[Report 1934] / Medical Officer of Health, Newcastle-upon-Tyne City & County.

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CITY AND COUNTY OF NEWCASTLE UPON TYNE.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON THE

Sanitary Condition of the City

DURING THE YEAR

1934.

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Members of Council who served on the

HEALTH COMMITTEE.

The Lord Mayor (Councillor R. S. DALGLIESH, J.P.)

Alderman DAVID ADAMS, J.P., Chairman.

Councillor WALTER THOMPSON, J.P. Vice-Chairman.

Alderman WALTER LEE, J.P.

,, J. CHAPMAN.

,, W. LOCKE, J.P.

Councillor CATHERINE A. AULD, J.P.

,, W. C. PERCIVAL, J.P.

,, H. MOAT, Junr.

,, A. LOUVRE.

,, J. PEARSON, J.P.

Councillor MAY NEWTON.

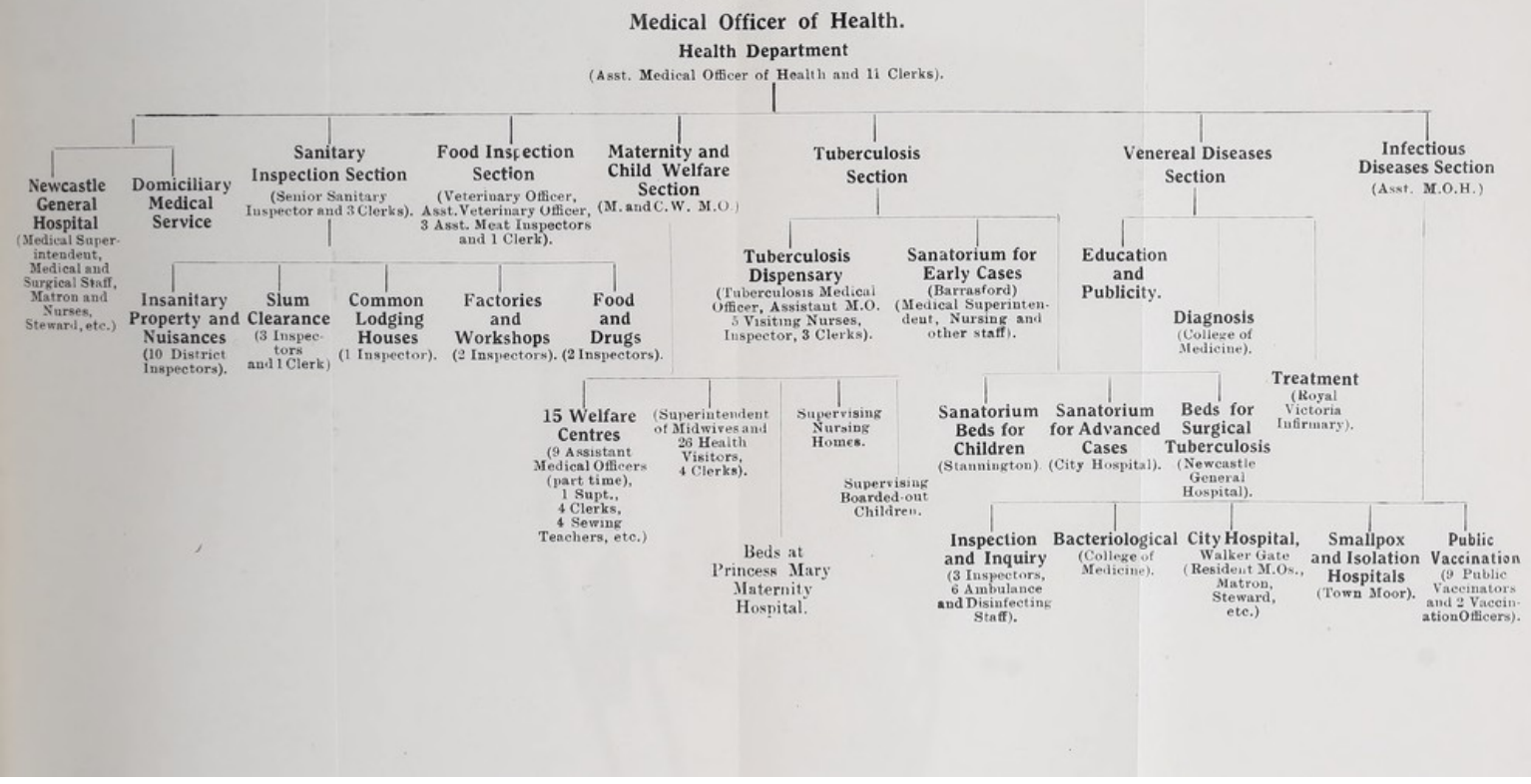
,, J. E. SCANLAN, O.B.E., J.P.

,, A. E. ROGERS.

,, R. M. ROWE.

,, J. LEADBITTER, J.P.

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



MATERNITY AND CHILD WELFARE COMMITTEE.

*Alderman JOHN CHAPMAN, Chairman.

*Councillor CATHERINE A. AULD, J.P., Vice-Chairman.

*Alderman DAVID ADAMS, J.P.

*Councillor WALTER THOMPSON, J.P.	†Dr. R. P. RANKEN LYLE, J.P.
* ,, H. MOAT, Junr.	†Miss G. ROWELL.
* ,, J. E. SCANLAN, O.B.E., J.P.	†Mrs. E. I. LEACH.
* ,, MAY NEWTON.	‡Councillor JEANIE L. GIBBIN, O.B.E., J.P.
* ,, J. PEARSON, J.P.	‡ ,, CATH. A. LOCKE.
* ,, A. E. ROGERS.	

* 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., Assistant Medical Officer of Health.

CHRISTOPHER RAIMES, Senior Sanitary Inspector.

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

ISAAC CLARK, Assistant Workshops Inspector.

JAS. HUNTER and A. KIRSOP, Assistant Inspectors under the Food and Drugs Acts.

W. F. BACON (retired Oct.), JAS. MCKENDRY, L. W. JOHNSON, WM. E. PERKINS, J. BROWN, L. WADE, M. SWALES, A. FRENCH (resigned April), W. A. PILSON, H. W. GRIEVES, R. G. SUDDICK, A. IBBITSON, District Inspectors.

WM. GRAY, W. STEWART, F. GALTON, Slum Clearance Inspectors.

ADAM FLOCKHART, Assistant Inspector of Common Lodging Houses.

WM. BEAN, R. S. COOPER, E. BANKS (Temp., Oct., 1934), Infectious Diseases Inspectors.

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

***ALFRED HEDLEY,** M.S.M., *GEO. CUTHBERTSON, *ALEC. M. WALKER, JOS. GILHESPY, H. G. OLIVER, *ROBT. LAWSON, *D. H. MACPHERSON, *R. DOBBIN, H. G. COATES, *F. PELLATT, L. SMALLEY, R. HALL, B. DICKSON (Typist), Clerks in the Health Department.

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

THOS. PARKER, F.R.C.V.S., Veterinary Officer and Inspector of Provisions.

H. THORNTON, M.R.C.V.S., B.V.SC., D.V.H., Assistant Veterinary Inspector.

JAS. M. ANDERSON, W. COCKBURN, GEO. PHILLIPS, Assistant Inspectors of Provisions. *NORMAN DICKSON, Clerk.

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

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

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

ANNIE G. BAINBRIDGE, Superintendent of Welfare Centres.

GLADYS PATTISON, IRENE GAWMAN, CATH. BARNES, MARY E. MUSE, Clerks.

H. GLEN DAVISON, M.D.
L. MABEL R. CAMPBELL, M.B., CH.B.
H. HARVEY EVERS, M.B., F.R.C.S.
OLGA ALCOCK, M.B., B.S.
GERTRUDE H. G. HICKLING, M.D., CH.B., B.SC., D.P.H.
C. N. ARMSTRONG, M.B., 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.

} Assistant Medical Officers (part time) Welfare Centres.

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

J. M. L. BURTENSHAW, M.B., CH.B., M.R.C.S., L.R.C.P., D.P.H., Assistant Tuberculosis Medical Officer (appointed Jan., resigned Sept.).

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. PETTIGREW, Assistant Inspector (appointed Nov., 1934).

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

BARRASFORD SANATORIUM.

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

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

CITY HOSPITAL FOR INFECTIOUS DISEASES.

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

J. B. TILLEY, M.D., B.S., B.HY., D.P.H., Senior Resident Medical Assistant.

W. ALCOCK, M.B., CH.B., D.P.H., B.HY., Resident Medical Assistant (resigned June).

E. G. BREWIS, M.B., B.S., M.R.C.P. (appointed October).

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

J. L. WATT, Matron.

J. K. ROSS, Domestic Superintendent (resigned December, 1934).

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

M. BURRILL, Dispenser (resigned August).

MAUD B. ELLIOTT, Dispenser (appointed October).

GEO. COCKBURN, Engineer.

J. SAUNDERSON, Assistant Engineer.

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

SMALLPOX AND ISOLATION HOSPITALS.

JOS. W. and JANE STEPHENSON, MATTHEW and ISABELLA ROBSON, Caretakers.

NEWCASTLE GENERAL HOSPITAL.

G. P. HARLAN, M.D., CH.B., B.HY., D.P.H., Medical Superintendent.

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

JAMES COOK, L.R.C.P. (Edin.), F.R.C.S. (Edin.), B.HY., D.P.H., Resident House Physician (resigned October).

JUNIOR RESIDENT HOUSE PHYSICIANS AND SURGEONS (5).

A. BARON, Matron.

S. LAKE and M. C. TAYLOR, Assistant Matrons. Sisters, Nurses, Domestic Staff.

N. H. HERDMAN, Dispenser.

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

CONSULTING STAFF, Etc.

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

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

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

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

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

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

W. E. WARDILL, M.B., B.S., F.R.C.S., Deputy Assistant Surgeon.

G. S. CLARK-MAXWELL, M.A., M.B., B.SC., Surgical Registrar.

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

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., Consultant, Diseases of the Eye.

D. R. MACGREGOR, B.SC., M.B., CH.B., D.L.O. (R.C.P.S.), Consultant, Throat, Nose and Ear.

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

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

DISTRICT MEDICAL OFFICERS.

Dr. W. SIMPSON, Dr. R. W. NEVIN, Dr. W. T. HALL (retired Sept.), Dr. T. J. RYAN.

PUBLIC VACCINATORS.

Drs. J. MACRAE, RICHARD DAGGER, T. J. RYAN, H. R. SMITH, A. M. PATERSON, J. A. BRAND (appointed April), G. P. HARLAN (Newcastle General Hospital).

VACCINATION OFFICERS.

EASTERN DISTRICT—W. H. F. GARRETT.

WESTERN DISTRICT—W. W. CUMMINGS.

To Alderman DAVID ADAMS, J.P., Chairman of the Health Committee of the Corporation of Newcastle upon Tyne.

SIR,

I have the honour to present the sixty-second Annual Report of the Medical Officer of Health on the Sanitary Condition of the City.

As in previous years the detailed reports of the officers responsible for the various sections of the Health Committee's organisation are set out in the body of the document.

This letter is intended to serve as a general commentary on the main features of the year 1934, to record developments and to direct attention to those problems and difficulties which still await solution.

Vital Statistics.

The year 1934 was remarkable in Newcastle for the fact that more marriages were contracted than in any other year since 1924. The total of 2,312 exceeds the previous year by 42, and indicates that for every 1,000 of the population, 16.2 persons undertook the obligations of matrimony.

Our Victorian grandparents would have regarded this increase in the marriage rate as a phenomenon of great significance.

We have only to refer to the pages of the eighth Annual Report of the Registrar-General to see how that officer, Mr. George Graham, expressed himself on a similar occasion. His comment written in 1847 is as follows :—

> " The Marriage Returns in England point out periods of prosperity little less distinctly than the funds measure the hopes and fears of the money market. If the one is the barometer of credit, the other is the barometer of prosperity, present in part, but future, expected, anticipated, in still greater part."

But we are somewhat more sceptical in these days, and even though 1934 witnessed an increase of 42 marriages and a reduction of 1,305 in the number of male and female unemployed as compared with the previous year, it would be premature to regard these facts as convincing proofs of returning prosperity. At most they but show the trend of events.

As regards the City birth rate, this remained stationary at the low record of 16.4 births per 1,000 population which had been established in 1933. The only consolation to be derived from this figure is the fact that it ends the series of successive reductions which has operated since 1930. Nevertheless, the local rate still exceeds the national birth rate of 14.8 per 1,000 population, and is higher than the average experienced for the 121 Great Towns, namely, 14.7 per 1,000.

Before dealing with the general death rate for the City some comment is necessary on those special death rates which deal respectively with infantile and maternal mortality. In neither case can the records be regarded complacently. The infantile mortality rate, which in 1933 was 76 per 1,000 births (the second lowest rate reported), registered an increase to 83 per 1,000 in 1934. This latter rate must be contrasted with the 59 per 1,000 births which was the average recorded for England and Wales, and the 63 per 1,000 births, which is the comparable figure for the 121 Great Towns.

A scrutiny of the individual causes of death shows that measles and its concomitant bronchitis and bronchopneumonia have been particularly fatal during the year, and account in great part for the stated increase. Nevertheless, it would appear that our returns for infantile mortality—subject though they are to adventitious influences difficult to control, such as epidemics of whooping cough and measles—are still too high, and that their reduction is a matter of urgent importance.

Three factors are mainly concerned in the prevention of infantile mortality :—

(1) Satisfactory ante-natal and child welfare services.
(2) Adequate nutrition of mother and child.
(3) A reasonably high standard of housing accommodation.

As regards the first of these, it is a fact that at least 67 per cent. of all Newcastle mothers are known to have ante-natal supervision, and that 75 per cent. of all infants attend the child welfare centres. These figures, though still showing scope for improvement, cannot be regarded as unsatisfactory. But as regards the remaining factors the position is very different. Insufficient nutrition and inadequate housing surroundings do not necessarily occur together, and for complete knowledge of their respective importance in the causation of infantile mortality it would be necessary to consider each separately and in detail. Some indication as to their influence, when in combination can be obtained from the study of the following data.

Amongst the nineteen wards of the City there are two groups each of five wards, where the circumstances of the inhabitants, both as regards overcrowding and prosperity, are widely different. In one of these groups the number of persons per room is considerably below the average for the City as a whole, while in the other it is markedly in excess. Furthermore, the former group comprises a series of residential districts giving house-room to persons who, as a general rule, are in reasonably comfortable circumstances, whereas the second or densely congested group, is inhabited by a much less prosperous community.

In the following table (Table I) are recorded the births and infantile mortality of each of these ten wards for the five-year period of 1930-1934, together with the relevant details regarding the density of occupation. In addition, the infantile mortality rate has been divided so as to demonstrate (a) the neo-natal mortality or mortality during the first month of life, and (b) the mortality during the remainder of the first year.

It is not intended here to discuss the present causes of neo-natal or first month mortality, or to labour the fact that this has shown itself less amenable to reduction than the mortality of any other period of childhood. Suffice to say that during the past twenty years the English neo-natal rate has only fallen 20%, whereas the infantile mortality rate for the remaining eleven months of the first year has declined 50%. In other words, infantile mortality apart from the first month of life, has readily responded to the efforts which have been directed towards its reduction, whereas neo-natal mortality has been more difficult to deal with.

TABLE I.

POPULATION AND DENSITY OF CERTAIN WARDS IN NEWCASTLE UPON TYNE AT 1931 CENSUS, AND BIRTHS AND DEATHS (UNDER 1 MONTH AND 1 YEAR) 1930-1934.

WARD.	Population Census, 1931.	Persons per room Census, 1931.	Births, 1930-1934.	Deaths 1930-1934	
				Under 1 month	Under 1 year.
JESMOND ...	10,944	0.58	427	13	20
ARTHUR'S HILL	9,185	0.76	424	15	29
ST. THOMAS' ...	13,698	0.81	686	14	33
DENE	17,404	0.82	922	37	70
HEATON	13,084	0.92	800	28	39
TOTAL 5 WARDS	64,315	—	3,259	107	191
Average Infantile Mortality Rate			= 59 per 1,000 births.		
„ Neo-Natal „ „			= 33 „ „ „		
„ Mortality Rate (1 month to 1 year) ...			= 26 „ „ „		
BYKER	15,585	1.45	1,430	54	128
ST. ANTHONY'S ...	15,356	1.52	2,070	81	181
ST. LAWRENCE ...	17,531	1.56	1,848	59	149
ST. JOHN'S ...	13,450	1.59	1,565	59	139
ALL SAINTS' ...	14,508	1.79	1,521	61	139
TOTAL 5 WARDS	76,430	—	8,434	314	736
Average Infantile Mortality Rate			= 87 per 1,000 births.		
„ Neo-Natal „ „			= 37 „ „ „		
„ Mortality Rate (1 month to 1 year) ...			= 50 „ „ „		

We must ask now whether infantile mortality—apart from the first month—has declined equally in the homes of the well-to-do and well-housed, and in the dwellings of the poor and overcrowded.

The average rates quoted at the bottom of each section in Table I are exceedingly significant. In our five residential wards the total infantile mortality over the five-year period 1930-1934, was equivalent to 59 per 1,000 births. The neo-natal mortality amounted to 33 per 1,000 births and the mortality for the remainder of the first year was 26 per 1,000 births. In the group of overcrowded wards the total infantile mortality for the same period was 87 per 1,000 births, made up of 37 per 1,000 neo-natal mortality, and 50 per 1,000 births for the rest of the first year. The difference between the neo-natal mortalities in the two groups of wards is practically negligible. But the mortality for the remainder of the first year as recorded for the poorer areas is practically double that experienced in the better class districts.

Clearly, despite our manifold efforts by way of Health Visitors, welfare clinics, free milk, there remains much to be done to improve the chances of infant life, and to diminish the risks which attend it in many parts of the City.

During the year 1934, 26 mothers died from causes directly attributable to pregnancy and parturition. The maternal mortality rate based on these figures is equivalent to 5.33 per 1,000 live and still births, and contrasts with the national rate of 4.41. Our local rate, though higher than the national, is not so excessive as to bring the City within the category of those Special Districts, whose maternal mortality is at present the subject of investigation by the Ministry of Health.

Having regard to all the circumstances, the presence of a large teaching maternity hospital, the facilities for the post-graduate instruction of medical men, the carefully organised schemes of municipal and voluntary ante-natal clinics, the large number of trained midwives, and the existence of excellent means of transport, it is, to say the least of it, disappointing that our maternal mortality rate is still so heavy. With all our facilities we should be capable of better things.

An analysis of the 26 maternal deaths which occurred suggested that in a quarter of these there existed some primary avoidable factor, which, in short, should never have occurred.

These primary avoidable factors comprise such matters as lack of ante-natal care, inadequate facilities for treatment, errors of judgment, and negligence on the part of the patient. Responsibility for these can be laid in varying degree upon the midwife, doctor and patient, but there can be no question that in the majority of cases inadequate co-operation between the various parties is the real cause.

The general death rate for the City showed no alteration from the previous year and remained at 12.7 per 1,000 of the population. This rate is not strictly comparable with the rate for England and Wales for the following obvious reasons. The national population is not necessarily constituted in the same proportions of male and female, or of these sexes in their various

age groupings, as is the Newcastle population. One would not contrast, for example, Southport with this City, for the former is a residential town largely inhabited by retired persons beyond middle age, and on that account subject to relatively high mortality. Our population, like that of every industrial centre, contains a high proportion of young people, amongst whom the death rate is very low.

Similarly, though in a less marked degree, the elements composing the population of the City and of the country as a whole are differently arranged.

To adjust these variations in the age and sex distribution, the Registrar-General has provided a series of factors, based on the census population of 1931. These comparability factors, as they are termed, when applied to the crude death rate of town or district give the "adjusted" death rate for that area. These adjusted death rates state the death rate for the locality as it would have been if its population had been composed in the same proportions by age and sex as the national population. When the appropriate comparability factor is applied to the Newcastle crude death rate for 1934, namely, 12.7 per 1,000, the adjusted death rate of 14.35 per 1,000 is obtained.

The comparison of this figure with the adjusted death rates for other large and local towns, as set out in Table II, gives a more valid indication of the relative healthiness of our City.

TABLE II.

	General Death Rate	Death Rate adjusted by Comparability Factor.
England and Wales	11.8	11.8
NEWCASTLE UPON TYNE	**12.7**	**14.35**
Hull	12.5	13.75
Leeds	12.9	13.80
Bradford	13.3	13.35
Sheffield	11.3	12.83
Manchester	12.2	13.95
Salford	13.6	16.05

TABLE II.—*Continued.*

	General Death Rate.	Death Rate adjusted by Comparability Factor.
Liverpool....	13.1	15.03
Nottingham	12.3	12.68
Leicester	11.7	11.85
Stoke-on-Trent	11.7	14.27
Birmingham	11.0	12.10
Cardiff.	12.3	13.04
Bristol.	10.9	10.68
Portsmouth..	12.4	12.23
London (County)	12.2	12.47
Gateshead	13.4	15.11
South Shields	13.2	14.92
Tynemouth	12.7	14.00
Sunderland	12.5	14.00
Middlesbrough	13.2	15.57
*County of Northumberland	11.8	12.48
*County of Durham	11.9	13.68

* Administrative County.

Turning now to the individual causes of death, the five most important of these are set out in order below :—

	Death Rate per 1,000 Population.	Percentage of Total Deaths.
(1) Diseases of the heart.....	2.03	15.9
(2) Cancer	1.54	12.1
(3) Bronchitis and pneumonia...	1.31	10.3
(4) Diseases of the veins and arteries	1.23	9.7
(5) Pulmonary tuberculosis.....	0.98	7.7

It will be observed that pulmonary tuberculosis, which at one time headed the lists of the City's mortality, is now relegated to fifth place. It occupies a similar position in the national ranking, but it must not be assumed from this that the City death rate from the disease has now fallen to the level of England and Wales. Pulmonary tuberculosis killed 280 persons in Newcastle in 1934, and the local death rate is still 40 per cent. higher than the national average. This fact can be seen from Table III in which are contrasted a number of the average death rates for England and Wales and Newcastle during the past seven years.

TABLE III.

Average Death Rates per 100,000 *in England and Wales and Newcastle upon Tyne during the Seven Year Period* 1927-1933. (*Based upon the Registrar-General's Abridged List of Causes of Death.*)

No.		England and Wales.	Newcastle upon Tyne.	Newcastle as a percentage of England and Wales.
	All causes...	1,221	1,292	105·8
	*Infantile mortality	66·3	82·0	123·7
1.	Typhoid and paratyphoid fevers ...	0.81	0·95	117·3
2.	Measles	8·7	17·7	**203·4**
3.	Scarlet fever	1·6	2·5	**156·2**
4.	Whooping cough...	8·3	11·8	**142·2**
5.	Diphtheria	7·4	2·9	39·2
6.	Influenza	41·1	30·9	75·2
7.	Encephalitis lethargica	2·4	3·2	**133·3**
8.	Cerebro-spinal fever	2·0	5·5	**275·0**
9.	Tuberculosis of respiratory system ...	74·3	103·9	**140·0**
10.	Other tuberculous diseases	23·1	26·1	113·0
11.	Syphilis	3·5	6·8	**194·3**
12.	General paralysis of the insane, tabes dorsalis	5·1	6·7	**131·4**
13.	Cancer, malignant disease	146·9	138·6	94·2
14.	Diabetes	14·2	13·5	95·1
15.	Cerebral hæmorrhage, etc.	66·2	53·1	80·2
16.	Heart disease	232·2	220·3	94·9
17.	Aneurysm...	3·2	3·6	112·5
18.	Other circulatory diseases	60·2	93·0	**154·5**
19.	Bronchitis...	63·2	64·2	101·6
20.	Pneumonia (all forms)	83·6	96·3	115·2
21.	Other respiratory diseases	13·3	13·8	103·8
22.	Peptic ulcer	10·2	10·8	105·9
23.	Diarrhœa, etc. (under 2 years) ...	10·8	18·7	**173·1**
24.	Appendicitis	7·3	5·9	80·8
25.	Cirrhosis of liver...	4·1	2·8	68·3
26.	Other diseases of liver, etc.	6·2	7·2	116·1
27.	Other digestive diseases	†	†	†
28.	Acute and chronic nephritis	38·6	44·2	114·5
29.	‡Puerperal sepsis	1·7	1·8	105·9
30.	‡Other puerperal causes...	2·5	2·5	100·0
31.	*Congenital debility, premature birth, etc.	32·6	33·2	101·8
32.	Senility	48·6	29·8	61·3
33.	Suicide	13·0	11·9	91·5
34.	Other violence	41·7	39·9	95·7
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.

Infectious Diseases.

Tuberculosis, though no longer the giant that it was, is even now one of the greatest evils which this City and area has to conquer. Our own particular problem lies in this. In Newcastle and the surrounding districts pulmonary tuberculosis attacks and kills at an earlier age than it does elsewhere. If we consider the country as a whole, 25.8 per cent. of the deaths from pulmonary tuberculosis during the five-year period 1929-1933 occurred below the age of 25.

Taking the sexes separately we find that 34.1 per cent. of all the female deaths and 19.4 per cent. of the male mortality from the disease took place before this age. In Newcastle for the same period the respective proportions are as follows :—

	Newcastle-upon-Tyne, 1929-1933.	England & Wales, 1929-1933.
(1) Number of deaths from pulmonary tuberculosis below 25 years of age per 100 deaths from the disease at all ages =	31.7%	25.8%
(2) Number of **Male** deaths from pulmonary tuberculosis below 25 years of age per 100 male deaths from the disease at all ages =	25.3%	19.4%
(3) Number of **Female** deaths from pulmonary tuberculosis below 25 years of age per 100 female deaths from the disease at all ages =	40.5%	34.1%

The figures show that in this respect our experience is definitely worse than the average for England and Wales.

In short, the pulmonary tuberculosis with which we have to deal is largely a disease of the young adult, affecting male and female alike. Its remedy can be found nowhere apart from its prevention. Only when our young people have behind them a childhood and youth devoid of all the shadows of malnutrition and overcrowding, can we look for some amelioration.

As regards the other infectious diseases which remain to be discussed, scarlet fever, measles and diphtheria were all prevalent during the year. The scarlet fever epidemic of 1933 was continued into 1934, but fell away during the latter months of that year. Amongst 1,727 cases of scarlet fever there were 22 deaths, giving a case mortality rate of 1.3 per cent. which is small indeed compared with the earlier years of the present century.

Measles appeared in epidemic form from January to June, and altogether 8,644 cases were notified with 80 deaths attributable to the disease. This large mortality but serves to indicate the great importance of providing hospital accommodation and treatment for severe and complicated cases of the disease. Only by such provision and by making available convalescent aftercare for such as need it, can we reduce the fatality of the disease itself and prevent the ill-health and invalidity which too frequently follow it.

Happily, at the end of the year through the generosity of Councillor Angus Watson, Whitton Tower, Rothbury, was placed at the disposal of the Health Committee. It will prove invaluable for the convalescent treatment of children recovering not only from the medical and surgical complaints of childhood but also from the so-called minor infectious diseases.

From the epidemiological standpoint the event of greatest importance has been the recrudescence of diphtheria in the City—with an incidence more widely distributed than for 12 years past. In the early months of the year it was obvious that diphtheria was more prevalent and more fatal than at any comparable period in recent memory. Steps were accordingly taken to anticipate the spread of the disease, and the diphtheria immunisation clinics which were organised have helped to give immunity to the susceptible, and confidence to those responsible for the care of children. The clinics were limited to children below the age of five, and of the 1,368 immunised, not one has contracted the infection to date.

