79	131	9	....	219	60
Female	181	161	7	36	61	4	....	101	40
Non-Pulmonary—									
Male	72	51	5	....	....	6	32	38	21
Female	86	68	6	....	....	7	28	35	16
TOTALS	639	556	29	115	192	26	60	393	137

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 199 cases (31.1 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
1938.....	844	632	1,476	229	242	471	1,947

Deaths.—There were 293 deaths from tuberculosis of Newcastle-upon-Tyne residents. 249 pulmonary and 44 non-pulmonary, giving a death rate per 1,000 population—

	Number of Deaths.	Death Rate per 1,000 Population.
Pulmonary Tuberculosis	249	0.85
Non-Pulmonary	44	0.15
All forms of Tuberculosis	293	1.00

The death rate is steadily falling and there is every reason to expect it to continue to do so.

Page 43A in the Report of the Medical Officer of Health gives further particulars of deaths from tuberculosis.

The period between notification and death averaged 27.5 months for all cases, 29.3 months for adult males, 25.6 months for adult females, and 5.6 months for children.

26 per cent. of the patients had either not been notified prior to death (6.8 per cent.) or died within 3 months of notification (19.2 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.	Average for 1933-37.	1938.		
						M.	F.	Total
Persons not notified	43	51	33	23	16	9	5	3
" notified under 1 mth.	35	47	50	38	31	17	4	...
" between 1 and 3 "	94	48	44	45	29	15	11	1
" between 3 and 6 "	53	30	38	36	27	15	12	...
Total under 6 months ..	226	183	166	140	103	56	32	4
Persons notified between—								
6 and 12 months ..	47	46	40	36	29	16	16	...
" 12 and 18 " ..	28	21	25	22	22	13	4	...
" 18 and 24 " ..	15	15	17	17	16	6	5	...
" 2 and 3 years	20	18	22	21	23	13	9	1
" over 3 years	21	47	53	59	70	51	23	...
TOTALS	357	331	324	296	263	155	89	5
								249

The figures for non-pulmonary forms of tuberculosis show that in 16 instances out of 44 deaths, the disease had not been notified prior to death ; 3 of the 17 fatal unnotified cases of pulmonary tuberculosis, and 12 of the 16 fatal unnotified cases of non-pulmonary tuberculosis, died in hospitals ; included in the 16 " other forms " were 11 cases of tuberculosis meningitis.

Family History.—In 78 instances amongst the 235 cases of pulmonary tuberculosis known to the Dispensary who had died during the year, *i.e.*, in 33.2 per cent., there was a history that some near relation was suffering from, or had died of pulmonary tuberculosis. The figures were 30.9 per cent. for males and 37.1 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 235 persons were as follows :—

Rooms in Dwelling.	1	2	3	4	More than 4	Institutions.	Common Lodging Houses.	Not Known.	Total.
Deaths	9	41	60	64	44	3	5	9	235

As regards the type of house occupied, 87 were flats, 45 tenements, 86 self-contained, 5 were common lodging houses, 3 institutions, and in 9 cases the particulars were not known.

It is noteworthy that of the 226 patients suffering from pulmonary tuberculosis who attended the Dispensary and died in 1938, 207, or 91.6 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.

Sanatorium Pavilions, City Hospital, Walker Gate.—425 patients were admitted (274 males and 151 females) and included 56 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 1938.

		Sex	In Institution on 1st January, 1938.	Admitted during the Year.	Discharged during the Year.	Died in Institution during the Year.	In Institution on 31st Dec., 1938.
Number of Patients.	Adults	M.	34	219	148	56	49
	Do.	F.	35	102	93	23	21
	Children....	M.	1	4	4	....	1
	Do.	F.	3	6	7	....	2
Observation Cases.	Adults	M.	4	46	35	5	10
	Do.	F.	6	30	30	2	4
	Children....	M.	3	5	7	....	1
	Do.	F.	2	13	15	....	....
TOTALS.....	....	....	88	425	339	86	88

N.B.—28 patients were re-admitted and are counted as 56 admissions.
3 patients were re-admitted twice and are counted as 6 admissions.

Included in the above table are 2 extra mural cases admitted and 3 discharged, 1 remaining in hospital at the end of the year.

Of the 94 patients discharged who had been under observation 47 were found to be suffering from tuberculosis. The total number of days of those who received treatment was 34,445 giving an average length of stay as 81 days.

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

	Males.	Females.	Total.
Improved	135	90	225
Without Improvement	59	55	114
Died in Hospital	61	25	86
TOTALS	255	170	425

Many of those discharged "improved" were fit for light work ; 41 were transferred to Barrasford Sanatorium and 4 to Stannington Sanatorium. 11 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 3,203 thoracic films were taken. These included 2,126 Dispensary patients, 416 inmates of the Sanatorium Pavilions, 326 patients from the City Hospital for Infectious Diseases, 287 in connection with artificial pneumothorax treatment and 48 nurses and maids belonging to the staff of the Hospital. In addition, 2,936 routine screen examinations were made, 1,736 in connection with artificial pneumothorax refills, and 1,200 to patients in hospital.

Artificial Pneumothorax.—There were 43 initial inductions of artificial pneumothorax and 1,736 refills performed at the Sanatorium Pavilions, City Hospital, Walker Gate, during the year. Since the year 1922, 482 patients have received this form of treatment.

NEWCASTLE GENERAL HOSPITAL.

113 patients were admitted (59 males and 54 females). Details are given in the following table :—

PATIENTS WHO RECEIVED TREATMENT IN NEWCASTLE GENERAL HOSPITAL DURING THE YEAR 1938.

	Sex	In Institution on 1st Jan., 1938.	Admitted.	Discharged.	Died in Institution.	In Institution on 31st Dec., 1938.
Pulmonary.... Adults	M.	1	3	2	2	....
Do. Do.	F.	....	4	4	....	....
Non-Pulmonary Do.	M.	21	46	27	14	26
Do. Do.	F.	7	27	21	4	9
Do. Children	M.	4	10	9	3	2
Do. Do.	F.	2	23	20	2	3
TOTALS.....		35	113	83	25	40

5 patients were re-admitted and are counted as 10 admissions.

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

	Males.	Females.	Children.	Totals.
Improved	20	22	24	66
Without Improvement	9	3	5	17
Died in Hospital	16	4	5	25
TOTALS	45	29	34	108

The total number of days of those who received treatment was 16,792, giving an average length of stay of 154 days.

STANNINGTON CHILDREN'S SANATORIUM.

40 beds are maintained at this Institution for the treatment of Newcastle upon Tyne patients. These were kept fully occupied throughout the year and 63 children completed treatment. The details are shown in the following tables :—

CHILDREN WHO RECEIVED TREATMENT IN STANNINGTON SANATORIUM
DURING THE YEAR 1938.

	In Sanatorium on 1st Jan., 1938.	Admitted.	Dis- charged.	In Sanatorium on 31st Dec., 1938.
Pulmonary Males	10	22	21	11
Do. Females	11	17	19	9
Non-Pulmonary Males	12	9	12	9
Do. Females	7	17	11	13
TOTALS	40	65	63	42

The total number of days of those who received treatment was 15,004, giving an average length of stay of 238 days.

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

	Males.	Females.	Total.
Disease quiescent	19	15	34
Improved	10	13	23
Without Improvement	4	2	6
TOTALS	33	30	63

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

12 beds are maintained at this Institution and 4 patients have been admitted (3 males and 1 female). Details are given in the table below :—

	In Institution on 1st Jan., 1938.	Admitted.	Dis- charged.	In Institution on 31st Dec., 1938.
Non-Pulmonary, Males	11	3	6	8
Do. Females	1	1	....	2
TOTALS	12	4	6	10

Included in the discharges are 4 children much improved and 2 deaths.

RETURN SHOWING THE WORK OF THE DISPENSARY.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY.				TOTAL.				GRAND TOTAL.	
	Adults.		Children.		Adults.		Children.		Adults.		Children.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
A.—NEW CASES examined during the year (excluding contacts) :—														
(a) Definitely tuberculous	226	112	6	9	22	25	21	35	248	137	27	44	456	
(b) Diagnosis not completed .....	.....	.....	.....	.....	.....	.....	.....	.....	26	21	13	34	94
(c) Non-tuberculous .....	.....	.....	.....	.....	.....	.....	.....	.....	340	291	128	105	864
													1,414	
B.—CONTACTS examined during the year :—														
(a) Definitely tuberculous	12	23	12	5	1	....	1	3	13	23	13	8	57
(b) Diagnosis not completed .....	.....	.....	.....	.....	.....	.....	.....	.....	5	5	17	6	33
(c) Non-tuberculous .....	.....	.....	.....	.....	.....	.....	.....	.....	81	182	69	90	422
													512	
C.—CASES written off the Dispensary Register as :—														
(a) Recovered	49	19	....	....	25	11	6	3	74	30	6	3	113
(b) Non-tuberculous (including any such cases previously diagnosed and entered on the Dispensary Register as tuberculous) .....	.....	.....	.....	.....	.....	.....	.....	.....	421	480	201	208	1,310
													1,423	
D.—NUMBER OF CASES on Dispensary Register on 31st December :—														
(a) Definitely tuberculous	718	513	69	76	104	126	111	111	822	639	180	187	1,828	
(b) Diagnosis not completed .....	.....	.....	.....	.....	.....	.....	.....	.....	32	17	31	20	100
													1,928	
1. Number of cases on Dispensary Register on 1st January			1,859		2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years								29	
3. Number of cases transferred to other areas, cases not desiring further assistance under the tuberculosis scheme, and cases "lost sight of"			203		4. Cases written off during the year as Dead (all causes)								260	
5. Number of attendances at the Dispensary (including Contacts)			9,407		6. Number of Insured Persons under Domiciliary Treatment on 31st December								Nil	
7. Number of consultations with medical practitioners :— (a) Personal			10		8. Number of visits by Tuberculosis Officers to homes (including personal consultations)								334	
(b) Other			1,160											
9. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes			10,992		10. Number of :— (a) Specimens of sputum, etc., examined								1,308	
					(b) X-ray examinations made								2,126	
					in connection with Dispensary work									
11. Number of "Recovered" cases restored to Dispensary Register, and included in A(a) and A(b) above			8		12. Number of "T.B. plus" cases on Dispensary Register on 31st December								677	

ANNUAL RETURN showing in SUMMARY FORM (a) the CONDITION at the END of 1938 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.

ANNUAL RETURN SHOWING IN SUMMARY FORM (a) THE CONDITION AT THE END OF 1936 OF ALL PATIENTS REMAINING ON THE DISPENSARY REGISTER; AND (b) THE REASONS FOR THE REMOVAL OF ALL CASES WRITTEN OFF THE REGISTER.

The total number of days of those who received treatment was 2,993, giving an average length of stay of 499 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.

Tables T145 and T145a of Memo. 37/T (Revised) are reproduced herewith and are self-explanatory.

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,

8th May, 1939.

BARRASFORD SANATORIUM.

Report of the Medical Superintendent.

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I beg to submit a report on the work at Barrasford Sanatorium during the year 1938.

General.—There has been no change in the number of patients accommodated. The total is 95; 57 being allocated to male patients and 38 to females. By this arrangement a few single rooms are secured 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.

Dr. A. E. Paxton relinquished his post as Assistant Medical Officer at the Sanatorium in September, and was followed by Dr. P. B. Crone.

During the year a considerable amount of interior painting was completed, and all the roofs were included. The onset of severe weather earlier than usual has prevented the completion of the latter, but resumption of work is expected and undoubtedly it will be completed before the finish of the financial year.

A further length of roadway has been macadamised, and the completion of the work is now within sight. The first section of this work was completed in 1932.

Following on the provision of a new ironing callender in the laundry in 1936, and a new hydro extractor in 1937, this year has seen the provision of a modern washing machine. The laundry is now equipped with up-to-date machinery, capable of dealing with the large amount of material which passes through it.

The re-flooring in composition of the Upper West Sanitary Annexe is a great improvement, and it is hoped that one of the remaining 3 will be included each year until completed.

The tiling of the Servery floor, to match the kitchen, which was completed last year, is in progress and almost finishes a re-furnishing of the kitchen and its environments.

X-ray Plant.—The single valve set installed in 1937 continues to give moderately good films.

A film is taken of each patient on admission, and subsequently when it is thought desirable, and during the year 310 films were completed and the interpretations recorded in the patients' notes.

The screening of lung collapse treatment cases has continued, and 945 screenings were performed and the appearances seen indicated by a diagram in the 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	253
Fillings	65
Temporary fillings	21
Scalings	24
Attention to dentures.....	1
Dressings	3
Examinations	11

The total number of attendances was 330.

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 5,700; the women worked 5,704 hours and the men 5,696.

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 217, seven less than in the previous year. The number of Newcastle admissions was 169, as against 170 in 1937. Gateshead Corporation had 33, West Hartlepool Corporation had 14, and South Shields Corporation had one case.

Of the 217 admitted cases, 14 had been in the Sanatorium previously as follows :—

1	of the re-admitted cases	was first admitted in.....	1929
1	"	"	1932
3	"	" were "	1933
2	"	" "	1934
1	"	" was "	1935
3	"	" were "	1936
3	"	" "	1937

Of these 14 re-admitted cases, 12 had had at some time or other tubercle bacilli demonstrated in the sputum, and in two cases tubercle bacilli had never been seen.

ADMISSIONS TO THE SANATORIUM DURING 1938.

Authority.	Male.	Female.	Total.
Newcastle Corporation	102	67	169
Gateshead Corporation	33	....	33
West Hartlepool Corporation	6	8	14
South Shields Corporation .....	....	1	1
	141	76	217
During 1937.....	145	79	224
During 1936.....	130	62	192
During 1935.....	123	72	195
During 1934.....	104	54	158
During 1933.....	108	51	159
During 1932.....	114	54	168
During 1931.....	125	60	185
During 1930.....	121	65	186
During 1929.....	124	54	178

NOTE.—Figures relating to the years 1921-1928 are given in the Report for the year 1932.

Discharges.—There were 229 discharges during 1938, as compared with 216 in 1937. There were no deaths in the Sanatorium during the year.

DISCHARGES FROM THE SANATORIUM DURING 1938.

Authority.	Male.	Female.	Total.
Newcastle Corporation	111	70	181
Gateshead Corporation	33	....	33
West Hartlepool Corporation	7	6	13
South Shields Corporation .....	....	1	1
Middlesex County Council.....	1	....	1
	152	77	229
During 1937.....	145	71	216
During 1936.....	124	66	190
During 1935.....	137	68	205
During 1934.....	97	47	144
During 1933.....	108	57	165
During 1932.....	111	60	171
During 1931.....	124	60	184
During 1930.....	131	59	190
During 1929.....	115	54	169

NOTE.—Figures relating to the years 1921-1928 are given in the Report for the year 1932.

SUMMARY OF MOVEMENTS OF PATIENTS DURING 1938.

Authority.	In residence night of Dec. 31st, 1937.	Admitted during 1938.	Discharged during 1938.	In residence night of Dec. 31st, 1938.
Newcastle Corporation	69	169	181	57
Gateshead Corporation	10	33	33	10
West Hartlepool Corporation	5	14	13	6
South Shields Corporation.....	....	1	1	....
Middlesex County Council.....	1	....	1	....
	85	217	229	73

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 229, 10 exhibited no definite signs or symptoms 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 219 cases of definite tuberculosis.

(*a*) Length of stay—

The average duration of treatment of all cases was 152 days.
 Excluding the 10 non-tuberculous cases, 156 days.
 The 181 Newcastle cases alone averaged 156 days.
 The longest stay was 504 days, the shortest 3 days.

(*b*) Beds occupied and patient days—

Average number of beds occupied, 88. 51 by males, and 37 by females.
 Total number of patient days was 32,140. 18,568 male, and 13,572 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	71.83	26,218
Gateshead Corporation	9.96	3,636
West Hartlepool Corporation	5.89	2,151
Middlesex County Council .....	.14	51
South Shields Corporation.....	.23	84

(*c*) Age—

Years.	Male.	Female.	Total.
16-20	33	20	53
20-25	19	20	39
25-30	14	14	28
30-35	24	8	32
35-40	14	5	19
40-45	15	3	18
45-50	8	3	11
50-55	11	....	11
55-60	7	....	7
60-65	1	....	1
TOTAL	146	73	219

(d) Social Status—

	Male.	Female.	Total.
Single	74	57	131
Married	71	12	83
Widowers.....	1	....	1
Widows .....	....	4	4
TOTAL	146	73	219

(e) Occupations of 146 Male Patients—

Engineering and metal workers	25
Labourers	10
Clerks	10
Machinists.....	5
Miners	4
Insurance agents	4
Salesmen	4
Bar Managers and barmen	4
Grocers.....	4
Electrical engineers	3
Postmen	3
Painters	3
Bricklayers	3
Joiners	3
Motor mechanics and drivers	3
Blacksmiths	2
Patternmakers	2
Drillers	2
Plumbers	2
Gas fitters.....	2
Master mariners	2
Tram drivers	2
Ex-soldiers.....	2
Hairdressers	2
Riveters	2
Compositors	2
Shop assistants	2

and one each of the following :—civil engineer, canvasser, mechanical excavator driver, electrician, schoolboy, grinder, office boy, blacksmith's hammer driver, railway worker (outside), laboratory assistant, cinema manager, ice cream vendor, whitesmith, draper, musical director, steel erector, draughtsman, coal merchant, handyman, brewer's drayman, machine man, surgical leather-worker, errand boy, commission agent, lamp inspector, commercial traveller, printer, pottery caster, bus conductor, seaman, hotel porter, shoe repairer, chef, and one had no occupation. Total 146.

(f) Occupations of 73 Female Patients—

Housewives	14
Clerks and typists	10
Shop assistants	10
Domestic servants	8
Hairdressers	4
Nurses	4
Machinists	2
Laundresses.....	2
Tailoresses	2

and one each of the following :—housework at home, bakeress, waitress, cardboard box maker, stewardess, bottle washer, collector, bookbinder, swimming bath attendant, box maker, sandpaperer, packer, sugar boiler, school teacher, french polisher, warehouse assistant, and one had no occupation. Total 73.

Diagnosis.

The diagnosis of pulmonary tuberculosis was confirmed bacteriologically either before admission or during residence in 136 cases (89 males and 47 females). 71 patients (50 males and 21 females) were apparently without tubercle bacilli in the sputum, and 12 patients (7 males and 5 females) said they had no expectoration ; making 83 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	10
Definite pleural tuberculosis without evidence of lung tuberculosis	36
Definite physical signs and X-ray evidence of lung tuberculosis without demonstrable bacilli.....	47

In the cases of the 47 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. 148 sputum examinations were made in connection with these 47 cases, and as 14 had no sputum the average examinations in those that had, was three each. 1,205 sputum examinations were made at the Sanatorium during the year ; of these 536 were positive as regards the presence of tubercle bacilli, and 669 were negative. 972 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 10 cases were discharged as not suffering from pulmonary tuberculosis, and the diagnoses in these cases were as follows :—

No pathological condition detected.....	5
Chronic bronchitis	1
Bronchial carcinoma	1
Bronchial dilatation	1
Pregnancy	1
Empyema (streptococcal)	1

These 10 non-tuberculous cases were included in the 16 patients sent for observation for the purpose of making a diagnosis. Of the remaining six, one was found to be suffering from pleural tuberculosis and five 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 .....	....	....	....	....	3	1	2	....
Non-tuberculous	1	....	1	....	1	1	3	3

The use of lipiodol in diagnosis was only necessary in one case, and the lipiodol bronchogram produced showed the characteristic appearances of a limited bronchiectasis.