Our own epidemic is in line with those which have occurred elsewhere in England. Bristol, Birmingham, Leeds and Hull have all suffered at an earlier date, and it has been our good fortune to benefit by their experience.

The actual details of the epidemic, together with notes on the features of the disease, and the various strains of the diphtheria bacillus which were associated with its causation are described by Dr. J. B. Tilley, on page 93 of the report.

Apart from recording that dysentery and cerebro-spinal fever are still in our midst, though to a diminishing extent, there is nothing further to be said regarding the infectious diseases of the area.

The incidence of Sickness.

The relative inadequacy of our vital statistics as a source of information regarding the presence and incidence of ordinary sickness has been commented upon at various times.

It was said by Charles Dickens that " It concerns a man more to know the risk of the fifty illnesses that may throw him on his back than the possible date of the one death that must come."

To the truth of this statement the whole medical profession and the pharmaceutical chemists alike bear witness.

It is a fact that we have registration of deaths, but as yet there is no general registration of sickness, and in consequence our information as to the nature and extent of incapacitating ill-health, as contrasted with mortal disease, is relatively scanty.

Some details extracted from a survey of samples of the medical record cards of patients under the National Health Insurance Acts are from time to time published in the pages of the Annual Report of the Chief Medical Officer of the Ministry of Health, but these data refer only to one portion of the population, namely, the insured section, and do not give us a complete picture of the state of affairs.

During the past year certain information has become available as a result of a study of the medical record cards of patients treated under the Health Committee's scheme for Domiciliary Medical Services. These records deal with persons of all ages and are fully indicative of the state of health of a large proportion of our publicly assisted population.

For various reasons it is not possible to treat these figures in such a way as to obtain attack rates for the various conditions referred to, but Table IV shows the relative frequency of these disorders of, and departures from, full health.

Details of a somewhat similar character in respect of National Health Insurance patients were published in the Annual Report of the Chief Medical Officer of the Ministry of Health for the year 1933, and are printed alongside for comparison.

Proportional distribution of disease amongst ordinary and chronic Public Assistance Patients. The information for insured persons as set out in the Annual Report of the Chief Medical Officer of the Ministry of Health is given for comparison.

DISEASE.	Representative Areas. England and Wales. Chief Medical Officer's Report, 1933.		Newcastle upon Tyne.			
			Ordinary Patients.		Chronic Patients.	
	No.	Per 1,000 of Total.	No.	Per 1,000 of Total.	No.	Per 1,000 of Total.
1. Influenza	14,905	118.6	171	22.0	7	7.6
2. Tuberculosis, all forms	905	7.2	96	12.4	26	28.3
3. Organic Heart Disease	1,589	12.6	385	49.6	121	131.8
4. Anaemia	1,578	12.6	290	37.4	60	65.4
5. Bronchitis, tonsillitis, nasal catarrh, cold, &c.	29,698	236.4	2,089	269.2	207	225.5
6. Pneumonia and other diseases of the respiratory system	1,699	13.6	283	36.5	47	51.2
7. Diseases of the digestive system	13,915	110.7	857	110.4	103	112.2
8. Diseases of genito-urinary system	3,854	30.7	286	36.9	45	49.0
9. Diseases of nervous system and special senses	7,046	56.1	399	51.4	66	71.9
10. Skin Diseases	6,112	48.6	294	37.9	15	16.3
11. Injuries and accidents	10,809	86.0	146	18.8	8	8.7
12. Abscess, boils, and other septic conditions ...	8,808	70.1	182	23.5	13	14.2
13. Lumbago, rheumatism, &c.	11,329	90.2	384	49.5	84	91.5
14. Debility, neuralgia and headache	6,115	48.7	417	53.7	49	53.4
15. Malignant Disease	221	1.8	25	3.2	11	12.0
16. Other Diseases	7,063	56.1	308	39.7	31	33.8
17. Infectious Diseases	—	—	971	125.1	15	16.3
18. Puerperal state	—	—	177	22.8	10	10.9
TOTAL ...	125,646	1,000	7,760	1,000	918	1,000

The importance of a study of morbidity or incidence of illness cannot be stressed too highly. Our present habit of mind is to regard these various minor illnesses as part of our common lot and unavoidable destiny. But a study of the information set out in Table IV, particularly of the part played by such conditions as bronchitis, tonsillitis, nasal catarrh and the diseases of the digestive system renders this position untenable. It is surely time that we realised that much of the enormous mass of ill-health which weighs upon all members of the community is definitely preventable.

Nutrition.

There is no question that of the various preventive measures available, the most fruitful of all would be an improvement in the general nutrition of the people.

The effective realisation of such a proposal would entail not only some re-survey of the nutritional needs of the individual and of the community, but would almost certainly involve a complete revision of the economics of our food supply and its distribution.

A great deal of work which will be helpful in future can be done at the present moment by ascertaining how families with different financial resources provide for the sustenance of their members.

Early in 1934 a small dietary survey was undertaken in this City by the Chief Health Visitor, Miss G. B. Cameron, and her staff. This was concerned with fifteen unemployed and nine employed families, and the summarised results were published and commented upon in my report for the year 1933.

During September, 1934, a much more ambitious survey was put in hand, and the circumstances of sixty-nine families, both employed and unemployed, some in old houses of the slum type, others in accommodation on new housing estates, were investigated by Miss Cameron and six members of the Health Visitors Staff. This study was directly supervised by Dr. H. E. Magee of the Ministry of Health, and by Miss M. I. Clark, a well-known investigator with very extensive experience in this type of work. The details of this study, which is one of the most comprehensive as yet undertaken in an English City, are at present in process of compilation and analysis and will be published later in the

present year. The results will be of inestimable value in assisting the Health Committee to formulate its solutions of the problems of local malnutrition which still confront us.

Slum Clearance and Overcrowding.

The second line of attack upon this mass of general ill-health is undoubtedly to be found in the slum clearance campaign, at present in active operation, and in the steps which are shortly to be taken under the Housing Act of 1935 to remove the evils of overcrowding.

Let us review briefly the progress of the Newcastle campaign during the past ten years. In 1924, the first step was taken when three Improvement Schemes under the Housing of the Working-Classes Acts 1890-1924, were approved by the Minister of Health. The areas dealt with, namely, Pilgrim Street, Prudhoe Street and Liverpool Street, contained a population of 2,209 persons. The houses were demolished and the occupants rehoused in "block" dwellings in Barrack Road and in houses on the Cowgate Estate.

Under the Housing Act, 1930, the City Council presented to the Minister of Health in December, 1930, a five-years programme of Slum Clearance, and later in September, 1933, a second five-years programme was submitted. These programmes together comprised 3,398 houses, in which were accommodated 9,900 separate families with a total population of 30,325 persons, or approximately 11 per cent of the population of the City.

Work was commenced early in 1931, and has continued with vigour up to the present time. In detail, it has already necessitated the making of 50 Clearance and two Compulsory Purchase Orders and the holding of seven public enquiries.

Thirty-eight Clearance and one Compulsory Purchase Orders have been confirmed by the Minister of Health, the remaining thirteen orders being at the moment under consideration by him.

The thirty-nine Orders confirmed by the Minister dealt with 1,320 premises in which were housed 3,003 separate families with a total population of 11,635. Of these 1,320 houses, 1,192 are to be demolished, necessitating the rehousing of 10,491 persons; 97 houses are to be reconditioned or altered, five houses

are to be converted for business purposes, and twenty-six were unconditionally excluded from the Orders. The number excluded unconditionally represents no more than 2.0 per cent. of the whole 1,320.

The programme submitted to the City Council in September, 1933 is reprinted in full as Appendix A. at the end of the present report. It can only be regarded as a sketch plan of the actual proposals, for in the preparation of the individual Clearance Orders, alterations have frequently to be effected. Such amendments generally necessitate the addition of properties to the list, rather than their removal therefrom.

Provision of Medical and Surgical Treatment.
Domiciliary Medical Services.

The " open choice " system of domiciliary medical services which had been instituted in six of the ten Medical Relief Districts on 8th November, 1933, has now completed its first year of working.

Apart from the obvious inadequacy of the financial remuneration received by the medical practitioners, and the heavy clerical work entailed by the " pool " system, there can be no doubt that the scheme has proved a notable success. But the two defects referred to, particularly the former, have necessitated the abandonment of the original " pool " system, whereby an annual fixed amount was divided amongst the participating practitioners irrespective of any increase in the number of persons requiring medical attention. (It may be remarked in passing that the " pool " yielded for each unit service—consultation or home visit—performed by the doctor the sum of 5.656 pence). In its place payment on a capitation basis has now been adopted—a method which ensures not only a reasonable financial return to the doctor, but obviates, in great part, the elaborate calculations which rendered the administration of the " pool " system so cumbersome.

A detailed description of the first ten months working of the scheme was submitted to the Council City on 20th March, 1935. Subsequently after negotiations with members of the medical panel concerned, a further report as to the capitation system of payment was adopted on 3rd April, 1935. These documents are printed at the end of the present report as Appendices B and C.

General Hospital Services.

The development of the Newcastle General Hospital has proceeded steadily. The following Table (Table V) records the gradual but continued progress which has occurred in the work of the hospital since its transfer in April, 1930.

TABLE V.

Year.	Admissions.	Discharges.	Operations.
1930	3,048	3,099	596
1931	3,598	3,574	1,125
1932	4,522	4,447	1,428
1933	4,776	4,763	1,560
1934	5,544	5,555	2,076

The past year has witnessed no outstanding change in the policy of the Health Committee as regards the hospital, though numerous minor advances and improvements have been brought about.

The increase in the number of patients necessitated some augmentation of the consultant staff, and an additional medical and surgical registrar have been appointed.

Reference was made in the report for 1933 to the establishment of a unit for the treatment of chronic nervous and other conditions by short electrical waves under the aegis of the Medical Research Council. On the termination of its financial responsibility for this investigation, the Council generously placed the valuable apparatus which had been gathered together at the disposal of the hospital. Thereupon, in view of the interesting results which had already been obtained, the Health Committee decided to retain the services of Mr. S. H. Evans, M.Sc., for the continuance of this important and highly promising research. The installation is probably the only effective unit of its kind at present in operation in any English hospital, and the work of Dr. F. J. Nattrass and Mr. S. H. Evans, who are collaborating on the medical and physical aspects respectively, has aroused considerable interest. A paper incorporating the results of the initial period of their investigation is in course of preparation and will be published in the medical press at an early date.

The Diabetic Clinic continues to function successfully, and now supervises the treatment of over sixty diabetic patients. The particular advantage of this supervision is found in the fact

that the physician in charge is thereby enabled to regulate the doses of Insulin required by the patient and to provide—if necessary—a suitable diet through public assistance sources.

A clinic has also been established to provide for patients suffering from pernicious anaemia and other similar blood conditions. Such patients are relatively numerous, particularly amongst women, and their supervision as out-patients is a matter of the first importance.

Both these clinics, dealing with diabetes and anaemia respectively, are doing most valuable work, not only from the curative but also from the preventive aspect. Without doubt regular attendance at the clinic is of great advantage to the patient. Not only does he or she receive the appropriate treatment which their disease requires, but, in addition, any relapse or retrogression in their condition is detected at the earliest possible moment.

Steps have been taken during the year to enter into arrangement with the Royal Victoria Infirmary and the North of England Radium Institute for the radium treatment of persons suffering from malignant disease. Owing to the fact that the radium in the custody of the Institute cannot be removed from the Infirmary premises, it has been necessary for patients from the Newcastle General Hospital to be transferred there. Where, however, treatment by radium emanation or radon is possible, the case has been treated at the Newcastle General Hospital, the radon being obtained through the Radium Institute. The arrangements have worked satisfactorily and well—largely as a result of the interest and co-operation of the Radium Officer of the Institute—Mr. C. J. L. Thurgar, F.R.C.S.

The preceding paragraphs summarise the various developments which have occurred at the hospital during the year, 1935. The future of the hospital is closely bound up with the recommendations of the Survey Letter of the Ministry of Health, which will now be dealt with.

Ministry of Health Survey, 1933.

As recorded in the report for 1933, the survey of the Health Services of the City was carried out by officers of the Ministry of Health in July and August of that year.

The letter of the Minister setting out the results of this survey and the recommendations based thereon was received on 6th February, 1934.

The Survey Letter, after being considered by the City Council was referred to the several Committees concerned. On the 21st November, 1934, the Health Committee presented to the City Council a report embracing its observations and recommendations with regard to the Survey Letter.

The document, which also included a three-year programme for the various works and improvements recommended by the Minister of Health, is reprinted as Appendix D of the present report.

These recommendations which will entail an estimated capital expenditure of £72,839, and an increased revenue expenditure on services of £2,898, were adopted in principle by the City Council on the 19th December, 1934. At the time of writing the first stage of the three-year programme is in active preparation.

Without entering into any detail it may be stated, quite shortly, that the recommendations of the Minister referred to the following :—

(1) The augmentation of the staff of the Tuberculosis Dispensary.

(2) The replacement of the existing X-Ray plants at the City Hospital, Walker Gate, and Barrasford Sanatorium.

(3) The organisation of an Orthopaedic Scheme.

(4) The improvement of the arrangements for the diagnosis and treatment of venereal disease.

(5) The provision of hospital accommodation for maternity cases.

(6) The replacement of the existing accommodation for sick children at the Newcastle General Hospital.

(7) The provision of additional nursing staff at the same hospital.

(8) The erection of a new Children's Home in substitution for the Highfield Home.

(9) The erection of a cubicle isolation block at the City Hospital for Infectious Diseases.

(10) The introduction of a scheme for the dental treatment of expectant and nursing mothers.

In the report of the Health Committee as adopted by the City Council detailed consideration was given to each of these matters, and adequate provision made for their accomplishment.

It is gratifying to note that on the 15th February, 1935, the Minister expressed his appreciation of the action proposed to be taken by the Council, and intimated that he would be glad to learn of the future progress of the various proposals.

Conclusion.

In conclusion, sir, I would place on record my very sincere thanks for the unfailing support and continued encouragement which I have received at all times from yourself, the Vice-Chairman, and the members of the Health Committee. Nor can I close without expressing my sense of personal indebtedness to the many members of the staff in every section of the Department for their keen spirit of co-operation and for their unwearying assistance.

I am, sir,

Your obedient servant,

J. A. CHARLES,
Medical Officer of Health.

Health Department,
Town Hall,
Newcastle upon Tyne,
July, 1935.

SUMMARY OF STATISTICS, 1934.

Population (estimated mid. 1934)	287,050
Area of City (acres)	8,458
Estimated number of houses	72,179
Rateable value	£2,363,186
Sum produced by 1d. rate	£9,452
Births	4,695
Birth rate (per 1,000 population)	16·4
Marriages	2,312
Deaths	3,646
Death rate (per 1,000 population)	12·7
,, ,, ,, adjusted by comparability factor	14·35
Infantile Mortality (deaths under one year per 1,000 live births)	83
Natural increase in population (excess of births over deaths in the year)	1,049

CHIEF CAUSES OF DEATH.

Cause.	Number.	Percentage of total deaths.
Diseases of the heart	582	15·9
Cancer	442	12·1
Bronchitis and pneumonia	375	10·3
Tuberculosis (all forms)	331	9·1
Do. (Pulmonary)	280	7·7
Diseases of the veins and arteries	353	9·7
Diseases of the nervous system	266	7·3
Diseases of the genito urinary system	177	4·8
Diseases of the early infancy, and congenital malformations under 1 year	182	5·0

INFECTIOUS DISEASES.

Disease.	Cases notified.	Number of deaths.	Death rate per 1,000 population.
Scarlet fever	1,727	22	0·077
Diphtheria	393	22	0·077
Enteric fever	14	1	0·003
Erysipelas	240	16	0·056
Cerebro-spinal fever	30	20	0·070
Measles	8,644	80	0·279
Tuberculosis (all forms)	604 (new cases)	331	1·153

Whooping cough, which is not notifiable, caused 16 deaths.

Influenza, which is not notifiable, caused 37 deaths.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

Health Report, 1934.

I.—GENERAL.

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

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

[illegible]

GENERAL STATISTICS.

POPULATION.—As estimated by the Registrar General at the middle of the year 1934—**287,050.**

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

Ward.	Population (estimated).	Gross Area in acres.	Less for Public Open Spaces in acres.	Net Area in acres.	Population per acre.	
					Gross.	Net.
St. Nicholas'	1,893	127	1	126	15	15
St. Thomas'	13,864	1,644	1,102	542	8	26
St. John's	13,597	169	2	167	80	81
Stephenson.....	17,783	212	...	212	84	84
Armstrong	14,434	176	31	145	82	100
Elswick	13,207	250	18	232	53	57
Westgate	13,640	90	1	89	152	153
Arthur's Hill	9,307	142	6	136	66	68
Benwell.....	20,259	551	31	520	37	39
Fenham	25,019	1,190	69	1,121	21	22
All Saints'.....	14,446	178	2	176	81	82
St. Andrew's	10,534	174	2	172	61	61
Jesmond	11,096	443	49	394	25	28
Dene	17,637	821	108	713	21	25
Heaton	13,253	225	28	197	59	67
Byker	14,745	139	...	139	106	106
St. Lawrence	17,725	180	7	173	98	102
St. Anthony's.....	15,551	598	21	577	26	27
Walker.....	29,060	1,149	41	1,108	25	26
CITY	287,050	8,458	1,519	6,939	34	41

INHABITED HOUSES.—**72,179** inhabited houses, which, on the estimated population, shows an average of **3.97** persons per dwelling.

RATEABLE VALUE.—**£2,363,186.** A penny rate produced £9,452.

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, 1934, was £348,834 for out-door relief, and £10,353 for indoor maintenance, making a total of **£359,187,** as compared with **£354,238** in the previous year.

The number of registered male unemployed was 25,417 at the beginning of the year, and 24,605 at its close, whilst the figures for females were 2,949 and 2,456 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 45.

MARRIAGES.—2,312 marriages took place during the year, as compared with 2,270 in 1933, and 2,168 in 1932.

BIRTHS.—4,695, equivalent to a rate of 16.4 per 1,000 population.

DEATHS.—(All causes)—4,823 equivalent to a gross rate of 16.8 per 1,000 population, and, after deduction of the deaths of 1,322 non-citizens and addition of 145 Newcastle residents who died elsewhere, to a net rate of 12.7 per 1,000 population. In 1933 the death rate was 12.7.

18 *Orders for Burial* (Newcastle-upon-Tyne Improvement Act, 1882, Sec. 47) were made, 7 being in respect of bodies lying in inhabited rooms, and 11 being cases from hospital.

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

CANCER DEATHS IN AGES (MALE AND FEMALE), 1934.

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.	...	...	...	...	...	...	11	15	26
	F.	...	...	...	1	...	...	3	2	6
Cancer of the digestive system ...	M.	...	...	...	...	...	10	59	62	131
	F.	...	...	...	...	...	8	51	60	119
Cancer of the respiratory organs ...	M.	...	...	...	...	1	2	16	8	27
	F.	...	...	...	...	...	2	3	3	8
Cancer of the uterus	F.	...	...	...	...	...	2	24	5	31
Cancer of other female genital organs ...	F.	...	...	...	...	...	3	3	2	8
Cancer of the breast	F.	...	...	...	...	...	4	15	17	36
Cancer of the male genito-urinary organs	M.	...	...	...	...	...	3	11	13	27
Cancer of the skin...	M.	...	...	...	...	...	...	...	2	2
	F.	...	...	...	...	...	...	...	1	1
Cancer of other or unspecified organs	M.	...	...	...	...	1	1	5	2	9
	F.	...	...	...	...	...	1	8	2	11
	M.	...	...	...	...	2	16	102	102	222
	F.	...	...	...	1	...	20	107	92	220
TOTAL ...		...	...	...	1	2	36	209	194	442

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

INFANTILE MORTALITY.—389 infants died before completing the first year of life, representing a rate of 83 deaths per 1,000 live births.

ZYMOTIC DEATH RATE.—There were 208 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 0.72 deaths per 1,000 population.

TUBERCULOSIS.—331 persons died from various forms of tuberculosis, 280 being from pulmonary, and 51 from non-pulmonary. The equivalent death rates are : *all forms* 1.15, *pulmonary* 0.97, and *non-pulmonary* 0.18 per 1,000 population.

For comparison of death rates with previous years see large table page 35A.

For particulars of deaths as to site of disease, age, etc., see table page 40A.

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 1934, as recorded on the " Newcastle Chronicle's " instruments :—

The mean barometer reading was 29.7 inches. The mean maximum and minimum temperatures were 64.5 F. and 41.1 F. respectively.

The rainfall for the year was 24.52 inches, 0.80 inches more than that of 1933 (23.72).

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

W.	on	49 days.
N.W.	on	126 ,,
N.E.	on	34 ,,
E.	on	7 ,,
S.E.	on	58 ,,
S.W.	on	86 ,,
S.	on	3 ,,
N.	on	2 ,,

Sunshine.

Sunshine records have been available by the courtesy of Professors G. W. Todd and J. A. Hanley, of Armstrong College. The observations are taken at Cockle Park Farm (fifteen miles north of the City, and in a rural area), and at the College itself. During the year 1,158 hours of sunshine were registered in the City, as compared with 1,405 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 105.

SEWERAGE.—There are 356 miles of sewers discharging directly into the Tyne, which is tidal, at various points along the 8¼ miles of river frontage.

CLEANSING AND SCAVENGING.—A weekly collection of refuse is made from 75 per cent. of premises and twice weekly from the remainder.

There are 75,334 dry ashtubs and galvanised iron bins, 28 dry ashpits, and 65 conservancy system closets in the City. Conversion of the latter is proceeding steadily and, during 1934, 10 pail-closets, and 10 combined privies and ashpits were removed and water closets substituted. 3 dry ashpits were also removed and dustbins substituted. 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, 23, 26, 27, 28, 29, 30, 31 and 33; Part III.—Sections 34, 35, 36, 37, 38, 43, 45, 48, 49, 50 and 51; Part IV.—Sections 52, 53, 56, 58, 59, 61, 62, 63, 64, 65 and 68; Part X.—Whole of.

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

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.