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.

104 of the 219 definite cases of tuberculosis were found to have normal temperatures during the whole of their residence, whilst 115 patients were feverish at some time or other of their treatment in the Sanatorium.

Afebrile throughout Treatment.	Febrile on Admission, Afebrile on Discharge.	Febrile Intermittently.	Febrile throughout Treatment.	Afebrile on Admission, Febrile on Discharge.
104	62	33	18	2

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 probably be attained by any other means.

It is naturally most useful in the case 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 five cases; in four it was successfully performed, and in one it could not be accomplished. To obtain better collapse, phrenic evulsion was performed in one case, and crushing of the phrenic nerve in another.

64 of the 219 tuberculous cases discharged in 1938 were considered to be suitable for treatment by lung collapse, but in 16, changes in the chest in the course of the disease on the chosen side prevented the treatment from being carried out.

Of the 48 cases treated, 17 were right sided and 31 left, and of these 37 showed definite clinical improvement, 14 of them losing the bacilli previously present in the sputum, whilst in four others bacilli had never been demonstrated. In the remaining 11 cases the lung collapse was discontinued after a longer or shorter period as it failed to control symptoms.

In addition to the above, 20 other cases had had lung collapse induced before admission. In 14 of them the effect was clinical improvement, 10 of them losing their bacilli.

In connection with the above cases discharged in 1938, 814 insufflations of air were performed, whilst during the year the total number of such operations was 764.

Since 1922, 536 cases have been treated by lung collapse at Barrasford, exclusive of those cases where it was induced before admission—which total 112.

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 136 cases with tubercle bacilli in the sputum, 42 either had no sputum or were T.B.— on discharge. Of this number 24 were amongst the 56 cases where an effective artificial pneumothorax had been induced.

Amongst the cases without tubercle bacilli in the sputum are included 36 cases of pleural tuberculosis.

Fluid in the pleural space, without evidence of lung disease, unless there is some other definite cause, is due to tuberculosis of the pleura. With adequate treatment, such cases usually make a good recovery, though one of the above developed tuberculous meningitis and another a tuberculous knee joint whilst in the Sanatorium.

The tuberculosis of the pleura in these cases is not primary, but is secondary to active tuberculosis elsewhere, usually in the mediastinal glands, and the object of treatment is to secure encapsulation of the preceding focus, so that further dissemination of tubercle bacilli is avoided. It is for this reason that all pleural cases are urged to complete six months treatment, and the results over many years are excellent.

It is satisfactory therefore that more and more pleural cases are reaching the sanatorium, indicating that the need for sanatorium treatment in these cases is being recognised.

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 219 cases discharged, only 86 could be regarded as cases of limited disease, whilst 133 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. 1,167 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 219 definite cases, and the 10 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.
219 definite cases.	{ Gained weight...	74	68	49	....	....	....	....	191
	{ Lost weight .....	....	....	....	....	16	3	....	19
	{ Stationary .....	....	....	....	5	....	....	....	5
	{ Not weighed on discharge .....	....	....	....	....	....	....	4	4
	Total	74	68	49	5	16	3	4	219
10 non- tuber- culous cases.	{ Gained weight...	6	3	....	....	....	....	....	9
	{ Lost weight .....	....	....	....	....	1	....	....	1
	{ Stationary .....	....	....	....	....	....	....	....	....
	{ Not weighed on discharge .....	....	....	....	....	....	....	....	....
	Total	6	3	....	....	1	....	....	10

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 219 cases of lung or pleural tuberculosis can be set out as follows :—

T.B. Minus.				
	M.	F.	Total.	
Quiescent	11	10	21	} =83 T.B. Minus.
Improved	38	16	54	
No Material Improvement..	8	....	8
T.B. Plus.				
	M.	F.	Total.	
G.1 { Quiescent	} =136 T.B. Plus.
G.1 { Improved	3	....	3
G.1 { No Material Improvement..	....	....	....
G.2 { Quiescent	1	1	} =136 T.B. Plus.
G.2 { Improved	45	30	75	
G.2 { No Material Improvement..	15	7	22	
G.3 { Quiescent	} =136 T.B. Plus.
G.3 { Improved	6	4	10	
G.3 { No Material Improvement..	20	5	25	

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 Assistant Medical Officers and of the Matron (Miss F. Baguley, A.R.R.C.), and the 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,
20th March, 1939.*

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**REPORT OF THE
MEDICAL SUPERINTENDENT
NEWCASTLE GENERAL HOSPITAL.**

**V.—GENERAL DISEASES
HOME AND HOSPITAL.**

**DOMICILIARY MEDICAL SERVICES,
NEWCASTLE GENERAL HOSPITAL.**

REPORT OF THE
MEDICAL SUPERINTENDENT
NEWCASTLE GENERAL HOSPITAL

V. GENERAL DISEASES
HOME AND HOSPITAL

HOSPITALARY MEDICAL SERVICES
NEWCASTLE GENERAL HOSPITAL

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.

The following table gives particulars of the work carried out during 1938 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.....	1,539	2,601	2,917
10	Dr. T. J. Ryan.....	1,630	3,870	6,250

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. It includes reports on the activities of the special departments and from these it will be seen that they are being utilised more and more and particularly by the outside authorities. This fact is one which must be considered when reference is made to the overtaking of the available accommodation. Only a very small proportion of the cases admitted to the special departments belong to the City. The arrangements for the admission of the outside patients are working quite efficiently now, although it has meant a large increase in the work of the clerical staff.

Again I have to report an increased activity in all departments of the Hospital, the admissions having increased by 553 and the discharges by 599. As in former years these increases have occurred chiefly in women, and in children under three years of age. It has been found necessary to make constant use of the extra beds put up in the wards and day rooms. It has been quite impossible to admit the number of dental cases sent to Hospital, only the very urgent ones being treated. The number of extractions under a general anæsthetic was 160. From what I have seen there would appear to be ample work to justify the establishment of a dental clinic in the Hospital.

During the year 3,822 letters have been sent out to doctors, with reports regarding their patients; of these 1,573 referred to medical and 2,249 to surgical cases.

The Sunday Morning Lectures continued and at these the attendance was well maintained. Expressions of appreciation of these lectures are frequently made.

The course of lectures and demonstrations for Undergraduates was also continued, and at these attendance was good.

The number of cases of pulmonary tubercle was again higher than in the previous year, both as regards adults and children. These of course include patients admitted for surgical treatment. There was, however, a considerable reduction in the number of

cases of non-pulmonary tubercle, both in adults and in children. During the year a number of children were transferred to Stan-nington Sanatorium and the W. J. Sanderson Orthopædic Hospital. I would take this opportunity of expressing my appreciation of the willing co-operation of the Tuberculosis Medical Officer.

The work in the Maternity Ward continues to increase, 694 cases having been dealt with compared with 545 in the previous year. In spite of the limited accommodation nothing of an untoward nature occurred, reflecting to the credit of the medical and nursing staff. With the start of the alterations to D. Block it was necessary to use the bottom floor of E. Block and this arrangement has proved quite satisfactory. With the completion of the new Maternity Block, E. Block will be taken over for the Joint Committee Clinic cases. The Female Clinic Cases are now occupying the upper floor of this Block. Quite a large number of the admissions to the Maternity Ward were paying patients. It was found necessary to refuse admission to a large number of patients from outside the City.

The number of patients admitted to the Mental Wards was again high, viz. :—401, compared with 413 in the previous year. It was found necessary to transfer to the City Mental Hospital 24.5% of the males and 40.9% of the females. This is a lower proportion in the case of the males and a higher in the case of the females than usually occurs. A larger number were dealt with as voluntary patients.

The suggestion put forward in last year's report has become an accomplished fact, weekly visits being made by members of the Medical Staff to the Mental Wards for the purpose of consultation. This arrangement I consider to be materially advantageous.

The incidence of infectious disease both among patients and nursing staff was considerably lower than in the previous year. It is very satisfactory to be able to report that the number of cases of dysentery in children was very much reduced, the whole of these practically having been admitted suffering from the disease.

The opening of the Main Children's Block during the year has filled a long felt need in the work of the Hospital. The accommodation available for the treatment of sick children is now very satisfactory and this should be reflected in the results

obtained. An increase in the brightness and animation of the children treated in the new wards is a very interesting and noticeable feature. This I attribute to the type of wards with the glass partitions, the children not having the feeling of being isolated and shut off from both the other patients and the staff.

Operations in the Theatres increased by 669 and it will be seen from the list that the increase was mainly in the major operations. Dental extractions were lower than in 1937. The two Theatres available are not adequate for the amount of operative work performed and this has given rise to complaints which have been very difficult to meet. It has also added to the difficulties of the Theatre nursing staff. I, however, anticipate that with the opening of the new Theatre in D. Block the position will be materially improved.

There was a reduction of thirty-six in the number of patients admitted suffering from miscarriage. Again I have to report that a number of these could not be described as natural, but in no case was it possible to take proceedings, although in several the Police were notified.

There was a large increase in the number of paying patients admitted as will be seen from the following returns :—

1931	...	63	1935	...	218
1932	...	105	1936	...	308
1933	...	124	1937	...	373
1934	...	170	1938	...	486

Had accommodation been available the number could have been very greatly increased. As I have already reported it was found necessary to refuse admission to the Maternity Ward of all cases outside the City, and these of course were all prepared to pay the full costs of maintenance and treatment. I might also add that very great disappointment was expressed by many of these patients when they could not be admitted.

As was anticipated the appointment of the second Masseuse has been fully justified by the increase in the amount of treatment given in the Massage Department.

A special report on the work in the X-ray Department is submitted by the Radiologist and it will be noted that there was an increase of over 1,000 in the number of cases.

During the year under review the Deep X-ray Therapy Department started operations and although it has been functioning for only six months the results being obtained are very gratifying and this should prove an important adjunct to the treatment available in the Hospital.

The number of prescriptions dispensed for Domiciliary Medical Service patients was 25,169, a reduction of 1,343 on the previous year. Some of the prescriptions, however, contain several items. In the case of one family, for example, with three prescriptions, there were eleven different items. The Assistant Dispenser's time is fully occupied in this part of the dispensing. This service also is responsible for considerable congestion in the Out-patient Department.

As regards diabetic patients there were 818 attendances for the supply of insulin, etc. The facilities in the Out-patient Department are hopelessly inadequate as regards the admission of patients, and this matter should be dealt with as soon as possible. This also applies to the Dispensary.

The number of cases admitted from other districts continues to increase, and, as has already been mentioned, with very few exceptions these were for treatment in one of the special departments.

The number of nurses admitted to the sick ward was 66, a considerable reduction on the previous year. Of these seven were under treatment more than once. There was a remarkable absence of infectious disease, there being only one case of measles. One nurse had to be transferred to Barrasford Sanatorium, but returned a few weeks later. She unfortunately died early this year from an acute infection of the spine.

The following were the outstanding diseases for which treatment was necessary :—

Septic Throats	20	Jaundice	2
Septic Fingers.....	8	Measles	1
Appendicitis	3	Pleurisy	1

In November, the Matron, Miss A. Baron, retired after twenty-five years' service and was succeeded by Miss J. D. R. Gibson.

It has not yet been possible to introduce the 48-hour week for the nursing staff, but it is hoped that with the proposed addition to the Nurses' Home, this may be managed.

Again I would like to express my appreciation of the manner in which the nursing duties have been carried out under the strenuous and exacting conditions which have existed during the year. The general overcrowding of the wards and the very many seriously ill cases have called for considerable patience and energy, particularly in the surgical wards.

Professor Thomas Beattie, having reached the retiring age relinquished his duties as Medical Director and was succeeded by Professor Wm. Hume. I would take this opportunity of recording my personal thanks for the co-operation and valuable assistance always readily and willingly given by Professor Beattie.

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 the Hospital.

ADMISSIONS AND DISCHARGES, ETC., FOR THE YEAR
ENDED 31st DECEMBER, 1938.

	<i>Males.</i>	<i>Females.</i>	<i>Children.</i>	<i>Total.</i>
Admissions	2,736	3,628	1,990	8,354
Discharges	2,734	3,655	1,968	8,357
Of the Discharges—Cured			3,987	
Relieved.....			3,283	
Died.....			1,087	
Total.....			<u>8,357</u>	

TABLE OF AGES OF PATIENTS TREATED.

Men over 60.....	927
Women over 60.....	769
Men under 60.....	1,807
Women under 60.....	2,886
Boys, 3-16.....	385
Girls, 3-16.....	397
Children under 3.....	1,186
	<u>8,357</u>

TRANSFERS FROM OTHER HOSPITALS, HOMES AND AUTHORITIES.

Royal Victoria Infirmary	56 (Includes 29 Ob.Wd. cases)
Gateshead County Borough	6
Gateshead P.A.C.	21
Gateshead Tuberculosis Care Committee	26
Shotley Bridge Colony	4
South Shields County Borough	1
South Shields Health Committee	6
South Shields P.A.C.	4
Northumberland County P.A.C.	54
Northumberland County Health Committee	16
North Riding of Yorkshire C.C.	2
North Riding of Yorkshire P.A.C.	3
Durham County P.A.C.	13
Durham County Health Committee	45
Tynemouth County Health Committee	1
Tynemouth P.A.C.	12
Tynemouth County Borough	1
Cumberland P.A.C.	1
Sunderland County Borough	1
Prudhoe Hall Colony	1
West Hartlepool P.A.C.	2
London County Council	1
Middlesbrough P.A.C.	3
PRIVATE CASES ADMITTED	486
INQUESTS HELD :—	
Hospital cases	56

OPERATIONS

FOR YEAR ENDED 31st DECEMBER, 1938.

Abdominal	786
Gynæcological	252
Thoracic	367
Orthopædic	135
Genito-Urinary	450
Nose, Throat, Ear and Eye	229
Blood Vessels	63
Rectum	17
Brain and Special Cases	179
Skin and Subcutaneous Tissues	472
Examination under anæsthetic	144
Amputations	29
Teeth	160
Radium	6
Plastic Cases	7
Teeth extracted under local anæsthetic	6
Transfusions	86
Total	3,388
Major Operations	1,589
Minor Operations	1,633
Teeth	166
	3,388

RETURN OF CASES TREATED IN MASSAGE DEPARTMENT

	<i>Massage.</i>	<i>Medical Electricity.</i>	<i>Sunlight.</i>	<i>Total.</i>
Treatments	6,208	3,415	2,421	12,044

X-RAY DEPARTMENT.

Cases X-rayed, Hospital.....	3,173
" " T.B. Dispensary	867
" " Babies' Hospital	133
" " Out-patients, excluding Babies' Hospital	438
" " Child Welfare Investigation	38
Total	<u>4,649</u>

RETURN OF MENTAL CASES, 1938.

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
Under treatment, January 1st, 1938....	11	9	20
Admitted during 1938	178	203	381
	<u>189</u>	<u>212</u>	<u>401</u>
Discharged during 1938 :—			
Cured.....	23	7	30
Improved	45	58	103
I.S.Q.	3	7	10
Transferred to :—			
Mental Hospital	46	85	131
General Hospital	21	30	51
A. and I. Wards	9	2	11
House (Able-bodied)	2	6	8
" (Chronic)	4	....	4
" Epileptic	2	6	8
City Hospital, Walkergate.....	3	....	3
Deaths	23	5	28
Under treatment, December 31st, 1938	8	6	14
	<u>189</u>	<u>212</u>	<u>401</u>

PATHOLOGICAL DEPARTMENT.

MATERIAL TESTED AND REPORTED ON IN HOSPITAL LABORATORY.

	<i>Reports.</i>
Sputa.....	669
Fæces	605
Blood Sugars	71
Blood Ureas	398
Blood, Microscopical (In-patients).....	262
Gastric Contents.....	161
Blood, Microscopical (Out-patients)	170
Pus and Effusions	231
Cerebro-Spinal Fluid	185
Complete Urinary examinations	1,545
Miscellaneous	5
Diabetic Clinic (Out-patients)	1,047
Lange Tests, C.S.F. (J.C.C.)	57

Total Hospital Laboratory ... 5,406

Entailing the examination of 6,311 Specimens.

BY ARRANGEMENT WITH OTHER LABORATORIES :—

Blood Wassermann's	700
Bacteriological Examinations	582
Histological Sections	416

Total	1,698
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Total reports issued	7,104
„ Specimens	8,009

ADULTS.—CLASSIFIED LIST OF DISEASES TREATED.**MEDICAL.****RESPIRATORY.**

Bronchitis	160	Broncho pneumonia	48
Asthma	40	Lobar pneumonia	83
Pleurisy	54	Hypostatic pneumonia	3
Bronchiectasis	69	Others	6
Bronchitis and Emphysema	41		

DIGESTIVE.

Gastritis	63	Dyspepsia	21
Gastric Ulcer	35	Gastro-Enteritis	17
Constipation	26	Cirrhosis of Liver	20
Duodenal Ulcer	33	Jaundice	9
Alcoholism	3	Others	2

NERVOUS.

Cerebral Hæmorrhage	79	Vertigo	2
Cerebral Thrombosis	57	Neuritis	9
Functional	40	Neurasthenia	52
Disseminated Sclerosis	17	General Paralysis	11
Epilepsy	52	Mental	323
Locomotor Ataxy	21	Neuralgia	15
Paralysis Agitans	5	Others	38
Poison	6		

DEFICIENCY DISEASE.

Scurvy	6
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INFECTIOUS DISEASES.

Encephalitis Lethargica	26	Erysipelas	5
Influenza	9	Others	9

CIRCULATORY.

Valvular Disease of Heart	115	Aneurysm	12
Myocarditis	158	Pernicious Anæmia	16
Arterio-sclerosis	81	Leukæmia	1
Acute Endocarditis	8	Secondary Anæmia	8
Hyperpiesia	59	Senility	90
Angina Pectoris	18	Debility	32
Coronary Thrombosis	14	Others	14

RHEUMATIC.

Acute Rheumatism	42	Sciatica	11
Chronic Rheumatism	23	Acute Arthritis	8
Rheumatoid Arthritis	26	Chorea	5
Lumbago	7	Others	9
Gout	1		

EXCRETORY.

Acute Nephritis	4	Uraemia.....	20
Chronic Nephritis	36	Cystitis	9
Pyelitis.....	23	Others	7

INTERNAL SECRETORY.

Myxœdema	5	Diabetes Mellitus	69
Goitre	8	Others	5

FOR OBSERVATION.

Cases for Observation.....	36
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TUBERCULOSIS.

Pulmonary.....	91	Non-Pulmonary.....	61
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ADULTS.—CLASSIFIED LIST OF DISEASES TREATED.

SURGICAL.

Malignant	346	Cellulitis	22
Hernia	165	Abscess	50
Appendicitis	222	Gangrene	21
Gall-bladder	91	Mastitis.....	35
Gastric Ulcer	38	Carbuncle	17
Duodenal Ulcer.....	52	Varix.....	5
Intestinal Obstruction	12	Phlebitis	8
Diverticulitis	4	Hæmorrhoids.....	53
Brain and Spinal Cord.....	86	Empyema.....	26
Plastic cases	6	Diseases of Bone	21
Renal Calculus	14	Diseases of Rectum	34
Kidney	35	Cystitis	22
Lung Diseases	18	Displaced Cartilage.....	23
Fractures	113	Bursitis	18
Dislocations	4	Deformities	17
Injuries, Wounds, etc.	60	Post operative	12
Burns	9	Simple Tumours	19
Prostate	95	Teeth	32
Hydrocele	15	Toxic Goitre	11
Urethral Stricture	20	Osteo Arthritis	19
Retention of urine	6	Intestinal Colic	16
Other Diseases, Male Organs	31	For Observation	131
Septic conditions	73	Glands.....	4
Ulcers.....	32	Others	51

PREGNANCY AND DISEASES OF WOMEN.

Pregnancy	757	Ovarian Cyst	16
Albuminuria of Pregnancy	6	Salpingitis	22
Hyperemesis Gravidarum	11	Uterine Fibroid	24
Pyelitis of Pregnancy	16	Pelvic Cellulitis	5
Placenta Praevia	3	Diseases of Uterus	72
Disorders of Pregnancy	37	Disorders of Menstruation	6
Miscarriage	180	Menopause	2
Puerperal Infection	5	Others	42
Ectopic Pregnancy	4		

DISEASES OF THE SKIN.

Dermatitis	29	Scabies	24
Psoriasis	2	Impetigo	8
Erythema	5	Eczema	7
Sycosis	2	Others	13

VENEREAL DISEASES.

Syphilis	10	Gon. Rheumatism	13
Gonorrhœa	38	Late Syphilis	25
Congenital Syphilis	1	Mixed Infection.....	7
Gonococcal Ophthalmia	1		

DISEASES OF THE EYE 8.

DISEASES OF THROAT, NOSE AND EAR.

Tonsillitis	19	Deflected Septum	1
Tonsils and Adenoids	66	Mastoid	13
Otitis Media	11	Others	19

CHILDREN.—CLASSIFIED LIST OF DISEASES TREATED.

MEDICAL.

Bronchitis	75	Asthma	6
Pleurisy.....	7	Digestive	93
Lobar Pneumonia.....	63	Diabetes Mellitus	3
Broncho Pneumonia.....	66	Epilepsy	10
Bronchiectasis	23	Prematurity	21
Circulatory	18	Marasmus and Malnutrition	18
Acute Nephritis	11	Rickets	2
Acute Rheumatism	15	Nursing	711
Chorea	31	For Observation	50
Excretory	17	Others	63

SKIN.

Impetigo	75	Verminous	2
Scabies	48	Congenital Syphilis	6
Dermatitis	17	Gonorrhœa.....	10
Eczema	11	Others.....	8
Tinea	1		

DISEASES OF THE EYE 9.

WHITTON TOWER.

103 Admissions. 103 Discharges.

DISEASES OF THE THROAT, NOSE AND EAR.

Otitis Media	15	Tonsils and Adenoids	53
Tonsillitis	15	Others	6
Mastoid	20		

SURGICAL.

Appendicitis	46	Injuries, Wounds, etc.	14
Hernia	24	Abscess	38
Intussusception.....	6	Septic conditions	18
Empyema	9	Deformities	9
Enlarged Glands	30	Osteomyelitis	15
Fractures	12	Phimosis	5
Brain Tumours etc.,.....	17	Teeth	2
Burns and Scalds	9	Others	24

INFECTIOUS.

Influenza	2	Cerebro-Spinal Meningitis	4
Pertussis	5	Dysentery	10
Measles	5	Diphtheria.....	5
Acute Anterior Poliomyelitis	2	Others.....	1

TUBERCULOSIS.

Pulmonary.....	19	Non-Pulmonary.....	38
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GEO. P. HARLAN, M.D.,

Medical Superintendent.

Newcastle General Hospital,
April, 1939.

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 ending on 1st March, 1939.

115 patients have attended during this period, an increase of 7 over the previous year. Of these patients 25 are males and 90 are females.

80 patients are receiving insulin. Increasing use is being made of the new slowly acting insulin, and 7 patients are now using it. They greatly appreciate the reduction of injections from two to one daily.

I have been able to ascertain the details of the deaths of seven clinic patients during this year. They are as follows :—

SEX.	AGE.	CAUSE OF DEATH.
F.	74	Senility.
F.	64	Congestive heart failure.
M.	64	Cerebral tumour.
M.	57	Coma. Dietetic and alcoholic excess.
F.	60	Cerebral thrombosis.
F.	56	Malignant renal tumour.
M.	30	Pulmonary tuberculosis.

W. G. A. SWAN,

*Medical Registrar and
Physician in Charge of Diabetic Clinic.*

*Newcastle General Hospital,
30th March, 1939.*

Report of Radiological Department.

During the past year the work of the diagnostic section of the Radiological Department has increased by a fraction over 25% as compared with the previous year.

The specialised type of the work is indicated by the investigations carried out for the departments of Neurosurgery and Thoracic Surgery. The skull was examined in 173 cases; ventriculography in 53 cases; encephalography in 15 cases and arteriography in 19 cases, a total of 260 cases.

The lungs were investigated by routine methods in 1,646 cases; by lipiodol into bronchi in 120 cases; lipiodol into chest sinus in 68 cases and by Tomography in 62 cases, a total of 1,896 cases. The addition of a Tomograph to the radiographic equipment has been of great service in the elucidation of problems in the chest, and its use is likely to be extended in the future.

Examination of the alimentary tract, by screen examination and radiographs, was carried out in 380 cases.

There is a comparatively small amount of fracture work owing to the fact that the hospital has no Casualty or Out-patient departments.

The Deep Therapy Section of the Radiological Department is now open and the work will steadily increase. Dr. T. R. Harlan, who has been appointed Assistant Radiologist, is responsible for this section and I feel sure that his interest and experience in X-ray Therapy will ensure its development along efficient and scientific lines.

Mr. Palmer succeeded Sister Taylor as radiographic technician in November, 1937. With the assistance of Nurse Hammond he has maintained the high quality of the radiographs which have been a feature of the department for a number of years.

Radiological Department.

RECORD OF WORK, 1938.

The number of patients X-rayed during the year 1938 as compared with the number X-rayed during 1937 is as follows :—

	1938.	1937.	<i>Increase.</i>
Hospital patients.....	3,173	2,366	807
T.B. Dispensary	867	806	61
Babies' Hospital	133	129	4
Out-patients, excluding Babies'			
Hospital	438	....	438
Child Welfare Investigation	38	....	38
Total cases.....	<u>4,649</u>	<u>3,301</u>	<u>1,348</u>

The cases X-rayed during 1938 have been classified nosologically as follows :—

	<i>Region.</i>	<i>No. of Cases.</i>	<i>No. of Screen Examinations.</i>	<i>No. of Films.</i>
HEAD.—				
Nasal Sinuses		51	....	74
Mastoids		4	....	9
Skull—General.....		173	....	512
Skull—Ventriculograms		53	....	224
Skull—Encephalograms		15	....	59
Skull—Arteriograms		19	....	29
Lower Jaw.....		15	....	33
Teeth		2	....	3
SHOULDER, ETC.—				
General		60	....	73
Clavicles		6	....	9
Humerus		16	....	26
Elbow		23	....	47
Radius and Ulna		22	....	43
Carpus		141	....	180
Metacarpus and Phalanges		39	....	66
Sternum		2	....	4
Femur		75	....	101
Knee.....		109	....	217
Tibia and Fibula (including ankle)		133	....	274
Tarsus, Metatarsus and Phalanges		49	....	82
Vertebrae		203	....	535
Pelvis		37	....	44
Hip Joints		71	....	76
CHEST.—				
General for Lungs		1,646	18	1,938
Lipiodol into Bronchi		120	....	247
Lipiodol into Sinus (post operative)		68	....	127
Tomograms		62	....	204
Heart.....		37	15	48
Ribs (injury)		34	....	38

ALIMENTARY.—

Barium Meals	260	258	653
Barium Enemata.....	83	83	151
Barium Boli	34	34	46
Oesophagus (for foreign body).....	3	3	5
Gall-bladder—General	56	.....	59
Gall-bladder—Shadocol.....	35	.....	105
Gall-bladder—Lipiodol into Sinus	1	.....	2
Abdomen—General	23	.....	29
Abdomen—for Fœtal presentation	37	.....	77
Kidneys, Ureters and Bladder.....	168	.....	290
Intravenous Pyelograms	75	.....	306
Retrograde Pyelograms.....	51	.....	66
	<hr/> 4,111	<hr/> 411	<hr/> 7,111
Radiograms taken of patients from T.B. Dispensary—not included in above Table. Chest—General	867	.....	867
	<hr/> 4,978	<hr/> 411	<hr/> 7,978
GRAND TOTAL.....	<hr/> <hr/> 4,978	<hr/> <hr/> 411	<hr/> <hr/> 7,978

The difference in the figures given in the Classified Table and the number of patients X-rayed can be accounted for by a patient having more than one region radiographed at the same time.

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

Radiologist.

*Newcastle General Hospital,
April, 1939.*

Report of Fever Therapy Department.

During the past year much progress has been made in the development of fever treatment. The tendency is now to use a shorter series of more sustained fevers in the treatment of those diseases which have been found to respond to this curative agent. Therefore the number of actual fever treatments used per patient has been diminished, but the duration of the individual treatments has been increased. These changes have yielded very gratifying results. In several instances a single fever treatment has produced great improvement and, in fact, in 29 patients only 63 treatments were given, an average of just over two per patient.

Certain forms of nervous disease are most favourably influenced by this treatment, but in addition some cases of joint disease and other conditions have been so treated.

Constant attention has been paid to the improvement of technical details of the apparatus, and in the training of the special nursing and technical staff which is necessary for this work to be carried out effectively and safely.

In addition to the treatment by general fever the department has been very fully occupied with the use of local fever by means of short waves. Valuable use has been made of this treatment in the case of sciatica, arthritis, boils and other conditions known to respond to heat therapy. It has also been used in the treatment of certain cases of chronic asthma where the local application of short waves to the chest has proved of considerable value.

905 local treatments were given during the year to 36 patients.

We have again co-operated in certain aspects of the work with Dr. A. E. W. McLachlan and we have pleasure in recording our appreciation of this co-operation.

F. J. NATTRASS.
S. F. EVANS.

*Newcastle General Hospital,
March, 1939.*

Report of Department of Neurosurgery.

I have much pleasure in submitting my report upon the work in the Department of Neurosurgery, not merely as a record of the work done, but also as an illustration of the part played by this service in the surgical life of the City and the surrounding district.

During the year 157 new patients were treated in the department, in comparison with 98 in 1937. These figures do not include patients who have been re-admitted after having been under the care of the department during the same or previous years. The great increase in the number of patients dealt with during the year is sufficiently illustrated by the fact that it exceeds the combined increase of cases during the four previous years, and also in that it exceeds the number of cases treated during the department's first year of work on its present basis.

I do not consider it necessary to give a detailed analysis of the clinical material which has passed through the department during the year since the relative number of cases in each group conforms well to our previous experience both as regards their incidence and their rate of increase. Certain points, however, call for comment, such as where our figures show striking differences from those of the other neurosurgical clinics in this country.

During the year 35 verified and 10 unverified cases of intracranial tumour were dealt with. This group is relatively much smaller than is the case in other clinics and consists largely of selected material. The close co-operation which exists between the department and other hospitals in the district and the friendly relations with their medical staffs, who are always ready to seek our help, enables detailed examinations of many cases to be made before the question of their transfer to the Newcastle General Hospital is considered. In this way the admission of many hopeless and unsuitable cases is avoided.

Much interest has been devoted to the surgical aspects of intracranial vascular disease. During the year 17 cases of this group were studied and in as many as 11 of these the presence of an intracranial aneurysm was confirmed. The interest in this field has followed the privilege which was afforded to the writer by Professor Moniz, of Lisbon, the pioneer of cerebral arteriography,

who afforded every facility for a detailed study of the technique at his clinic during the course of a visit which was made at the beginning of the year. In the following months 19 arteriographic examinations were made. It is necessary for me to point out that this has been made possible only since the installation of the new X-ray apparatus, and, in referring to the excellence of the radiographic technique which is now available in the hospital, I should like to pay a special tribute to Mr. Palmer, the radiographer, who has proved an indispensable help in the work of the department.

Since the provision of facilities for deep X-ray therapy it has become possible to treat certain cases of malignant glioma by a combination of surgery and radiotherapy. In some cases the results have far exceeded expectations and I have much pleasure in extending my thanks to Dr. T. R. Harlan for his enthusiastic co-operation with the work of the department.

The surgical aspects of epilepsy have continued to afford the usual interest. During the year 32 cases were investigated with a view to surgical therapy, an increase of 11 cases over the previous year, though fewer cases have actually come to operation owing to the increasing demands made by other types of case. It should be made known as widely as possible that only certain selected cases of epilepsy are amenable to surgery, such as when the fits begin for the first time in adult life and when there is no mental impairment. Too often the resources of the department are wasted over obviously unsuitable cases.

The operative work shows an increase which is parallel to the increased number of patients. During 1938, 183 major operations were carried out, in comparison with 132 in 1937 and 116 in 1936. With the exception of cerebral arteriography, which has been a subject of special interest, there has been no outstanding increase of any one class of operation.

The progressive increase of work which has been undertaken by the department since it was organised on its present basis in July, 1934, is a sufficient indication for the need for such a service in the district. Until the past year it seemed that with a moderate annual increase, such as is shown in my previous reports, that need was satisfied. The very large and disproportionate increase of work within the past year appears to indicate that this belief was mistaken, and that we may have to reckon

with still further increases. Such increasing demands upon the services of the department are a source of pride and gratification, but I regret to say that for some time I have felt that, as at present constituted, the department cannot deal with more than about 100 cases a year if the meticulous technical standards of neurosurgery are to receive full consideration.

It is again a great pleasure to express my deep appreciation to my colleagues and assistants, to the nursing and technical staffs for that help and encouragement which is so constantly given, and to Dr. G. P. Harlan who in addition has faced the administrative difficulties which have attended the increase of work.

A. R. D. PATTISON, F.R.C.S.,
Surgeon-in-Charge,
Department of Neurosurgery.

Newcastle General Hospital,
4th May, 1939.

Report of the Department of Thoracic Surgery.

The work of this Department has, as usual, continued to increase. The following table shows the rate at which the work has expanded :—

YEAR.	CASES.	OPERATIONS.
1934.....	17	27
(May-Dec.)		
1935.....	65	118
1936.....	92	195
1937.....	129	249
1938.....	198	396

The need for the proposed new housing of the Department is now urgent. There are always between 50 and 60 cases, most of them of the long-stay type, under treatment as in-patients at one time. Even so, it has proved impossible to avoid a lengthy waiting-list. This could possibly be shortened, even with the present limited accommodation, if additional operating days were available. The provision of an adequate staff of assistants would not only ensure better care and attention of the patients, but would also facilitate a more efficient and expeditious method of completing the many tedious but necessary routine investigations required. To all intents and purposes, the Department has the use of the same personnel as when it was started, on an experimental basis, in 1934. The figures included in this Report are sufficient indication of the need for such further assistance especially when it is realised that the figures for 1939 already show that as much work has been done in the Department during the first 7 months of the year as in the whole of 1938.

Arrangements entered into with the Public Authorities of surrounding districts have helped considerably. The continued increase in the regional function of the Department is shown in the following table :—

DOMICILE.	1934-36	1937	1938	TOTAL
Newcastle upon Tyne	101	61	62	224
Gateshead	22	17	35	74
Durham County.....	21	18	34	73
Northumberland.....	20	20	20	60
Middlesbrough and Hartlepool	5	6	1	12
North Riding of Yorkshire.....	.....	.....	4	4
Darlington	2	.....	.....	2
South Shields	3	2	14	19
Tynemouth .....	.....	1	1	2
Other Areas and Paying Patients.....	.....	4	27	31
TOTALS	174	129	198	501

It would still appear, as mentioned in our previous Reports, that thoracic surgery is not principally concerned with the treatment of phthisis. The proportion of this work has, however, increased somewhat during the year under review. Once again, attention must be drawn to the comparatively late stage in which the majority of cases of cancer of the lung are referred to the Department. Many of them have probably not sought medical advice until late in the course of the disease, but it is unfortunately probable that many of these cases have sought medical advice, and even been admitted to hospitals and sanatoria whilst still in an operable state, but owing, perhaps, to procrastination, or doubts as to the efficacy of surgery, have reached the surgeon either too late or not at all. It should be remembered that these cases probably all pass through an operable stage, and as knowledge of this spreads, it is hoped that more will be referred to our Department in time. Indeed, several such cases have been seen during the early months of 1939, so perhaps our efforts are bearing fruit. The cases dealt with are classified in the table given below :—

TYPE OF CASE.	1934-36	1937	1938	TOTAL
Thoracic forms of Tuberculosis	50	24	41	115
Pneumonitis, lung cysts, bronchiectasis, etc.	67	52	90	209
Other inflammatory conditions of pleura, chest wall and subdiaphragmatic spaces, etc.	27	27	30	84
Malignant growths of lungs and pleura	12	9	7	28
Benign growths of lungs and pleura .....	.....	1	4	5
Mediastinal conditions	4	1	.....	5
Oesophageal conditions	7	2	12	21
Diseases of the heart and great vessels.....	7	9	5	21
Diaphragmatic conditions.....	.....	2	1	3
Unclassified conditions .....	.....	2	8	10
TOTALS	174	129	198	501

Academic Activities.

Participation in both under- and post-graduate instruction has continued as before in connection with the Medical School at King's College, but the activity of the Department is such that some more regular scheme is required. Similarly, the lecture-demonstrations to groups of medical practitioners in the district, arranged by the British Medical Association, have been continued, and, as before, have proved invaluable for bringing before doctors the scope of the Department's work and, no doubt, account to some extent for the increase in its volume. Visits to similar clinics both at home and abroad have continued as far as possible, but the September crisis and my mobilisation interfered with this, as with other aspects of the Department's work.

In December, I was honoured by being elected a member of the Société D'Études Scientifiques sur la Tuberculose.

A gratifying recent development is the number of visitors who are now coming especially to study and see demonstrations of methods of anæsthesia employed in the Department by Dr. Joan Miller who is now recognised as one of the most proficient workers in this aspect of thoracic surgical work. Several demonstrations of work have been arranged for visitors mostly from abroad.

Contributions to the literature relevant to the work of the Department include the following :—

“Bronchiectasis—A Fatal Disease.” (With Dr. Cookson.)
Edinburgh Medical Journal, Vol. XLV., p. 844, 1938.

“Thoracotomy.” (With L. O'Shaughnessy, F.R.C.S.) *British Medical Journal*, Jan. 21st, 1939.

It is a pleasure to me to record my thanks to those who have helped to facilitate the running of the Department, especially to those members of the nursing staff who work in the Theatre and upon whom the strain of the increased volume of work has principally fallen.

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,

30th August, 1939.

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.
Hospital of St. John of God, Scorton.....	†3	....	Cripples.
TOTAL	5	4	

* Deceased 26th March, 1938.

† 1 Case admitted 6th April, 1938.

**REPORTS OF THE VETERINARY OFFICER
AND INSPECTOR OF PROVISIONS,
AND OF THE INSPECTOR UNDER THE FOOD AND
DRUGS ACTS (CHIEF SANITARY INSPECTOR).**

VI.—FOOD.

**BOVINE TUBERCULOSIS.
INSPECTION OF MEAT AND PROVISIONS,
FOOD AND DRUGS.**

DEPARTMENT OF THE VETERINARY SERVICE
AND INSPECTOR OF PROVISIONS
AND OF THE INSPECTOR GENERAL THE FOOD AND
DRUGS ACTS (1906) (1938) (1950)

VI-FOOD

INSPECTOR OF MEAT AND PROVISIONS
INSPECTOR OF FOOD AND DRUGS
INSPECTOR OF THE VETERINARY SERVICE

BOVINE TUBERCULOSIS, AND THE INSPECTION OF MEAT AND PROVISIONS AND FOOD AND DRUGS.