Cause of Death	Age Periods — Gross									Age Periods — Net									Wards—Net Deaths																			Transferable Deaths		Deaths in Institutions in the City of "Non-Residents."
	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	Elswick	Westgate	Arthur's Hill	Benwell	Fenham	All Saints'	St. Andrew's	Jesmond	Dene	Heaton	Byker	St. Lawrence	St. Anthony's	Walker	Inward	Outward	
I.—EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.																																								
Enteric Fever	...	...	...	2	1	...	...	1	4	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4
Measles	9	27	33	17	...	...	...	...	86	9	25	31	15	...	...	...	...	80	...	2	12	12	7	3	4	1	5	3	2	1	...	4	2	5	7	9	1	...	6	57
Scarlet Fever	...	5	10	8	1	3	...	...	27	...	2	9	8	1	2	...	...	22	...	1	1	...	3	1	1	3	...	2	3	1	1	3	...	...	...	1	1	...	5	26
Whooping Cough	9	3	3	1	...	...	...	...	16	9	3	3	1	...	...	...	...	16	...	...	2	...	2	...	...	...	2	1	1	...	...	...	1	...	2	3	2	...	...	5
Diphtheria	1	1	10	15	...	1	1	...	29	1	1	7	12	...	...	1	...	22	...	...	2	1	...	1	1	2	6	3	...	...	...	2	...	1	...	2	1	...	7	27
Influenza	...	1	...	4	1	4	13	13	36	...	1	...	4	2	4	13	13	37	...	...	4	2	3	2	...	4	3	2	2	1	2	3	1	...	1	2	5	1	...	1
Dysentery	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Erysipelas	8	...	2	1	2	2	5	6	26	6	...	...	1	...	...	4	5	16	...	1	1	...	...	1	...	2	1	...	...	...	2	3	1	1	...	2	1	...	10	24
Encephalitis Lethargica	...	...	...	...	1	6	...	1	8	...	...	...	...	1	6	1	1	9	...	2	1	1	...	1	...	...	2	...	...	...	...	...	...	...	1	...	1	1	...	4
Cerebro-Spinal Fever	4	5	7	9	4	6	4	...	39	2	4	4	2	4	2	2	...	20	...	1	...	3	2	1	1	...	...	...	...	...	...	1	1	...	2	5	3	1	20	39
Tetanus	...	...	1	...	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Tuberculosis of the Respiratory System	4	...	4	14	69	117	78	9	295	2	...	1	13	64	114	78	8	280	2	6	12	27	13	11	16	9	18	25	27	8	5	15	11	17	12	23	23	5	20	136
Tuberculosis of the Central Nervous System	1	5	13	16	8	1	2	...	46	1	...	5	7	4	...	2	...	19	...	1	...	1	...	...	...	...	2	1	1	1	1	...	1	2	3	2	3	...	27	40
Tuberculosis of the Peritoneum and Intestines	...	...	2	2	3	5	2	1	15	...	...	2	1	1	3	1	...	8	...	...	...	...	1	...	1	2	...	2	...	...	...	1	...	...	...	1	...	...	7	13
Tuberculosis of the Vertebral Column	...	...	...	...	1	3	2	...	6	...	...	...	...	1	3	1	...	5	...	...	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	1	...	1	3
Tuberculosis of the Joints	...	...	...	...	1	1	...	...	2	...	...	...	...	1	1	...	...	2	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
Tuberculosis of Lymphatic System	...	...	...	...	1	1	...	...	2	...	...	...	...	1	1	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Tuberculosis of Genito Urinary System	...	...	...	2	...	1	1	1	5	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4
Disseminated Tuberculosis	3	...	4	4	6	6	1	1	25	1	...	1	2	2	4	2	1	13	...	1	...	...	1	1	...	...	...	...	1	...	...	1	...	4	...	3	1	1	13	24
TOTAL TUBERCULOSIS	8	5	23	38	89	135	86	12	396	4	...	9	23	74	126	85	10	331	2	9	12	29	16	12	19	12	22	28	30	9	6	17	12	24	15	29	28	6	71	223
Syphilis	3	...	...	1	...	4	14	3	25	2	...	...	1	...	4	10	3	20	...	...	5	1	...	1	...	...	...	2	5	...	...	1	1	1	1	2	...	...	5	24
Other Venereal Diseases	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Pyæmia, Septicæmia	4	1	1	1	1	3	10	3	24	1	...	1	...	...	2	6	3	13	...	...	...	2	1	1	...	...	...	1	...	...	1	...	...	3	2	2	...	1	12	23
Other Infectious or Parasitic Diseases	4	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4
II.—CANCER AND OTHER TUMOURS.																																								
Cancer of the Buccal Cavity	...	...	...	1	...	...	15	22	38	...	...	...	1	...	...	14	17	32	1	...	4	4	...	2	2	1	...	1	5	...	1	2	3	3	1	2	...	...	6	21
Cancer of the Digestive Organs and Peritoneum	...	...	1	...	...	24	168	158	351	...	...	...	...	...	18	110	122	250	...	7	14	15	9	12	11	10	19	21	11	9	11	19	20	10	12	14	26	4	105	192
Cancer of the Respiratory Organs	...	...	...	...	1	6	24	15	46	...	...	...	...	1	4	19	11	35	1	1	1	2	1	...	...	3	1	3	4	1	3	3	4	4	1	...	2	...	11	24
Cancer of the Uterus	...	...	...	...	...	4	32	5	41	...	...	...	...	...	2	24	5	31	1	1	3	...	1	...	1	...	1	2	1	3	4	...	1	4	3	2	3	1	11	17
Cancer of the Female Genital Organs	...	...	...	...	...	4	5	2	11	...	...	...	...	...	3	3	2	8	...	1	...	1	...	1	1	1	...	...	...	...	1	1	...	...	...	...	1	...	3	5
Cancer of the Breast	...	...	...	...	...	5	18	18	41	...	...	...	...	...	4	15	17	36	...	6	3	2	...	...	2	1	3	4	1	2	3	3	1	...	2	1	2	...	5	18
Cancer of Male Genito Urinary System	...	...	...	...	...	4	14	13	31	...	...	...	...	...	3	11	13	27	...	1	2	3	...	...	3	2	2	1	...	1	1	2	3	1	1	...	4	...	4	14
Cancer of the Skin	...	...	...	...	...	...	1	3	4	...	...	...	...	...	...	...	3	3	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	3
Cancer of other or unspecified Organs	1	...	...	...	1	3	17	8	30	...	...	...	...	1	2	13	4	20	...	...	1	...	...	1	1	1	2	2	...	1	4	4	2	...	...	...	1	...	10	16
Tumours (not malignant)	...	...	1	5	3	9	11	2	31	...	...	1	2	...	4	6	2	15	...	1	...	...	2	...	1	2	2	1	...	1	1	...	1	...	...	1	2	1	17	28
Tumours of undetermined nature	...	2	5	2	1	7	14	1	32	...	...	1	1	1	1	6	...	10	...	2	2	1	1	...	...	...	...	...	...	1	...	1	1	...	...	...	1	...	22	25
III.—RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.																																								
Rheumatic Fever	...	...	1	5	2	6	6	2	22	...	...	1	3	2	4	6	2	18	...	...	1	2	...	...	1	2	...	...	...	...	1	1	2	1	1	3	3	1	5	10
Chronic Rheumatism	1	...	...	...	1	...	3	7	12	...	...	...	...	...	...	3	7	10	1	...	...	...	...	...	1	...	...	1	1	1	...	1	2	2	...	...	...	...	2	4
Diabetes	...	...	...	4	6	11	22	34	77	...	...	...	2	1	7	13	30	53	...	1	3	6	1	5	2	2	3	4	2	4	1	5	5	2	1	4	2	1	25	50
Rickets	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Diseases of the Thyroid and Parathyroid Glands	...	...	...	...	2	...	4	3	9	...	...	...	...	1	...	3	3	7	...	...	...	1	...	2	1	...	...	...	1	...	...	...	...	1	...	...	1	...	2	6
Exophthalmic Goitre	...	...	...	...	2	...	1	1	4	...	...	...	...	1	...	...	1	2	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	3
Diseases of the Thymus	1	...	1	...	...	...	...	...	2	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Diseases of the Adrenals	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Other General Diseases	...	...	1	1	1	1	1	...	5	...	...	...	1	...	1	1	...	3	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2	5
IV.—DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.																																								
Hæmorrhagic conditions	...	...	...	...	1	1	...	...	2	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	2
Anæmia, Chlorosis	2	...	...	...	3	4	7	9	25	2	...	...	...	1	2	3	9	17	...	...	...	1	...	2	1	1	1	...	1	...	...	2	1	1	...	1	5	...	8	12
Leukæmia, Aleukæmia	...	2	...	...	4	4	9	...	19	...	1	...	...	3	1	2	...	7	...	...	...	1	...	1	1	...	1	1	...	1	1	...	...	...	...	...	...	...	12	14
Diseases of the Spleen	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
V.—CHRONIC POISONING.																																								
Alcoholism	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
VI.—DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																																								
Encephalitis	...	...	...	1	1	5	1	...	8	...	...	...	...	...	3	1	...	4	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	4	7
Meningitis	5	...	2	6	3	1	1	...	18	3	...	2	5	...	...	...	...	10	...	...	1	1	3	...	1	...	1	...	1	...	...	...	...	...	1	...	1	...	8	14
Locomotor Ataxy	...	...	...	...	...	1	4	1	6	...	...	...	...	...	1	4	1	6	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	...	1	1	1	...	...	4
Other Diseases of the Spinal Cord	...	...	...	...	...	1	6	...	7	...	...	...	...	...	...	5	...	5	...	...	...	...	...	...	...	...	...	3	1	...	1	...	...	...	...	...	...	...	2	3
Cerebral Hæmorrhage, Apoplexy	...	...	1	2	2	7	54	97	163	...	...	...	...	2	5	50	94	151	...	10	10	9	4	8	4	3	11	9	6	8	5	12	6	9	11	15	11	3	15	64
Hemiplegia and other paralyses	...	...	...	...	...	1	4	4	9	...	...	...	...	...	...	3	4	7	...	1	...	1	...	...	...	...	...	1	1	1	...	1	...	1	...	...	...	...	2	7
General Paralysis of the Insane	...	...	...	...	...	1	4	...	5	...	...	...	...	...	2	10	...	12	...	1	1	...	...	...	2	1	1	...	...	1	...	1	...	...	1	1	2	9	2	5
Other forms of Insanity	...	...	...	...	...	1	...	...	1	...	...	...	...	...	2	1	...	3	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	2	...	...
Epilepsy	1	...	...	...	3	2	5	4	15	1	...	...	...	4	5	7	4	21	...	1	2	3	1	2	2	2	...	1	1	1	...	...	...	2	2	...	1	7	1	9
Infantile Convulsions (under 5 years)	13	2	1	...	...	...	...	...	16	13	2	1	...	...	...	...	...	16	...	...	...	1	1	1	...	...	...	1	2	3	...	1	...	1	1	2	2	...	...	...
Other Diseases of the Nervous System	...	...	...	3	1	4	5	8	21	...	...	...	1	1	3	6	8	19	...	...	...	...	1	1	...	...	4	2	2	...	...	...	1	2	3	1	2	3	5	13
Diseases of the Ear and of the Mastoid Sinus	4	2	2	11	8	5	4	...	36	1	2	1	2	3	2	1	...	12	...	...	1	...	1	1	...	...	...	1	1	...	...	...	...	2	1	1	3	1	25	33
VII.—DISEASES OF THE CIRCULATORY SYSTEM.																																								
Pericarditis	1	1	1	...	...	...	1	1	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	5
Acute Endocarditis	...	...	...	...	1	4	5	2	12	...	...	...	...	1	2	5	1	9	...	...	...	1	1	2	1	...	1	...	1	1	...	1	...	...	...	...	...	...	3	5
Chronic Endocarditis, Valvular Disease	...	...	...	2	8	25	74	37	146	...	...	...	1	7	17	67	40	132	1	2	8	6	7	7	5	5	9	13	7	6	9	6	7	6	3	7	18	7	21	56
Diseases of the Myocardium	1	1	1	...	2	13	78	220	316	1	1	1	...	2	10	74	220	309	...	11	13	19	17	27	19	9	17	15	22	7	14	13	15	25	15	24	27	15	22	114
Angina Pectoris	...	...	...	...	...	7	44	42	93	...	...	...	...	...	6	38	42	86	1	6	4	2	2	4	2	3	7	8	...	3	1	14	8	6	4	4	7	4	11	22
Other Diseases of the Heart	...	...	...	...	...	1	13	26	40	...	...	...	...	...	1	13	26	40	...	...	1	2	1	3	3	2	2	4	4	4	1	2	4	4	1	...	2	1	1	10
Aneurysm	...	...	...	...	...	1	5	1	7	...	...	...	...	...	1	4	1	6	...	...	...	1	...	...	...	...	1	1	...	...	...	...	...	...	2	1	...	...	1	5
Arterio-Sclerosis	...	...	...	...	...	1	53	253	307	...	...	...	...	...	2	55	249	306	2	9	13	18	23	22	15	13	29	22	22	12	14	14	9	10	19	15	25	20	21	101
Gangrene	...	...	...	...	...	2	5	7	14	...	...	...	...	...	2	4	7	13	...	...	1	...	...	...	...	1	3	...	...	1	...	1	1	1	1	3	...	...	1	12
Other Diseases of the Arteries	...	...	...	...	1	...	1	...	2	...	...	...	...	1	...	1	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Diseases of the Veins	...	...	...	...	...	...	5	2	7	...	...	...	...	...	...	3	2	5	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	1	1	...	...	2	6
Diseases of the Lymphatic System	...	...	1	...	1	...	...	...	2	...	...	1	...	1	...	...	...	2	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Abnormalities of blood pressure	...	...	...	...	...	1	13	14	28	...	...	...	...	...	...	12	13	25	...	1	...	1	3	2	1	...	1	3	2	...	...	4	5	...	...	...	2	1	4	17
VIII.—DISEASES OF THE RESPIRATORY SYSTEM.																																								
Diseases of the Nasal Fossæ and Annexa	...	...	...	...	...	1	1	...	2	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1
Diseases of the Larynx	...	...	...	...	...	...	4	...	4	...	...	...	...	...	...	2	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	3
Bronchitis	11	2	2	2	1	6	21	73	118	10	2	2	1	...	3	22	76	116	...	5	5	6	5	4	7	2	3	6	10	6	2	9	5	6	10	14	11	4	6	25
Broncho-Pneumonia	60	40	15	5	2	8	36	34	200	48	32	11	2	2	5	29	32	161	1	3	22	10	11	7	4	3	14	11	9	5	2	5	4	8	11	14	17	1	40	110
Lobar Pneumonia	11	4	5	4	12	23	25	12	96	7	2	3	3	10	19	21	13	78	...	5	8	2	6	4	3	4	2	3	5	2	4	2	5	4	7	5	7	2	20	64
Pneumonia (not otherwise defined)	8	5	1	...	...	2	4	6	26	7	3	...	...	...	1	3	6	20	...	1	1	2	1	1	...	...	2	1	3	2	1	2	...	2	...	1	...	...	6	11
Pleurisy	1	3	2	...	1	2	6	...	15	1	...	2	...	1	1	1	...	6	...	1	...	...	...	...	...	...	...	...	...	1	...	...	1	1	1	...	1	...	9	15
Congestion and Hæmorrhagic Infarct of Lung	...	...	...	...	1	1	5	...	7	...	...	...	...	1	...	5	...	6	...	...	1	1	...	1	...	...	...	...	...	...	1	2	...	...	...	...	...	...	3	2
Asthma	...	...	1	...	...	3	5	5	14	...	...	1	...	...	2	4	4	11	...	1	...	2	...	...	1	...	...	1	...	...	...	...	...	2	1	3	...	...	3	2
Other Diseases of the Respiratory System	...	...	...	...	1	...	2	...	3	...	...	...	...	1	...	2	...	3	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
Carried forward	172	112	136	151	177	391	1001	1191	3331	130	81	93	92	131	300	828	1127	2782	11	98	168	185	139	148	128	99	185	193	173	101	101	169	136	157	151	200	240	98	647	1690

RETURN OF DEATHS FROM "ALL CAUSES" DURING THE 52 WEEKS ENDED 29TH DECEMBER, 1934—*Continued.*

Cause of Death	Age Periods. Gross. Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	Total (Gross)	Age Periods. Net. Under 1 year	1 year and under 2	2 years and under 5	5 years and under 15	15 years and under 25	25 years and under 45	45 years and under 65	65 years and above	Total (Net)	Wards—Net Deaths. St. Nicholas'	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	Transferable Deaths. Inward	Outward	Deaths in the Institutions in the City of "Residents" or "Non-Residents"
Brought forward	172	112	136	151	177	391	1001	1191	3331	130	81	93	92	131	300	828	1127	2782	11	98	168	185	139	148	128	99	185	193	173	101	101	169	136	157	151	200	240	98	647	1690
IX.—DISEASES OF THE DIGESTIVE SYSTEM.																																							
Diseases of the Buccal Cavity, Pharynx, etc.	2	...	...	1	1	2	5	2	13	2	...	...	1	1	1	5	1	11	...	2	1	...	...	1	1	...	2	...	...	...	...	2	...	1	...	1	1	3	10
Diseases of the Œsophagus	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Ulcer of the Stomach or Duodenum	...	...	...	...	1	16	42	11	70	...	...	...	...	6	20	3	29	1	3	1	...	1	2	2	1	1	2	2	1	1	...	4	1	1	...	2	4	8
Other Diseases of the Stomach	6	...	...	1	...	3	2	6	18	5	...	...	1	...	1	2	5	14	...	...	1	1	2	2	1	4	1	8	2	6	1	2	1	...	6	2	5	4	...	18	46
Diarrhœa and Enteritis (under 2 years)	69	2	...	...	...	...	...	...	71	51	2	...	...	...	...	...	...	53	...	1	1	...	...	...	...	...	1	1	...	...	...	...	2	1	...	1	2	5	7
Diarrhœa and Enteritis (over 2 years)	...	...	6	4	...	3	1	1	15	...	...	5	3	...	1	...	1	10	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	5
Ulceration of the Intestines	...	...	...	...	...	2	2	1	5	...	...	...	...	...	1	...	1	2	...	2	...	...	...	...	...	...	4	1	...	...	1	1	1	1	...	...	36	53
Appendicitis	13	...	1	11	4	14	16	8	54	...	...	1	6	1	3	11	12	28	...	3	2	1	1	3	...	3	2	2	2	...	1	2	1	5	1	...	2	...	52	35
Hernia, Intestinal obstruction	1	...	2	1	1	5	35	23	80	3	...	1	...	...	1	11	12	28	...	...	1	...	1	...	1	...	1	...	...	1	...	...	...	...	1	...	...	...	10	16
Other Diseases of the Intestines	1	...	...	...	...	2	10	3	16	1	...	...	...	...	3	1	4	6	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Cirrhosis of the Liver (Alcoholic)	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	8
Cirrhosis of the Liver (Non-Alcoholic)	...	...	...	...	...	3	5	3	11	...	...	...	...	...	4	2	6	14	...	1	2	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	1	5	7
Acute Yellow Atrophy of Liver	...	...	1	...	...	1	4	2	8	...	...	...	...	...	1	1	1	3	...	...	...	...	...	...	...	1	...	3	...	...	3	2	...	...	...	1	15	24
Biliary Calculi	...	...	...	...	...	1	14	13	28	...	...	...	...	...	1	6	7	14	...	1	...	...	...	...	...	...	1	1	1	1	...	...	4	...	1	1	2	...	7	16
Other Diseases of the Gall Bladder and Ducts	...	...	...	...	...	2	6	13	21	...	...	...	...	...	1	4	9	14	1	1	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	5	6
Diseases of the Pancreas	...	...	...	...	...	1	3	2	6	...	...	...	...	...	1	...	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	8	11
Peritonitis without stated cause	1	...	...	1	...	5	4	...	11	...	...	...	...	...	3	...	...	3	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
X.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																																							
Acute Nephritis	...	...	...	6	4	1	5	1	17	...	...	...	1	...	3	1	6	...	...	...	...	...	1	1	1	...	2	12	6	4	6	1	6	6	7	4	6	8	3	11	13
Chronic Nephritis	...	1	...	1	5	15	58	60	140	...	1	...	1	5	9	45	53	114	...	4	4	6	8	14	6	5	2	12	6	4	6	2	6	6	7	4	6	8	3	29	88
Nephritis (not stated to be acute or chronic)	...	...	1	...	...	2	7	5	15	...	...	...	...	...	5	5	10	...	...	...	...	1	1	1	...	1	1	...	...	...	...	1	...	3	...	1	1	1	17	21
Other Diseases of the Kidney and Annexa	2	1	...	...	1	11	6	2	23	...	1	...	...	1	2	1	4	6	...	...	...	1	...	...	...	1	...	...	1	...	1	...	...	...	...	...	1	...	3	5
Calculi of the Urinary Passages	...	...	...	...	1	...	2	3	6	...	...	...	...	1	...	2	3	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	6	10
Cystitis	...	...	...	...	1	...	2	8	11	...	...	...	...	...	1	4	5	...	...	1	...	1	...	...	...	1	...	...	1	...	1	...	...	...	...	1	1	...	5	11
Diseases of the Urethra, Urinary Abscess, etc.	...	...	...	...	...	...	4	8	12	...	...	...	...	...	...	5	5	7	...	1	1	1	...	...	...	1	...	...	1	...	3	...	2	2	...	1	...	1	27	38
Diseases of the Prostate	...	...	...	...	...	...	6	39	45	...	...	...	...	...	...	3	15	18	...	...	2	1	...	...	...	...	1	...	...	1	...	...	1	...	...	1	...	1	10	14
Diseases of the Female Genital Organs	1	...	...	...	1	9	2	2	15	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2	3
Diseases of the Male Genital Organs	2	...	...	...	1	...	...	1	4	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XI.—DISEASES OF PREGNANCY, CHILD-BIRTH AND THE PUERPERAL STATE.																																							
Post-abortive Sepsis	...	...	...	...	1	6	...	...	7	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	6	7
Abortion, not returned as Septic	...	...	...	...	...	3	...	...	3	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	7
Ectopic Gestation	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Accidents of Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Hæmorrhage	...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis	...	...	...	...	1	7	...	...	8	...	...	...	...	...	3	...	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	6
Puerperal Albuminuria and Convulsions	...	...	...	...	2	21	...	...	30	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	3	3	23	29
Other Toxæmias of Pregnancy	...	...	...	...	...	6	...	...	13	...	...	...	...	2	4	...	...	6	...	1	...	...	...	...	1	...	1	1	...	...	...	...	...	...	1	...	...	...	7	12
Puerperal Phlegmasia	...	...	...	...	1	3	...	...	4	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3	4
Other Accidents of Childbirth	...	...	...	...	...	2	...	...	2	...	...	...	...	...	1	...	1	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Other or unspecified conditions of the Puerperal state	...	...	...	...	1	6	...	...	7	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	6
	...	...	...	...	1	4	1	...	6	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	4	4
XII.—DISEASES OF THE SKIN AND CELLULAR TISSUE.																																							
Carbuncle, Boil	2	...	...	...	...	2	...	5	9	1	...	...	...	...	2	...	5	8	...	...	...	...	...	...	1	...	1	1	...	...	...	...	3	1	1	...	...	1	7
Cellulitis, Acute Abscess	5	1	...	1	2	3	2	1	15	4	1	...	1	1	2	1	...	10	...	1	...	2	1	...	...	...	...	...	...	1	...	...	1	1	1	3	...	5	14
Other Diseases of the Skin and Annexa	3	1	...	...	...	...	1	...	5	2	1	...	...	...	1	...	...	4	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	5
XIII.—DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																																							
Acute Infective Osteomyelitis and Periostitis	1	...	...	5	3	1	1	...	11	...	...	...	1	1	1	1	...	4	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	7	10
Other Diseases of the Bones	2	1	...	2	...	...	1	1	7	...	...	...	2	...	...	...	1	3	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	4	7
Diseases of the Joints	2	1	1	...	...	2	...	...	6	...	...	...	...	...	2	...	...	2	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	4	6
XIV.—CONGENITAL MALFORMATIONS.																																							
Congenital Malformations	56	2	...	...	...	...	...	...	58	28	2	...	...	...	...	...	...	30	...	...	1	1	3	1	3	...	2	4	2	...	...	4	...	...	2	4	3	...	28	39
XV.—DISEASES OF EARLY INFANCY.																																							
Congenital Debility	28	...	...	...	...	...	...	...	28	21	...	...	...	...	...	...	...	21	...	1	...	2	1	...	1	...	3	2	...	2	...	1	1	3	2	2	...	2	7	18
Premature Birth	156	...	...	...	...	...	...	...	156	101	...	...	...	...	...	...	...	101	...	2	3	5	11	5	2	3	6	9	10	1	1	9	4	2	7	9	12	2	57	87
Injury at Birth	25	...	...	...	...	...	...	...	25	11	...	...	...	...	...	...	...	11	...	...	...	1	1	...	1	...	1	2	...	...	...	...	...	1	...	1	...	1	14	21
Atelectasis	11	...	...	...	...	...	...	...	11	8	...	...	...	...	...	...	...	8	1	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	1	2	1	...	3	3
Icterus Neonatorum	3	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases peculiar to Early Infancy	15	...	...	...	...	...	...	...	15	8	...	...	...	...	...	...	...	8	...	...	2	...	1	...	1	...	1	...	...	...	...	2	...	...	1	...	...	...	7	13
XVI.—OLD AGE.																																							
Senile Dementia	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	2	...	...	...
Old Age	...	...	...	...	...	...	...	77	77	...	...	...	...	...	...	88	88	...	3	7	7	3	3	2	3	3	3	3	4	3	14	4	5	7	8	6	12	1	5
XVII.—DEATHS FROM VIOLENCE.																																							
Suicide by Poison	...	...	...	...	...	2	5	1	8	...	...	...	...	...	2	3	1	6	...	...	1	...	1	...	...	...	1	...	2	1	...	...	...	...	...	1	...	2	...	2	6
" Poisonous Gas	...	...	...	...	2	4	5	1	12	...	...	...	...	3	4	6	1	14	...	...	1	...	1	...	1	...	1	2	1	...	1	...	2	1	...	...	2	2	...	3
" Hanging or Strangulation	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	2	...	2	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	1
" Drowning	...	...	...	...	...	1	4	...	5	...	...	...	...	1	...	2	...	3	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
" Firearms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	3	4
" Cutting and Piercing Instruments	...	...	...	...	1	...	2	3	6	...	...	...	...	...	2	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
" Crushing	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Homicide by Firearms	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
" Cutting and Piercing Instruments	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
" Other means	3	...	...	...	...	1	1	...	5	3	...	...	...	...	1	1	...	5	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1
Food Poisoning	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Accidental absorption of Poisonous Gas	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Accidental Poisoning (not by Gas)	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4
Conflagration	...	...	...	...	...	2	2	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19	26
Accidental Burns (conflagrations excepted)	1	5	4	2	4	6	3	1	26	...	3	1	1	1	...	1	...	7	...	...	...	1	1	...	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...
" Mechanical Suffocation	2	...	...	1	...	1	...	...	4	2	...	...	1	...	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2	3	2
" Drowning	...	...	...	1	...	2	1	...	4	...	...	...	...	...	2	1	...	3	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
" Injury by Cutting and Piercing Instruments	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
" Injury by Fall, Crushing, etc.	...	...	2	14	20	38	40	33	157	...	...	...	1	5	11	16	16	23	72	...	...	2	3	4	7	3	3	7	11	...	3	1	5	2	5	1	4	11	9	94	146
Electricity (Lightning excepted)	...	...	...	1	...	1	...	...	2	...	...	...	...	1	...	1	...	2	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	2	6
Unstated Forms of Accidental Violence	1	...	...	...	2	3	2	...	8	1	...	...	...	...	1	...	...	4	...	...	1	1	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	1	1	...
Violent Deaths of Unstated Nature	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	2	1	3	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	1	...	...
Wounds of War	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XVIII.—ILL-DEFINED DISEASES.																																							
Sudden Death	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	7	7
Cause of Death unstated or ill-defined	3	1	...	...	...	4	2	1	11	3	...	...	...	...	...	1	4	7	...	1	1	...	...	...	1	...	...	...	...	1	2	...	...	...	1	...	...	...	...	...
Totals	560	128	154	205	263	624	1320	1539	4823	389	92	101	118	162	391	1000	1393	3646	15	132	207	242	183	194	162	130	241	268	224	122	127	229	179	201	209	262	319	145	1322	2774

VITAL STATISTICS, YEAR 1934, AND INFECTIOUS DISEASES.

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.	Attack Rate per 1,000 Population.						Attack Rate per 1,000 Births. (live & still)
							Smallpox.	Typhus.	Scarlet Fever.	Diphtheria.	Enteric Fever and Continued Fever.	Erysipelas.	Puerperal Fever.
England and Wales	14·8	11·8	...	59	0·26	†	0·00	...	3·76	1·70	0·03	0·51	4·0
121 Great Towns (includ. London)	14·7	11·8	...	63	0·31	†	†	†	†	†	†	†	†
NEWCASTLE UPON TYNE	**16.4**	**12.7**	**14.35**	**83**	**0.49**	**1.15**	...	...	**6.01**	**1.37**	**0.05**	**0.84**	**3.28**
Hull	18·3	12·5	13·75	64	0·3	1·0	...	...	2·36	3·37	0·03	0·45	2·22
Leeds	14·8	12·9	13·80	71	0·59	0·95	...	...	5·58	4·59	0·02	0·86	7·06
Bradford	13·7	13·3	13·35	62	0·29	0·82	...	...	5·44	2·88	0·02	0·61	4·01
Sheffield	14·5	11·3	12·83	55	0·22	0·76	...	...	4·58	2·75	0·01	0·64	9·66
Manchester	14·8	12·2	13·95	69	0·31	1·14	...	...	2·69	1·12	0·02	0·47	8·92
Salford	14·7	13·6	16·05	93	0·49	1·06	...	...	2·56	5·85	0·01	0·57	6·35
Liverpool	20·3	13·1	15·03	81	0·68	1·15	0·00	0·00	4·13	3·36	0·03	0·95	2·35
Nottingham	15·6	12·3	12·68	69	0·17	0·89	...	...	2·4	0·8	0·01	0·63	3·1
Leicester	14·2	11·7	11·85	53	0·16	1·00	...	...	5·81	1·92	0·02	0·75	2·25
Stoke-on-Trent	16·7	11·7	14·27	85	0·24	1·03	0·00	0·00	5·70	1·41	0·00	0·54	4·13
Birmingham	15·3	11·0	12·10	68	0·24	0·79	...	...	3·21	0·99	0·04	0·67	6·9
Cardiff	15·8	12·3	13·04	74	0·22	1·15	...	...	4·09	2·35	0·01	0·52	15·7
Bristol	13·9	10·9	10·68	46	0·11	0·86	0·00	0·00	2·54	1·83	0·01	0·40	0·84
Portsmouth	15·9	12·4	12·23	44	0·31	0·96	...	...	5·42	1·36	0·01	0·41	4·17
London (County)	13·4	12·2	12·47	67	0·40	0·87	0·03	...	4·32	2·79	0·03	0·61	4·34
Gateshead	18·4	13·4	15·11	87	0·51	1·39	...	...	9·47	0·53	...	0·67	2·53
South Shields	17·9	13·2	14·92	83	0·32	1·75	...	...	4·40	0·40	0·02	0·74	2·90
Tynemouth	17·7	12·7	14·00	77	0·44	0·89	0·00	0·00	6·03	0·88	0·06	0·66	2·56
Sunderland	20·1	12·5	14·00	82	0·39	1·10	0·00	0·00	6·50	0·82	0·03	0·88	2·82
Middlesbrough	19·7	13·2	15·57	79	1·18	1·24	...	...	6·95	2·71	...	0·65	8·99
*County of Northumberland	15·5	11·8	12·48	69	0·35	0·81	...	...	8·08	1·24	0·05	0·61	1·50
*County of Durham	17·8	11·9	13·68	78	0·48	0·88	...	...	8·62	2·42	0·17	0·77	2·41

* Administrative County. † Not available.

Vital Statistics of Whole District during 1934 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.			
			Net.						Under 1 Year of Age.		At all Ages.	
		Uncorrected Number	Number	Rate.	Number	Rate.	of Non-residents registered in the District	of Residents not registered in the District	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

* Calculated on a population of 282,200.

Corrected Death Rates in different Wards, 1934.

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.
7·9	9·5	15·2	13·6	12·7	14·7	11·9	14·0	11·9	10·7	15·5	11·6	11·4	13·0	13·5	13·6	11·8	16·8	10·9	12·7

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 1934.

(Registrar General's Return.)

Causes of Death.	Sex	All Ages	0–	1–	2–	5–	15–	25–	35–	45–	55–	65–	75–
All Causes	M.	1932	226	47	51	64	84	106	99	231	359	400	265
	F.	1747	170	46	51	56	81	88	98	150	278	359	370
1—Typhoid and Para-typhoid Fevers	M.	...	...	...	...	...	...	...	...	...	...	...	...
	F.	1	...	...	...	...	...	...	...	...	...	1	...
2—Measles	M.	35	3	12	15	5	...	...	...	...	...	...	...
	F.	46	7	14	15	10	...	...	...	...	...	...	...
3—Scarlet Fever	M.	12	...	...	4	6	1	1	...	...	...	...	...
	F.	11	...	1	6	3	...	...	1	...	...	...	...
4—Whooping Cough	M.	4	3	...	1	...	...	...	...	...	...	...	...
	F.	12	5	4	2	1	...	...	...	...	...	...	...
5—Diphtheria	M.	17	1	2	3	11	...	...	...	...	...	...	...
	F.	7	...	...	4	2	...	...	...	1	...	...	...
6—Influenza	M.	19	...	1	...	2	1	...	2	2	5	4	2
	F.	18	...	...	...	2	1	...	2	3	3	3	4
7—Encephalitis Lethargica	M.	7	...	...	...	...	1	2	3	...	...	1	...
	F.	5	...	...	...	...	1	2	1	1	...	...	...
8—Cerebro-spinal Fever	M.	12	2	1	1	1	3	2	...	1	1	...	...
	F.	8	1	3	3	...	1	...	...	...	...	...	...
9—Tuberculosis of respiratory system	M.	173	1	...	...	7	30	47	22	33	27	3	3
	F.	108	1	...	1	6	33	32	12	16	5	1	1
10—Other Tuberculous diseases	M.	29	1	1	6	2	5	5	4	1	2	...	2
	F.	22	1	...	2	7	5	1	2	2	2	...	...
11—Syphilis	M.	16	1	...	...	...	...	1	3	7	1	3	...
	F.	5	1	...	...	1	...	1	...	...	2	...	...
12—General paralysis of the insane, tabes dorsalis	M.	19	...	...	...	...	...	...	2	6	10	1	...
	F.	2	...	...	...	...	...	...	2	...	...	...	...
13—Cancer, malignant disease	M.	224	...	...	...	...	2	8	8	34	72	73	27
	F.	227	...	...	...	1	...	6	15	39	71	60	35
14—Diabetes	M.	22	...	...	...	1	...	3	...	...	6	9	3
	F.	38	...	...	...	...	1	2	3	2	6	21	3
15—Cerebral hæmorrhage, etc.	M.	79	...	...	...	...	2	...	1	7	24	32	13
	F.	90	...	...	...	...	...	...	2	4	23	36	25
16—Heart disease	M.	332	...	...	...	...	2	2	15	36	85	107	85
	F.	352	...	...	...	2	8	12	10	29	62	105	124
17—Aneurysm	M.	8	...	...	...	...	...	...	2	2	3	...	1
	F.	1	...	...	...	...	...	...	...	1	...	...	...
18—Other circulatory diseases	M.	118	...	...	...	...	...	...	2	4	29	47	36
	F.	99	...	...	...	...	...	...	1	5	17	27	49

Causes of Death at different periods of life for 1934—*continued.*

Causes of Death.	Sex	All Ages	0–	1–	2–	5–	15–	25–	35–	45–	55–	65–	75–
19—Bronchitis	M.	73	8	...	2	1	...	...	1	7	12	24	18
	F.	52	5	2	...	...	1	1	...	2	3	15	23
20—Pneumonia (all forms)	M.	147	39	19	7	2	7	10	6	18	17	15	7
	F.	107	25	17	9	3	4	5	5	5	10	15	9
21—Other respiratory diseases	M.	19	...	...	2	...	...	1	1	7	3	3	2
	F.	13	1	...	1	...	...	1	...	...	6	1	3
22—Peptic ulcer	M.	23	...	...	...	...	...	1	2	12	5	3	...
	F.	10	...	...	...	...	...	...	3	1	3	2	1
23—Diarrhoea, etc.	M.	40	31	2	3	1	...	...	...	1	...	1	1
	F.	28	19	1	2	2	...	1	2	...	1	...	...
24—Appendicitis	M.	10	...	...	...	5	1	2	...	...	1	1	...
	F.	5	...	...	...	...	...	1	...	1	3	...	...
25—Cirrhosis of liver	M.	5	...	...	...	...	...	...	...	...	3	1	1
	F.	3	...	...	...	...	...	...	...	...	2	...	1
26—Other diseases of liver, etc.	M.	8	...	...	...	...	...	...	...	1	...	6	1
	F.	24	...	...	...	...	...	...	1	4	6	10	3
27—Other digestive diseases	M.	33	6	...	1	3	1	1	3	7	4	4	3
	F.	39	4	...	1	...	1	...	4	6	9	6	8
28—Acute and chronic Nephritis	M.	49	...	1	...	...	2	2	2	6	10	12	14
	F.	77	...	...	...	3	3	1	4	12	22	16	16
29—Puerperal Sepsis	F.	8	...	...	...	...	...	4	4	...	...	...	...
30—Other Puerperal causes	F.	19	...	...	...	...	6	5	8	...	...	...	...
31—Congenital Debility, Premature Birth, Malformations, etc.	M.	103	102	1	...	...	...	...	...	...	...	...	...
	F.	79	78	1	...	...	...	...	...	...	...	...	...
32—Senility	M.	29	...	...	...	...	...	...	...	...	...	6	23
	F.	48	...	...	...	...	...	...	...	...	...	8	40
33—Suicide	M.	21	...	...	...	...	2	2	4	8	2	3	...
	F.	9	...	...	...	...	1	1	1	1	2	3	...
34—Other violence	M.	68	1	1	1	8	11	8	7	9	11	7	4
	F.	35	3	2	1	2	3	4	2	...	4	6	8
35—Other defined diseases	M.	175	27	6	5	9	13	8	9	22	25	33	18
	F.	135	17	1	4	11	12	8	13	15	16	22	16
36—Causes ill-defined, or unknown	M.	3	...	...	...	...	...	...	...	...	1	1	1
	F.	4	2	...	...	...	...	...	...	...	...	1	1

Resident Population 287,050

Under 1 Year.

	Legitimate.	*Illegitimate.*
(M.)	211	15
(F.)	155	15

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 255 Women 306 Children 195	756	...
Barrasford Sanatorium, Barrasford	Tuberculosis	95	75	20
Newcastle Mental Hospital, Gosforth	Mental	1,060	1,060	...
Shotley Bridge Colony, Shotley Bridge	Mental Defectives	473	473	...
St. Mary Magdalene Hospital, Newcastle	Chronic Sick ...	96	96	...
VOLUNTARY.				
Royal Victoria Infirmary, Newcastle	General, Medical and Surgical, Venereal Diseases, etc.	700	200	500
Do.	Convalescents	35	...	...
Fleming Memorial Hospital, Newcastle	Children.....	88	30	58
Princess Mary Maternity Hospital, Newcastle	Maternity	73	30	43
Eye Infirmary, Newcastle	Eyes.....	32	8	24
Throat, Nose and Ear Hospital, Newcastle	Throat, Nose and Ear	35	...	...
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.....	24	12	12
Stannington Sanatorium, Stannington	Tuberculosis (Children)	310	30	280
Dental Hospital, Newcastle	Dental	Out patients only.		
Walker Accident Hospital	Shipyard Accidents	20	20	...
Newcastle Dispensary	General, Medical	Out patients only.		
Hospital for Diseases of the Skin	Skin Diseases ...	6	...	...
Hospital for Women	Women	Out patients only.		...
Sanderson's Home for Crippled Children, Gosforth	Children.....	134	67	67

REPORT OF THE
MATERNITY AND CHILD WELFARE
MEDICAL OFFICER.

II.—THE CHILD.

INFANTILE MORTALITY, MATERNITY AND
CHILD WELFARE, NURSING HOMES.

INFANTILE MORTALITY.

SUMMARY OF BIRTHS AND DEATHS, 1934.

	LEGITIMATE.			ILLEGITIMATE.			Grand Total.
	M.	F.	Total.	M.	F.	Total.	
Total Births in the year ...	2,887	2,680	5,567	165	116	281	5,848
Net ,, ,, ,, ...	2,325	2,169	4,494	120	81	201	4,695
Net Deaths under 1 year...	209	157	366	12	11	23	389
Death Rate per 1,000 births	90	72	81	100	136	114	83

BIRTHS AND DEATHS (NET), 1934.

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'	14	1	71	7·4
St. Thomas'.....	136	7	51	9·8
St. John's	292	23	79	21·5
Stephenson.....	341	30	88	19·2
Armstrong	276	32	116	19·1
Elswick	190	13	68	14·4
Westgate	252	20	79	18·5
Arthur's Hill	90	7	78	9·7
Benwell.....	342	31	91	16·8
Fenham	456	28	61	18·2
All Saints'	256	31	121	17·7
St. Andrew's.....	142	6	42	13·5
Jesmond	86	7	81	7·7
Dene	203	25	123	11·5
Heaton	148	7	47	11·2
Byker	242	22	91	16·4
St. Lawrence	314	25	80	17·7
St. Anthony's	482	34	71	31·0
Walker.....	433	40	92	14·9
CITY	4,695	389	83	16·4

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

ANALYSIS OF INFANTILE MORTALITY.

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Death-rate of Infants *under* 1 *year* per 1,000 births.....	100	88	88	88	82	85	74	92	76	76	83
Death-rate of Infants *under* 3 *months* per 1,000 births...	59·0	53·4	52·9	55·6	50·8	52·5	46·7	48·1	51·2	45·0	57·2
Death-rate of Infants from *Premature Birth*, per 1,000 births	26·7	19·0	20·6	22·6	20·6	24·5	17·8	20·2	20·7	20·4	21·5
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Premature Birth*, plus all *Congenital Causes**	45·5	38·6	38·6	38·6	35·4	38·8	33·7	34·2	37·3	36·7	38·6
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Diarrhoea and all other Digestive Diseases*†...	9·6	11·6	13·1	9·3	13·4	15·0	11·3	12·5	9·2	12·9	13·4
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Infantile Atrophy, Debility and Marasmus* ...	9·5	10·3	7·7	6·5	4·4	3·7	4·6	2·2	4·9	4·7	4·5
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Measles*.....	1·10	1·9	1·7	0·6	2·2	3·7	0·5	5·7	0·8	1·5	1·9
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Whooping Cough*.....	1·9	4·2	3·8	1·3	3·9	1·4	2·5	2·6	2·5	2·3	1·9
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Respiratory Diseases*	27·9	22·7	18·1	27·1	16·6	16·4	16·8	24·7	16·0	12·9	15·5
Death-rate of Infants *under* 1 *year* per 1,000 births, from *Tuberculosis* (all forms).....	1·6	0·6	2·0	2·4	1·3	1·0	1·1	2·0	0·8	1·3	1·5

For particulars of deaths, as to causes, etc., see Table on page 50A.

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

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

RETURN OF DEATHS UNDER ONE YEAR OF AGE DURING THE 52 WEEKS ENDED 29TH DECEMBER, 1934.

CAUSE OF DEATH.	AGE PERIODS. GROSS. Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total under 1 Year of Age.	NET (after allowing for transfers). Under 1 Week.	1–2 Weeks.	2–3 Weeks.	3–4 Weeks.	Total under 1 Month.	1–3 Months.	3–6 Months.	6–9 Months.	9–12 Months.	Total under 1 Year of Age.	Deaths in Institutions in the City of "Residents" or "Non-Residents."
EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES.																					
Measles	...	...	...	...	...	...	...	1	8	9	...	...	...	...	...	...	...	1	8	9	4
Whooping Cough	...	...	...	...	...	2	2	3	2	9	...	...	...	...	...	2	2	3	2	9	1
Diphtheria	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	1	...	1	...
Dysentery	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	...	1	1
Erysipelas	...	...	...	1	1	3	2	1	1	8	...	...	...	1	1	3	1	...	1	6	8
Cerebro-Spinal Fever	...	...	...	...	...	...	1	2	1	4	...	...	...	...	...	...	1	1	...	2	4
Tuberculosis of the Respiratory System	...	...	...	...	...	...	3	...	1	4	...	...	...	...	...	...	1	...	1	2	3
Tuberculosis of the Central Nervous System	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	...	1	1
Disseminated Tuberculosis	...	...	...	...	...	...	...	1	2	3	...	...	...	...	...	...	...	1	...	1	3
TOTAL TUBERCULOSIS	...	...	...	...	...	...	4	1	3	8	...	...	...	...	...	...	2	1	1	4	7
Syphilis	...	...	1	...	1	1	1	...	...	3	...	...	1	...	1	1	...	...	...	2	3
Pyæmia Septicæmia	...	2	...	1	3	...	...	...	1	4	...	1	...	...	1	...	...	...	...	1	3
Other Infectious or Parasitic Diseases	...	...	...	...	...	...	1	1	2	4	...	...	...	...	...	...	...	...	...	...	4
CANCER AND OTHER TUMOURS.																					
Cancer of other or Unspecified Organs	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1
RHEUMATISM, DISEASES OF NUTRITION AND OF ENDOCRINE GLANDS AND OTHER GENERAL DISEASES.																					
Chronic Rheumatism	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1
Diseases of the Thymus	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	1	...
DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.																					
Anæmia Chlorosis	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...	2	...	...	...	2	1
DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS.																					
Meningitis	...	...	...	...	...	...	2	2	1	5	...	...	...	...	...	...	1	1	1	3	3
Epilepsy	1	...	...	...	1	...	...	...	...	1	1	...	...	...	1	...	...	...	...	1	...
Infantile Convulsions	3	2	2	1	8	...	3	1	1	13	3	2	2	1	8	...	3	1	1	13	...
Diseases of the Ear and Mastoid Sinus	...	...	...	...	...	...	3	1	...	4	...	...	...	...	...	...	1	...	...	1	4
DISEASES OF THE CIRCULATORY SYSTEM.																					
Pericarditis	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Diseases of the Myocardium	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	1	...
DISEASES OF THE RESPIRATORY SYSTEM.																					
Bronchitis	...	...	1	...	1	7	...	2	1	11	...	...	1	...	1	6	...	2	1	10	2
Broncho Pneumonia	...	2	1	2	5	16	13	15	11	60	...	2	...	2	4	14	8	13	9	48	28
Lobar Pneumonia	...	...	...	...	...	3	3	2	3	11	...	...	...	...	...	2	3	1	1	7	7
Pneumonia (not otherwise defined)	...	...	...	...	...	3	2	3	...	8	...	...	...	...	...	2	2	3	...	7	1
Pleurisy	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	...	1	1
Carried forward	4	6	5	5	20	39	39	37	37	172	4	5	4	4	17	33	26	28	26	130	85

RETURN OF DEATHS UNDER ONE YEAR OF AGE DURING THE 52 WEEKS ENDED 29TH DECEMBER, 1934.

CAUSE OF DEATH.	AGE PERIODS.																			
	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.	Deaths in Institutions in the City of "Residents" or "Non-Residents."
Brought forward	4	6	5	5	20	39	39	37	37	172	4	5	4	4	17	33	26	28	26	130	85
DISEASES OF THE DIGESTIVE SYSTEM.																					
Diseases of the Buccal Cavity, Pharynx, etc.	...	...	...	...	...	...	1	...	1	2	...	...	...	...	...	...	1	...	1	2	2
Other Diseases of the Stomach	...	...	...	2	2	3	...	...	1	6	...	...	...	2	2	2	...	...	1	5	3
Diarrhœa and Enteritis	...	6	8	4	18	17	27	5	2	69	...	3	5	4	12	15	19	3	2	51	46
Hernia, Intestinal Obstruction	...	...	...	...	...	2	4	3	4	13	...	...	...	...	...	...	1	...	2	3	13
Other Diseases of the Intestines	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	1	1
Peritonitis, without stated cause	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1
NON-VENEREAL DISEASES OF GENITO-URINARY SYSTEM AND ANNEXA.																					
Other Diseases of the Kidney and Annexa	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Diseases of the Female Genital Organs	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
" " Male " "	...	...	1	...	1	...	...	1	...	2	...	...	1	...	1	...	...	...	...	1	2
DISEASES OF SKIN AND CELLULAR TISSUE.																					
Carbuncle, Boil	...	...	1	...	1	1	...	...	...	2	...	...	1	...	1	...	...	...	...	1	2
Cellulitis, Acute Abscess	...	1	...	...	1	1	...	1	2	5	...	1	...	...	1	1	...	1	1	4	4
Other Diseases of the Skin and Annexa	...	...	...	...	...	2	...	1	...	3	...	...	...	...	...	1	...	1	...	2	3
DISEASES OF THE BONES AND ORGANS OF LOCOMOTION.																					
Acute Infective Osteomyelitis and Periostitis	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1
Other Diseases of the Bones	...	1	...	1	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Diseases of the Joints	...	1	...	...	1	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	2
CONGENITAL MALFORMATIONS.																					
Congenital Malformations	19	8	6	1	34	13	4	2	3	56	12	3	3	1	19	4	2	1	2	28	39
DISEASES OF EARLY INFANCY.																					
Congenital Debility	6	4	4	2	16	8	3	...	1	28	5	3	3	2	13	6	1	...	1	21	18
Premature Birth	110	27	8	6	151	5	...	...	...	156	70	17	7	3	97	4	...	...	...	101	87
Injury at Birth	18	5	2	...	25	...	...	...	...	25	6	3	2	...	11	...	...	...	...	11	21
Atelectasis	8	1	1	...	10	1	...	...	...	11	5	1	1	...	7	1	...	...	...	8	3
Icterus Neonatorum	...	1	...	1	2	1	...	...	...	3	...	1	...	1	2	1	...	...	...	3	...
Other Diseases peculiar to Early Infancy	6	5	1	2	14	1	...	...	...	15	5	...	1	1	7	1	...	...	...	8	...
DEATHS BY VIOLENCE.																					
Homicide by other means	1	1	...	...	2	...	...	1	...	3	1	1	...	...	2	...	...	1	...	3	1
Poisoning by Food	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Accidental Burns (Conflagration excepted)	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2	...
Accidental Mechanical Suffocation	1	...	...	...	1	1	...	...	...	2	1	...	...	...	1	1	...	...	...	...	1
Accidental Injury by Cutting and Piercing Instruments	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	1
Other or unstated Forms of Accidental Violence	...	1	...	...	1	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...
ILL-DEFINED DISEASES.																					
Causes of Death Unstated or Ill-defined	3	...	...	...	3	...	...	...	...	3	3	...	...	...	3	...	...	...	...	3	...
TOTAL	176	68	38	24	306	96	82	52	54	590	112	39	28	18	197	71	50	35	36	389	343

Report of the Maternity and Child Welfare Medical Officer.

To the Medical Officer of Health.

Sir,

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

Ante-Natal Supervision.

This is provided in the City by :—

(*a*) Medical Practitioners.

(*b*) Practising Midwives.

(*c*) Medical Staffs of the Maternity and Newcastle General Hospitals.

(*d*) Medical Officers of the Municipal Ante-Natal Centres.

Recent statistics indicate that approximately 67 per cent. of the expectant mothers in Newcastle are receiving medical advice during the ante-natal period.

There are seven Municipal Ante-Natal Clinics in the City, and in six of them the medical services are rendered weekly by three members of the Maternity Hospital Consultant Staff, two of whom are Consultant Obstetricians. At the other Centre the medical services are provided by the local practitioners on three days a month, and by an obstetrician on the fourth day—the latter attending as a consultant to deal with cases specially referred to him by others. All are employed on a part-time basis.

During the year 1,996 women attended the Municipal Clinics, this being an increase of 135 over the corresponding figure for the previous year. The number of women attending some of the Clinics has become excessive, and the provision of increased facilities is under consideration and recommendations will be made in due course.

Free beds in the Princess Mary Maternity Hospital were placed at the disposal of 151 women during the year ; in addition free outdoor attendance on the various districts by the Professional Staff of the Hospital was provided for 105 women. These privileges are in return for an annual grant paid to the Hospital Authorities by the City Council, and the necessary orders are given by the Medical Officers at, and through, the Centres.

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

Centre.	Ante-Natal.		Post-Natal.	
	Attendance.	Individuals.	Attendance.	Individuals.
Benwell	1,068	313	102	11
Byker	1,897	470	18	6
Fenham	512	139	8	5
Diana Street	830	275	2	2
Elswick	715	260	1	1
Walker	514	319	...	...
Wharncliffe Street	953	220	10	4
	6,489	1,996	141	29

Women Attending Ante-Natal Centres.

The following details refer to the confinements of 1,582 expectant mothers who attended the municipal ante-natal centres during 1934, and whose children were born during that year.

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

	Cases.	*Percentage.*
Doctors	197	12·4
Midwives	364	23·0
Health Visitors on Districts	178	11·2
Welfare Centres and Voluntarily	843	53·4
	1,582	

The result of the subsequent confinements were :—

Type of Confinement.	Number of Cases.	Resulting in		
		Living Children.	Still-born Children.	Sets of Twins.
Normal	1,257	1,234	16	7
Instrumental	203	185	15	3
Cæsarian Section	7	6	1	...
Induction	9	8	1	...
Abortion	21	...	...	...
Not Pregnant	43	...	...	...
Left City	42	...	...	...
Total	1,582	1,433	33	10

Abnormalities were found in 78 or 4.8 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.
Breach Presentation	44	27	24	3	16	13	3	...	...	...	1	1	...
Deformed Pelvis	11	2	2	...	1	1	...	8	5	3	...	...	...
Albuminuria	18	14	14	...	4	2	2	...	...	...	...	...	...
A.P. & P.P. Hæmorrhage	5	3	3	...	2	2	...	...	...	...	...	...	...

7 mothers subsequently died :—Septicæmia, 1 ; Hæmorrhage 3 ; Cerebral Hæmorrhage, 1 ; Embolism, 1 ; Eclampsia, 1.

Midwives Acts.

Forty-seven midwives notified their intention to practise midwifery in the City. Three of these were registered as being in practice prior to the 1902 Act, and the remaining forty-four qualified by examination and possessed the Certificate of the Central Midwives Board.

The standard of midwifery prevailing among the City's midwives is a good one, and annually they attend approximately one-third of the total births taking place in the City. The happiest relationship and co-operation exists between the midwives and the health department staff, and the Superintendent of Midwives maintains a frequent and constant inter-change of opinions on professional matters. Midwifery bags, appliances, and records kept by practising midwives are examined as a routine, and all cases of ophthalmia neonatorum, puerperal pyrexia and septicæmia are carefully investigated and supervised. Clothing and appliances thought to be infected are disinfected—the owners being suspended from practice so long as is deemed necessary for the safety of others.

For these various purposes 622 visits were made ; 290 visits to septic patients, and 322 to cases of ophthalmia neonatorum were also made.

Births attended by Midwives.—1,702 (net) living births (a decrease of 36 on the previous year) and 38 (net) still-births (12 less than in 1933) were attended by midwives during the year. Midwives attended 37 per cent. of the net births in the City. In addition midwives attended in the capacity of maternity nurses with doctors in 350 cases, as compared with 347 in 1933.

Notices for medical help sent to Local Authority by the midwives :—

FOR THE MOTHER.

During Pregnancy—	
Ante Partum Hæmorrhage...	24
Abortions	7
Illness	9
Albuminuria & Puffiness of hands and feet.....	8
	48
During Labour—	
Uterine Inertia	75
Malpresentations	37
Retained Placenta	8
Post Partum Hæmorrhage...	9
Ruptured Perineum.....	132
Placenta Prævia	1
	262
During Puerperium—	
Rise of Temperature	12
Eclampsia	1
Undefined Illness of Mother	16
	29
Total calls for mother.....	339

FOR CHILD.

Prematurity	25
Discharging Eyes.....	17
Cyanosis	1
Congenital Defects	8
Illness of Baby.....	23
Still-births.....	4
Rashes	3
	81
Total calls for mother and child	420

In 24.1 per cent. of the midwives' cases the services of a doctor were requisitioned.

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

	Cases.
For forceps delivery	98
For post partum hæmorrhage...	7
For ante partum hæmorrhage ...	14
For illness of mother.....	28
For illness of child.....	32
For premature birth	5
For discharging eyes.....	12
Other	93
Specialists called in	7
Total cases	296

There was a total number of 420 calls for medical aid from midwives, and 70 per cent. of these calls were paid for by the Local Supervising Authority.

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

Maternal Mortality.

Of the 4,875 Newcastle women who were confined in the City in 1934, 26 died of pathological conditions directly attributable to childbirth. This gives a mortality rate of 5.33 per 1,000 compared with 4.50 for the previous year. The higher rate is due to an increase in the number of deaths attributed to puerperal toxæmia.

Causes.	1934	1933	1932	1931	1930	1929
Abortions (Septic)	1	1	1	...	...	...
Abortions (Not Septic)	1	4	1	...	1	1
Accidents of Pregnancy	1	...	...	1	2	2
Puerperal Hæmorrhage	3	4	3	5	3	4
Other Accidents of Childbirth	2	2	4	2	4	5
Puerperal Fever	7	7	9	9	14	11
Other Toxæmias of Pregnancy	1	2	2	4	2	6
Puerperal Phlegmasia	1	...	1	2	2	1
Puerperal Insanity	...	...	...	...	...	...
Puerperal Disease of Breast	...	...	...	...	...	...
Ectopic Gestation	1	...	1	...	...	...
Unspecified conditions of puerperal state	2	2	...	...	...	...
Puerperal Albuminuria and Convulsions	6	...	...	...	...	...
	26	22	22	23	28	30

Puerperal Septicæmia and Puerperal Pyrexia.

One hundred and forty-four cases were notified during the year—52 puerperal fever and 92 pyrexia. Details of these are embodied in the following table :—

	Total Cases Notified.	Newcastle Cases.	Extra Mural Cases.	Admitted to Hospital.	Total Deaths.	
Puerperal Septicæmia ...	52	16	36	131	Newcastle ...	7
					Extra Mural ...	23
Puerperal Pyrexia ...	92	40	52		Newcastle ...	0
					Extra Mural ...	0

Of the 56 City cases 55 were visited and the attendants at the confinements are indicated in the following table :—

	Puerperal Septicaemia.	*Puerperal Pyrexia.*
Doctors	4	5
Doctors and Midwives	4	6
Midwives	2	5
Princess Mary Maternity Hospital Staff	6	21
Newcastle General Hospital	...	2
	16	39

Consultants' Services have been available since 1927 for all cases of puerperal fever and pyrexia, and medical practitioners are authorised to obtain the services of a Consultant in any of the difficulties or complications which may occur in connection with labour or the puerperium.

Sterilised Outfits. Arrangements exist whereby patients referred by midwives or doctors to Messrs. Brady & Martin, Ltd., can obtain an excellent outfit at a small cost.

Ophthalmia Neonatorum.

The incidence for this disease is only 0.5 per 1,000 higher, and is comparatively low. Of the 54 City cases notified, 46 made a complete recovery. In two cases the sight was slightly impaired.