TUBERCULOUS MILK.

During the year 368 samples of milk were taken for bacteriological examination, 26 of which were reported by the Bacteriologist to contain tubercle bacilli. Twelve of the twenty-six positive samples however were check samples. The positive samples were from the supplies of sixteen different farms, thirteen of which were situated in the County of Northumberland, and three in the County of Durham.

The following table shows the percentage of milk samples found to contain tubercle bacilli during the past 19 years :—

Year.	Percentage of Samples found Tuberculous.
1920.....	6.3
1921.....	5.5
1922.....	7.0
1923.....	4.5
1924.....	3.2
1925.....	8.0
1926.....	4.0
1927.....	3.7
1928.....	3.7
1929.....	8.7
1930.....	4.2
1931.....	3.7
1932.....	1.8
1933.....	2.0
1934.....	2.6
1935.....	3.4
1936.....	2.7
1937.....	4.3
1938.....	3.8

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.

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 1938.

THE CENTRALISED STATE VETERINARY SERVICE.

The Report of the Cattle Diseases Committee of the Economic Advisory Council, dated 1934, emphasised the serious losses incurred annually in Great Britain due to diseases amongst livestock. The more important facts elicited in this Report were :—

- (a) That 58 per cent. of dairy cattle leaving herds were disposed of on account of disease ;
- (b) that the average productive life of dairy cattle under the existing conditions was in the neighbourhood of $4\frac{1}{2}$ years, or only half that which might be expected if the herds were free from the ravages of disease ;
- (c) that about 40 per cent. of the cows are infected to a varying extent with bovine tuberculosis and about the same proportion with contagious abortion ; and
- (d) that on account of tuberculosis the annual loss due to the necessity of maintaining herds at full strength and to meat condemned was about £3,000,000 per annum, without taking account of the loss in productivity during life.

On the available data, tentative estimates of the total losses from diseases in livestock of all kinds indicate that it was of the order of magnitude of £14,000,000 per annum, or 10 per cent. of the output of the meat, poultry and dairying industries of this country. The eradication of disease is thus one of the most important steps that can be taken to improve the permanent assets and resources of the industry.

Largely as a result of this Report a Centralised State Veterinary Service was established. This Service came into being on 1st April, 1938, the duties of which were to be directed firstly to the

eradication of bovine tuberculosis and to the elimination of contagious abortion from tubercle free herds. The establishment of the State Service was of importance to local authorities as it involved the transfer of certain veterinary duties from local authorities to the Ministry of Agriculture and Fisheries. These duties included the veterinary inspection of markets, the routine veterinary inspection of dairy herds and diagnostic inquiries into the scheduled animal diseases.

As far as this city was concerned, an arrangement was made by which the Veterinary Officer continued to carry out these duties as heretofore, but acting on behalf of the Ministry, who undertook to pay the Local Authority for such services according to an agreed scale of fees.

The functions of the Local Authority under the Milk and Dairies Acts and Orders, except in relation to veterinary inspections and tuberculin testing of animals, and likewise its functions in relation to meat inspection are unaffected by the new arrangements.

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 Orders of 1925 and 1938.

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 Ministry of Agriculture and Fisheries, 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 one case was found to come within the category of "tuberculosis not advanced," as defined by the Orders, whilst in the remaining three cases, the animals were found to have been suffering from "tuberculosis advanced," necessitating the condemnation and destruction of the carcasses and organs as unfit for human consumption.

In the course of milk and meat inspection within the City during the year, 2,178 animals were found on slaughter to be affected with tuberculosis, this being an increase of 18.75 per cent. as compared with the number found diseased during the previous year. This increase was due to a greater condemnation of pigs' heads.

In 1,862 cases some part of the carcase or internal organs was condemned and destroyed as diseased, whilst in the case of the remaining 316 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 18 cow-keepers, registered as occupying 21 premises, and on the registered premises there is a total of 31 cowsheds, in which are housed 489 milch cows.

Of these registered premises, one is licensed for the production of Tuberculin Tested Milk, and 8 for the production of Accredited Milk, no licence for the production of Accredited Milk being granted unless a steam steriliser has been installed.

As stated in the last Annual Report the installation of milking machines has not produced the uniformly high standard of milk cleanliness that would be expected.

During the year, 191 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 Orders, 1925 and 1938).*
					Of Udder.	Other than Udder.	Udder.	Other than Udder.	
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*
1938	18	21	31	489	3	1	2	1	4*

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, 831 outbreaks of the disease were confirmed, in which 1,234 animals were attacked, as compared with 743 outbreaks during the previous year, involving 879 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 18 blood smears were taken from dead animals or dressed 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 309,897. Whilst there were 1,814 fewer cattle and 1,112 fewer calves, there were 62,876 more sheep and 4,996 more pigs slaughtered than during the previous year, as indicated in the following table :—

ANIMALS SLAUGHTERED ON LICENSED PREMISES WITHIN THE CITY.

	YEAR.				
	1938.	1937.	1936.	1935.	1934.
Cattle	27,456	29,270	28,499	27,486	21,623
Calves	6,201	7,313	7,358	7,478	4,705
Sheep	219,243	156,367	172,844	173,481	163,556
Pigs	54,867	49,871	47,077	44,871	37,737
Horses.....	2,130	1,450	1,565	1,610	982
Total Animals	309,897	244,271	257,343	254,926	228,603

Note : The total cattle slaughtered during 1938, included 3,089 cows, 15,119 heifers, 650 bulls and 8,598 bullocks.

Seven hundred and seventy-five and three-quarter carcasses, together with 3,561 lbs. of meat (excluding offal, etc.) were condemned and destroyed as being unfit for human consumption, as compared with 640 carcasses and 1,055 lbs. of meat condemned and destroyed during the previous year. Of the $775\frac{3}{4}$ carcasses, 316 whole carcasses and eight quarters were condemned on account of tuberculosis, comprising $206\frac{3}{4}$ carcasses of beef, $103\frac{1}{4}$ carcasses of pork and 8 carcasses of veal.

Of the 54,867 pigs slaughtered, 1,616 were found affected with tuberculosis, approximately 29 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 88.05 per cent. of cases.

TABLE SHEWING COMPARISON BETWEEN TUBERCULOSIS AND OTHER DISEASES AS CAUSES OF CONDEMNATION OF CARCASSES OF ANIMALS SLAUGHTERED WITHIN THE CITY DURING THE YEAR 1938.

TUBERCULOSIS.

	CATTLE.					Sheep.	Pigs.	Total.
	Cows	Heifers.	Bulls.	Bullocks	Calves.			
Whole carcasses and organs condemned	114	60	3	28	8	....	103	316
Parts or organs condemned	160	100	16	73	....	....	1,513	1,862
Total and Partial	274	160	19	101	8	....	1,616	2,178

OTHER DISEASED CONDITIONS.

	CATTLE.					Sheep.	Pigs.	Total.
	Cows	Heifers.	Bulls.	Bullocks	Calves.			
Whole carcasses and organs condemned	24	21	1	12	61	268	66	185
Parts or organs condemned	90	274	14	208	6	146	560	1,152
Total and Partial	114	295	15	220	67	414	626	1,337

It will be seen from the above table that tuberculosis in cattle accounts for about 77%, and in pigs 64%, of the total condemnations, as compared with other diseased conditions.

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.
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
1938	263	205	77.94

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.

Public Health (Meat) Regulations of 1924.

These Regulations are comprehensive and of great value in enforcing the cleanly handling of foodstuffs. Visits, numbering 8,144, 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.

Imported Foodstuffs.

During the year, 246 vessels carrying meat and other foodstuffs from Denmark, Holland, Canada, Australia, New Zealand, America, Russia and Madagascar, arrived at the Quayside, this being an increase of ten as compared with the number of arrivals during the previous year.

Three hundred and eighty-four visits were made to the wharves and vessels alongside, 3,566 packages, containing meat, etc., being opened and examined. Regarding these visits, 20 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 frozen 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 228,248 carcasses of mutton and lamb, comprising twenty separate consignments, arriving at the Quayside direct from Australia, 2,531 were examined, four carcasses being found affected with the disease.

The condemnation of only four 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.—192 heads, 1,303 maws, 394 feet and 55 casings.

Frozen Meat.

BEEF.—15,015 fore and hind-quarters and 16,640 crops.

(Packages).—33,219 boneless, 102 buttocks and 50 shins.

Offals (packages).—20 cheeks, 180 tongues, 350 hearts, 4,362 kidneys, 6,310 livers, 276 skirts, 139 tripes, 1,756 tails, 120 (mixed) offals and 63 sweetbreads.

VEAL.—6,691 carcasses, 220 sides, 16 legs and 1,406 packages boneless.

Offals (packages).—5 tongues, 88 hearts, 1,464 livers and 58 kidneys.

MUTTON AND LAMB.—228,248 carcasses.

Offals (packages).—204 hearts, 546 livers, 96 kidneys and 39 sweetbreads.

PORK.—46,376 carcasses, 29,651 sides and 244 cuts. Packages.—45 boneless and 37 legs.

Offals (packages).—28 kidneys.

Other Goods.

547,954 sides Danish, Dutch and Canadian bacon. Cases.—1,336 American bacon and hams, 43,488 tinned meats, 64 sausages and 10 barrels pork.

NUMBER AND ORIGIN OF VESSELS ARRIVING WITH FOOD.

Denmark.	Holland.	Canada.	Australia.	New Zealand	America.	Russia.	Madagascar
108	77	32	13	8	5	2	1

Exported Foodstuffs.

The number of horses slaughtered within the City, for the purpose of the carcasses being exported for consumption on the Continent, was 2,130 or 640 more than during the previous year.

NUMBER OF VISITS AND INSPECTIONS OF PREMISES DURING THE YEAR 1938.

Slaughterhouses.	Central Markets.			Meat Shops.		Fish Shops.		Provision Shops.		Wholesale Fruit Shops.	Wharves and Vessels.	Cold Stores.	Stalls, Carts, etc.	Food Preparing Factories.
	Meat and Provisions.	Fruit and Vegetables.	Fish.	Wholesale.	Retail.	Wholesale.	Retail.	Wholesale.	Retail.					
19,441	273	132	192	4507	774	8	12	67	2	10	384	20	2322	199

HUMAN CONSUMPTION DURING THE YEAR 1938.

Livers.				Heads.				Plucks.			Sets Stomachs and Intestines.		Fat.		Ox Tongues	Pig Maws.	Griskins.	Rinds.	Sheep Sweetbreads.
Ox.	Calf.	Sheep.	Pig.	Ox.	Calf.	Sheep.	Pig.	Calf.	Sheep.	Pig.			Ox.	Pig.					
68							1,423			136	5	15	74	4					
										1									
2				8											8				
				1											1				
										2									
78	1	3		5					1	1									
5										4	18								
										4	71								
2										3	2	5							
										1		1							
65		35	38																
1				1											1				
22																			
12		45	63						39	22									
5			1						4	5	1	1							
31-20 bs.	12	147	12	9	2	48	7 cwts. 2 qrs. 14 lbs.	6	270	130	3	185	56 lbs.	10 lbs.		11½ cwts	3 cwts	98 lbs.	6 lbs.
												187							

Total Weight of Meat and Other Foodstuffs Condemned.

The approximate total weight of meat and other foodstuffs condemned during the year was 187 tons 3 cwts. 4 lbs., comprising :—

	tons.	cwts.	qrs.	lbs.
Beef, Mutton, Veal, Pork	95	13	1	17
Offal, Fish and Provisions.....	31	18	1	12
Fruit and Vegetables	59	11	1	3
	187	3	0	4

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 seven negative; and of the throat swabs examined for the same disease, both were positive. 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	10	3	7
Throat Swabs examined for Tuberculosis..	2	2	....
Blood, etc., examined for Anthrax.....	18	....	18
Milk examined for mastitis	2	2	....
	32	7	25

Slaughterhouses.

During the year, 74 separate premises were licensed for slaughtering purposes.

Of the 74 licensed premises, 17 were vacant during the whole or part of the year and 21 were occupied by wholesale firms, the remainder being occupied by retail butchers.

Of the total animals dealt with within the City, 208,999, or 67.4 per cent., were slaughtered by wholesalers, the remaining 100,898, or 32.6 per cent., being slaughtered by retailers.

Licensed Slaughtermen.

Under the Slaughter of Animals Act, 1933, slaughtermen's licences were granted during the year to 14 persons, making a total of 174 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, 153 visits were made to premises in respect of 136 complaints received, 175 premises, including others than those complained of, being inspected and dealt with.

Of the 175 separate premises, rats were found infesting 155, the remaining 20 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 74.85 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	136
Number of premises inspected and dealt with in connection with the above	175
Number of premises infested with rats	155
Number of visits	153
KIND OF PREMISES DEALT WITH.	
Bakeries	2
Builder's Yard	1
College	1
Dwellings	106
Factories	2
Farm	1
Garage	1
Gardens	9
Huts	3
Marine Stores	2
Mill	1
Quarries	2
Sewage Works	2
Shops (food)	25
Shops (other than food)	9
Warehouses	5
Wasteland	2
Workshop	1
Total	<u>175</u>

PROSECUTIONS.

Offence.	No. of cases.	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	1	Offender fined £5.
Do. Do.	1	Two persons were charged, each being fined £5 and £2-2-0 costs.
<i>Slaughter of Animals Act, 1933.</i> Slaughtering animals without the same having first been stunned by means of a mechanically operated instrument.....	2	In one case offender fined £2, the other being dismissed.

HORACE THORNTON, B.V.Sc., M.R.C.V.S., D.V.H.,
Veterinary Officer.

Town Hall,
Newcastle upon Tyne,
14th June, 1939.

FOOD AND DRUGS ADULTERATION, Etc.

Total Samples.—The number of samples of foods and drugs obtained for analysis during the year was 1,105, as against 1,100 in 1937. They were of a varied nature, and included all the articles in common use in the household. All of these were submitted to the Public Analyst, who certified that 1,043 were genuine and 62 not genuine.

Notwithstanding the large number of samples taken (of over 100 different articles of foods and drugs), it was only necessary to institute legal proceedings in 12 cases.

Informal Samples.—365 informal samples were taken, as against 311 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. 752 samples were taken, and of these 49 were certified to be below the minimal limits fixed by the "Sale of Milk Regulations, 1901." Of this number 13 were deficient in non-fatty solids, 30 in milk-fat and 6 in both. The percentage of deficiency in fat varied from 0.6 to 41.0 (the average being 8.19), and of solids not fat from 0.3 to 6.7 (average 2.66).

"Appeal to Cow" Samples.—Four farms were visited and, after witnessing the milking operations, 15 samples were taken, and submitted to the Public Analyst for analysis. 14 of these were up to the standard, whilst the remaining 1 fell below. No action could be taken in respect of this sample, as the milk was "as it came from the cow." The deficiency was 8.6 per cent. in milk-fat and 0.3 per cent. in non-fatty solids.

Samples not Genuine, etc.—The percentage of all samples not genuine to the total number taken was 5.6 (compared with 8.0 for the previous year). The percentage of non-genuine milk samples to the total number of milk samples obtained was

Samples taken for Analysis during the Year 1938.

ARTICLE.	No. of Samples obtained.			Result of Analysis.		Action Taken.			REMARKS.
	Formal.	Informal.	Total.	Genuine.	Not Genuine.	Prosecutions.	Concussions.	Cases Dismissed.	
New Milk	704	48	752	703	49	9	7	2	In 28 of the remaining 40 cases (of the 49 samples "not genuine") the vendors were cautioned by order of the Health Committee, and in 12 no action was taken, these including slight deficiencies, "appeal to cow" sample (not for proceedings), etc.
Condensed Milk		10	10	10					
Milk Foods (Malted)		2	2	2					The sample "not genuine" was of fresh cream, which contained boric acid 0.22%. The vendor was summoned and fined £2-0-0.
Cream (Tinned and Fresh)	2	13	15	14	1	1	1		
Butter		16	16	16					The 2 samples "not genuine" (informal and formal, from one vendor) were of "home-made" apricot jam, which contained an excess quantity of sulphur dioxide and were also deficient in soluble solids. The case was met by a caution.
Margarine		14	14	14					
Lard		1	1	1					
Cocoa		3	3	3					
Tea		3	3	3					
Coffee (including "Coffee Extract")		5	5	5					
Sugar		7	7	7					
Baking Powder		1	1	1					
Custard and Blancmange Powders		3	3	3					
Jams, Jellies and Marmalade	1	12	13	11	2				
Golden Syrup		1	1	1					Of the 6 samples "not genuine," 2 contained an excess quantity of sulphur dioxide. In 1 case the vendor was summoned and fined 10/-; in the other the manufacturers were cautioned (retailers protected by warranty). In 2 cases, the quantity of sulphur dioxide was within the limit allowed, but the presence of this preservative was not "declared" as required. In 1 case the vendor was summoned (case dismissed on payment of costs), the other being met by a caution. In the remaining 2 instances, no preservative was found in samples declared to contain it. No further action was taken with regard to these.
Rice, Ground Rice, Tapioca, Sago, Semolina and Corn Flour		6	6	6					
Flour, Wholemeal, Oatmeal, Oats, and "Flakes"		6	6	6					
Peas, Barley, Beans and Lentils		7	7	7					
Dried Fruits		14	14	14					
Tinned Fruits		4	4	4					
Candied Peel, Glacé Cherries, Preserved Ginger, Almonds (Ground and Whole)		19	19	19					
Mincedmeat		8	8	8					
Soups (Tinned)		2	2	2					
Pastes (Meat, Fish, etc.)		2	2	2					
Tinned Meats, Fish, etc.		3	3	3					
Fish Cakes		6	6	6					Three of these were "artificial" essences. 2 of the samples were declared as such, but the other was not and, in this instance, the attention of the vendor was drawn to the matter.
Biscuits (Assorted)		12	12	12					
Bacon		1	1	1					
Cheese		4	4	4					
Tripe		7	7	7					
Sausage	29		29	23	6	2	1	1	
Table Jellies and Gelatine		6	6	6					
Honey		1	1	1					
Ice Cream		10	10	10					
"Potato Crisps"		3	3	3					
Pickles and Sauces		2	2	2					
Mustard, Pepper and Vinegar		8	8	8					The 2 samples "not genuine" (both informal) were of Syrup of Squills, which were deficient in vinegar of squill. In each case, a subsequent formal sample was genuine, and the vendor was cautioned in respect of the informal samples. One sample of Syrup of Squills (returned as "genuine") contained vinegar of squill in excess of the B.P. requirements by approximately 15%, whilst a sample of Glauber Salt (also returned as "genuine") was found to have partially effloresced. In each case, the vendor's attention was drawn to the matter.
Flavouring Essences		4	4	4					
Suet and Frying Fat		2	2	2					
Herbs (Seasoning)		3	3	3					
Household Drugs, etc. — (Including Camphorated Oil, Castor Oil and Capsules, Chem- ical Food, Cod Liver Oil, Capsules, and "Extract," Com- position Essence, Cream of Tartar, Crushed Linseed, Epsom Salts, Eucalyptus Oil, Glauber Salt, Glycerine, Gregory Powder, Iodine, Liquorice Powder, Liquid Paraffin, Olive Oil, Paregoric, Syrup of Figs, Syrup of Rhubarb, Tincture of Rhubarb, Syrup of Squills, Tartaric Acid, and Ointments (Sulphur, Boric, and Zinc)	2	62	64	62	2				
Beer		1	1	1					
Wines (a) Alcoholic		3	3	3					
(b) Non-alcoholic		6	6	6					
Spirits (Whisky, Rum and Gin)	2	7	9	9					
Mineral Waters		3	3	3					The 2 samples "not genuine" (both informal) contained only 30% of orange juice, with 70% water and sweetening, and were coloured with a coal tar dye. In one case, samples of this "orange juice" had recently been the subject of proceedings by the Northumberland County Council, since when the article had been withdrawn from sale pending the re-naming of the article so as to comply with the law. In the other case, the sample was not sold as "Orange Juice," and no further action was taken.
"Orange Juice" and Cordials		4	4	4	2				
TOTAL	740	365	1,105*	1,043	62	12	9	3	Amount of Penalties — £19 10s. 0d.

* Includes 279 samples taken "in course of delivery" (at railway stations, hospitals, etc.)

6.5 (as against 9.79 in 1937). The total number of samples taken was at the rate of 3.8 per 1,000 of the population (estimated) of the City for the year 1938. 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 preservative, and in compliance with the requirements of the law in all other respects.

Margarine Warehouses.—59 visits were made to the registered margarine warehouses in the City. In all cases the packages examined were found to comply with the Act as regards labelling.

Preservatives in Food.—Of the total samples obtained for analysis (1,105), only 52 contained preservative, the quantity in most instances being well within the limits allowed.

22 samples of sausage contained preservative (sulphur dioxide), the quantity in 20 instances being within the permissible limit.

Two samples exceeded the maximal limit of preservative. In one case, the vendor was summoned and fined 10/-, in the other the manufacturers were cautioned (the retailers being protected by warranty).

In two instances where the quantity was within the limit allowed, the presence of the preservative was not declared as required. In one case the vendor was summoned (case dismissed on payment of costs), the other being met by a caution.

In two instances, no preservative was found in samples declared to contain it. No further action was taken in these cases.

One sample of cream (fresh) contained boric acid, 0.22 per cent., respecting which the vendor was summoned and fined £2.

Two samples of jam ("home-made" apricot—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.
<i>Milk and Dairies (Consolidation) Act, 1915 ; Section 6.—</i> Name and address of vendor not inscribed upon vehicle and churn.....	1	Offender cautioned.
<i>Milk and Dairies Order, 1926 ; Article 6 (3).—</i> Selling milk without being registered for the purpose	1	Do.
<i>Article 28.—</i> Milk vessels not properly cleansed before being returned	2	Offenders cautioned.
<i>Article 29 (1).—</i> Name and address of owner not properly marked upon churns	3	Do.
<i>Article 29 (2).—</i> Milk churns in a condition contravening the Order	2	Do.
<i>Article 31 (2).—</i> Bottles of milk opened and portions of contents sold therefrom.....	4	Do.
<i>Milk (Special Designations) Order, 1936 ; Third Schedule, Parts I. and II., A, 6.—</i> Churns containing "designated" milk forwarded unsealed	3	Do.
<i>Milk and Dairies (Amendment) Act, 1922 ; Sections 2-3 ; Milk and Dairies Order, 1926 ; Article 6 ; Milk (Special Designations) Order, 1923 ; Article 3.—</i> Selling "Pasteurised" milk without being registered and licensed for the purpose	1	Offender cautioned.
TOTAL	17	

The Public Health (Condensed Milk) Regulations, 1923-1927.

Ten 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 117, 118, and 181.

Cleanliness of Milk Churns.—During the year 25,413 churns awaiting return to the farmers were examined at the various railway stations in the City. Of this number, only 1 was found in an uncleansed condition. The case was met by a caution.

In addition, 1,499 churns in course of transit through the City were examined. Of these, 2 were found uncleansed, and the firm concerned was communicated with accordingly.

Water.—Samples are taken weekly from all parts of the City and at the water works, and examined for the presence of *bacillus coli*.

The results are described on page 118.

PREMISES ON WHICH FOOD IS PREPARED.

Bakehouses.—There are 164 bakehouses on the register, of which 4 are certified "basement bakehouses."

Restaurant Kitchens (including hotels, cafés and dining rooms).—The number on the register is 120.

Regular inspection and strict supervision are exercised over these places, in order to ensure the preparation and handling of food under hygienic conditions. In 5 instances notices were served (and immediately complied with) in respect of general cleansing, etc.

Fried Fish Shops.—The number of these is 152 (as against 153 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 52 applications for registration were received, of which 50 were granted by the Committee, and 2 refused owing to the unsuitability of the premises.

Registrations granted now number 349, as follow :—

(a) manufacturers, vendors, and owner-occupiers of the premises.....	47
(b) manufacturers, vendors and occupiers	46
(c) vendors and owner-occupiers	76
(d) „ „ occupiers.....	173
(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 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. 10 samples were submitted for analysis and 5 of these were found to be poor in milk-fat. The percentage (in all samples) varied from 2.1 to 14.8.

The Milk and Dairies (Amendment) Act, 1922, Sec. 2, and The Milk and Dairies Order, 1926, Article 6.—During the year 52 applications were received for permission to retail milk, 48 being granted, 3 refused on sanitary grounds, and 1 withdrawn. At the close of the year there were 751 retail milk-shops in the City, including 63 belonging to the 9 larger dairy companies. Of the total, 59 were shops in which only dairy products and like commodities were retailed, 663 were shops selling other articles, and 29 were hawkers. All milk-shops and dairies were regularly inspected, and the conditions generally found to be satisfactory.

Milk (Special Designations) Order, 1936.

The number of licences granted during the year is in accordance with the following table :—

	GRADE OF MILK.			Total.
	Tuberculin Tested.	Accred-ited.	Pasteur-ised.	
Producer-bottler-retailers.....	1	8	....	9
Bottler-retailers	7	1	2	10
Retailers	12	1	125	138
Supplementary Licences (Retailers)	3	2	1	6
TOTAL	23	12	128	163

W. GRAY,

Inspector under the Food and Drugs Acts, etc.

Health Department,

Town Hall,

23rd June, 1939.

**REPORT OF THE
CHIEF SANITARY INSPECTOR.**

**VII.—NUISANCES, HOUSING,
FACTORIES, Etc.**

THE

AMERICAN

AMERICAN

FACTORIES

NUISANCES, HOUSING, FACTORIES, ETC.

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I have the honour to submit the following report upon the work carried out by my section of the Department during the year 1938.

Throughout, all sub-departments have functioned in a very satisfactory manner and, generally, work has been well maintained in each.

The principles of hygiene have been applied in divers ways, to the home, the school, the factory, workshop, and business place, the food shop and store, the place of public entertainment, and other premises, with resultant benefit to all.

With regard to "**Food and Drugs Adulteration**," detailed on page 196A, the percentage of all samples returned by the City Analyst as "not genuine" shows a welcome decrease of 2.4 as compared with the previous year. With respect to milk, "careless handling," rather than wilful adulteration, is largely responsible for many of the deficient samples. In one particular instance (a deficiency of 41 per cent. in milk-fat), it was indisputably ascertained that gross carelessness in the bottling of the milk was the cause of the deficiency.

Slum Clearance.—It was anticipated that the last of the areas scheduled in the second 5-years programme would be presented for Public Inquiry at the end of the year under report. Events beyond the control of the Department, however, prevented this and, instead, Inquiry was held in January, 1939. A further survey of the housing conditions of the working classes in the City has commenced and, out of this, a third programme of Clearance Areas will be presented for consideration at an early date. This programme is not a final one; many properties still remain which will be dealt with at a subsequent date.

New Legislation.—The Factories Act, 1937, came into operation on the 1st July, 1938. This Act not only consolidates previous legislation but brings into force extensive amendments of

great importance, and increases the administrative responsibilities of local authorities. Briefly, the aim of the provisions is the better protection of health and safety of persons employed in factories. The duties generally vested in local authorities are in respect to factories where mechanical power is not used in the trade or process, and are (briefly) :—

Cleanliness of interiors, and removal of accumulations of dirt and refuse.

Overcrowding.—A minimum of 400 c.ft. of space per person is now required, instead of the former 250 c.ft. ; otherwise overcrowding occurs. Exemption from the 400 c.ft. standard may be claimed in respect of certain workrooms, in specified circumstances.

Temperature.—A reasonable temperature must be maintained in every workroom. 60° Fah. is specified for a room where work “ not involving serious physical effort ” is done.

In other classes of work the “ reasonable temperature ” will vary.

Ventilation.—Workrooms must be adequately ventilated by the circulation of fresh air. The provision is to be effective and suitable and also must render harmless, as far as practicable, all fumes, dust and other impurities that may be injurious to health.

Lighting.—Sufficient and suitable natural and artificial lighting must be provided. Glazed windows must be kept clean, free from obstruction, and may be whitewashed or shaded against heat or glare.

Drainage of Floors is required where the process carried on causes the floor to be so wet that it can be removed by drainage.

Sanitary Conveniences.—Sufficient and suitable conveniences must be provided for each sex. The Sanitary Accommodation Regulations, 1938, define very clearly the requirements under the Section. The local authority enforces this provision in all factories.

Basement Bakehouses.—Previous law allowed underground bakehouses provided they were certified by the local authority as being suitable. The new provisions define these bakehouses as “ basement bakehouses ” and state the conditions under which they are allowed to continue.

Certified basement bakehouses in use as bakehouses must be re-examined before the 1st July, 1938. They must be suitable as regards construction, height, light, ventilation, and any hygienic respect, and examined again every fifth year. If not conforming to these requirements, the certificate is cancelled. An appeal is allowed if a certificate is cancelled by the local authority. Any basement bakehouse not in use as a bakehouse on the 30th July, 1937, must cease, and basement bakehouses in use after that date but not being so used for a period of twelve months must also cease.

Such, in short, are a few of the main health provisions. Safety provisions in case of fire, welfare, prevention of accidents, working hours, etc., are also prominent in the Act, which undoubtedly will go far to create a healthy working environment.

NUISANCES.

The number of nuisances, etc., reported upon and dealt with during the year was 20,034.

Of the many complaints received, none could be described as being of an unusual character.

Investigation of a large number, however, revealed, apart from minor defects, the desire of the complainant to obtain a Council house.

Notices Served.

The following are the numbers of notices and letters issued during the year :—

Number of notices served :—	
Informal.....	4,576
Statutory	515
	<hr/> 5,091
Number of special letters sent	2,107*
Number of circular letters sent	1,790
	<hr/>
Total.....	8,988
	<hr/>

*In addition 723 special letters were sent relative to the "Overcrowding" provisions of the Housing Act, 1936, ("permitted numbers," etc.).

Magisterial Proceedings.

112 " statutory notices not complied with " and other contraventions were reported to the Health Committee, who ordered legal proceedings to be taken, but in only 7 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 217.

The Rent and Mortgage Interest Restrictions Acts.

Three applications were received from tenants for certificates under the above Acts, certifying that their houses were not reasonably fit for habitation.

Inspection was made and a certificate granted in each case. Subsequently, repairs were carried out by the owners, rendering the houses fit.

Conversion of " Dry " Closets to Water-closets.

The existing pail-closets, privies, etc., tabulated on page 207, are generally situate in the semi-rural areas of the City.

Structurally they are in good condition and, further, there are no sewers reasonably available to enable conversion to water-closets to be made.

18 " 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. Arrangements have now been made whereby a considerable number of these foul conveniences will be abolished during the ensuing year.

Four dry ashpits were also removed and replaced by regulation dustbins (which were 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.

583 observations were made of 97 factory and other chimneys.

17 informal and 2 statutory notices were served during the year. Drivers of 6 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.	
97	583	14	36	17	2	....

ATMOSPHERIC POLLUTION.—NEWCASTLE RECORDS, 1938.

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.O ₃ .	Chlorine as Cl.	Ammonia as N.H ₃ .	Lime as Ca.O.
January ..	52.5	0.20	0.65	1.22	1.36	2.32	5.75	1.22	0.53	0.10	0.30
February ..	28.4	0.13	0.68	1.28	0.45	1.82	4.36	0.85	0.64	0.01	0.14
March	7.53	0.06	0.35	1.11	0.80	0.35	2.67	0.41	0.15	0.01	0.10
April	3.69	0.03	0.13	0.57	0.14	0.23	1.10	0.13	0.10	0.01	0.06
May	122.1	0.13	2.48	2.27	3.43	3.90	12.21	1.76	0.78	0.18	0.30
June	99.4	0.13	2.36	1.42	1.59	1.19	6.69	0.75	0.57	0.06	0.24
July	71.0	0.54	1.12	0.80	1.99	1.70	6.15	0.78	0.30	0.07	0.11
August	63.9	0.10	0.52	1.42	0.89	2.68	5.61	0.84	0.23	0.07	0.27
Sept.	58.9	0.05	0.34	0.71	0.84	2.82	4.76	1.01	0.29	0.03	0.10
October ..	75.4	0.10	0.46	0.63	1.36	0.60	3.15	1.34	0.42	0.08	0.25
Nov.	54.8	0.40	0.59	1.37	0.99	1.64	4.99	0.64	0.38	0.11	0.27
Dec.	75.4	0.08	0.08	0.61	2.41	2.41	5.59	0.62	0.96	0.04	0.12
Total, 12 months....	713.02	1.95	9.76	13.41	16.25	21.66	63.03	10.35	5.35	0.77	2.26
Average per month	59.42	0.16	0.81	1.12	1.35	1.81	5.25	0.86	0.45	0.06	0.19

An average of 5.25 metric tons per square kilometre per month=5.0 cwts. per acre per annum, or 160 tons per square mile per annum, as compared with 8.2 cwts. per acre, or 262 tons per square mile in 1937.

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 Car- bonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as S.O ₃ .	Chlorine as Cl.	Ammonia as N.H ₃ .	Lime as Ca.O.
January ..	44.1	0.23	1.46	3.65	0.53	2.11	7.98	0.88	0.37	0.09	0.59
February ..	21.4	0.15	2.26	3.44	0.62	1.36	7.83	0.53	0.45	0.03	0.35
March	7.48	0.20	0.94	1.88	0.60	0.29	3.91	0.41	0.16	0.01	0.23
April.....	3.61	0.15	0.63	1.33	0.43	0.36	2.90	0.29	0.13	0.03	0.12
May	92.2	0.21	2.45	2.94	1.30	1.65	8.55	0.88	0.39	0.13	0.53
June	73.5	0.09	1.00	1.83	0.88	1.18	4.98	0.56	0.41	0.04	0.48
July.....	60.1	0.44	1.03	1.55	1.08	1.32	5.42	0.61	0.29	0.07	0.29
August	52.1	0.16	1.14	2.30	0.52	2.50	6.62	0.79	0.23	0.05	0.29
Sept.	61.5	0.11	1.11	1.68	0.73	2.58	6.21	0.84	0.27	0.07	0.15
October ..	80.2	0.12	1.61	1.98	0.80	1.76	6.27	1.20	0.35	0.08	0.13
Nov.	62.8	0.09	1.56	1.92	0.87	2.39	6.83	0.91	0.31	0.12	0.20
Dec.	80.2	0.11	1.16	1.94	0.80	3.53	7.54	1.20	0.94	0.04	0.33
Total, 12 months...	639.19	2.06	16.35	26.44	9.16	21.03	75.04	9.10	4.30	0.76	3.69
Average per month	53.27	0.17	1.36	2.21	0.76	1.75	6.25	0.76	0.36	0.06	0.31

An average of 6.25 metric tons per square kilometre per month=6.0 cwts. per acre per annum, or 191 tons per square mile per annum, as compared with 8.9 cwts. per acre, or 284 tons per square mile in 1937.

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 $S.O_3$.	Chlorine as Cl.	Ammonia as $N.H_3$.	Lime as $Ca.O$.
January ..	40.3	0.19	1.29	1.96	2.01	2.74	8.19	1.36	1.37	0.40	0.36
February ..	20.2	0.05	0.83	1.80	1.77	2.90	7.35	1.18	1.29	0.11	0.43
March	3.09	0.08	0.35	0.98	0.50	0.71	2.62	0.43	0.17	0.03	0.19
April.....	2.42	0.21	0.55	2.02	0.30	0.67	3.75	0.30	0.17	0.04	0.16
May	83.3	0.19	1.25	3.09	2.16	2.00	8.69	1.55	0.77	0.16	0.75
June	67.2	0.13	1.38	1.88	1.07	1.34	5.80	0.64	0.48	0.13	0.34
July.....	63.1	0.28	1.72	1.98	1.38	1.89	7.25	0.60	0.40	0.07	0.20
August	45.7	0.13	1.28	2.24	0.55	2.74	6.94	0.82	0.29	0.04	0.42
Sept.	53.7	0.08	0.74	1.72	0.65	2.36	5.55	0.89	0.31	0.03	0.27
October ..	73.9	0.07	0.83	1.62	0.89	2.07	5.48	0.91	0.58	0.15	0.19
Nov.	53.7	0.31	0.78	1.49	1.40	1.93	5.91	1.07	0.54	0.11	0.27
Dec.	60.4	0.11	0.39	1.21	1.93	3.27	6.91	1.29	1.16	0.07	0.20
Total, 12 months....	567.01	1.83	11.39	21.99	14.61	24.62	74.44	11.04	7.53	1.34	3.78
Average per month	47.25	0.15	0.95	1.83	1.22	2.05	6.20	0.92	0.63	0.11	0.31

An average of 6.20 metric tons per square kilometre per month = 5.9 cwts. per acre per annum, or 190 tons per square mile per annum, as compared with 7.3 cwts. per acre, or 235 tons per square mile in 1937.

TOTAL IN THREE GAUGES IN THE CITY, 1938.

MONTH.	RAIN (Millimetres).	METRIC TONS OF DEPOSIT PER SQUARE KILOMETRE PER MONTH.									
		Insoluble Matter.			Soluble Matter.		TOTAL SOLIDS.	Included in Soluble Matter.			
		Tar.	Other Car-bonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as S.O ₃ .	Chlorine as Cl.	Ammonia as N.H ₃ .	Lime as Ca.O.
Total, 12 months....	1919.2	5.84	37.50	61.84	40.02	67.31	212.51	30.49	17.18	2.87	9.73
Average per month	159.9	0.49	3.12	5.15	3.34	5.61	17.71	2.54	1.43	0.24	0.81
Average per gauge, 12 mths.	639.7	1.95	12.50	20.61	13.34	22.44	70.84	10.16	5.73	0.96	3.24
Average per gauge per month	53.3	0.16	1.04	1.72	1.11	1.87	5.90	0.85	0.48	0.08	0.27

An average of 5.9 metric tons per square kilometre per month=5.6 cwts. per acre per annum, or 180 tons per square mile per annum, as compared with 8.1 cwts. per acre, or 260 tons per square mile in 1937.

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	40.89	63.2
February	37.73	52.0
March.....	71.31	104.9
April	105.82	134.4
May	128.94	156.2
June	157.87	180.7
July	101.63	118.0
August	126.35	140.6
September	75.2	112.9
October.....	91.82	103.3
November	66.62	81.4
December	30.02	44.4
Total for year	1034.20	1292.0
Average per month	86.18	107.7

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.

Three applications were received for certificates of sanitation and, after careful inspection of the premises, all were granted.