The number of cases notified was 59, of which 54 were City cases. 52 of these were visited. The number is an increase of 3 on that for 1933. The confinements were attended by :—

Doctors	24
Midwives	10
Princess Mary Maternity Hospital	24
Salvation Army Home	1
	59

327 calls were made on the 52 visited cases in the City, and the ultimate results were :—

Recovered completely	46
Died	2
Removed from City	2
Slightly defective	2
	52

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

1930	16·6
1931	10·4
1932	9·2
1933	11·0
1934	11·5

Maternity and Nursing Homes.

There were 18 of these Homes in the City, and 17 were inspected under the 1927 Act. The exception was the Northern Women's Hospital, Sandyford Road, which is annually exempted under Section 6 of the Act. Viewed as a whole the City's Nursing Homes will probably compare favourably with those in other towns. It should be recognised, however, that no amount of inspection will eliminate or prevent the effects of personal shortcomings (often temporary) which from time to time make their appearance in one or more members of nursing staffs.

Births.

Of the 4,695 infants born alive in the City in 1934, and belonging to Newcastle residents, 2,445 were boys and 2,250 were girls. Of the former 90 per 1,000, and of the latter 75 per 1,000 died during their first year. This preponderance of male deaths appears to obey a natural and universal law, and is impossible to account for. It is common experience that boys are more difficult to rear than girls.

23.0 per cent. of the City's births occurred in institutions, as shown in the following table :—

Nursing Homes	100
Princess Mary Maternity Hospital	666
Gables Maternity Home	97
Newcastle General Hospital	219
Walker Accident Hospital	1
	1,083

Illegitimate Births.

Two hundred and one illegitimate children were born—this being 14 less than in the previous year. The death rate among these children is high everywhere, and in Newcastle in 1934 it was 114 per 1,000 compared with 81 per 1,000 legitimate children. Every effort is made to save these children, and when it is possible to get the mothers to bring the children regularly to the Centres the children's lives are practically secure. In all instances the single girl is provided with free milk for her infant when this is suitable and necessary.

Birth Rate.

This remains at 16.4 per 1,000 as in the previous year.

Deaths of Children.

There was an increase of 8.3 per cent. in the number of deaths among children during their first year of life, and occurring mostly during the treacherous first three months.

	1930	1931	1932	1933	1934
Deaths of children during first week of life	117	120	133	126	112
Deaths of children during first month	177	180	175	177	197
Deaths from prematurity	93	102	101	96	101
Deaths of twins and triplets	29	42	32	39	33
Death-rate of illegitimate children (per 1,000 illegitimate births)	101	106	171	163	114

Neo-Natal Mortality.

As usual fifty per cent. of the deaths in the first few weeks of life are due to the single cause—premature birth. There is also an increase in the number of deaths attributed to diarrhoea and broncho-pneumonia. Diarrhoea seldom exists among breast fed infants, and in the isolated instances—if there are any—in which it does occur, it is of a mild type and not fatal in its effects. When therefore, the death of an infant occurring in the first weeks of life is certified as being due to diarrhoea, the certificate is not complete unless it states the cause of the diarrhoea which, in nearly every case, will be found to be bottle feeding. Were this always necessary, very little need be said, but experience proves that large numbers of women feed their offspring artificially instead of naturally—some do it from want of accurate knowledge, and others from choice. The effect on the child is the same in both cases, and one of the effects—as we see—is death. The campaign which has been waged in our Centres for many years in favour of natural feeding continues, and there is every reason for believing that it has achieved some success. There are, however, still large numbers of infants being artificially fed who could, and should be, fed naturally. Every effort will be made to prevent unnecessary bottle feeding.

The other cause mentioned, broncho-pneumonia, is not so easy to combat, because it is influenced by climatic and economic factors.

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. The problem is very largely a feeding one, although a great deal can be done by constant supervision, and by getting the children off the streets and into the parks and open spaces, or into open-air nursery schools. For the last fifteen 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 107,717 attendances at the Centres last year, more than half were made by children of 1–5 years of age.

TODDLERS ATTENDING THE CENTRES.

Year.	*Number of Children.*
1929	2,779
1930	3,418
1931	4,257
1932	4,422
1933	4,351
1934	4,198

Clinics.

There is no pathological condition occurring in young children that cannot be adequately treated in Newcastle, and in certain instances the City is unusually fortunate. Of the commonest ailments met with at the Centres discharging ears, and decayed—and often aching—teeth are prominent. Arrangements have been completed with the Education Committee through the Principal School Medical Officer whereby children referred from the Child Welfare Centres are treated for dental or aural conditions at the School Clinics.

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. 692 children were so referred during the year, and they received a total of 3,810 treatments.

Cookery Demonstrations.

These were given every week throughout the year in one or other of the Centres. The main object of the demonstrations was to teach poor women how to spend economically on food the small sum available in so many homes, and how best to prepare and cook the food procured. They were fairly well attended, and were greatly appreciated by those interested.

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 respirating diseases in the autumn and winter—is given by the Centre Health Visitor at every Centre. There is a complete syllabus of the subjects of these talks, and this is closely adhered to. It embraces everything conducive to maintaining good health in mothers and children, and the talks are listened to with interest.

Nursery Schools.

These were conducted by members of the Voluntary Association in Diana Street, Wharncliffe Street, and St. Lawrence Centres. The class in the first named has always been appreciated and well attended, but the numbers attending the other two have never been large, and in the case of the last named (St. Lawrence),

were so small that the Centre was discontinued in June. These indoor schools are now being superseded by the open-air schools which are for exactly the same purpose, but are conducted as much as possible out of doors, and are therefore, superior from a health aspect. There are three such schools in the City, one under the auspices of the Education Committee which is held in Ashfield House, Elswick Road, one established and conducted at her own expense by Miss Steel in Union Road, Walker, and a third established in Byker by the Tyneside Nursery School Association. All these Schools, or Play Centres, as they are sometimes called, both indoor and outdoor, have done a great deal of good to the health of the children attending, and public gratitude should be bestowed on all who have so kindly given their time and funds for this excellent purpose.

Children Acts, 1908-1933.

At the beginning of the year there were 37 nursed-out children in the City, and 68 at the close of the year. This increase was due to the handing back from the Education Authorities of the children between the ages of 5 to 9 years, and also to the opening of Miss Merz's Nursery for Nursed Out Children.

All these children were regularly supervised and kept under observation, and the Supervisor's reports were good concerning all.

Municipal Training Course for Health Visitors.

The fourth Training Course for Health Visitors commenced in September, 1933, and ended with the examination in the College of Medicine in April, 1934. Of the eight students enrolled five qualified in April and two in July. One student did not complete the course owing to illness.

The fifth Training Course commenced with eight students in October. For economical and other reasons the numbers applying for training have decreased in all parts of the country.

Welfare Centres.

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

Centre.	Address.	Women and Children.	Medical Officer.	Health Visitor.	Ante-Natal Sessions.
Benwell	Y.W.C.A. Club, Buddle Road	Monday Thursday	Dr. Olga Alcock	Miss Willson	Friday, 2 p.m. Mr. Harvey Evers.
Byker	Corner of Dalton Street and Shipley Street	Monday Tuesday	Dr. Anne Fairweather Dr. C. H. Armstrong	Miss Johnson	Friday, 2 p.m. Dr. Mabel Campbell.
City	Princess Mary Maternity Hospital, Jubilee Road	Tuesday	Dr. A. F. G. Spinks	Miss Pritchard	Thursday, 2 p.m. Mr. Harvey Evers.
Cowgate (Opened 2nd May, 1934)	Methodist Church Hall, Stamfordham Road	Wednesday (Afternoon only)	Dr. C. C. Ungley	Miss Atkinson	
Diana Street, Westgate	25, Diana Street	Tuesday Friday	Dr. Olga Alcock	Miss Hastie	Wednesday, 10 a.m. Mr. Harvey Evers.
Elswick	Elswick Wesleyan Church Hall, Malvern Street	Monday Thursday	Dr. Glen Davison	Miss Hatfield	Tuesday, 2 p.m. Mr. Harvey Evers.
Fenham	Church Hall, Grange Road	Friday	Dr. Gertrude Hickling	Miss Thompson	Monday, 10 a.m. Mr. Harvey Evers.
Heaton	St. Gabriel's Parish Hall, Chillingham Road	Wednesday	Dr. A. F. G. Spinks	Miss Lewis	(See Byker above).
Scotswood	Denton Road	Tuesday	Dr. Anne Fairweather	Miss Carr	Benwell (see above).
Shieldfield	St. Jude's Parish Hall, Dinsdale Road	Monday Thursday	Dr. A. F. G. Spinks	Miss Mason	Byker (see above).
Spital Tongues	Dunn's Cottages	Tuesday (Afternoon only)	Dr. Mabel Campbell	Miss Simpson	Diana St. (see above). or Wharncliffe Street (see below).
St. Lawrence	Harbottle Street	Wednesday Friday	Dr. Gertrude Hickling Dr. Glen Davison	Miss Laing	Byker (see above).
Walker	Presbyterian Church Hall, Church Street	Monday Thursday	Dr. A. G. Ogilvie Dr. C. N. Armstrong	Miss Hisco	Tuesday, 10 a.m Mr. Harvey Evers.
Walkergate	St. Oswald's Mission Room, Walpole Street, Walkergate	Thursday	Dr. Gertrude Hickling	Miss Phillips	Tuesday, 10 a.m. (see Walker above).
Wharncliffe Street, Scotswood Road	18, Wharncliffe Street	Wednesday	Dr. Mabel Campbell	Miss Sheil	Tuesday, 10 a.m. Dr. Mabel Campbell.

MATERNITY AND CHILD WELFARE CENTRES, 1934.

Centre.	Ante-Natal Sessions.	Ante-Natal.		Post-Natal.		New Children.			Individuals.			Attendances.			Medical Sessions.		Illegitimate	Individuals.	
		Individuals.	Attendances.	Individuals.	Attendances.	Under 12 months	Over 12 months	Total.	Under 12 months	Over 12 months.	Total.	Under 12 months.	Over 12 months.	Total.	Number.	Average Attend'ce.		Boys.	Girls.
Benwell...	48	313	1068	11	102	217	52	269	316	383	699	3859	5289	9148	188	48·7	18	326	373
Byker	48	470	1897	6	18	291	27	318	423	346	769	4284	4774	9058	183	49·5	20	394	375
City	...	...	...	...	...	143	22	165	224	231	455	2184	3864	6048	94	64·3	7	224	231
Cowgate	...	...	...	...	...	41	20	61	44	71	115	543	539	1082	32	33·8	...	52	63
Diana Street	49	275	830	2	2	304	56	360	424	455	879	5346	5783	11129	190	58·6	32	437	442
Elswick...	47	260	715	1	1	327	40	367	526	418	944	5860	4945	10805	188	57·5	20	473	471
Fenham...	45	139	512	5	8	217	20	237	325	227	552	3325	2119	5444	96	56·7	3	297	255
Heaton	...	...	...	...	...	179	20	199	280	176	456	3303	1999	5302	96	55·2	3	231	225
Scotswood	...	...	...	...	...	109	22	131	159	205	364	1559	2433	3992	94	42·5	13	190	174
Shieldfield	...	...	...	...	...	228	39	267	359	374	733	4347	5639	9986	188	53·1	21	347	386
Spital Tongues...	...	...	...	...	...	95	16	111	132	108	240	1425	818	2243	47	47·7	3	124	116
St. Lawrence	...	...	...	...	...	303	53	356	506	474	980	5939	6450	12389	194	63·9	19	499	481
Walker	47	319	514	...	...	225	31	256	356	338	694	4234	4805	9039	188	48·1	21	342	352
Walkergate	...	...	...	...	...	162	13	175	243	178	421	3014	2176	5190	98	53·0	2	223	198
Wharncliffe Street ...	47	220	953	4	10	253	30	283	357	214	571	4175	2687	6862	98	70·0	35	293	278
Total	331	1996	6489	29	141	3094	461	3555	4674	4198	8872	53397	54320	107717	1974	54·6	217	4452	4420

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

Dried Milk.

An alteration in the method of distributing the free milk was made during the year. Previously distributed by chemists in return for vouchers given at the Centres, the milk is now distributed from the Centres. This innovation took place in July, and its object was to save the previous cost of distributing. A substantial saving has been effected. During the year 83,214 lb. cartons of dried milk were given gratis, and vouchers for 19,928 were given for cost price milk, the latter being distributed by the chemists as formerly. One-third of the children attending the Centres received free milk, and expectant mothers to the number of 361 also received it gratis.

The following table shows the quantity of dried milk distributed each month during the year 1934 :—

MONTH.	FREE.	AT COST PRICE.
	lbs.	lbs.
January	5,341	2,233
February	6,019	1,608
March	8,175	1,493
April	5,740	2,098
May	6,330	1,795
June.....	9,284	2,104
July	5,105	1,737
August.....	6,720	2,006
September.....	8,934	1,631
October.....	7,115	895
November	6,500	1,611
December	7,951	717
	83,214	19,928

Children attending Centres	8,872
Children given free milk	2,974
Percentage	33·5
Expectant mothers given milk	361
Free milk given to children (lbs.)	80,322
Free milk given to expectant mothers (lbs.)	2,892

NOTIFICATION OF BIRTHS ACTS.

Of the 5,848 live, and 322 still-births (gross) which were registered in the City in 1934, 5,238 or 84.9 per cent. were notified as follows :—

Notified by.	*Gross Living Births.*	*Gross Still-Births.*
Medical Practitioners	220	7
Medical Practitioners and Midwives	341	13
Midwives	1,779	43
Princess Mary Maternity Hospital	2,198	194
Newcastle General Hospital	204	18
Gables Maternity Home	213	6
Parents	1	...
Walker Accident Hospital	1	...
	4,957	281

Still-Births.—Of the total net notifications of births received, 180 were of still-births, which gives a rate of 36.9 per 1,000 of net live and still-births.

Year.	*Percentage.*	*Year.*	*Percentage.*
1928	3·8	1932	4·3
1929	3·7	1933	3·7
1930	4·2	1934	3·7
1931	4·2		

Still-births Registered	180
Still-births Notified	137
Percentage Notified	76·1
Still-births Visited	162

Duration of Pregnancy.	*No.*	*Percentage to Total.*
At or under 7 months	17	10·5
At 7–8 months	47	29·0
At full time	98	60·5

Suggested causes of the still-births :—

	Cases.
(*a*) Ill-health of the mother	34
(*b*) Fœtal deformities and malpresentations and uterine inertia	48
(*c*) Premature delivery, ante-partum hæmorrhage, etc.	20
(*d*) Other causes, including albuminuria	60

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

Health Visiting.

With the exception of the so-called residential districts such as parts of Jesmond, every district in the City is visited regularly by members of the Health Visiting Staff, who call at houses in which births have taken place, or in which there are children of pre-school age or cases of measles, pneumonia or diarrhoea. Visits are also paid to expectant mothers, and to houses in which there are children who have been discharged from hospital and who require following up.

For all purposes the Health Visiting Staff during the year 1934 made a grand total of 90,459 visits.

4,237 births were visited, and 20,704 re-visits were paid, an average of about 5 re-visits per child. These gave a total of 24,941 visits to children under 1 year.

Summary of Visits.

	Primary.	Subsequent.	Total.
Births	4,237	20,704	24,941
Measles	7,115	8,299	16,014
Pneumonia	752	994	1,746
Diarrhœa	30	41	71
Children over 1 Year	.....	.....	37,760
Hospital Cases	.....	.....	453
Expectant Mothers	.....	.....	1,592
Special Visits	.....	.....	714
Visits to Boarded-out or Nursed-out Children	.....	.....	568
Unsuccessful Visits (Outs and Removals)	.....	.....	6,015
Dietary Survey	.....	.....	585
	.....	.....	90,459

Infants on Visiting List.

Of 4,501 children born in the City in 1933, 3,657 completed their first year in 1934 and of the remainder :

349 died,
209 left the City,
250 could not be traced,
36 were visited only once.

The following figures are therefore based on the 3,657 who completed the first year, *plus* the 349 who died, making in all a total of 4,006, and of that total 2,619, or 65.4 per cent., attended the Welfare Centres.

Of the number (2,619) attending the Centres 100 died, a rate of 38.2 per 1,000, as compared with 86 per 1,000 for the City.

Illnesses.—Among the children visited 308, or 7.7 per cent., contracted measles; 109, or 2.7 per cent., contracted whooping cough; 97, or 2.4 per cent., contracted diarrhoea; 435, or 10.9 per cent., contracted bronchitis or pneumonia.

The mortality per 1,000 births in 1934 was as follows :—

1 roomed dwellings	118·2
2 roomed dwellings	91·1
3 roomed dwellings	62·5
Dwellings over 3 rooms	84·7

Details as to the stated **Feeding** of the 4,006 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	3,602	89·9	108	2·7	296	7·4
Deaths in First Year of above Children	247	6·9	22	20·4	80	27·0
At time of Death	214	5·9	33	30·5	102	34·4
Surviving Children (3,657) at 9 months	1,911	52·3	448	12·2	1,298	35·5

Details as to children who should have attained the age of 5 years during 1934 :—

Well and attending school	2,840
Well and not attending school	10
Ill and not attending school	20
Left City or failed to trace	1,117
Died in 2nd year	115
Died in 3rd year	34
Died in 4th year	29
Died in 5th year	14
Total surviving	2,870
Total deaths	192
Total reported on	4,179

The addresses of 217 children who left the City were sent to the Medical Officers of Health for the districts to which they had gone.

Voluntary Workers.

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

I am, Sir,

Your obedient servant,

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

Health Department,
Town Hall,
Newcastle upon Tyne,
1st June, 1935.

INCLUDING REPORTS OF THE
RESIDENT MEDICAL OFFICER OF THE
INFECTIOUS DISEASES HOSPITAL
AND THE BACTERIOLOGIST.

III.—INFECTIOUS DISEASE.

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

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

WARD.	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Pneumonia.	Cerebro-Spinal Fever.	Encephalitis Lethargica.	Polioencephalitis.	Poliomyelitis.	Measles and Rubella	Puerperal Fever.	Smallpox.	Whooping Cough.	Diarrhœa (under 2 years of age).	Dysentery.	Tuberculosis. All forms.
St. Nicholas'	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
St. Thomas'	...	1	1	...	9	1	2	...	...	2	...	...	...	1	...	9
St. John's	2	1	1	...	31	...	1	...	...	12	...	...	2	1	...	12
Stephenson	1	...	...	1	14	3	1	...	...	12	...	...	...	6	...	29
Armstrong	...	...	3	...	18	2	...	...	...	7	...	...	2	2	...	16
Elswick	1	1	1	...	12	1	1	...	...	3	...	...	...	1	...	12
Westgate	1	...	1	...	7	1	...	...	...	4	...	...	...	4	...	19
Arthur's Hill	2	2	3	...	7	...	...	...	...	1	...	...	...	1	...	12
Benwell	6	1	...	...	18	...	2	...	...	5	...	...	2	8	...	22
Fenham	3	...	2	...	15	...	...	...	...	3	...	...	1	2	...	28
All Saints'	...	...	3	...	17	...	...	...	...	2	1	...	1	6	...	30
St. Andrew's	...	...	1	...	9	...	...	...	...	1	...	...	...	1	...	9
Jesmond	...	2	1	...	7	...	...	...	...	...	...	...	...	2	...	6
Dene	2	3	3	...	9	1	...	...	...	4	...	...	...	1	...	17
Heaton	...	1	...	...	9	1	...	...	...	2	...	...	1	...	...	12
Byker	1	1	...	...	14	...	...	...	...	5	...	...	...	6	...	24
St. Lawrence	...	...	...	...	18	2	1	...	...	7	1	...	2	2	...	15
St. Anthony's	2	2	1	...	20	5	...	...	...	9	3	...	3	5	...	29
Walker	1	1	1	...	24	3	1	...	...	1	3	...	2	4	1	28
CITY	22	16	22	1	259	20	9	...	...	80	8	...	16	53	1	331

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 1934.

NOTIFIABLE DISEASE.	AT AGES—YEARS.																GROSS TOTAL.				NET TOTAL.		Cases admitted to Hospital (gross).
	Under 1.		1 to 5		5 to 15.		15 to 25.		25 to 45.		45 to 65.		65 and upwards.		Ages not known.		1934.		1933.		1934.		
	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)	3	1	75	11	257	15	38	...	23	1	2	1	1	...	...	...	399	29	97	11	393	22	379
Erysipelas	15	8	14	2	15	1	21	2	65	2	88	5	37	6	3	...	258	26	294	17	240	16	126
Scarlet Fever	9	...	389	15	1098	8	165	1	81	3	14	...	3	...	4	...	1763	27	2066	21	1727	22	1669
Enteric Fever	1	...	2	...	3	2	7	1	1	...	...	...	1	1	...	...	15	4	8	4	14	1	66
Cerebro-Spinal Fever	5	4	11	12	6	9	5	4	3	6	1	4	...	...	...	...	31	39	52	41	30	20	68
Acute Poliomyelitis	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	5	2	2	...	2
Acute Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	...	...
Encephalitis Lethargica	...	...	...	...	...	...	...	1	...	6	...	...	...	1	...	...	...	8	2	7	...	9	...
Puerperal Fever	...	...	...	...	...	...	16	9	36	21	...	...	...	...	...	...	52	30	37	30	16	8	...
Puerperal Pyrexia	...	...	...	...	...	...	35	...	57	...	...	...	...	...	...	...	92	...	51	...	40	...	7
Ophthalmia Neonatorum	59	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	59	...	56	...	54	...	4
Pneumonia	90	79	341	70	188	9	70	14	86	33	72	65	31	52	1	...	879	322	815	250	840	259	151
Malaria	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	10	1	2	...	...
Dysentery	4	1	29	...	24	...	2	...	4	...	2	...	1	...	...	...	66	1	75	2	65	1	68
†Measles and Rubella	380	9	3079	60	4782	17	321	...	105	...	7	...	...	...	12	...	8686	86	4086	37	8644	80	248
‡Chickenpox	52	...	345	...	1013	...	25	...	9	...	...	...	...	...	3	...	1447	...	888	...	1446	...	6
	618	102	4285	170	7388	61	705	32	472	72	186	75	74	60	23	...	13751	572	8545	425	13513	438	2794

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

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

WARD DISTRIBUTION OF INFECTIOUS DISEASES (NET).

WARD.	Diphtheria.	Erysipelas.	Enteric Fever.	Scarlet Fever.	Cerebro-Spinal Fever.	Poliomyelitis.	Acute Polio-encephalitis.	Encephalitis Lethargica.	Measles.	Rubella.	Puerperal Fever.	Puerperal Pyrexia.	Ophthalmia Neonatorum.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Smallpox.	Chickenpox.	Malaria.	Dysentery.	Tuberculosis (all forms).	TOTAL.
St. Nicholas'	1	...	...	5	...	...	...	...	15	12	...	...	...	5	...	...	1	...	1	3	43
*St. Thomas'	59	15	1	87	...	...	...	...	59	117	...	...	...	26	3	...	50	...	...	17	434
St. John's	9	15	...	67	1	...	...	...	249	133	...	...	5	74	3	...	59	...	1	32	648
Stephenson	27	13	2	60	6	...	...	...	314	204	2	2	8	61	2	...	70	...	6	41	818
Armstrong	24	10	...	65	3	...	...	...	258	187	...	1	3	55	7	...	36	...	11	27	687
Elswick	10	10	...	81	3	...	...	...	163	151	...	1	...	28	1	...	30	...	2	30	510
Westgate	17	8	...	63	1	...	...	...	135	139	...	2	8	41	3	...	68	1	...	38	524
†Arthur's Hill	21	11	...	79	2	...	...	...	55	95	...	1	...	18	4	...	48	...	5	10	349
Benwell	59	22	1	147	1	...	...	...	461	348	...	3	...	59	4	...	102	...	1	37	1245
Fenham	24	19	4	302	...	1	...	...	395	509	...	2	1	53	4	...	145	...	...	38	1497
All Saints'	9	18	...	83	...	...	...	...	171	63	4	21	3	38	...	...	57	...	3	51	521
St. Andrew's	13	9	...	66	...	...	...	...	111	64	...	...	4	23	...	...	54	1	1	23	369
Jesmond	2	8	...	41	1	...	...	...	25	97	...	...	1	5	...	...	78	...	...	13	271
Dene	14	11	1	126	1	1	...	...	139	233	...	...	3	14	3	...	112	...	...	25	683
Heaton	12	11	1	69	2	...	...	...	151	145	...	2	1	15	1	...	50	...	...	26	486
Byker	12	13	2	56	2	...	...	...	321	163	1	1	2	44	...	...	112	...	...	40	769
St. Lawrence	28	3	...	67	1	...	...	...	369	214	...	1	3	43	...	...	117	...	2	34	882
St. Anthony's	30	18	...	113	5	...	...	...	669	488	5	1	3	107	3	...	149	...	5	55	1651
‡Walker	22	26	2	150	1	...	...	...	574	648	4	2	9	91	2	...	108	...	27	64	1730
CITY	393	240	14	1727	30	2	...	...	4634	4010	16	40	54	800	40	...	1446	2	65	604	14117

* 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						Military or Naval Cases.	Institutions. *	Total Cases (Gross).	Cases from outside of City.	Net Cases.
	Single Cases.	2 Cases each.	3 Cases each.	4 Cases each.	5 Cases each.	6 Cases and over.					
Diphtheria (including Membranous Croup)	278	25	4	1	...	...	3	52	399	6	393
Erysipelas	212	3	...	...	...	...	...	40	258	18	240
Scarlet Fever	1,203	158	30	8	2	1 (6)	1	105	1,763	36	1,727
Enteric (or Typhoid Fever)	5	1	...	1	...	...	...	4	15	1	14
Cerebro-Spinal Fever	26	1	...	...	...	...	...	3	31	1	30
Poliomyelitis	2	...	...	...	...	...	...	...	2	...	2
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...
Polioencephalitis	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	13	...	...	...	...	...	...	39	52	36	16
Puerperal Pyrexia	23	...	...	...	...	...	...	69	92	52	40
Ophthalmia Neonatorum	51	...	...	...	...	...	...	8	59	5	54
Pneumonia	766	30	2	...	...	...	4	43	879	39	840
Malaria	...	...	...	...	...	...	...	2	2	...	2
Dysentery	38	4	...	...	...	...	...	20	66	1	65
Total	2,617	222	36	10	2	1 (6)	8	385	3,618	195	3,423

* See next page.

INFECTIOUS DISEASES.

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

PUBLIC INSTITUTIONS AND INFECTIOUS DISEASE.