The number of places certified is now 4 theatres and music halls, 45 cinemas, and 125 concert halls, billiard rooms, cafés, etc., 264 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 the 49 theatres, music halls and cinemas during evening performances has been carried out.

In 6 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 one case, additional means of ventilation was provided.

In all others 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.

11 applications for permission to establish the trade of a fish fryer were received during the year.

The Health Committee granted consent to 2 of these applications, and refused 7 others, on account of the unsuitability of the premises for the purpose, the remaining 2 being withdrawn by the applicants before being reported to the Committee. The trade of " fish fryer " predominates in the City.

There is a total of 186 registered premises carrying on offensive trades, of which 152 are fish-frying premises. These latter are regularly inspected by day and occasionally at night-time.

Generally, the whole of the offensive trades have been conducted in a satisfactory manner during the year. 1,305 inspections were made of the various premises.

The number of such trades now on the register is :—

Fish fryers	152
Rag and bone dealers.....	8
Tripe boilers	5
Gut scrapers	8
Dealers in hides and skins.....	4
Bone boilers.....	3
Fat melter	1
Fat extractor	1
Glue makers	2
Size maker	1
Soap boiler	1

Defective waste-water closets (to replace with fresh-water closets with flushing cisterns, etc.).....	10
Foul privy and ashpit (to replace with w.c.)	1
Foul or defective ashpits not connected with privies (to remove and provide dust-bins).....	14
Insufficient water-closet accommodation (additional water- closets ordered)	2
Defective or insufficient dust-bins (for houses)	1,086
" " " (for business premises)	53
Defective water-closets	1,521
Water-closets without adequate water supply	62
Dirty water-closets, etc. (served on tenants)	7
Defective drains (to repair, or construct new drains)	775
Choked drains, etc.	301
Defective, want of, or choked sinks, waste-pipes, etc.	693
No sink provided	5
Defective or choked soil-pipes, vent shafts, etc.	91
Sink waste-pipes not trapped	354
Want of or defective pavement in yards, passages, etc.	670
Rooms dirty and/or verminous	66
Dirty bedding	5
Damp rooms	1,201
Dirty yards, passages, stairs, etc.	74
Animals, pigeons, and fowls improperly kept	9
Offensive accumulations	84
Accumulations of manure	9
Want of or defective manure pits	3
Broken roofs and want of or defective or choked spouting.....	1,705
Want of water (other than in tenements—see below).....	97
Smoke nuisances.....	14
Want of proper ventilation to rooms (including to floor space), broken window cords, etc.	902
Structural defects—internal and external—(broken plaster, floors, stairs, walls, fireplaces, etc.).....	8,199
Smoke emitted into rooms (from defective fireplaces, obstructed flues, etc.)	243
Stables (unsuitable, defective, etc.)	6
Piggeries (" ")	5
Food manufactured or stored for sale under improper conditions....	4
Bakehouses—Dirty, etc.	61
Schools (Council and other) :—	
Water-closets defective.....	2
Drinking fountain out of order	1
Inadequate accommodation for :—	
Storage of food (other than in tenements).....	419
Cooking of food (" ")	1
Washing of clothes (" ")	254
Water supply and sink not conveniently accessible (other than in tenements)	61
Housing Act, 1936 :—	
Overcrowding.....	13
“ Permitted numbers,” etc., not inscribed in rent books.....	45
Carried forward.....	19,128

TOTAL	20,034
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DETAILS RELATING TO CERTAIN WORKS CARRIED OUT IN THE ABATEMENT OF
NUISANCES AND TO INSPECTIONS MADE DURING 1938.

Length (in yards) of old drains removed	3,379
Length (in yards) of new drains constructed	4,145
New trapped gullies provided to drains.....	697
Defective water-closets removed.....	379
Water-closets provided (in place of the foregoing defective water-closets removed, also in 40 cases where the accommodation was previously insufficient).....	419
Dry ash-pits removed and replaced by galvanised iron dust-bins	*4
No. of drains tested	1,465
No. of tests of above drains made by smoke and water.....	1,500
No. of inspections from complaints made at office (verbally or by letter)	5,545
No. of tenement inspections made.....	11,045
No. of contraventions of Tenement Bye-laws for which notices have been served to obtain remedy.....	692
Inspections of houses made from complaints received outdoors or nuisances discovered in the districts, including a large number of minor nuisances, such as choked drains and dirty yards, the abatement of which was accomplished at the time of visit, and without legal notice.....	1,985
Inspections to learn if works ordered were in progress.....	11,010
Supervisions of work in progress.....	8,980
Common yards and courts in the worst localities specially visited on Friday afternoons and Saturday mornings to obtain weekly cleansing	12,585
Inspections after infectious disease.....	1,086
Inspections of milk shops and ice creameries (including retail shops)	1,822
„ bakehouses.....	†1,363
„ offensive trades	1,305
„ wholesale margarine warehouses	59
„ as to limewashing of tenements.....	1,723
„ of schools	283
„ shops (re Shops Act, 1934; Section 10)	298
„ public houses	246
„ under Housing Act	11,328
„ re Overcrowding (Preliminary Survey)	8,421
Inspections of cinemas, etc. (day visits, 188; night visits, 76)	264
„ tents, vans, sheds and similar structures	34
Miscellaneous visits	5,666

* Dust bins supplied free by Corporation.

† Including 687 inspections made under the Factories Act by the Assistant Inspectors of
Factories.

SUMMARY OF LEGAL PROCEEDINGS ORDERED TO BE TAKEN BEFORE THE
MAGISTRATES FOR THE ABATEMENT OF NUISANCES, ETC.,
DURING THE YEAR 1938.

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> —				
Drains defective, imperfectly trapped, etc.	11	11	....
Roofs and/or spouting defective	20	18	2	
Dampness in rooms, etc.	17	17	....
Yard pavements defective.....	7	7	....
Smoke emitted into rooms (from defective ranges, obstructed flues, etc.)	10	7	....	In 3 cases remedial measures are being adopted; cases standing adjourned.
Water-closets defective	10	10	....
Scullery sinks defective, woodwork rotted, etc.	4	4	....
Waste-pipes from sinks and baths defective and/or untrapped	3	3	....
Rooms inadequately ventilated (broken sash-cords, etc.)	11	10	1	
Doors, window sills, thresholds and weather-boards defective, etc., permitting entrance of rainwater into houses	7	7	....
Scullery floor defective	1	1	....
Pointing required to walls, etc.	2	2	....
Want of or defective dustbins for house refuse	3	3	....
Keeping a common lodging house without being registered as the keeper thereof....	1	....	....	Fined 20/-.
<i>Newcastle upon Tyne Corporation Act, 1926, s. 14, and Newcastle upon Tyne Corporation (General Powers) Act, 1935, s. 9.</i> —				
Ventilated food storage accommodation not provided, defective, etc.	5	5	....
TOTAL	112	105	3	4

HOUSING.

Housing Act, 1936.—Overcrowding.

The Minister of Health fixed the 1st January, 1937, as the "appointed day" with respect to overcrowding and, subsequently, the 1st July, 1937, became the date on and after which offences in relation to overcrowding commenced.

Rent books or similar documents used in connection with working class dwelling-houses must also contain the "permitted number" in relation to the house on and after the 1st July, 1937. Systematic examination of such rent books during the year revealed many offences with respect to the prescribed information. A friendly warning and advice in every instance were sufficient to rectify the omissions.

A few cases of illegal overcrowding were also discovered and afterwards abated by the offenders. In view of the circumstances these offences were also met by cautions and advice. The offenders generally were persons who possessed only a single house or so and were unaware of the statutory obligations.

The total number of dwellings in respect of which the "permitted numbers" were supplied (on request) during the year was 3,338.

In order to obtain this information, 8,421 visits were made to 5,743 separate dwellings, 23,116 rooms being measured up.

Abatement of Overcrowding.—The City Treasurer (re-housing department) has re-housed 242 overcrowded families, of 1,389 persons, in suitable dwellings during the year.

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.

The Housing Act, 1936.

The total number of inspections carried out under the Housing Act during the year was 11,328.

MINISTRY OF HEALTH TABLE.

1.—*Inspection of Dwelling Houses during the Year :—*

(1) (a) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts).....	7,087
(b) Number of inspections made for the purpose.....	24,567
(2) (a) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 & 1932..	3,196
(b) Number of inspections made for the purpose.....	11,328
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	*1,370
(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	2,403

* (Dealt with as Clearance Areas or as Individual Unfit Houses).

2.—*Remedy of Defects during the year without Service of formal Notices :—*

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers	1,718
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3.—*Action under Statutory Powers during the Year :—*

(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	115
(2) Number of dwelling houses which were rendered fit after service of formal notices :—	
(a) By owners	106
(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	570
(2) Number of dwelling houses in which defects were remedied after service of formal notices :—	
(a) By owners	554
(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	24
(2) Number of dwelling houses demolished in pursuance of Demolition Orders.....	*28

(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	38
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit .....	....

* (Mostly resulting from action taken previous to the year under report).

MINISTRY OF HEALTH TABLE—*Continued.*4.—*Housing Act, 1936, Part IV.—Overcrowding :—*

(a).—(i) Number of dwellings overcrowded at the end of the year	7,989
(ii) Number of families dwelling therein	7,989
(iii) Number of persons dwelling therein	† 23,528
(b).—Number of new cases of overcrowding reported during the year	13
(c). (i) Number of cases of overcrowding relieved during the year	294
(ii) Number of persons concerned in such cases	1,726
(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.

Under this Section, owners are required by notice to carry out specified works or repairs to make houses reasonably fit for human habitation. Considerable difficulty has again been experienced with a certain type of owner regarding the requirements of notices ; however, it was not necessary in any instance to resort to statutory action.

1,833 dwelling-houses have been inspected, and the nature and number of defects dealt with are tabulated in the following summary :—

HOUSING ACT, 1936 ; SECTION 9.

DETAILS OF WORKS CARRIED OUT UNDER NOTICE.

No. of houses involved	1,833
Roofs repaired (including chimney stacks).....	964
Spouting repaired, renewed, etc.	650
External walls repaired, re-pointed, etc.	1,169
Under-floor ventilation provided.....	254
Yard pavements repaired or renewed	707
Dampness remedied (from causes other than those defined above)	783
Drains repaired, reconstructed, etc.	685
Water-closets repaired	1,163
" ; additional conveniences provided.....	27
Dustbins provided	368
Accommodation for washing clothes, provided, repaired, etc.	331
Coalhouses repaired	351
Ceiling- and wall-plaster repaired or renewed.....	1,363
Floors repaired or renewed.....	398
Window sash-cords renewed or repaired.....	700
Windows repaired or renewed	369
Doors repaired or renewed.....	817
Cooking accommodation provided.....	118
Fireplaces repaired or renewed.....	529
Ventilated food stores provided.....	440
Water supply and/or sinks provided, waste-pipes repaired, etc.....	1,006
Staircases.—Stairs, handrails, etc., repaired or renewed	457
Light (natural and/or artificial) provided.....	67
Ventilation of rooms, etc., improved.....	43
Rooms, staircases, etc., cleansed	91
Minor repairs (not included in the above)	946
TOTAL.....	14,796

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 offer alternative proposals. If aggrieved by their decision, after hearing his case, appeal may be made 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	24	46	151
Closing Orders made	18	38	92
Houses re-conditioned	1	1	1
Premises retained for business purposes (owners finding alternative accommo- dation for tenants displaced)	1	3	9
TOTAL	44	88	253

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.

An application was received under this Section covering three houses belonging to one owner, and which had been excluded by the Minister of Health from a Clearance Order subject to an offer to re-condition the properties to the satisfaction of the local authority.

Proposals were accepted, re-conditioning works satisfactorily completed, and certificates granted by the Health Committee for a period of five years.

Slum Clearance.

In February the Minister of Health held an Inquiry into 15 areas. This Inquiry, in respect of 12 clearance orders and 3 compulsory purchase orders, comprised 328 houses, 716 separate dwellings, and a population of 2,218.

These orders were all fully confirmed by the Minister.

The Inquiry lasted only 1½ days and was largely attended by owners and others acting for them.

Details are appended in the following table :—

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.
Albion Row (Compulsory Purchase Order)	8	36	84	8	36	84
Benwell (Thirlwell's Cottages)	4	4	11	4	4	11
Old Benwell (East Cottages)	17	18	58	17	18	58
Old Benwell (Riverside Cottages) ..	9	10	17	9	10	17
Old Benwell (Boathouse Cottages), No. 1	7	8	6	7	8	6
Old Benwell (Boathouse Cottages), No. 2	4	6	24	4	6	24
Stepney Lane	6	26	70	6	26	70
Jesmond Vale	12	18	41	12	18	41
Pearson Street	7	15	54	7	15	54
St. Anthony's (Ellison Place)	7	13	45	7	13	45
Denton Burn (Wood Row)	12	13	59	12	13	59
Hindhaugh Street (Compulsory Purchase Order)	92	201	615	92	201	615
Hill Street (Compulsory Purchase Order)	51	133	436	51	133	436
Hill Street	57	120	420	57	120	420
Scotswood Road (Bowman Terrace)	35	95	278	35	95	278
TOTAL	328	716	2,218	328	716	2,218

The houses in all the areas were 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 further 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 again noticeably decreased. The plans submitted with respect to these houses now show a desirable dwelling.

The number of tenemented houses in the City at the end of the year was 2,286, consisting of :—

1,497	....	One-room holdings.
4,123	....	Two-room holdings.
730	....	Three-room holdings.
97	....	Four-room holdings.
4	....	Five-room holdings.

A total of 6,451 separate holdings. During the year 11,045 inspections have been made of this type of dwelling.

Tenement Bye-laws.

54 new tenemented houses, comprising 216 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 required work was carried out without recourse to legal proceedings.

Common Lodging Houses.

At the end of the year there were on the Register 13 common lodging houses, as compared with 15 in 1937, two houses having been closed and removed from the register, one voluntarily, and the other for slum clearance.

The total number of lodgers for which the houses are registered is 470, showing a decrease of 63 from last year, due to the removals above-mentioned. 536 inspections during the day-time and 99 at night-time have been made. All of the houses have been conducted in a satisfactory manner. The offences found have been met by a caution in each case.

The average number of lodgers per night was 342, the highest number being 363, and the lowest 311.

The following summary shows in detail the accommodation as at the end of the year :—

Description of Lodgers.	No. of			Accommodation.			
	Houses.	Single Beds.	Double Beds.	Married Couples.	Single Women.	Single Men.	Total.
Married couples and single women	2	60	10	10	60	....	80
Women only	1	18	....	....	18	....	18
Men only	10	372	....	....	....	372	372
TOTAL	13	450	10	10 (20 persons)	78	372	470

Summary of inspections, contraventions found, etc. :—

Number of houses on the register at the end of the year.....	13
Applications for registration (Public Health Act, 1936, Sec. 238) ; all granted (3 for the full year and the remainder for shorter periods pending provision of satisfactory means of escape in case of fire)	14
Houses ceased to be occupied as common lodging houses.....	2
Inspections made in the day-time	536
Inspections made in the night-time.....	99
Notices served { re washing of bed-clothes, 56, { re lime-washing of houses, 28}	84
Defects and Contraventions of Bye-laws, etc. :—	
Structural defects in houses.....	5
Defective drains	3
„ water-closets.....	7
„ roof and spouting	1
Choked drain	1
Sink defective	1
Yard pavements defective	3
Dust-bins defective or insufficient	2
Inefficient ventilation of room (fireplace sealed up)	1
Bathroom walls dirty	1
Keeping a common lodging house without being registered as the keeper thereof	1
Deaths reported.....	4
Cases of infectious disease reported (tuberculosis 4, erysipelas 1, measles 1)	6

Investigation into certain houses suspected of being used as common lodging houses brought to light one house, in a residential area, being used as such. The matter was reported to the Health Committee, who ordered legal proceedings and, subsequently, the offender was convicted of carrying on an unregistered common lodging house and fined 20/-. The house was immediately vacated.

Tents, Vans, Sheds and Similar Structures.

There are 2 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.

469 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 474 during the previous year.

Houses built during the year 1938.—The City Engineer reports that there were 938 self-contained houses, and 732 flats (tenancies),

built privately during the year under report. In addition, 747 dwellings were provided under housing schemes.

Houses Demolished, etc.—Apart from action by the Health Committee, 5 self-contained houses, 4 flats, and 2 tenemented houses (comprising 5 holdings) have been demolished, or have ceased to be used as dwellings, for various reasons (conversion to business premises, etc.).

Disinfestation.

ERADICATION OF BED BUGS.

Council Houses.—In all houses found to be infested, the skirtings, architraves, and other wood mouldings are removed, the house and contents being then treated with an insecticide ("Zaldecide" or similar liquid). Woodwork, before re-fixing, is coated on the back with creosote. Thorough cleansing and decorating follow, and the house is again sprayed with the liquid insecticide. All infested unoccupied houses are treated in a similar manner.

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 an insecticide ("Zaldecide" or similar liquid), which is followed by the thorough cleansing of the house.

Recurrence of infestation after these treatments has been negligible.

Re-housing from Slum Areas.—The furniture and effects of all tenants from condemned houses are removed by the Corporation to the Disinfestation Station in special containers, fumigated with hydrogen cyanide gas, and afterwards returned to the new houses.

Bedding and soft goods are removed separately and disinfected by steam.

The services of a commercial firm have again been engaged during the year to assist in this work. The same process is carried out by them, with the exception that the vans are "gassed" in a suitable locality instead of at the central station.

Number of Council houses found to be infested	211
" " " disinfested	211
" other houses found to be infested.....	56
" " " disinfested	56
" tenants' belongings disinfested (removed	
from condemned "slum" houses)	832

Factories and Workshops.

Important new legislation (Factories Act, 1937) came into operation on the 1st July. Comment upon this Act is made on pages 203—205.

Inspections have been well maintained during the year, the total number being 6,200. Visits include factories, workshops, domestic workshops, workplaces, laundries, bakehouses, etc. 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 31 lists of outworkers were received, 12 employers having sent in their lists in February and August, as required by the Factories Act, 1937, and 7 employers only once. Included in the lists were the names and addresses of four 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 30 outworkers' premises inspected.

144 notices as to insanitary conditions in factories, etc., were received from H.M. Inspector of Factories. These received due attention, the result of action taken being duly reported to H.M. Inspector, as required by the Act.

ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901, AND THE FACTORIES ACT, 1937 (WHICH SUPERSEDED THE ACT OF 1901 ON 1ST JULY, 1938).

Home Office Tables.

1.—INSPECTIONS FOR PURPOSES OF PROVISIONS AS TO HEALTH. INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS.

PREMISES. (1)	NUMBER OF		
	Inspec- tions. (2)	Written Notices. (3)	Occupiers Prosecuted (4)
Factories with mechanical power	864	145	} None
Factories without mechanical power.....	5,330	171	
† Other Premises under the Act (including works of building and engineering construction but not including out- workers' premises).....	6	....
TOTAL	6,200	316	....

† Electrical Stations are reckoned as factories.

2.—DEFECTS FOUND.

PARTICULARS.	NUMBER OF DEFECTS.			Number of defects in respect of which Prosecutions were instituted.
	Found.	Re-medied.	Referred to H.M. In-spector.	
(1)	(2)	(3)	(4)	(5)
Want of cleanliness (S.1)	81	79	} None.
Overcrowding (S.2)	2	2	....
Unreasonable temperature (S.3)	45	45	....
Inadequate ventilation (S.4).....	26	26	....
Ineffective drainage of floors (S.6)	1	1	....
Sanitary {insufficient	52	52	—	
Conven- {unsuitable or defective	186	180	—	
iences (S.7) {not separate for sexes	8	8	—	
Other offences	76	63	13	
(Not including offences relating to Home Work or offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921, and re-enacted in the Third Schedule to the Factories Act, 1937.)				
TOTAL	477	456	13	—

OUTWORK IN UNWHOLESOME PREMISES,
(SECTION 108 OF ACT OF 1901 ; SECTION 111 OF ACT OF 1937.)

NATURE OF WORK. (1)	Instances. (2)	Notices served. (3)	Prosecutions. (4)
As per Home Office List	None.	None.	None.

LIST OF TRADES.

	TRADES.	FACTORIES (Factories Act, 1937).	WORKPLACES (Public Health Act, 1936).
1	Athletic Outfitters (comprises : the making and repairing of bats, rackets, guns, cycles, billiard tables, golf clubs, etc.)	36	....
2	Bakehouses.....	164	....
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.)	217	97
4	Laundries.....	9	....
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.).....	552	....
6	Restaurant kitchens .....	....	120
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.)	308	....
8	Wearing apparel (comprises : dress-makers, milliners, costumiers, mantle and gown makers, underclothing, bed linen, furriers, shirt makers, tailors, etc.)	321	....
9	Workers in leather (comprises : boot-makers and repairers, bookbinders, bag and trunk makers, belt makers, harness and saddlery, etc.)	155	....
10	Watchmaking and jewellery (comprises : watchmakers, opticians, instrument makers, etc.)	56	....
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.)	201	241
	TOTAL.....	2,019	458

Inspection of Council and other Schools.

During the year 283 inspections were made. In three cases minor defects were found in connection with sanitary conveniences and water supply. 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. To these factory premises (which are also inspected under the Factories Act) 44 visits were made.

Seven samples of rag flock were purchased and submitted for analysis. All were found to conform to the standard of cleanliness prescribed by the Regulations.

Offences.—One case of "obstruction" (refusal to sell a sample of rag flock to the Inspector) occurred, the offender being summoned; case dismissed.

Exhumations.

Two exhumations and re-interments were 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, 25 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.

Thirteen samples of fertilisers and 1 of feeding stuff were obtained (mostly informally) and submitted for analysis to the Agricultural Analyst.

One informal sample of fertiliser was found to be deficient in one of its constituents and a formal sample was taken. In this instance the composition of the article agreed with the statement of particulars, and no further action was taken.

The remaining samples all complied with the requirements.

Merchandise Marks Act, 1926.

In the administration of this Act, 441 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 57 instances there was left a copy of a printed notice to traders (setting out the principal provisions of the Act), and in 68 cases cautions were administered (61 verbally and 7 by special letter).

Agricultural Produce (Grading and Marking) Act, 1928.

There are 4 premises on the Register for the cold storage or chemical storage of eggs, under the above Act.

147 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 108.

During the year, 5 applications for registration were received and granted, whilst 2 persons' names were removed from the Register, the sale of scheduled poisons having been discontinued.

The persons registered are :—

Grocery, Provision and General Dealers	....	47
Hairdressers	....	19
Druggists	....	15
Hardwaremen, etc.	....	10
Seed and Agricultural Merchants	....	12
Chemical Disinfectant Manufacturers	....	3
Electrical Supplier	....	1
Manufacturing Chemist	....	1

318 visits were made to registered premises in order to ascertain if the provisions of the Act and Rules were being complied with, also to unregistered premises suspected of selling poisons listed under Part II. of the Poisons Act. During the year 9 verbal cautions were given in respect of minor contraventions found.

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.

298 inspections have been made, and 74 contraventions of the Act and Section found and dealt with. Details of the contraventions are given on page 215.

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.

During the year, Inspectors R. S. Cooper, F. James and A. Anderson resigned to take up similar appointments under other local authorities, whilst Inspector J. McNicholl, Chief Assistant Inspector, retired on superannuation, in his 40th year of service with the Department.

Two of the vacancies have been filled by the appointment of Messrs. L. Oliver and S. Holliday, and Inspector L. W. Johnson was appointed from the staff to the position of Chief Assistant Sanitary Inspector.

It is with sincere regret that I have to record the death, after a short illness, of Inspector A. E. Kirsop, at the age of 52 years.

Conclusion.

In conclusion, Sir, I desire to express my sincere appreciation of your guidance and support during the year, and to the whole of the Staff I tender thanks for their enthusiastic attention to their various duties.

I am, Sir,

Your obedient servant,

W. GRAY,

Chief Sanitary Inspector.

Health Department,

Town Hall,

23rd June, 1939.

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Appendix A.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

AIR RAID PRECAUTIONS COMMITTEE.

ORGANIZATION OF THE FIRST-AID AND EMERGENCY HOSPITAL SERVICES.

The organization of the First Aid and Hospital Services which will be called into being in the event of a national emergency is briefly as follows :—

- (1) First Aid Parties.
- (2) First Aid Posts.
- (3) Ambulance Services.
- (4) Emergency Hospitals.
- (5) Base Hospitals.

The precise role to be played by each of the above and their detailed organization will be described in order in the subsequent paragraphs. A short account of the methods of maintaining communication between the various units of the scheme, and of the general administration, will also be given.

1.—First-Aid Parties.

The full-time war establishment which has been fixed for the City is 194 parties, composed of 970 men, with a further reserve of 50%, making a total of 1,455 men. Each man is required to be trained in Anti-gas Precautions and in First Aid work, the standard of proficiency being the examination for the St. John Ambulance Brigade certificate or its equivalent. It is probable that in the event of war, a considerable proportion of the members of the first-aid parties will be employed full-time and paid by the State.

The first-aid parties will consist of five men, one of whom is also a driver, as it is intended that the parties shall be mobile. For this purpose, each party is to be provided with a car. First-aid parties will be grouped in the first instance at first-aid depots, of which 30 have been sited in various parts of the City, some in conjunction with the first-aid posts, others in buildings such as garages, schools, child welfare clinics, etc. The depots will provide accommodation for the personnel when coming off duty, and a mess room and storage for equipment. They will also serve as the " emergency stations " for certain of the ambulances.

In time of war the first-aid parties will be on duty for 24 hours and will then be completely relieved from duty for a period of 24 hours. During the period on duty, reliefs will, of course, be arranged as far as possible, for rest, meals, etc.

Three first-aid parties with their cars, will be stationed at each of the first-aid depots, and, in addition, two ambulances with their crews. Additional parties and ambulances forming a central reserve will be stationed at Elswick Hall.

2.—First-Aid Posts.

Nine first-aid posts will be established and no part of the City will be more than one mile distant from a post. A list of these first-aid posts is attached. It will be seen that the buildings used are mainly schools or public baths, which on the outbreak of an emergency can be easily transformed into first-aid posts. Certain preliminary measures to facilitate this transformation have already been carried out.

Elswick Hall (previously known as the Lough Model House) in Elswick Park, is to be the Headquarters of the First-Aid Services. This building, which has been adapted for this purpose, will also contain a first-aid post and the central medical stores.

The first-aid posts will possess accommodation for the reception and treatment of casualties, waiting rooms and staff quarters. In addition there will be facilities for the cleansing of persons who have become contaminated with "Gas" but who are not otherwise incapacitated, and who after being supplied with clean clothing will be able to proceed home.

Each first-aid post will be under the direction of a Medical Practitioner, who will be assisted and relieved by other Medical Practitioners. There will also be a small nucleus of trained nurses employed full-time. The volunteer members of the first-aid post staffs will have a number of functions to perform—the treatment of casualties, clerical duties, preparation of drinks and meals. They will be part-time workers, mainly female, with only a small complement of males for special duties.

The numbers allotted to the individual posts will vary, but on an average the staff of each post will consist of 20 men and 100 women. In all the staff of the nine first-aid posts will amount to 1,045 persons, together with a 25% reserve.

The function of the first-aid post is primarily to deal with the walking wounded cases which might otherwise gravitate to the hospitals and cause congestion there. In this way the first-aid post will act as a filter, and casualties, after they have received attention, will be sent home or referred for further treatment to one of the emergency hospitals. Furthermore, in periods of respite between raids, the posts will act as dressing stations for minor injuries and wounds.

A careful record will be kept of every casualty admitted to the first-aid posts so that questions of disablement pensions may be considered at a later date.

The work of the first-aid posts will be organized on a three-shift basis.

3.—Ambulance Services.

A large fleet of ambulances will be required to transport casualties to the first-aid posts and emergency hospitals. It is estimated that 145 ambulances will be necessary in addition to those already in the possession of the City Police and the Health Department. To provide these it is proposed to convert a number of small vans, which when properly fitted out would carry three or four stretchers. A number of these vehicles have already been earmarked.

The ambulances in time of war will be stationed near to first-aid depots and posts. There will also be three divisional ambulance depots where reserves can be maintained in a state of readiness and where overhauling and servicing can be carried out.

Each ambulance will be manned by a driver and an attendant, who will work on the three-shift system. Of the 870 drivers and attendants who will be required (plus a reserve of 25%) 80% or 696 will be female, and the remaining 174 male. Practically three-quarters of the ambulance personnel will be employed on a full-time basis in war time.

In addition to ambulances, 97 cars will be required for the transportation of sitting casualties. A total of 291 drivers (plus a reserve of 25%) who will be organized in three shifts, will be required for this purpose. Approximately 230 of these drivers will be women, and the remaining 61 male. A large proportion will be employed full-time. These cars will work in very close association with the first-aid parties, one car being assigned to each party for the transfer of casualties, in addition to the car which will convey the party itself.

4 and 5.—Emergency and Base Hospitals.

Normally Emergency Hospitals are provided both inside and outside the areas they are intended to serve. The usual arrangement is for a limited number of Casualty Hospital beds to be provided in the town, but for the majority of the beds to be made available in large base hospitals in the country. In Newcastle, owing to the fact that the bulk of the hospital accommodation for Northumberland and Tyneside is concentrated in the City, and the consequent absence of standing hospitals in the adjacent county areas, it will be necessary to reverse the normal arrangement. The majority of the Casualty Hospital beds will therefore be in existing institutions in the City, while the Base Hospitals will be smaller units outside. At a later date, large hatted hospitals will probably be constructed in the county areas. The Casualty Hospitals in the City will be organized in two groups, Municipal and Voluntary respectively, each of which will have its own Base Hospitals.

The constituent hospitals in each group are as follows :—

MUNICIPAL GROUP.

Hospital or Institution.	Function of Hospital in time of War.	Beds available for Casualty purposes.
Newcastle General Hospital ..	{ Civilian Sick } { Casualties }	512
Elswick Grange	{ Civilian Sick } { Casualties }	718
Shotley Bridge M.D. Colony	Base Hospital	380
Hexham Public Assistance Institution.....	Do.	225

VOLUNTARY HOSPITALS.

Hospital or Institution.	Function of Hospital in time of War.	Beds available for Casualty purposes.
Royal Victoria Infirmary	{ Civilian Sick } { Casualties }	662
Fleming Memorial Hospital....	{ Civilian Sick } { Casualties }	92
Sanderson Hospital School	Casualties	195
Stannington Sanatorium.....	Base Hospital	530
Stannington Mental Hospital.	Do.	200

In time of war, civilians remaining in Newcastle will use the hospitals very much as they do at present for ordinary illnesses and accidents. The function of the base hospitals is to increase the reserve of beds and to give accommodation in relatively safe areas where sick and wounded can be restored to health in quiet surroundings. Large stocks of beds, blankets, drugs, dressings, surgical instruments, X-ray apparatus, etc., have been assembled and are held ready for use in emergency.

The Medical Staffs of the hospitals in both groups will constitute a pool, from which surgical teams can be drawn and despatched wherever they are urgently required.

The existing nursing personnel of the hospitals will not be large enough to staff the additional beds which are being provided, but additional trained nurses will be forthcoming from amongst those who are married or in retirement, and several hundreds of V.A.D.'s will also be incorporated in the hospital staffs, either on a part-time or a full-time basis.

6.—Communications.

At this stage it is necessary to say something regarding the communication which will have to be maintained between first-aid depots and posts, ambulance depots, report centres, and the emergency hospitals and executive headquarters of the A.R.P. and First-Aid Services.

In the main this will be done through the telephone system which will link up all the units in the scheme, but in addition it is proposed to organize a "runner" service which can replace telephone communication in time of need.

Motor and pedal cyclists are being recruited through the transport service for these duties and will be attached to every department of the First-Aid Services.

7.—Administration.

The general administrative control of all the Municipal First-Aid and Hospital Services is vested in the A.R.P. Committee and its Executive Officer—the A.R.P. Officer and Controller (F. J. Crawley, Esq.)

The detailed administration of the same services is carried out by the Medical Officer of Health—Dr. J. A. Charles—from the Health Department, Town Hall, Newcastle upon Tyne.

The co-ordination of **all Emergency Hospitals** in the counties of Northumberland and Durham and the North Riding of Yorkshire, is the duty of the Ministry of Health Hospital Officer—Dr. Eric Donaldson, O.B.E., Clarendon House, Clayton Street West, Newcastle upon Tyne.

The co-ordination of the Voluntary Hospitals in and around Newcastle will be carried out by the Group Officer—Mr. F. C. Pybus, F.R.C.S., the Royal Victoria Infirmary, Newcastle upon Tyne.

The following is a detailed list of the Administrative and Executive personnel :—

Local :

A.R.P. Officer and Controller				F. J. CRAWLEY, Esq., A.R.P. Headquarters, Jesmond Dene House.
Executive Officer for Medical				
A.R.P. Services	...	...	Dr. J. A. CHARLES,	Health Department, Town Hall.
Deputy	do.	...	Dr. E. F. DAWSON-WALKER,	City Hospital, Walker Gate.
Assistant	do.	...	Dr. E. G. BREWIS,	Health Department, Town Hall.
First-Aid Commandant	...	G. R. CURRY, Esq.,	46, Cloth Market.	
Deputy	do.	...	Mr. C. G. BLACKLOCK,	46, Cloth Market.
Do.	do.	...	Miss LAURA WHITFORD,	46, Cloth Market.
Ambulance Officer	...	Mr. T. BROOKE DAVISON,		
Deputy Ambulance Officer		Mr. F. MILTON,	46, Cloth Market.	
First-Aid Sub-Commandant for Transport and Com- munications	...	Mr. A. D. PRESTON,	Limecroft (A.R.P. West End), Western Avenue.	
Group Officer for Voluntary Hospitals	...	Mr. F. C. PYBUS, F.R.C.S.,	Royal Victoria Infirmary.	

Regional :

Hospital Officer, Ministry of

Health Dr. ERIC DONALDSON, O.B.E.,
Clarendon House,
Clayton Street West.

Health Department,

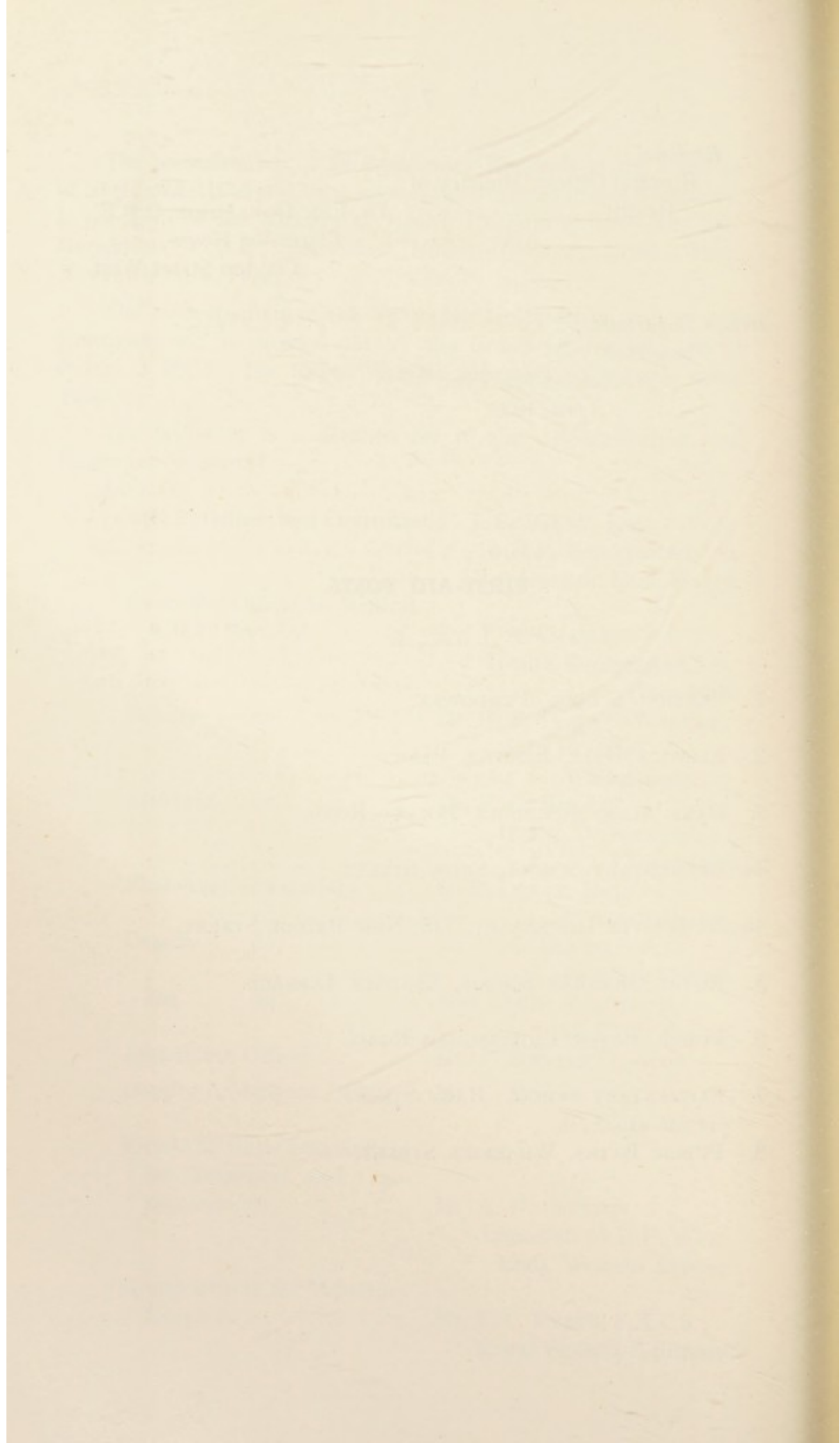
Town Hall,

Newcastle upon Tyne,

April, 1939.

FIRST-AID POSTS.

1. CENTRAL SCHOOL, PENDOWER.
2. ELSWICK HALL, ELSWICK PARK.
3. DAME ALLAN'S SCHOOLS, BOLBEC ROAD.
- 4a. ELEMENTARY SCHOOL, SNOW STREET.
- 4b. NEWCASTLE DISPENSARY, 115, NEW BRIDGE STREET.
5. ROYAL GRAMMAR SCHOOL, ESKDALE TERRACE.
6. PUBLIC BATHS, CHILLINGHAM ROAD.
7. ELEMENTARY SCHOOL, RABY STREET.
8. PUBLIC BATHS, WHARRIER STREET.



ANNUAL REPORT
OF THE
JOINT COMMITTEE'S CLINIC
For the Year 1938.

During the year 1938 the facilities offered by the Joint Committee for the diagnosis and treatment of Venereal Diseases have been fully utilised for the benefit of patients and the protection of the community.