The following notifications were received during the year :—

Institutions, &c.	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Encephalitis Lethargica.	Measles and Rubella.	Puerperal Fever.	Puerperal Pyrexia.	Pneumonia.	Chickenpox.	Ophthalmia Neonatorum.	Polioniyelitis.	Polio-encephalitis.	Cerebro-Spinal Fever.	Smallpox.	Malaria.	Dysentery.	Total.
Royal Victoria Infirmary	1	18	25	...	...	22	1	...	38	...	...	...	...	...	...	...	...	105
Fleming Memorial Hospital	12	7	29	2	...	17	...	...	1	...	...	...	...	1	...	...	2	71
Newcastle General Hospital	1	3	9	...	...	3	...	1	1	7	...	...	...	2	...	...	12	39
City Hospital for Infectious Diseases	3	...	1	2	...	6	1	...	...	...	...	...	...	...	...	2	...	13
Maternity Hospital	...	4	2	...	...	...	37	68	...	...	7	...	...	...	...	...	...	118
Military Barracks	9	...	8	...	...	...	...	...	4	3	...	...	...	...	...	...	...	24
Barnado's Home	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
City Mental Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
Eye Infirmary	...	...	1	...	...	2	...	...	...	9	...	...	...	...	...	...	...	3
Deaf and Dumb Institution	3	1	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	15
National Children's Home	...	...	2	...	...	3	...	...	...	1	...	...	...	...	...	...	6	22
Throat, Nose and Ear Hospital	...	5	14	...	...	1	...	...	...	...	...	...	...	...	...	...	...	3
Common Lodging Houses	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
Royal Victoria School for the Blind	...	...	2	...	...	...	...	...	...	6	...	...	...	...	...	...	...	9
Babies' Hospital, West Parade	...	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	1
Salvation Army Maternity Home	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	7
St. Vincent's Home	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	6	
Northern Counties Orphanage (Boys)	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
Nursing Homes	...	...	2	...	...	1	...	...	1	13	...	...	...	...	...	...	...	17
Hostels, etc.	3	2	8	...	...	2	...	...	...	...	...	...	...	...	...	...	...	15
Total	55	40	106	4	...	66	39	69	47	39	8	...	...	3	...	2	20	498

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

SCARLET FEVER.

Notifications of 1,727 cases were received during the year, and there were 22 deaths, equivalent to a mortality of 1.3 per cent.

DIPHTHERIA.

393 cases were notified during the year, and 22 died, a case mortality of 5.6 per cent., as compared with 9.7 in 1933.

MEASLES AND RUBELLA.

8,644 cases (including 4,010 of rubella) were notified, and there were 80 deaths (net) in 1934, representing a death rate of 0.28 per 1,000 population, as compared with 0.13 in 1933, and a case mortality of 0.9 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'	...	...	1	...	...	...	...	...	1	...	2
St. John's	...	...	...	1	4	4	1	...	2	...	12
Stephenson	...	...	...	1	6	1	...	1	3	...	12
Armstrong	...	...	...	...	2	2	1	1	1	...	7
Elswick	...	...	...	...	...	...	1	1	1	...	3
Westgate	...	...	...	1	1	...	1	...	1	...	4
Arthur's Hill	...	...	...	...	...	...	...	...	1	...	1
Benwell	...	...	...	2	1	1	1	...	...	...	5
Fenham	...	...	...	...	...	1	1	...	1	...	3
All Saints'	...	...	...	...	1	1	...	...	...	...	2
St. Andrew's	...	...	...	...	1	...	...	...	...	...	1
Jesmond	...	...	...	...	...	...	...	...	...	...	...
Dene	...	...	...	...	...	1	...	...	3	...	4
Heaton	...	...	...	1	...	...	...	...	1	...	2
Byker	...	...	...	1	1	2	1	...	...	...	5
St. Lawrence	...	...	...	1	4	...	2	...	...	...	7
St. Anthony's	...	...	...	...	4	2	3	...	...	...	9
Walker	...	...	...	...	...	1	...	...	...	...	1
Total	...	...	1	8	25	16	12	3	15	...	80

Each Health Visitor visited and revisited 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 1934.

Cases notified by Medical Practitioners	7,181	
Cases found by Health Visitors	1,441	
Cases notified by Parents	54	
Cases found from Returns of Deaths	10	
	8,686	gross.
Less cases from outside of City	8,644	net.

Of the total number of measles cases notified, 7,715 in 5,915 households (or 88.8 per cent.) were visited by the Health Visitors, and 8,299 revisits were paid, a total of 16,014 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	411	1,730	1,774	1,593	407	5,915
Children	911	4,411	4,112	4,013	918	14,365
Cases	572	2,269	2,343	2,033	498	7,715
Percentage of Cases to Children	62·8	51·4	57·0	50·7	54·2	53·7
Cases developing Pneumonia	43	104	50	50	3	250
Percentage of Cases developing Pneumonia	7.5	4·6	2·1	2·5	0·6	3·2
Deaths from Measles	11	44	13	9	...	77
Cases notified Measles, Deaths certified Pneumonia	6	1	1	...	...	8
Case Mortality per cent.	3·0	2·0	0·6	0·4	...	1·1

Total unvisited cases 971, including 905 in better-class houses, in which no deaths occurred, and 66 in institutions, with 9 deaths.

Medical Attendance.—In 96·5 per cent. of the cases visited a doctor was in attendance.

Condition of Patient.—In 91.7 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.—4,140, or 53.7 per cent. of the affected children had previously attended school, and 3,575, or 46.3 per cent. had never attended school. In connection with 2,096 of the latter cases, however, other children in the infected houses were scholars, equivalent to 27.2 per cent. of the total cases.

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

Under 1 year	370
1–2 years	649
2–3 years	706
3–4 years	809
4–5 years	778
5–6 years	1,327
Over 6 years	3,076
	7,715

WHOOPING COUGH.

16 deaths occurred from whooping cough. The particulars are as follows :—

Ward.	Years of Age.						Total.
	0–1.	1–2.	2–3.	3–4.	4–5.	5–10.	
St. Nicholas'	...	...	...	...	...	...	...
St. Thomas'	...	...	...	...	...	...	...
St. John's	1	1	...	...	...	...	2
Stephenson	...	...	...	...	...	...	...
Armstrong	2	...	...	...	...	...	2
Elswick	...	...	...	...	...	...	...
Westgate	...	...	...	...	...	...	...
Arthur's Hill	...	...	...	...	...	...	...
Benwell	1	...	...	...	1	...	2
Fenham	...	...	1	...	...	...	1
All Saints'	1	...	...	...	...	...	1
St. Andrew's	...	...	...	...	...	...	...
Jesmond	...	...	...	...	...	...	...
Dene	...	...	...	...	...	...	...
Heaton	...	...	...	...	...	1	1
Byker	...	...	...	...	...	...	...
St. Lawrence	2	...	...	...	...	...	2
St. Anthony's	2	...	1	...	...	...	3
Walker	...	2	...	...	...	...	2
City	9	3	2	...	1	1	16

The death rate in 1934 was equivalent to 0.06 per 1,000 population, as compared with 0.09 in 1933.

FOOD POISONING.

There were no cases of food poisoning reported during the year.

ENTERIC GROUP OF FEVERS.

During the year 1934, 15 cases of the enteric group of infections were brought to notice. The distribution of these cases, according to the months in which they were notified, the type of infection (typhoid or para-typhoid), and their place of origin, is recorded in the following table :—

Distribution of Enteric Group Infections for 1934.

	Extra-Mural.		Newcastle.	
	Typhoid.	Para-typhoid B.	Typhoid.	Para-typhoid B.
January	1	...	1	...
February	...	...	...	1
March	...	...	4	...
April	...	...	1	1
May	...	...	1 (1)	...
June	...	...	...	...
July	...	...	...	...
August	...	...	2	2 (1)
September	...	...	1	...
October	...	...	...	...
November	...	...	...	...
December	...	...	...	...
Totals	1	...	10 (1)	4 (1)

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

It will be seen that one of the 15 patients came from without the City's boundaries, the remaining 14 being Newcastle cases proper. The one extra-mural case (a typhoid) was admitted to the City Hospital at the request of the Local Authority concerned. The fourteen city cases, which were all admitted to hospital, were made up of ten cases of typhoid, one of which was not bacteriologically proved, and four para-typhoid B. infections. Among the ten cases of typhoid there was one death, a nurse at the City Hospital (whose home address was outside the City), and one of the Para B. cases died in an Institution in the City, and was diagnosed post mortem. There was one small outbreak where four members of the same family were infected. The remainder were all sporadic cases, and no connection could be traced between them.

In all, there were 66 admissions to the City Hospital. Apart from the 14 patients mentioned above, these cases were all notified in the areas of neighbouring Local Authorities, and were admitted to the City hospital at the request of the Local Authority concerned, either because they had no Infectious Diseases Hospital of their own, or because their available accommodation was already fully occupied. Twenty-nine of the patients admitted to hospital were suffering from typhoid fever, and of this number four were found to have a co-incident infection with para-typhoid B, and one with dysentery of the Flexner type. Of these 29 patients 3 died, equivalent to a case mortality of 10.3 per cent. No deaths occurred among the 27 para-typhoid cases.

DIARRHŒA.

There were in all 67 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 years :—

Year.	Births Registered.	Successful Vaccinations.	Unsuccessful Vaccinations.	Exemption Certificates.		Deaths, Removals and Post-ponements.
				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	5,850	3,101	21	1,391	23·8	...

* 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.

1,446 cases were notified. There were no deaths.

ERYSIPELAS.

240 cases of this disease were notified and there were 16 deaths.

PUERPERAL SEPTICÆMIA AND PUERPERAL PYREXIA.

56 cases were notified, with 7 deaths. Inquiries were made concerning 55 of these.

INFLUENZA AND PNEUMONIA.

These diseases accounted for 296 deaths as against 352 last year.

Total deaths at age periods.

Under 5 years.	5–15.	15–25.	25–45.	45–65.	65 and over.	Total.
114	9	14	29	66	64	296

As will be seen from the above figures, 114, or 38 per cent., of the deaths occurred below the age of 5 years.

840 cases of pneumonia, including influenzal-pneumonia, were notified. For the ages and ward distribution, see pages 72 and 73.

Of that number 752, or 89.5 per cent., were visited by Health Visitors. It was found that of these 752 visited cases, 512, or 68.4 per cent., were primary pneumonia, 56, or 7·4 per cent., were cases of influenzal-pneumonia, and 184, or 24.5 per cent., were cases of pneumonia following other diseases.

Sex.—52.3 per cent. of the cases were males.

Ages.—The ages of the 752 cases visited were as follows :—

Under 1 year	86
1–5 years	325
5–15 years	168
15–25 years	58
25–45 years	60
45–65 years	43
and over 65 years	12
	752

Housing.—84 cases occurred in 1 roomed dwellings, 272 cases occurred in 2 roomed dwellings, 191 cases occurred in 3 roomed dwellings, and 205 cases occurred in more than 3 roomed dwellings.

Type of House.—307 cases occurred in flats, 262 cases in tenements, and 183 in self-contained houses.

Previous History.—

There was a previous history of			Measles	in 337 cases.
,,	,,	,,	Whooping Cough	in 212 cases.
,,	,,	,,	Influenza	in 113 cases.
,,	,,	,,	Frequent winter Coughs and Colds	in 482 cases.
,,	,,	,,	Pneumonia	in 178 cases.
,,	,,	,,	Tuberculosis	in 24 cases.

Hospital Treatment.—151 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. 31 of these patients died, giving a case mortality of 20.5 per cent.

Deaths.—95, or 12.6 per cent. of the visited cases of pneumonia died.

ENCEPHALITIS LETHARGICA.

During the year 1934 there were no cases of encephalitis lethargica notified. There were 9 deaths.

All of these referred to patients in the post-encephalitic state of the disease. Each case was investigated and the approximate dates of the original attacks in this series were found to be as follows :—one in 1918 ; two in 1919 ; two in 1922 ; one in 1924 ; one in 1925 ; one in 1927 ; and one in 1933.

ACUTE POLIOMYELITIS.

Three cases were notified, two of which proved to be poliomyelitis. These two cases were admitted through another Institution in the City from extra-mural areas. Both cases recovered.

CEREBRO-SPINAL MENINGITIS.

During the last two years the incidence of cerebro-spinal fever, which for some years previous to 1932 had been steadily increasing, has somewhat declined, and during 1934, 31 cases

were notified in Newcastle. The figures for 1933 and 1932 were 51 and 59. Of these cases notified in Newcastle 29 were admitted to the City Hospital for treatment, one was nursed at home, and one died in the Newcastle General Hospital. Five cases notified as suffering from some other condition were found, when admitted to hospital, to be cases of cerebro-spinal fever. In addition, 34 cases were admitted from surrounding areas, so that in all 68 patients have been treated in the City Hospital. There were 36 deaths among these 68 cases, equivalent to a case mortality rate of 52.9 per cent. This figure is higher than that for 1933, which was 42.5 per cent. It may be noted that if the cases dying within 24 hours of admission, which numbered ten, were to be deducted, a case mortality rate of 44.8 per cent. would be obtained. The distribution of the cases according to the months in which they were notified, and their places of origin, is recorded in the following table :—

	Newcastle.	Extra-Mural.	Totals.
January	5 (2)	8 (5)	13 (7)
February	4 (2)	4 (2)	8 (4)
March	2 (1)	3 (1)	5 (2)
April	4 (2)	6 (3)	10 (5)
May	6 (3)	2 (1)	8 (4)
June	6 (4)	4 (1)	10 (5)
July	...	3 (1)	3 (1)
August	3 (1)	...	3 (1)
September	1 (1)	...	1 (1)
October	1 (1)	1 (1)	2 (2)
November	1 (1)	1 (1)	2 (2)
December	1 (1)	2 (1)	3 (2)
Totals	34 (19)	34 (17)	68 (36)

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.

Exactly 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 68 cases admitted to hospital :—

Ages.	0–1.	1–2.	2–5.	5–15.	15–25.	25–45.	45 and upwards.	Totals.
Male	4 (2)	3 (2)	2 (2)	12 (5)	9 (3)	7 (4)	3 (3)	40 (21)
Female.....	3 (3)	4 (3)	7 (3)	8 (2)	2 (1)	2 (2)	2 (1)	28 (15)
Totals	7 (5)	7 (5)	9 (5)	20 (7)	11 (4)	9 (6)	5 (4)	68 (36)

Figures in parentheses indicate deaths.

It will be noted that the attack rate and mortality rate are particularly high under the age of 5, and that young persons and adults from 15 to 25 have the best chance of recovery from the disease.

BACILLARY DYSENTERY.

Bacillary dysentery has been prevalent in the City since 1928, and during the past year 114 cases were notified. In only 72 of these, however, was the diagnosis confirmed bacteriologically. Of the latter number, 2 were extra-mural cases, who were admitted to one of the City's hospitals suffering from the disease, and 2 were seamen notified by the Tyne Port Sanitary Authority.

Of the 72 proved cases 68 were admitted to the City Hospital, Walker Gate, where one died. One of the remaining cases died in the Newcastle General Hospital, and another was nursed at home.

During the year sixteen cases were notified in the Newcastle General Hospital. Six of these occurred in one outbreak in the early part of the year. The infecting organism was of the Flexner type, and one case died, as mentioned above. This case was, however, complicated by a surgical condition. The remainder were sporadic cases, with the exception of a nurse who became infected. Four of these cases were due to the Sonne organism, and six to the Flexner type of organism.

Four cases occurred in the Fleming Memorial Hospital during the year. They were all of the sporadic type, two of the cases being due to the Flexner organism, one to the Sonne type, and

one to the Newcastle type of organism. The latter case subsequently died in the City Hospital. Two of the cases were extra-mural.

Five cases, all of the Flexner type, were notified from the Boys' Home, which was mentioned in the report for 1933. The cases occurred in two groups, three in January and two in March. From March to the end of the year no further cases were notified from this Institution.

The circumstances and history of all cases were carefully investigated with a view to obtaining information as to the probable sources of infection. The age, sex, and mortality incidence of the series of 72 cases are given in the following table :—

Ages.	0–1.	1–2.	2–5.	5–15.	15–25.	25–45.	45 and upwards.	Total.
Males.....	3 (2)	3	16	14	2	5	2	45 (2)
Females	1	2	9	10	3	1	1	27
Total	4 (2)	5	25	24	5	6	3	72 (2)

The figures in parentheses indicate fatal cases.

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

	Flexner.				Sonne Bacillus.	Shiga	Newcastle.	Not Typed	Totals.
	W.	X.	Z.	XZ.					
Total No. of Cases	27	4	22	2	9	1	5	2	72
Fatal Cases ...	...	...	1	...	...	...	1	...	2
Non-Fatal Cases	27	4	21	2	9	1	4	2	70

VENEREAL DISEASES.

Syphilis was certified as the cause of death in 20 cases.

The work of the treatment clinic has been continued successfully. 1,369 old and new cases attended 21,732 times as out-patients. 23 cases accounted for 610 in-patient days. Of the

840 new cases, 203 were syphilis, 421 gonorrhœa, 7 soft chancre, and 209 were conditions other than venereal. 65 per cent. were males.

2,498 doses of salvarsan substitutes, 3,658 doses of mercury and 1,228 doses of bisoxyl were administered to out-patients and in-patients.

1,260 Wasserman reactions were carried out by the College of Medicine, and 2 microscopical examinations of pathological material were made by the College and 1,491 at the treatment clinic. The irrigation stations for males and for females in connection with the clinic have been in full use during the year.

54 medical practitioners in the City are qualified to receive free supplies of arseno-benzol compounds. 18 made application for these supplies during the year and 1,061 doses were given.

Newcastle Residents Notified as Attending other Centres.

Cases.—Syphilis, 1 ; gonorrhœa, 10 ; conditions other than venereal, 4.

Attendances.—192.

Doses of salvarsan substitute given to in-patients and out-patients, 6.

In-patients.—In-patient days, 55.

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

CITY HOSPITALS FOR INFECTIOUS DISEASES.

Report of the Deputy Medical Superintendent.

Accommodation.

Names and Situation of Hospitals.		Total Available Beds.
City Hospital for Infectious Diseases, Walker Gate—		*
	Beds.	
Fever Pavilions	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
1909	263,064	172	1,090	78·0
1910	265,077	172	912	83·0
1911	267,261	172	1,110	83·1
1912	269,193	172	1,542	86·4
1913	271,295	172	1,286	88·3
1914	271,523	172	1,835	78·9
1915	278,107	232	1,886	90·5
1916	278,107	232	1,380	87·0
1917	278,107	232	1,303	87·5
1918	278,107	232	1,245	87·5
1919	275,099	232	1,370	84·3
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

* 30 of these beds temporarily appropriated for Tuberculosis patients.

CITY HOSPITAL, WALKER GATE.

(**Fever Pavilions.**)

Admissions during the year—3,292.

The *average daily number* of patients in the hospital was 271, exclusive of 116 cases of Phthisis.

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

	1890	1895	1900	1905	1910	1915	1920	1925	1930	1931	1932	1933	1934
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
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
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
All cases of the above, together with Continued and Typhus Fever and Cerebro-Spinal Fever, etc.	21·3	34·6	38·6	47·8	83·0	90·5	86·4	86·0	96·1	95·6	96·3	96·0	95·0

CITY HOSPITAL FOR INFECTIOUS DISEASES, WALKER GATE.

Diseases Admitted—1934.

Sent in as	Number.	Proved to be:— Scarlet Fever.	Diphtheria.	Diphtheria Carriers.	Enteric Group 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	1766	1646	2	...	...	...	9	45	...	...	1	...	...	...	...	1	1	...	1	...	6	...	38	1	...	...	...	15
Diphtheria	508	15	376	...	...	...	1	...	...	1	1	...	...	...	...	1	2	...	8	...	...	...	80	3	...	2	...	18
Diphtheria Carriers	130	...	1	124	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Enteric Group Fevers	80	...	...	...	65	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	7	...	2	...	3
Dysentery	98	...	...	...	...	66	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	29	...	...	...	2
Measles	179	3	...	...	...	...	171	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	1	...	...	...	...	1
Rubella	22	1	...	...	...	...	2	18	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Varicella	5	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pertussis	9	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Epidemic Cerebro-Spinal Meningitis	60	...	...	...	1	...	...	...	...	...	...	48	5	...	...	2	...	...	...	...	...	...	...	...	...	3	...	1
Other forms of Meningitis	42	2	...	...	...	...	...	...	...	...	...	19	8	...	...	8	4	...	..	...	...	...	...	...	...	...	...	1
Poliomyelitis	3	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Encephalitis Lethargica	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Pneumonia	168	1	...	...	...	...	2	...	...	...	4	...	...	...	...	135	17	1	7	...	...	...	...	...	...	...	...	1
Bronchitis	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Influenza	10	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	8	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Erysipelas	131	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	125	5	...	...	...	...	...	...	...
Skin and Septic Conditions	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	...	...	...	...	...	...	...
Puerperal Pyrexia	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	...
Tonsillitis	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	...	...	...	...	...
Other Gastro-Intestinal Diseases	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	...	...	...	...
Ophthalmia Neonatorum	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
General Diseases	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
Injuries	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...
Unclassified	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
Totals	3292	1669	379	124	66	68	185	63	6	1	14	68	13	2	...	151	29	9	19	126	30	7	141	49	4	10	5	54

Diseases and Mortality Rates.

MORTALITY OF CASES TREATED IN HOSPITAL AS COMPARED WITH CASES NOT REMOVED DURING 1934.

DISEASE.	HOSPITAL.			NOT REMOVED.		
	Total Cases. (Verified)	Deaths.	Case Mortality per cent.	Total Cases.	Deaths.	Case Mortality per cent.
Scarlet Fever...	1,669	31	1·86	94	1	1·06
Diphtheria.....	379	29	7·6	7*	1	14·3
Enteric Group of Fevers	66	3	4·5	1	1	100

*One case, from outside of the City, died in the Royal Victoria Infirmary.

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
1915–1929.									
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.									
1930.....	584	158	66	4	4	2	0·7	2·5	3·0
1931.....	989	94	21	5	5	2	0·5	5·3	9·5
1932.....	1,120	134	33	9	5	4	0·8	3·7	12.1
1933.....	1,934	95	34	27	10	4	1·4	10·5	11·7
1934.....	1,669	379	66	31	29	3	1·8	7·6	4·5

Admissions and Deaths, 1934.

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	245	182	156	125	128	75	80	85	134	131	188	140	1669	5	6	4	6	2	1	...	2	...	2	2	1	31
Diphtheria	13	13	18	21	22	16	11	28	41	52	60	84	379	2	1	1	4	2	...	1	3	3	2	2	8	29
Diphtheria Carriers	7	3	2	10	8	11	7	9	16	26	12	13	124	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Group Fevers	3	17	7	6	2	1	21	4	5	...	...	...	66	...	2	...	1	...	...	...	...	...	...	...	...	3
Dysentery	6	5	5	4	3	6	6	6	17	5	4	1	68	...	1	...	...	...	...	...	...	...	...	...	...	1
Measles	...	10	32	37	53	28	12	5	1	1	1	5	185	...	1	7	15	15	4	1	1	...	...	...	2	46
Rubella	29	9	13	2	3	2	3	...	...	2	...	...	63	...	...	...	...	...	...	...	...	...	...	...	...	...
Varicella	...	1	...	...	2	...	1	...	...	1	...	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Mumps	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Pertussis	1	...	1	...	3	2	1	3	...	2	1	...	14	...	...	1	...	1	...	1	...	...	...	...	...	3
Epidemic Cerebro-Spinal Meningitis...	13	8	5	10	8	10	3	3	1	2	2	3	68	7	4	2	5	4	5	1	1	1	2	2	2	36
Other forms of Meningitis...	...	2	1	2	3	1	...	...	...	1	1	2	13	...	2	1	2	3	1	...	...	...	1	1	2	13
Poliomyelitis	...	...	...	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	20	9	21	21	13	10	6	7	5	9	13	17	151	4	3	5	5	1	...	2	1	1	2	...	7	31
Bronchitis	4	1	3	...	2	...	3	1	...	2	9	4	29	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	2	...	2	2	...	...	...	...	1	...	1	1	9	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	2	3	2	5	...	1	...	1	...	...	1	4	19	...	...	...	...	...	...	...	1	...	...	...	...	1
Erysipelas	11	13	20	9	11	7	3	7	11	11	9	14	126	...	3	5	1	3	2	1	1	3	1	1	2	23
Skin and Septic Conditions	6	3	2	1	6	4	1	1	2	1	3	...	30	1	1	...	1	3	...	...	...	...	...	...	...	6
Puerperal Pyrexia	...	...	...	...	...	3	1	1	1	...	1	...	7	...	...	...	...	...	1	1	...	...	...	1	...	3
Tonsillitis	16	7	3	2	10	11	10	9	18	12	25	18	141	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Gastro-Intestinal Diseases	4	4	6	3	4	3	6	2	5	1	5	6	49	...	...	1	...	...	...	...	...	1	...	1	...	3
Ophthalmia Neonatorum	1	...	...	...	...	1	1	...	...	...	...	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...
General Diseases	3	...	1	...	2	...	...	...	...	2	1	1	10	...	...	...	...	...	...	...	...	...	1	...	...	1
Injuries	1	...	1	1	...	...	...	...	...	2	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Unclassified	1	2	5	3	2	1	4	5	5	6	9	11	54	...	...	...	...	1	...	...	...	...	...	...	...	1
Totals	388	292	306	264	285	193	180	177	263	270	348	326	3292	19	24	27	40	35	14	8	10	9	11	10	24	231

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

	Within 24 hours.	*Within 48 hours.*
Scarlet Fever	5	1
Diphtheria	8	5
Typhoid	...	1
Dysentery	...	1
Measles	1	2
Pertussis	...	1
Epidemic Cerebro-spinal Meningitis	10	2
Other Forms of Meningitis	5	...
Pneumonia	7	1
Erysipelas	3	2
Puerperal Septicæmia	3	...
Skin and Septic Conditions	2	...
Gastro-Intestinal	2	...
Total	46	16

Average Stay in Hospital during the last Twenty-seven Years.

Years.	All Cases.		Scarlet Fever.		Diphtheria (including carriers).		Enteric Fever.		Other Diseases.	
Average.	No.	Average Stay in Days.	No.	Average Stay in Days.	No.	Average Stay in Days.	No.	Average Stay in Days.	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	1224	17·8
1932	2,143	30·3	1120	35·2	162	57·5	33	47·0	828	17·7
1933	3,040	27·6	1934	32·7	114	61·6	34	41·2	958	12·7
1934	3,292	30·1	1669	35·0	503	41·1	66	40·0	1054	15·5

DIPHTHERIA.

The autumn of 1934 saw a marked increase in the incidence of diphtheria in Newcastle and the surrounding area, and this increase is reflected in the number of cases and carriers admitted to hospital. As the above table shows the combined figures for these cases had never reached 200 since 1929. In 1934 it reached 503, as contrasted with 114 in 1933. 144 of these patients were admitted in the first six months, and 359 in the last six months of the year.

379 true cases were admitted to hospital, and 124 carriers. 298 of the cases were of the simple faucial or tonsillar type, and in three others the infection was limited to the nose. There were three deaths in this group. Two of these cases were admitted suffering from other coincident conditions, one medical and the other surgical, which contributed more to the fatal issue than did the diphtheritic condition. In a group of 55 faucio-pharyngeal cases, with varying degrees of nasal involvement, there were 19 deaths—equivalent to a case mortality of 34.5 per cent. There were 21 cases of laryngeal or tracheal diphtheria of whom seven, or 33.3 per cent., died. In nine of these cases the obstruction was so considerable that tracheotomy was performed shortly after admission to hospital, and of these five died.

The case mortality of the whole series of 379 cases was 7.6 per cent., a figure lower than that for 1933, which was 10.5 per cent., but higher than 1932, which was 3.7 per cent. There was again a comparatively high mortality rate among the faucio-pharyngeal cases with nasal involvement.

It can be said that, although a proportion of severe cases are being met with, the virulence of the infection does not seem to have increased with the incidence of the disease in this area to the same extent as it would appear to have done in certain other areas.

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

Special arrangements had to be made to deal with the large influx of cases. Two spare wards were opened, and, as was the case in the scarlet fever epidemic of 1933, it was found necessary to requisition for diphtheria cases the pavilion at Walker Gate which usually accommodates thirty of the tuberculosis patients. At the close of the year four wards were in use for nursing diphtheria cases instead of one which usually suffices.

There was one Institutional outbreak of diphtheria in the City during the autumn of the year. It occurred at the Northern Counties Orphanage, a residential school which numbers approximately 75 children between the ages of 7 and 15. There were two waves of infection, the first of which extended over a week, and consisted of 11 cases. The subsequent swabbing detected 9 carriers. About six weeks later, the second wave occurred, with

three cases and two carriers. The cases were all of the " mitis " type, and were fortunately mild, the children all making good recoveries. Since this outbreak, the whole of the Institution has been immunised by the physician to the hospital, and it is intended to immunise all new entrants.

In June, 1934, a scheme was inaugurated whereby free immunisation against diphtheria of all children under the age of 5 was offered to parents. The work was carried out by a part-time officer, and four clinics were held each week at certain Maternity and Child Welfare Centres. At the end of the year, 74 clinics had been held, and 576 children had completed treatment.

Dr. J. B. Tilley has supplied the following facts from an investigation carried out during 1934, into the incidence, and clinical significance of the three types of diphtheria bacilli, Gravis, Intermediate and Mitis. Wherever possible the organisms from each patient were isolated and classified by the Public Health Laboratory, and an intra-dermal virulence test performed.

In total 428 strains of diphtheria bacilli were so examined. Fifteen of these could not be placed in any one of the groups. Of the remaining 413 strains, 29.6 per cent. proved to be of Gravis type, 38.2 per cent. Intermediate, and 32.2 per cent. Mitis.

The results of the intra-dermal virulence tests shewed that 50 (12.1 per cent.) of the classified organisms were non-virulent. Of the total number of Gravis strains 9.8 per cent, proved to be avirulent. In the case of the Intermediate type the proportion was 3.9 per cent., while for the Mitis type it was 24.4 per cent.

Included in the total number of organisms classified were strains from 105 diphtheria carriers. This group was made up of 27 Gravis, 22 Intermediate, and 56 Mitis types.

Observations on the severity of the 308 clinical cases of diphtheria were made on admission to hospital, and are shewn in the following table :—

	Gravis.	*Intermediate.*	*Mitis.*
Mild	50	45	53
Moderate	28	58	23
Severe	17	33	1
Deaths	7	12	1

The case mortality rates for the three types were : Gravis 7.36 per cent., Intermediate 8.82 per cent., and Mitis 1.29 per cent.

SCARLET FEVER.

During the year 1934, 1,669 cases of scarlet fever were admitted to Walker Gate, as against 1,934 in 1933. This figure, while it shows a decrease on the figure for 1933, is still considerably in excess of the average number of scarlet fever cases admitted in recent years.

The first six months of the year saw the gradual decline of the epidemic which started in the autumn of 1933. There was the usual increase in admissions during the autumn, but this, though larger than normal, did not amount to epidemic proportions.

The Isolation Hospital on the Town Moor was in use until June to accommodate convalescent cases, and was re-opened in October for the same purpose.

The prevailing type of scarlet fever remained, for the most part, mild, but the mortality rate was higher than for the previous year—1.8 per cent. instead of 1.4 per cent. The complication attack rate was lower, 35.0 per cent., as contrasted with 32.0 per cent.

A death rate of 1.8 per cent. in scarlet fever, which shows such a marked increase on that for the last decade, calls for some comment. From a detailed examination of the fatal cases, it is evident that this figure is not a true index of the mortality from scarlet fever in 1934.

Among the 11 fatal cases which did not receive antitoxin, there were four which could be classed as entirely due to scarlet fever. One of these was a " missed " case, which was admitted with acute nephritis and died within 48 hours. Three were severe cases and all developed broncho-pneumonia.

Of the remaining seven cases, one was a mixed infection with measles, one was cross-infected with measles and subsequently developed an empyema, while another was cross-infected with diphtheria. For the rest, one was admitted from a hospital with a diagnosis of renal sarcoma, one with congenital heart disease, one had sustained a ruptured urethra, which was obviously the cause of death, and another was suffering from severe diabetes and died in coma.

Among the cases which received antitoxin, there were 20 fatalities. Eleven of these can be counted as directly due to scarlet fever or its complications. Three were cases of mixed infection with measles, one having in addition a dirty appendix

wound on admission, while three were cross-infected with measles. One of these developed an extensive abscess of the thigh, and another had an appendicectomy wound on admission, but died with symptoms very suggestive of measles encephalitis. Of the remaining three cases, one was admitted with acute chorea, another died from a spreading cellulitis due to a dog bite, and a third had been operated on for empyema and glands in the neck before admission.

Fifteen deaths, a mortality rate of 0.89 per cent., would give a better idea of the mortality due to scarlet fever.

The number of fatal cases, due to measles cross-infection, is unfortunately high, but would certainly have been higher had it not been for the extensive use of pooled adult serum obtained from volunteers among the nursing staff who had previously suffered from measles. Only one of these cases had previously received prophylactic serum and that was the one which developed the deep abscess of the thigh.

A commencing measles epidemic coincided with the latter part of the scarlet fever epidemic, and cases of scarlet fever incubating measles were constantly being admitted, with the result that the supply of serum became temporarily exhausted.

From the study of these cases two points emerge :—

(1) The gravity of the prognosis in cases of mixed infection with scarlet fever and measles.

(2) The necessity of making every effort to maintain an adequate supply of convalescent or pooled adult serum to deal with these ward outbreaks.

Scarlet fever antitoxin has been used to a somewhat less extent than in previous years. The numbers and relative proportions of patients receiving this form of treatment for the period 1926-1934, are as follows :—

	1926	1927	1928	1929	1930	1931	1932	1933	1934
Scarlet Fever Cases admitted.....	831	741	452	543	584	989	1120	1934	1669
Number treated with Antitoxin...	78	172	177	169	249	483	380	436	331
Percentage treated with Antitoxin	9·5	20·3	39·2	31·1	42·6	48·8	33·9	22·5	19·8

Scarlet fever antitoxin has now been in use for about nine years, and opinions as to its value and its limitations are becoming more definite.

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

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

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

Scarlet Fever.	Number.	Percentage treated with Antitoxin.	Percentage with Complications.	Mortality Rate.	Return Case Rate.	Average stay in Days in Hospital.		
						All Cases.	Complicated Cases.	Non-complicated Cases.
All Cases ...	1,669	19·8	35·0	1·8%	5·6%	35·0	51·6	26·0
Antitoxin Cases	331	100	41·0	6·04%	6·6%	38·7	56·8	26·1
Non-Antitoxin Cases	1,338	Nil.	33·5	0·82%	5·4%	34·1	50·0	26·0

Percentage Incidence of Complications.

	Rhinorrhœa.	Otorrhœa.	Adenitis.	Rheumatism.	Albuminuria.	Nephritis.	Cardiac.	Other Complications.
All Cases	11·2	12·4	4·4	1·3	3·05	0·48	0·53	1·6
Antitoxin Cases ...	13·6	13·9	5·4	2·4	1·5	0·3	0·3	3·6
Non-Antitoxin Cases ...	10·6	12·03	4·2	1·05	3·4	0·53	0·59	1·2

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 was high and showed a slight increase on last year. 394 cases occurred in 1,669 admissions—a complication rate of 23.6 per cent., as contrasted with 21.6 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	142	43·8
	Otorrhœa	161	65·3
Antitoxin Cases	Rhinorrhœa	45	41·8
	Otorrhœa	46	88·1
	Total	394	57·5

The average stay per patient of cases in this group was 57.5 days, as contrasted with the figure given for 1933, namely, 48.3 days.

In the treatment of these patients it was found necessary to perform one hundred and four operations—twenty-six for the removal of tonsils and adenoids, and seventy-eight for mastoidectomy.

Subsequent Progress.—As in previous years, supervision of all cases of rhinorrhœa and otorrhœa has been maintained after their discharge from hospital, and every one of the 394 cases of this type has been visited at varying intervals. The result of these visits showed that amongst 187 cases of rhinorrhœa, nine or 4.8 per cent. still had slight nasal discharge, whilst four or 1.9 per cent. of the 207 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 1,669, produced 94 "Return" cases, a percentage of 5.6. These arose from 86 "Infecting" cases, a percentage of 5.1.

SEASONAL OCCURRENCE.

QUARTER.	Total Scarlet Fever Admissions.	"Infecting" Cases.		"Return" Cases.	
		No.	Percentage.	No.	Percentage.
January to March.....	583	32	5·5	35	6·0
April to June.....	328	11	3·3	11	3·35
July to September.....	299	13	4·3	14	4·6
October to December.....	459	30	6·5	34	7·4

Of the 86 "Infecting" cases (*a*) 43 had no complications or discharges whilst in hospital, and remained "clean" after reaching home, (*b*) 14 had no complications whilst in hospital, but developed discharges after reaching home, while (*c*) 29 had complications whilst in hospital, but were "clean" on discharge.

The figure of 5.1 for the percentage of "Infecting" cases is high, and has only once been exceeded in recent years, but the high incidence of the disease, and the necessity for curtailing the normal period of detention in hospital, would both account, to some extent, for the large number of these cases.

"RETURN" CASES FOR YEARS 1906–1934.

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

ERYSIPELAS.

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

In the following table the number of notifications of erysipelas, the deaths caused by the disease, and the case mortality rate are detailed for the years 1926-1934. In addition, similar information is given for such of these cases as were admitted to the City Hospital, together with the duration of their stay in hospital.

Year.	Total Notifications.	Deaths.	Mortality Rate. Per cent.	City Hospital.			
				Admissions.	Deaths.	Mortality Rate. Per cent.	Duration of stay in Hospital. Days.
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 these cases is high. In 1934 this was 18.2 per cent. for all cases of erysipelas treated in hospital—as contrasted with 12.9 per cent. in 1933, and 11 per cent. in 1932. Of the 126 cases admitted to hospital, 26 were given antitoxin, of which 9, or 34.6 per cent., died. Among the 100 non-antitoxin cases there were 14 deaths, giving a mortality rate of 14 per cent.

Mixed Infections.

45 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	13
Scarlet Fever with Measles	12
Scarlet Fever with Measles and Diphtheria	1
Scarlet Fever with Varicella	3
Scarlet Fever with Pertussis	1
Measles with Pertussis	1
Scarlet Fever with Rubella	4
Scarlet Fever with Erysipelas	3
Diphtheria with Varicella	1
Diphtheria with Dysentery	1
Diphtheria with Erysipelas	1
Typhoid with Dysentery	1
Erysipelas with Dysentery	1
Pertussis with Rubella	1
Measles with Varicella	1
	45

Cross Infections.

During the year 111 patients, or 3.3 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 Diphtheria	6
Scarlet Fever with Measles	37
Scarlet Fever with Varicella	23
Scarlet Fever with Rubella	19
Scarlet Fever with Varicella and Measles	3
Scarlet Fever with Pertussis	5
Scarlet Fever with Erysipelas	1
Scarlet Fever with Varicella and Diphtheria	3
Scarlet Fever with Varicella and Pertussis	2
Diphtheria with Scarlet Fever	7
Diphtheria with Rubella	1
Diphtheria with Pertussis	1
Para. B. with Scarlet Fever	1
E.C.S.M. with Scarlet Fever	1
E.C.S.M. with Measles	1
Total	111

There were seven deaths, scarlet fever with measles (6), and scarlet fever with diphtheria (1).

Staff Sickness.

The incidence of sickness amongst members of the Nursing and Domestic Staffs remained somewhat high during 1934, but showed a slight improvement on 1933. The figures were :—

Nursing Staff.—77 of the nursing staff were off duty owing to sickness for a total of 1,544 days. Two nurses contracted enteric fever, one of whom died, 1 scarlet fever, and 3 diphtheria. One suffered from measles, 6 from rubella, 4 from influenza, 15 from tonsillitis, 9 from various skin and septic conditions, 4 from minor accidents, and 3 from appendicitis, two of these latter being operated upon. One nurse was transferred to Barrasford Sanatorium for a second period of treatment for pulmonary tuberculosis, but resumed duty before the end of the year. The remainder were nursed in their own homes.

Domestic Staff.—54 were off duty through sickness for a total of 803 days. 9 suffered from influenza, 9 from tonsillitis, 4 from skin and septic conditions, 1 from appendicitis, 2 from minor accidents, and 2 from unclassified conditions. The remainder were nursed in their own homes.

Since the number of admissions to the hospital was larger than in any previous year since its opening, the staff were, for long periods, working under considerable pressure, and this fact may account to some extent for the amount of sickness. The new extensions of the Nurses' Home have been in use throughout the year, and it is hoped that in future years the effect of the greatly improved housing of the nursing and domestic staffs will be reflected in a lesser incidence of sickness.

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.

One nurse contracted scarlet fever, and 3 diphtheria. All these nurses had been immunised, and on testing were found to be negative to the respective diseases which they subsequently contracted. They would appear to be examples of those rather rare cases where exposure to massive infection may occasionally break down a newly acquired artificial immunity. All these cases were mild and made good recoveries.

Two nurses contracted enteric fever while working on the enteric ward, one case being an infection with B.Typhosus, and the other with B.Paratyphosus B. The latter was a mild case, but the former was a severe infection, and the patient unfortunately died after four weeks illness.

With the exception of a mild case in 1933, these were the first cases of enteric fever which have occurred among the nursing staff of the hospital since 1915, the year after routine inoculation against enteric fever was first introduced. Both these nurses had undergone the routine course of inoculation less than two years previous to the time of their being infected. The cases go to prove that, while a measure of protection can undoubtedly be conferred by inoculation, there is need for the strict observance of the prescribed nursing technique when dealing with these cases.

The practice, started in 1930, of subjecting all nurses and members of the domestic staff to an intradermal tuberculin test to determine their susceptibility to tuberculosis, has been continued in the past year. In addition, an X-Ray photograph of the chest of each individual is taken and filed. Should any condition at all suspicious of tuberculosis be discovered, the affected person is not employed in the sanatorium pavilions.

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.

The wards of both hospitals, however, were utilised to accommodate convalescent cases of scarlet fever. These wards were in use from January to June to cope with the scarlet fever epidemic of the winter of 1933-34. They had to be reopened in October, 1934, for scarlet fever convalescents, in order to release more accommodation at the City Hospital, Walker Gate, for the rapidly increasing number of diphtheria cases. Temporary nurses and domestics were engaged to staff the hospital.

E. F. Dawson-Walker, M.D.,

Deputy Medical Superintendent.

City Hospital for Infectious Diseases,
Newcastle upon Tyne,
3rd July, 1935.

DISINFECTION, Etc.

11,214 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, 759 houses, including 875 rooms, were similarly disinfected. 986 visits were made, and disinfection was also carried out in 286 special cases.

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

ARTICLES FROM CITY.		ARTICLES—HOSPITAL PROPERTY.	
1934	1933	1934	1933
32,017	30,534	17,049	14,900

8,340 articles were also disinfected at the Smallpox Hospital.

The staff have thus dealt with 57,406 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—1933.

FROM	FOR INFECTIOUS DISEASES.	FOR PHTHISIS.
	FLUID (½ pint tins.)	FLUID (½ pints.)
Health Department	70	...
Tuberculosis Dispensary	...	640
Corporation Yard, Benwell	30	...
TOTAL	100	640

BACTERIOLOGICAL INVESTIGATIONS, 1934.

The following is a report on the bacteriological examinations carried out on behalf of the Health Department of the Newcastle Corporation, at the Public Health Laboratory (University of Durham College of Medicine), Armstrong College, Newcastle upon Tyne.

A total of 9,737 specimens were submitted for examination. The nature of the investigations and the results obtained are given under the various sections as follows :—

BACTERIOLOGICAL EXAMINATIONS :—

	Diphtheria.			Phthisis.			Swabs for Haemolytic Streptococci.		
	Total.	Positive.	Negative.	Total.	Positive.	Negative.	Total.	Positive.	Negative.
No. of Examinations ...	3,191	316	2,875	548	67	481	31	15	16
Percentage positive ...		9·9			12·2			48·4	

AGGLUTINATION REACTIONS :—

	Agglutination Tests for the Enteric Fevers.			Agglutination Tests against Brucella Abortus and Brucella Melitensis.		
	Total.	Positive.	Negative.	Total.	Positive.	Negative.
No. of Examinations ...	114	*58	56	9	1	8

* Of these positive results :—
30 agglutinated B. typhosus, "H"
2 ,, B. paratyphosus A. "H"
26 ,, B. paratyphosus B. "H"

The following agglutinations were also obtained :—

B. Typhosus "O".....from 3 specimens.
B. Paratyphosus B. "O" .....from 1 specimen.

MILK EXAMINATIONS :—

1. For tubercle bacilli by animal inoculation :—

Total.	Found.	Not found.	Percentage positive.
380	10	370	2·6

2. Bacterial content of organisms other than the tubercle bacillus (the colon bacillus being taken as the indicator) :—

Colon bacilli not found in 1.0 cc.	or less	54	
,, ,, found in 1·0 cc.	but not in less	26	
,, ,, ,, in 0·1 cc.	,, ...	26	124
,, ,, ,, in 0·01 cc.	,, ...	18	
,, ,, ,, in 0·001 cc.	,, ...	12	
,, ,, ,, in 0·0001 cc.	,, ...	9	31
,, ,, ,, in 0·00001 cc.	,, ...	10	
			155

In addition to the colon bacillus indicator as mentioned above, a total estimation of the number of organisms present was carried out on all the samples submitted during the year, and taking 200,000 organisms per cc. as the standard for Grade "A" milk—

105	samples were below 200,000 per cc. and
50	samples were above 200,000 per cc.
155	

3. 286 samples of "Certified" and Graded Milk were examined during the year in accordance with the scheme of the Ministry of Health under the Milk and Dairies (Amendment) Act, 1922, and Milk (Special Designations) Order, 1923.

The following results were obtained :—

	Total.	Satisfied the Test.	Failed to satisfy the Test.
"Certified" Milk	58	48	10
Grade "A" Milk (T.T.)	156	133	23
Grade "A" Milk	59	49	10
Pasteurised Milk	13	11	2
	286	241	45

WATER EXAMINATIONS :—

(i) *Routine Samples.*

Class I.	(Colon bacilli not found in 100 cc. or less)	99
Class II.	(,, ,, found in 100 cc. but not in less)	57
Class III.	(,, ,, found in 10 cc. but not in less)	25
Class IV.	(,, ,, found in 1 cc. but not in less)	3
		184

(ii) During the months of August and September, 30 samples of water were examined from the several Corporation Swimming Baths in the City, and the following is a summary of the results obtained :—

Colon bacilli	not found in 100 cc. or less	15
,, ,,	found in 100 cc., but not in less	8
,, ,,	found in 10 cc., but not in less	5
,, ,,	found in 1 cc., but not in less	2
		30

(iii) In addition to the above, the undermentioned samples of water were examined and detailed results of the examinations were furnished at the time :—

From Barrasford Sanatorium	2

VENEREAL DISEASES :—

	Serological reactions.	Microscopical examinations.	Total.
From Treatment Centre.....	1,260	2	1,262
From Private Practitioners	1,555	166	1,721
TOTAL	2,815	168	2,983

OTHER EXAMINATIONS :—

(*a*) **Diphtheria.**—In addition to the daily routine examinations, typing according to the types of Anderson, McLeod and others and virulence tests either (1) subcutaneous, or (2) intradermal, have been continued on similar lines to the previous year, and the following results were obtained during the year 1934.

Diphtheria types.				B. Hofmanni.	Saccharose fermenters.	No diphtheria bacilli isolated.	Total.
Gravis.	Mitis.	Intermedius.	Atypical.				
119	136	169	46	30	9	59	568

VIRULENCE TESTS.

Intradermal.		Subcutaneous.	
Positive.	Negative.	Virulent.	Non-Virulent.
400	51	21	8
451		29	

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

From the City Infectious Diseases Hospital.....	236	specimens.
From the City Health Department.....	9	,,
From the Newcastle General Hospital	14	,,
	259	,,

In this total of 259 specimens,

87 were positive, and
172 were negative.

Typhoid bacilli " H " being isolated.....	26	times.
B. paratyphoid B. " H " being isolated.....	61	,,

Other organisms isolated were :—

B. Morgan No. 1	22	,,
B. paracolon	19	,,
Late lactose fermenting bacilli	8	,,
B. proteus	3	,,

The following specimens of urine were received and examined for organisms of the enteric group :—

From the City Infectious Diseases Hospital.....	109	specimens.
From the City Health Department.....	1	,,
	110	

The following results were obtained, all from the City Hospital :—

B. Typhosus " H "..... isolated 6 times.
B. Paratyphoid B. " H " ..... ,, 14 ,,
B. Dysenteriæ Flexner W. was also isolated twice from two Paratyphoid cases (probably contaminated specimens).

(*c*) **Bacillary Dysentery and Food-poisoning group.**—The examination of fæces for dysentery bacilli and organisms of the food-poisoning group from suspected cases has been continued throughout the year, and the following results were obtained :—

	From City Infectious Diseases Hospital.	From City Health Department.	From Newcastle General Hospital.	Total Specimens.
Total	202	31	56	289
Positive	69	8	18	95
Negative.....	133	23	38	194
Shiga bacillus.....	1	...	...	1
Flexner bacillus	53	6	13	72
Sonne Bacillus.....	5	1	3	9
Newcastle Dysentery bacillus	6	...	...	6
Salmonella Group	4	1	2	7
	69	8	18	95

The following is a list of the types of Flexner bacilli obtained :

	W.	X.	Y.	Z.	XY.	Total.
From—						
City Infectious Diseases Hospital	25	5	1	21	1	53
City Health Department	3	...	...	3	...	6
Newcastle General Hospital	4	2	...	5	2	13
	32	7	1	29	3	72

(*d*) **Cerebro-spinal fluids.**

(i) A total of 38 C.S. fluids were received for bacteriological examination ; detailed results were furnished and the following is a general summary of the results :—

Tubercular	2
Meningococcal (Types I, 3 ; II, 1 ; III, 2 ; inagglutinable, 1)	7

Other organisms.

Pneumococcal	3
Streptococcal	1
Mixed infections	2
Others	3
Result inconclusive or negative	20

(ii) 21 specimens of Meningococcal fluids were also received for typing of Meningococci, and the results were as follows :—

Type I, 7 ; Type II, 2 ; Type III, 5 ; inagglutinable, 1.
No Meningococci grown in 6.

(*e*) **Miscellaneous.** — The following specimens were also examined and reports furnished :—

3 cultural examinations of blood.
2 specimens of urine for organisms.
2 specimens of various organs from post-mortem examinations.
2 samples of water for enteric group organisms.
2 samples of necrotic bone for pathogenic organisms.
5 various speciemens from suspected food-poisoning.
1 piece of membrane from throat for diphtheria bacilli.

Total 17

(*f*) **Measles serum.**

3 batches, supplied during the year.

(g) **Newcastle General Hospital** :—

A number of bacteriological examinations for the above-named hospital have again been carried out in this laboratory during the year 1934, and the following is a summary of the various specimens received :—

Character of examination.	
Autogenous vaccines	5
Blood cultures for organisms	6
Cerebro-spinal fluids	5
Fæces for tubercle bacilli	5
Gland for glanders	1
Pus from various sources	1
Sputum for streptothrix	1
Swabs from various sources	2
Urine for organisms	8
Urine for animal inoculation	8
Total	42

SEROLOGIGAL TYPES OF HAEMOLYTIC STREPTOCOCCI.

(Scarlet Fever).

As a result of arrangement with the Ministry of Health Pathological Laboratory, 100 swabs from cases of Scarlet Fever were examined for Haemolytic Streptococci, and the various strains typed serologically in accordance with the typing of Dr. F. Griffith.

Dr. V. D. Allison, who carried out this work, furnished a detailed report to Dr. Charles in September, 1934, the strains isolated being distributed among 12 different types.

The following table gives a complete summary of the various examinations, including the year 1933, for comparison :—

Nature of investigation.	1933.	1934.
Throat swabs for B. Diphtheria	1,265	3,191
Sputa for Tubercle bacilli	534	548
Swabs for Hæmolytic Streptococci	54	31
Agglutination tests :—		
Against the Enteric Fevers	92	114
Against Brucella Abortus	8	9
Milk examinations :—		
For the Tubercle bacillus	388	380
For Bacillus Coli and Count	156	155
Graded Milk	234	286
Water examination :—		
For Bacillus Coli	192	184
For complete Examination	37	32
Venereal Diseases	2,681	2,983
Other Examinations :—		
(*a*) Diphtheria—Type of bacilli	70	568
Virulence tests— (i) intradermal	25	451
(ii) subcutaneous	33	29
(*b*) Enteric Fevers— (i) Fæces	188	259
(ii) Urine	2	110
(*c*) Bacillary Dysentery and Food-poisoning group	340	289
(*d*) Meningitis (various) C.S. Fluid	31	59
(*e*) Miscellaneous	7	17
(*g*) Newcastle General Hospital	53	42
Total	6,393	9,737

(Signed) S. H. WARREN, M.R.C.S. (Eng.), D.P.H. (Lond.),

Director, Public Health Laboratory

University of Durham College of Medicine,

Newcastle upon Tyne,

17*th April*, 1935.

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

IV.—TUBERCULOSIS.

TUBERCULOSIS DISPENSARY,
BARRASFORD SANATORIUM.