The Venereal Diseases investigation and treatment facilities were transferred to the Joint Committee's Clinic on the 30th August, 1937, and the present report deals therefore with the first completed year of working of this Clinic.

The Geographical Area served comprises :—

	<i>Estimated Population.</i>
County of Durham (northern part)	300,000
County of Northumberland	405,900
County Borough of Gateshead	117,000
County Borough of Newcastle upon Tyne	291,300
	<hr/>
	1,114,200
	<hr/>

A Sketch Map of the area served by the Clinic
is shown on page two.

out-patient attendance, and is almost essential, where, for reasons of distance or occupation, the patient is unable to attend regularly.

It is possible that the increasing use of the Sulphanilamide group of drugs may, in the future, greatly modify the necessity for the in-patient accommodation of patients suffering from Gonorrhœa or its complications.

Out-Patient Attendances.

The total out-patient attendances for the year numbered 108,630, being made up as follows :—

Male Department	82,514
Female Department	26,116
Total	<u>108,630</u>

The sessional attendances during the year have averaged :—

Session.	No. of Sessions (Medical Officers)	Average sessional attendance.	
		Male.	Female.
10 a.m.—12 noon†	308	37.73	27.38
3 p.m.—5 p.m.	255	31.20	27.24
5 p.m.—7 p.m.*	306	48.16	15.74
Total	869	39.48	23.22

† Includes Saturday, 11 a.m. to 12 noon session.

* „ „ 4.30 p.m. to 6.30 p.m. session.

Daily average of Intermediate Treatments, Dressings, etc. :—

Males	134.80
Females.....	16.02

ATTENDANCES PER CURRENT CASE.

	Syphilis.		Gonorrhœa.	
	Males.	Females.	Males.	Females.
Joint Committee's Clinic (1938)	14.5	16.1	44.9	29.0
Newcastle	14.3	16.4	55.7	31.2
Gateshead	13.0	14.5	51.5	38.6
Durham	13.3	15.9	35.4	18.7
Northumberland	16.4	16.7	29.8	31.8
All Clinics, England and Wales (1937)	12.7	13.4	33.0	27.0

Syphilis.

The number of patients attending who were found to be suffering from Syphilis was 390 or 15.06%. Of this number 105 were found to be suffering from early infective, primary, or secondary Syphilis, 218 from the later (tertiary) manifestations, and 67 from congenital infection.

The importance of the diagnosis and adequate treatment of Syphilis in the early stages lies in the possibility of attaining a complete cure, and the prevention of the late cardio-vascular and nervous system lesions, and congenital Syphilis.

The drugs of choice in the treatment of early Syphilis are the Neoarsphenamine group and Bismuth. In a series of cases the recently introduced Mapharside has been employed with encouraging results.

The default rate of patients in the early infective stages of Syphilis, before completion of the first course of treatment, has, during the year been 10.6% of 83 males and 31.8% of 22 females. As these defaulters can at most be regarded as only temporarily non-contagious, this constitutes a serious public health menace.

Of the later manifestations, cardio-vascular Syphilis and Neuro-syphilis accounted for approximately 35% of this group of 218 patients.

In the treatment of Neuro-syphilis, Tryparsamide has been the drug of choice, supplemented by pyrexial treatment with Dmelcos or Pyrifer.

In a small series of cases, in conjunction with Dr. Nattrass, mechanical hyperpyrexia has been employed.

The employment of these forms of therapy has resulted in a marked clinical improvement in many of the patients.

The exhibition of Tryparsamide necessitates careful ophthalmological examination, and determination of the visual fields. We record our appreciation of the valuable help and advice given in this connection by Mr. MacRae and the consultant staff of the Eye Hospital.

The importance, too, of dental treatment in patients undergoing antisppecific therapy has been emphasised by the observation of Dr. Cruickshank in this clinic, that only 31% of patients undergoing treatment were reasonably fit dentally. Bismuth stomatitis which

was found to occur in 75% of patients with unhealthy mouths, and in only 7% of the healthy, occasioned the interruption of treatment for an average of 10-14 weeks.

The results of the investigation were published in the *British Journal of Venereal Diseases* of October, 1938.

The majority of congenital Syphilitics came under treatment at the age of 5 and upwards as the result of impairment of vision through interstitial keratitis, or choroiditis: those coming under observation in the first years of life showed in general skin manifestations.

The age groups of the cases were :—

<i>Under 1 year.</i>	<i>1 to 5 years.</i>	<i>5 to 15 years.</i>	<i>Over 15 years.</i>
4	4	24	35

The importance of the investigation of all members of a family in which a case of congenital Syphilis has been detected is shown by the bringing under treatment in one instance of the parents and their other three children, and in a second, all five members of the family.

The increasing application of routine Wassermann tests in Ante-natal Centres should, by the detection of maternal Syphilis in early pregnancy, effect a further decrease in congenital infections.

The ultimate eradication of congenital Syphilis depends on the early diagnosis and adequate treatment of the primary and secondary stages of infection in the male and female, and in the treatment during pregnancy of any woman known to have had treatment for an antecedent Syphilis.

Gonorrhœa.

During the year 1,086 cases of Gonorrhœa (843 males and 243 females) reported, comprising 41.98% of the total new patients.

The sex ratio of the new Syphilitic infections is 1.3 males to 1 female, but in Gonorrhœa this ratio is 3.4 to 1, indicating the probability that a number of infected women do not come under investigation or treatment.

In the female the signs and symptoms of this disease may be slight, and in the absence of definite symptoms many women, known or alleged sources of infection, will not report for investigation. Slightness or absence of symptoms is also a common cause of default.

Certain factors, distance from the clinic, conditions of employment, etc., may make it difficult for a woman to attend for investigation or for the continuance of treatment, and for social reasons a patient may be most unwilling to attend regularly.

The most important recent advance in the control of Gonorrhœa has been the introduction of the Sulphanilamide group of drugs, which have very materially shortened the period of treatment and observation.

Sulphonamide p., Uleron, and M and B '693' have been employed along with routine local treatment in approximately one-third of the cases.

The results of this form of treatment accord with the observations of other clinicians. M and B '693' has, in our experience, given the highest percentage (86%) of cures on a three months' observation basis, its rapidity of action being shown in one case of Ophthalmia Neonatorum and in one case of purulent Gonococcal Ophthalmia in an adult in which the infected eyes were clear in three days.

The rapid disappearance of signs and symptoms may, however, predispose to default before completion of observation and assurance of the complete eradication of the infection. In a small number of cases a latent infectivity associated with closed foci in the urethral glands or in the prostate has been noticed.

The employment of this group of drugs must therefore be controlled by the most stringent tests of cure.

Recent publications have suggested the possibility of sterility occurring after Sulphanilamide treatment. Sterility, if occurring in any appreciable percentage of sulphanilamide treated cases, will prove a serious contra-indication to its continued use. This question is being investigated in the cases now under treatment.

Chancroid.

Cases of Chancroid numbered 17 or 0.65% of the total infections. The importance of Chancroid is that it may mask a concomitant Syphilis. The employment of the Reenstierna intradermal test has facilitated the diagnosis of these cases, and treatment with Dmelcos vaccine—an emulsion of Ducrey's bacillus—or with the Sulphanilamide group of drugs has given satisfactory results.

Conditions other than Venereal.

This group of 1,095 patients (42.31%) comprised such varied conditions as non-gonococcal urethritis, balanitis, non-specific ulceration, genital warts, climatic bubo, trichomonatous vaginitis, vaginal discharge of pregnancy, non-specific skin diseases, prophylaxis or early preventive treatment, etc. Many of these conditions are not in themselves serious and clear up during the period of observation necessary to exclude a concomitant Gonorrhœa or Syphilis, and others, after exclusion of infection, were referred to the appropriate departments.

Patients seeking prophylaxis, or early preventive treatment following exposure fall into two groups : (1) " the occasional risk " (2) " the frequently promiscuous."

After clinical examination, prophylactic treatment is carried out. The former class of patient is kept under observation for the maximum incubation period of Gonorrhœa and Syphilis. In the second case the patient is advised to report for examination and prophylaxis after each exposure.

Pathological Investigations.

The number of specimens examined in the clinic during the year was 24,190 while 10,509 tests were sent to the approved Laboratories. The specimens examined in the clinic are chiefly in relation to the microscopic diagnosis of early Syphilis and Gonorrhœa and in the bacteriological control of the latter infection, while the laboratory specimens deal chiefly with the serological diagnosis or control of treatment of these infections.

In view of the importance of cultures in the diagnosis, or exclusion, of gonococcal infection, especially in the female, and in the tests of cure of both male and female, provision for this form of investigation has been made.

The necessity for full investigation and the long continued tests of cure required in all forms of Venereal Disease accounts for the high number of specimens examined.

Results of Treatment.

During the year 1,622 patients were discharged as cured, 450 were transferred to other Centres, and 2,187 remained under treatment at the close of the year.

The results of treatment are governed to a large extent by the duration of the infection before the patient reports for examination. In the early stages these diseases are amenable to treatment and in the majority of instances a complete and permanent cure is assured.

During the year 477 patients defaulted from treatment, the default rate for the various areas is shown in the following table :—

DEFAULT RATE PERCENTAGE.

	Syphilis.		Gonorrhœa.	
	Males.	Females.	Males.	Females.
Joint Committee's Clinic (1938)	5.8	11.4	18.8	19.4
Newcastle	7.3	14.0	19.7	21.1
Gateshead	7.9	11.8	15.5	15.0
Durham	7.1	12.5	22.2	27.3
Northumberland	2.2	7.0	17.5	13.7
All Clinics, England and Wales (1937)	17.4	17.9	21.8	18.2

While a certain number of defaulting patients may probably have been rendered permanently non-contagious, there remains a group, who by reason of early default, must be regarded as infective or liable to suffer infective relapse. This potentially infective group is approximately 2.5% of all Syphilitic infections dealt with during the year and 15.0% of all Gonorrhœal infections.

Default of patients before completion of treatment constitutes therefore a serious factor in the control and ultimate eradication of infections.

During the year attempts to influence the return for continuance of treatment of defaulters were undertaken by "chase up" letters and later by personal follow-up through the Public Health Services. A postal follow-up resulted in the return for treatment of 30% of the male and 38% of the female defaulters written to. Approximately 21% of letters were returned "not known, gone away," etc., and no notice of the communication was taken by 49% of males and 41% of females.

Personal follow-up by a Health Visitor in the case of defaulting women and children is showing promising results ; a certain number of traceable patients having returned for treatment.

While it is possible that a number of migratory defaulters may be continuing treatment at other Centres, there remains a moderately large group of individuals in whom default is due to carelessness or ignorance as to the future possibilities.

A wide dissemination of popular knowledge as to the dangers of neglected Venereal Disease is the primary step to combat default.

Statistical Tables.

The statistical tables appended to this report show the area distribution of the work during the year.

Medical, Nursing, and Clerical Staff.

The figures quoted showing the amount of work carried out in the Clinic could not have been achieved without the consistent endeavours and loyal co-operation of all members of the staff.

*Newcastle General Hospital,
Westgate Road,
Newcastle upon Tyne, 4,
June, 1939.*

STATISTICAL SUMMARY OF ATTENDANCES, IN-PATIENTS, INJECTIONS, AND PATHOLOGICAL WORK FOR THE YEAR 1938.

	CONSTITUENT AREAS.								OTHER AREAS.								TOTALS.	
	Newcastle.		Gateshead.		Durham.		North'land.		Tynemouth.		So. Shields.		Sunderland.		Cumberland.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Attendances at Medical Officers' Sessions.</i>																		
Syphilis.....	4,989	4,757	1,588	1,109	2,252	2,551	3,689	3,568	222	220	153	40	61	28	14	.....	12,968	12,273
Chancroid	17	.....	13	.....	29	8	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	72	8
Gonorrhœa	8,277	2,173	2,425	700	3,710	679	4,409	1,305	139	69	108	46	4	8	2	2	19,073	4,982
Non-Venereal	1,008	1,324	298	233	382	544	460	733	27	58	18	9	5	11	.....	3	2,199	2,915
<i>Intermediate Treatment.</i>																		
Syphilis.....	53	3	.....	.....	5	.....	2	.....	.....	.....	18	17	6	.....	.....	.....	84	20
Chancroid	30	.....	33	.....	36	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	118	.....
Gonorrhœa	28,153	2,708	5,883	846	5,551	541	4,979	1,242	138	67	185	1	2	.....	.....	.....	44,891	5,405
Non-Venereal	1,852	347	479	49	388	32	367	58	10	26	13	1	.....	.....	.....	.....	3,109	513
TOTAL ATTENDANCES	44,379	11,312	10,719	2,937	12,353	4,355	13,938	6,906	536	440	495	114	78	47	16	5	82,514	28,116
																	TOTAL ATTENDANCES	108,630
<i>In-Patients, Days.</i>																		
Syphilis, No. of Patients.....	15	18	3	6	4	14	17	24	.....	.....	.....	.....	.....	.....	1	.....	40	62
" " Days	667	77	180	62	156	188	629	369	.....	.....	.....	.....	.....	.....	2	.....	1,634	696
Chancroid, No. of Patients	1	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
" " Days	34	.....	.....	.....	39	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	79	.....
Gonorrhœa, No. of Patients	14	11	3	1	7	3	6	6	1	.....	.....	.....	.....	.....	2	5	33	26
" " Days	405	415	89	121	101	25	268	279	31	.....	.....	.....	.....	.....	106	367	1,000	1,207
Non-Venereal, No. of Patients	1	.....	1	.....	2	1	3	6	.....	.....	.....	.....	.....	.....	.....	.....	7	7
" " Days	10	.....	15	.....	14	14	21	366	.....	.....	.....	.....	.....	.....	.....	.....	60	380
TOTAL—In-Patients.....	31	29	7	7	15	18	27	36	1	.....	.....	.....	.....	.....	3	5	84	95
" " Days.....	1,116	492	284	183	310	227	924	1,014	31	.....	.....	.....	.....	.....	108	367	2,773	2,283
																	TOTAL NO. OF IN-PATIENTS	179
																	" " " " DAYS	5,056
<i>Anti-Syphilitic Treatment.</i>																		
Arsenobenzene Preparations	3,398	.....	1,000	.....	1,698	.....	2,503	.....	169	.....	104	.....	48	.....	8	.....	8,928	.....
Other Arsenicals, Tryparsamide, Mapharside, etc.	219	.....	83	.....	75	.....	177	.....	13	.....	.....	.....	.....	1	.....	.....	568	.....
Bismuth Preparations	7,754	.....	2,164	.....	3,961	.....	5,831	.....	367	.....	146	.....	69	.....	11	.....	20,303	

JOINT VENEREAL DISEASES CLINIC AT NEWCASTLE GENERAL HOSPITAL.

STATISTICAL SUMMARY OF INFECTIONS DEALT WITH DURING THE YEAR 1938.

	CONSTITUENT AREAS.								OTHER AREAS.								TOTALS.		
	Newcastle.		Gateshead.		Durham.		North'land.		Tynemouth.		So. Shields.		Sunderland.		Cumberland.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
(1) <i>New Infections.</i>																			
Syphilis—																			
Primary	26	1	3	.....	10	1	14	.....	.....	.....	2	1	1	.....	.....	.....	56	3
Secondary	7	7	3	1	4	5	7	3	2	.....	.....	1	1	.....	.....	.....	24	17
Latent 1st year .....	.....	.....	1	.....	.....	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	3	2
Tertiary	52	41	14	14	10	16	29	38	3	.....	1	.....	.....	.....	.....	.....	109	109
Congenital	12	10	10	4	2	5	8	14	.....	2	.....	.....	.....	.....	.....	.....	32	35
Chancroid	4	.....	1	.....	7	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	1
Gonorrhœa	374	103	103	27	166	50	181	57	12	5	6	.....	1	.....	1	.....	843	243
Non-Venereal	275	213	73	33	122	76	140	136	11	8	3	1	2	1	.....	1	626	469
TOTAL NEW INFECTIONS	750	375	208	79	321	155	385	249	28	15	12	3	5	1	.....	2	1,709	879
																	TOTAL		2,588
(2) <i>Under treatment 1st Jan., 1938.</i>																			
Syphilis	190	196	72	50	110	116	137	145	7	8	4	.....	2	2	.....	.....	522	517
Chancroid	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Gonorrhœa	211	46	45	13	87	13	122	21	2	.....	3	1	.....	1	1	1	471	96
Non-Venereal	54	20	15	7	26	11	25	18	.....	.....	.....	.....	.....	.....	.....	.....	120	56
(3) <i>Transferred from other Centres.</i>																			
Syphilis	64	39	11	7	33	16	27	12	3	.....	7	3	1	2	3	.....	149	79
Chancroid	2	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Gonorrhœa	68	7	12	.....	8	2	11	2	3	.....	4	2	.....	1	1	3	107	17
Non-Venereal .....	.....	1	.....	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
(4) <i>Returned Defaulters.</i>																			
Syphilis	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Chancroid .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gonorrhœa	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Non-Venereal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TOTAL OF 1, 2, 3, and 4	1,342	685	365	156	587	314	709	447	43	23	30	9	8	7	5	6	3,089	1,647	
																	TOTAL		4,736
(5) <i>Discharged Cured.</i>																			
Syphilis	28	23	15	5	14	7	24	13	1	.....	2	.....	.....	.....	.....	.....	84	48
Chancroid	4	.....	1	.....	5	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	1
Gonorrhœa	198	22	44	6	72	8	98	10	3	.....	4	.....	.....	1	.....	.....	419	47
Non-Venereal	253	183	74	33	122	64	140	122	9	5	1	1	2	1	.....	1	601	410
(6) <i>Defaulters presumed cured.</i>																			
Syphilis	5	7	.....	4	3	3	2	1	.....	.....	.....	.....	.....	1	.....	.....	10	16
Chancroid .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Gonorrhœa	21	9	3	.....	13	3	8	3	1	.....	.....	.....	.....	.....	.....	.....	46	15
Non-Venereal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(7) <i>Defaulters presumed infective.</i>																			
Syphilis	21	35	9	5	9	17	3	14	.....	.....	.....	.....	.....	.....	.....	.....	42	71
Chancroid .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gonorrhœa	108	25	22	6	45	15	47	8	.....	.....	.....	.....	.....	.....	.....	.....	222	54
Non-Venereal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(8) <i>Transferred to other Centres.</i>																			
Syphilis	51	21	7	5	22	9	17	21	5	.....	5	2	2	1	1	.....	110	59
Chancroid	1	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Gonorrhœa	104	14	16	3	29	7	35	8	6	1	4	1	1	.....	2	5	197	39
Non-Venereal	12	7	2	.....	3	3	4	5	2	1	1	.....	.....	.....	.....	.....	24	16
TOTAL OF 5, 6, 7 AND 8	806	346	194	67	340	137	381	205	27	7	17	4	5	4	3	6	1,773	776	
																	TOTAL		2,549
<i>Total under treatment 31st Dec., 1938.</i>																			
Syphilis	247	209	83	57	121	124	178	164	9	10	7	3	3	2	2	.....	650	569
Chancroid	2	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Gonorrhœa	223	86	76	25	102	32	126	51	7	4	5	2	.....	1	.....	.....	539	201
Non-Venereal	64	44	12	7	23	21	23	27	.....	2	1	.....	.....	.....	.....	.....	123	101
TOTAL	536	339	171	89	247	177	328	242	16	16	13	5	3	3	2	.....	1,316	871
																	TOTAL		2,187