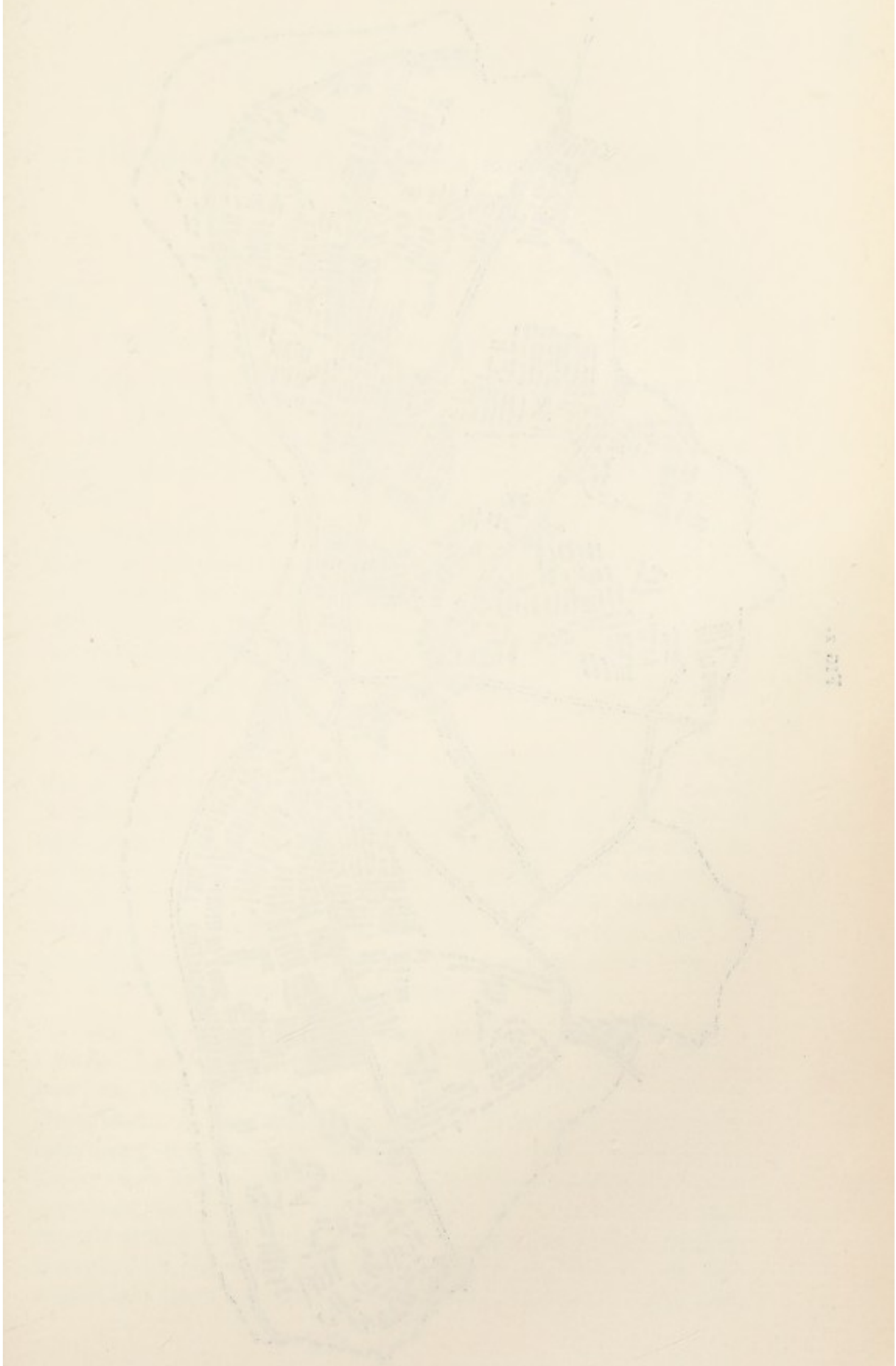
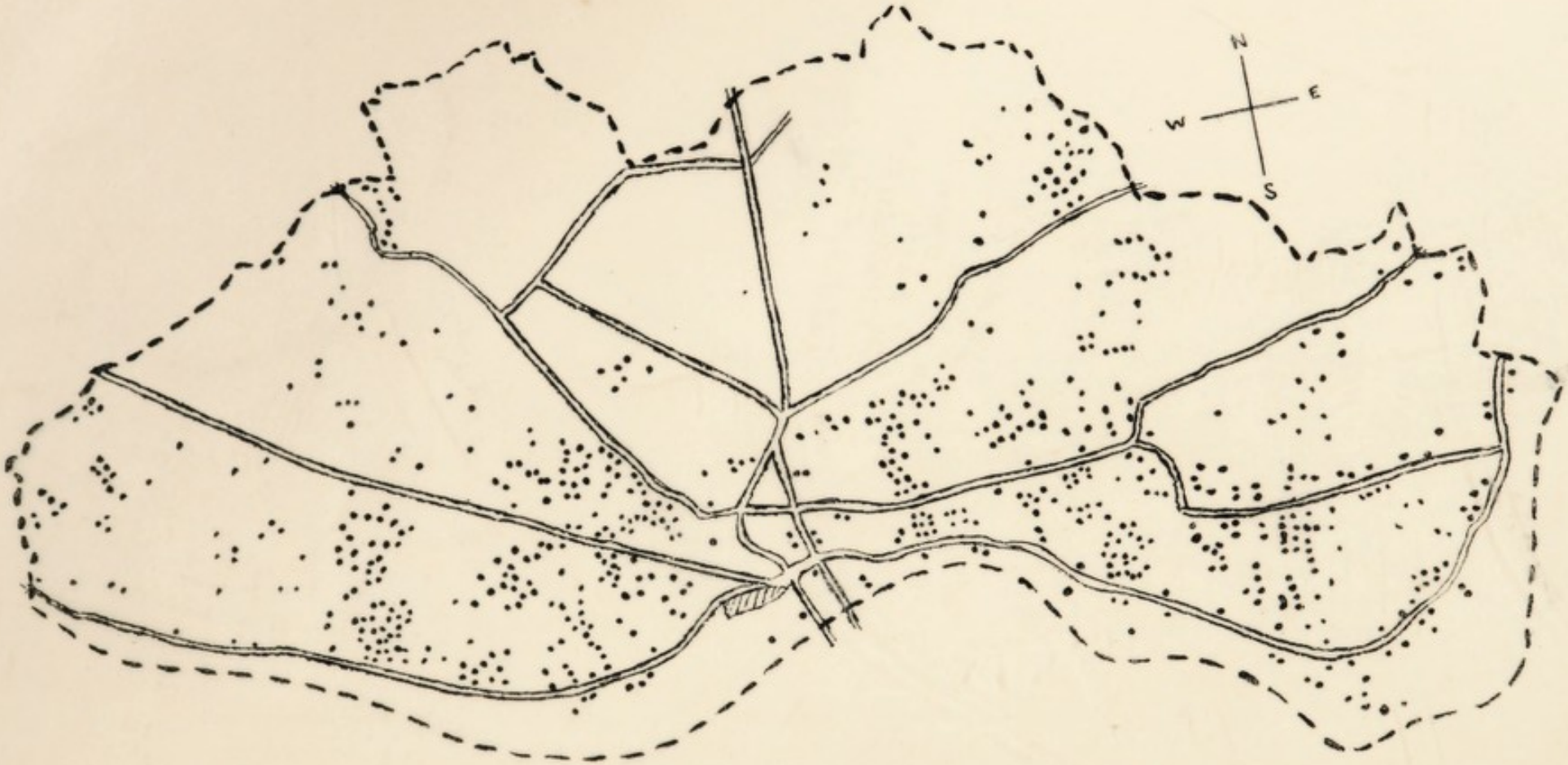


FIG 2.

Fig. 1.

FIG 2.
FIG 1.

FIG 1.



TUBERCULOSIS.

Report of the Tuberculosis Medical Officer.

To the Medical Officer of Health.

Sir,

I beg to submit, herewith, my report for the year 1934.

The Tuberculosis Dispensary. 403 clinics have been held at the Dispensary at each of which an average of 18 patients was seen, of these 5 were stripped and carefully physically examined, and in addition many minor examinations were made and recorded.

The clinics were held upon weekday mornings, Tuesday and Thursday afternoons and Wednesday evenings, the latter time was intended for people working. During the summer months, when patients' attendances were smaller, it was possible to discontinue one afternoon clinic per week and devote this time to domiciliary visiting, with the result that 225 visits were made during the year as against 44 in 1933.

At the end of the year a total of 1,682 cases of tuberculosis was on the Dispensary register, of these 710 had tubercle bacilli in their sputum. An outline plan of the City, figure 1 printed upon transparent paper, illustrates by means of dots the location of the residences of the latter. By examining this plan superimposed upon figure 2, which is of the residential property of the City, their distribution can be seen. Most of them occur in congested areas and poor property, but there are many living in the older Corporation Housing Estates.

The rehousing of tuberculous patients living under overcrowded conditions at home is very desirable. For some time now the closest co-operation has existed between the Housing Department of the Corporation and the Tuberculosis Dispensary, and many families have been moved into better dwellings or Corporation houses. Unfortunately, financial considerations have prevented this in many instances. At the end of 1934 I had records of 378 tuberculous persons living in Corporation Housing Estates. Of these 135 were notified from the Estates, 89 had moved into them from clearance areas, and 154 had moved in from

non-clearance areas. The exact details of these patients are set out in the table below :—

	Housing Estate Notifications.	Transferred from Non-Clearance Areas.	Transferred from Clearance Areas.	Totals.
Sputum Positive Cases...	47	64	36	147
Sputum Negative Cases	88	90	53	231
Totals	135	154	89	378

The rehousing of families in good dwellings plays a large part in the campaign against tuberculosis, but it is apparent that when 135 cases have been notified from good Corporation Estate Houses during the last few years this is only one factor in a very complex and difficult problem.

Contacts.—The health of persons, who have been or are living with a case of tuberculosis is receiving more and more attention. These persons are called "Contacts." A record has always been kept of these and between 1926 and 1930, inclusive, 1,337 were examined at the Dispensary, 511 were found to be tuberculous and the remaining 826 were discontinued from attending the Dispensary because they had not tuberculosis. The details of those discontinued are set out in Table 2.

1926.		1927.		1928.		1929.		1930.		Totals.	
Contact of a Case where Sputum was											
+	—	+	—	+	—	+	—	+	—	+	—
96	39	91	35	104	51	135	56	151	68	577	249

Table 3 gives the numbers of any of the above who returned in later years and were then found to be tuberculous.

Year Discontinued.

1926.	1927.	1928.	1929.	1930.	Totals.
8	5	6	8	12	39

It will be seen that 39 out of 826 (577+249), or 4.7 per cent., of these discontinued contacts later developed tuberculosis. These 39 patients returned to the Dispensary not because they had been kept under close and constant supervision, but because they were told to do so if their health caused them any anxiety, and they were, in most cases, sent back by their general practitioner. The co-operation of the general practitioner is very important in this work.

A new departure has been made with regard to contacts at the Sanatorium Pavilions, City Hospital, Walker Gate. Here relations and friends visit patients on Wednesdays and Saturdays. I am now seeing some of the visitors at the Hospital every Wednesday afternoon and impressing upon them the importance of being examined if they are contacts, and by this means I have been able to examine and x-ray some every week. This is, as I have mentioned, a new method of attacking the problem and further particulars and statistics will be given in later reports.

Attendances at the Dispensary.—2,297 persons attended the Dispensary during the year, registering 7,354 attendances, and 1,966 complete physical examinations were made. 1,320 cases attended for the first time; of these 675 were sent by general practitioners, 127 by the Newcastle-upon-Tyne Dispensary, 28 by the Royal Victoria Infirmary, 19 by the School Medical Officer, 61 by the staff of the Newcastle General Hospital, 9 by the Maternity and Child Welfare Centres, 72 came of their own accord under special circumstances, 150 were sent by the Tuberculosis Dispensary Medical Staff and smaller numbers from other sources.

Of the 1,320 new cases, 348 had lived with patients known to have tubercle bacilli in their sputum, 91 with tuberculous patients who had not tubercle bacilli in their sputum, and 56 were contacts of persons who had died from pulmonary tuberculosis.

Table 4 gives details of the New Cases examined (excluding contacts), and Table 5 gives details of the recommended contacts as per Memo. 37/T (revised). I am pleased to report that the latter figures have increased from 177 in 1933.

New Cases Examined (excluding Contacts), during the Year 1934.
(First Schedule, Part A., Memo. 37/T., Revised).

Diagnosis.	Males.		Females.		Totals.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis	162	10	112	15	299
Non-Pulmonary Tuberculosis ...	14	25	16	14	69
Diagnosis not completed.....	14	14	17	19	64
Non-Tuberculous	196	87	189	61	533
Totals	386	136	334	109	965

CONTACTS EXAMINED DURING THE YEAR 1934.
(First Schedule, Part B., Memo. 37/T., Revised).

Diagnosis.	Males.		Females.		Totals.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis	25	11	32	9	77
Non-Pulmonary Tuberculosis...	...	2	1	1	4
Diagnosis not completed.....	2	9	7	13	31
Non-Tuberculous	52	59	76	56	243
TOTALS	79	81	116	79	355

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

CASES DISCONTINUED IN PREVIOUS YEARS, AND RETURNED DURING THE YEAR 1934. (INCLUDED IN PREVIOUS TABLES 4 AND 5.)

Diagnosis.	Males.		Females.		Totals.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis	19	2	14	2	37
Non-Pulmonary Tuberculosis ...	1	4	2	...	7
Diagnosis not completed.....	3	2	8	7	20
Non-Tuberculous	61	23	65	18	167
TOTALS	84	31	89	27	231

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

	Number of Patients and Cases who attended the Dispensary (or were visited in their homes), during the Year 1934.			
	Total.	Males.	Females.	Under 15 years of age.
"Sputum Positive Cases"...	811	491	296	24
"Negative Cases"	1,711	558	527	626
TOTALS.....	2,522	1,049	823	650

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

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

ANNUAL RETURN SHOWING IN SUMMARY FORM (a) THE CONDITION AT THE END OF 1934 OF ALL PATIENTS REMAINING ON THE DISPENSARY REGISTER; AND (b) THE REASONS FOR THE REMOVAL OF ALL CASES WRITTEN OFF THE REGISTER. THE TABLE IS ARRANGED ACCORDING TO THE YEARS IN WHICH THE PATIENTS WERE FIRST ENTERED ON THE DISPENSARY REGISTER AS DEFINITE CASES OF PULMONARY TUBERCULOSIS, AND THEIR CLASSIFICATION AT THAT TIME.

Condition at the time of the last Record made during the year to which the Return relates.	Previous to 1926.					1926.					1927.				
		Class T.B. plus.					Class T.B. plus.					Class T.B. plus.			
	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).
(a) Remaining on Dispensary Register on 31st December. *Disease Arrested*—															
Adults—Male	3	6	6	1	13	1	...	2	...	2	3	1	...	...	1
Female	1	2	8	2	12	1	...	...	...	...	...	...	2	...	2
Children	1	...	...	...	...	1	1	...	...	1	2	...	...	...	...
Disease not Arrested—															
Adults—Male	8	11	26	13	50	1	2	1	1	4	1	2	5	3	10
Female	4	5	12	2	19	2	...	6	2	8	1	...	...	1	1
Children	6	2	3	2	7	...	...	1	...	1	2	...	1	...	1
Total on Dispensary Register at 31st December	23	26	55	20	101	6	3	10	3	16	9	3	8	4	15
(b) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*—															
Adults—Male	58	20	14	7	91	2	...	6	...	6	4	...	1	...	1
Female	28	8	17	1	52	4	...	2	...	2	5	...	1	...	1
Children	23	...	2	...	4	4	...	...	...	...	3	...	1	...	1
Lost sight of, or otherwise removed from Dispensary Register	26	14	28	7	135	15	4	17	3	24	27	1	14	5	20
DEAD—Adults—Male	23	26	48	28	270	9	3	49	40	92	13	2	36	51	89
Female	13	6	13	12	133	6	4	33	50	87	12	1	27	30	58
Children	2	1	11	2	14	4	...	2	8	10	...	...	...	7	7
Total written off Dispensary Register	173	75	133	57	699	44	11	109	101	221	64	4	80	93	177
GRAND TOTALS	196	101	188	77	800	50	14	119	104	237	73	7	88	97	192

Condition at the time of the last Record made during the year to which the Return relates.	1928.					1929.					1930.				
		Class T.B. plus.					Class T.B. plus.					Class T.B. plus.			
	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).
(a) Remaining on Dispensary Register on 31st December. *Disease Arrested*—															
Adults—Male	3	...	4	1	5	5	2	2	...	4	4	1	1	...	2
Female	...	...	1	...	1	2	...	2	...	2	9	...	2	...	2
Children	...	...	1	...	1	4	...	...	...	...	8	...	...	...	...
Disease not Arrested—															
Adults—Male	1	1	18	...	19	11	...	23	1	24	17	3	16	13	32
Female	2	1	6	...	7	7	2	11	3	16	9	1	20	3	24
Children	2	...	1	...	1	7	...	3	...	3	6	...	2	1	3
Total on Dispensary Register at 31st December	8	2	31	1	34	36	4	41	4	49	53	5	41	17	63
(b) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*—															
Adults—Male	6	...	2	...	2	5	...	2	2	4	...	...	...	...	...
Female	3	...	...	...	...	4	...	1	1	2	...	...	...	...	...
Children	1	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Lost sight of, or otherwise removed from Dispensary Register	15	2	12	3	17	24	1	17	6	24	29	1	14	10	25
DEAD—Adults—Male	7	1	62	34	97	15	...	38	50	88	16	1	48	68	117
Female	2	2	26	26	54	10	2	44	39	85	11	...	25	36	61
Children	2	...	5	2	7	4	...	8	3	11	1	1	1	5	7
Total written off Dispensary Register	36	5	107	65	177	65	3	110	101	214	57	3	88	119	210
GRAND TOTALS	44	7	138	66	211	101	7	151	105	263	110	8	129	136	273

Condition at the time of the last Record made during the year to which the Return relates.	1931.					1932.					1933.				
		Class T.B. plus.					Class T.B. plus.					Class T.B. plus.			
	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).
(a) Remaining on Dispensary Register on 31st December. *Disease Arrested*—															
Adults—Male	4	...	1	1	2	2	...	...	...	...	...	...	...	...	...
Female	2	1	...	...	1	6	...	...	...	...	...	...	...	...	...
Children	5	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Disease not Arrested—															
Adults—Male	14	2	26	19	47	44	...	26	23	49	34	2	32	36	70
Female	13	...	11	4	15	22	...	14	15	29	27	...	26	21	47
Children	10	...	5	...	5	11	...	1	3	4	22	...	2	1	3
Total on Dispensary Register at 31st December	48	3	43	24	70	86	...	41	41	82	83	2	60	58	120
(b) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*—															
Adults—Male	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Children	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lost sight of, or otherwise removed from Dispensary Register	25	...	7	9	16	15	...	8	13	21	6	...	4	5	9
DEAD—Adults—Male	21	...	26	80	106	9	...	13	48	61	6	...	5	48	53
Female	10	...	23	51	74	8	...	18	48	66	3	...	8	43	51
Children	5	...	5	3	8	4	...	1	7	8	2	...	2	5	7
Total written off Dispensary Register	61	...	61	143	204	36	...	40	116	156	17	...	19	101	120
GRAND TOTALS	109	3	104	167	274	122	...	81	157	238	100	2	79	159	240

Condition at the time of the last Record made during the year to which the Return relates.	1934.				
		Class T.B. plus.			
	Class T.B. minus.	Group 1.	Group 2.	Group 3.	Total (Class T.B. plus).
(a) Remaining on Dispensary Register on 31st December. *Disease Arrested*—					
Adults—Male	...	...	...	...	...
Female	...	...	...	...	...
Children	...	...	...	...	...
Disease not Arrested—					
Adults—Male	56	1	28	63	92
Female	50	...	26	35	61
Children	41	...	1	6	7
Total on Dispensary Register at 31st December	147	1	55	104	160
(b) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*—					
Adults—Male	...	...	...	...	...
Female	...	...	...	...	...
Children	...	...	...	...	...
Lost sight of, or otherwise removed from Dispensary Register	3	...	1	1	2
DEAD—Adults—Male	3	...	2	36	38
Female	9	...	4	20	24
Children	2	...	1	1	2
Total written off Dispensary Register	17	...	8	58	66
GRAND TOTALS	164	1	63	162	226

MEMO. 37/T. REVISED. SCHEDULE III.—*Continued.* NON-PULMONARY TUBERCULOSIS.

ANNUAL RETURN SHOWING IN SUMMARY FORM (*a*) THE CONDITION AT THE END OF 1934 OF ALL PATIENTS REMAINING ON THE DISPENSARY REGISTER; AND (*b*) THE REASONS FOR THE REMOVAL OF ALL CASES WRITTEN OFF THE REGISTER.

Condition at the time of the last Record made during the year to which the Return relates.	Previous to 1926.					1926.					1927.					1928.				
	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
(*a*) Remaining on Dispensary Register on 31st December. *Disease Arrested*— Adults—Male	...	...	...	1	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Female	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Children	1	3	...	2	6	1	3	1	...	5	...	...	1	...	1	1	...	...	2	3
Disease not Arrested— Adults—Male	4	...	3	1	8	...	...	1	...	1	...	...	...	...	...	4	...	...	2	6
Female	1	...	1	...	2	...	...	...	...	...	2	1	...	...	3	...	...	...	...	...
Children	14	1	5	4	24	3	1	...	...	4	6	...	...	3	9	4	2	1	1	8
Total on Dispensary Register at 31st December	20	4	10	9	43	5	4	2	...	11	8	1	1	3	13	9	2	1	5	17
Transferred to Pulmonary	4	1	...	4	9	...	1	...	1	2	1	1	...	3	5	1	1	1	1	4
(*b*) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*— Adults—Male	2	...	...	3	21	2	2	1	...	5	1	...	...	3	4	1	1	1	1	4
Female	3	1	...	2	20	...	...	...	4	4	1	...	...	3	4	...	1	...	...	1
Children	8	4	2	16	61	7	3	1	6	17	7	5	...	6	18	4	1	...	6	11
Lost sight of, or otherwise removed from Dispensary Register	18	1	3	19	41	15	3	2	22	42	5	8	2	27	42	11	5	3	25	44
DEAD—Adults—Male	1	1	2	2	16	3	...	1	1	2	2	1	3	2	8	...	2	...	...	2
Female	...	...	...	...	7	...	1	...	...	1	...	1	1	...	2	...	2	2	...	4
Children	3	...	1	3	7	2	2	1	...	5	...	1	1	...	2	3	3	...	...	6
Total written off Dispensary Register	35	7	8	45	173	29	11	6	33	79	16	16	7	41	80	19	15	6	32	72
GRAND TOTALS of (*a*) and (*b*) (excluding those transferred to Pulmonary)	55	11	18	54	216	34	15	8	33	90	24	17	8	44	93	28	17	7	37	89

Condition at the time of the last Record made during the year to which the Return relates.	1929.					1930.					1931.				
	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
(*a*) Remaining on Dispensary Register on 31st December. *Disease Arrested*— Adults—Male	...	...	...	...	...	1	...	1	...	2	1	...	...	1	2
Female	1	...	...	...	1	...	...	...	1	1	...	...	1	...	1
Children	1	3	...	2	6	4	9	1	4	18	3	1	...	7	11
Disease not Arrested— Adults—Male	...	...	...	2	2	5	...	1	...	6	2	1	1	2	6
Female	1	...	...	...	1	5	1	1	1	8	1	2	...	...	3
Children	13	6	...	2	21	7	4	2	5	18	12	10	4	18	44
Total on Dispensary Register at 31st December	16	9	...	6	31	22	14	6	11	53	19	14	6	28	67
Transferred to Pulmonary	...	3	...	...	3	2	...	2	...	4	2	1	2	1	6
(*b*) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*— Adults—Male	1	...	...	...	1	2	...	...	1	3	...	...	...	...	...
Female	...	2	...	2	4	1	...	...	3	4	...	...	...	1	1
Children	2	1	...	4	7	2	2	...	1	5	...	...	...	1	1
Lost sight of, or otherwise removed from Dispensary Register	15	5	3	17	40	10	9	2	16	37	6	4	5	9	24
DEAD—Adults—Male	1	...	1	1	3	2	1	2	...	5	3	...	1	...	4
Female	1	3	1	1	6	...	1	1	1	3	1	4	1	...	6
Children	...	1	...	...	1	4	4	1	1	10	...	3	3	2	8
Total written off Dispensary Register	20	12	5	25	62	21	17	6	23	67	10	11	10	13	44
GRAND TOTALS of (*a*) and (*b*) (excluding those transferred to Pulmonary)	36	21	5	31	93	43	31	12	34	120	29	25	16	41	111

Condition at the time of the last Record made during the year to which the Return relates.	1932.					1933.					1934.				
	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
(*a*) Remaining on Dispensary Register on 31st December. *Disease Arrested*— Adults—Male	1	1	...	...	2	...	...	...	...	...	1	...	...	...	1
Female	2	2	1	3	8	...	...	...	...	...	...	...	...	1	1
Children	2	1	...	8	11	1	...	1	1	3	...	...	...	...	...
Disease not Arrested— Adults—Male	5	3	4	3	15	12	4	...	2	18	5	1	3	4	13
Female	3	1	...	1	5	4	4	1	5	14	3	6	1	6	16
Children	12	9	1	11	33	19	14	3	17	53	8	17	2	18	45
Total on Dispensary Register at 31st December	25	17	6	26	74	36	22	5	25	88	17	24	6	29	76
Transferred to Pulmonary	...	1	...	1	2	...	1	1	...	2	...	...	...	...	...
(*b*) Not now on Dispensary Register and reasons for removal therefrom. *Discharged as Recovered*— Adults—Male	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Female	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Children	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lost sight of, or otherwise removed from Dispensary Register	8	9	4	9	30	5	3	2	5	15	1	...	...	1	2
DEAD—Adults—Male	5	...	3	...	8	4	1	...	1	6	...	...	1	...	1
Female	1	...	1	...	2	2	2	1	...	5	...	...	...	...	...
Children	1	4	1	1	7	...	1	4	...	5	1	...	1	...	2
Total written off Dispensary Register	15	13	9	10	47	11	7	7	6	31	2	...	2	1	5
GRAND TOTALS of (*a*) and (*b*) (excluding those transferred to Pulmonary)	40	30	15	36	121	47	29	12	31	119	19	24	8	30	81

CASES AND PATIENTS WRITTEN OFF THE DISPENSARY REGISTER DURING THE YEAR 1934.

(First Schedule, Part A., Memo. 37/T., Revised).

DIAGNOSIS.	MALES.		FEMALES.		TOTALS.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis, Recovered	32	1	19	...	52
Non-Pulm. Tuberculosis, Recovered	11	5	10	4	30
Non-Tuberculous.....	259	154	272	138	823
Left district, lost sight of, or will not attend Dispensary ...	56	8	48	11	123
TOTALS	358	168	349	153	1,028

At the end of the year the number of patients and cases on the Dispensary register was 1,780. These are tabulated below :—

NUMBER OF CASES AND PATIENTS ON DISPENSARY REGISTER AT END OF YEAR 1934.

(First Schedule, Part A., Memo. 37/T., Revised).

DIAGNOSIS.	MALES.		FEMALES.		TOTAL.
	Over 15 yrs.	Under 15 yrs.	Over 15 yrs.	Under 15 yrs.	
Pulmonary Tuberculosis (T.B. in Sputum)	434	6	260	10	710
Pulmonary Tuberculosis (no T.B. in Sputum)	228	50	172	49	499
Non-Pulmonary Tuberculosis ...	127	133	106	107	473
Diagnosis not completed.....	17	24	24	33	98
TOTALS	806	213	562	199	1,780

The two tables (pages 116A and 116B) are self-explanatory and are required by the Minister of Health under Memo. 37/T (revised).

Domiciliary Visits.—During the year I made 225 domiciliary visits to 148 patients and 77 contacts, of these 45 were examined.

Relations with other Departments and Hospitals.—The closest co-operation has existed between the Tuberculosis Dispensary and all the various departments of the Health Department. Constant interchange of information and patients has taken place between

the School Medical Service and the Tuberculosis Dispensary. The relation between it and the other Medical Services in the City has, as formerly, been most satisfactory. Special mention should be made of the work of the Voluntary Tuberculosis Care Council.

Voluntary Tuberculosis Care Council.—In previous reports brief mention only has been made of this because the Tuberculosis Care Council itself issues an Annual Report. This can be obtained from the Secretary, Mr. F. Girling, 17, Ellison Place, Newcastle-upon-Tyne. During 1934, 187 patients were referred to the Voluntary Tuberculosis Care Council for consideration. The assistance given was as follows :—

	Number of Patients.
Loan of bed and bedding	58
Total number of beds and bedding on loan	192
Milk	130
Outfits of clothing	48
Eggs	100
Surgical appliances	9
Other assistance	44

Nurses' Visits to Patients.—685 new patients were seen and 9,913 subsequent visits made. A total of 1,725 were upon their lists on December 31st, 1934, comprising of 772 males, 557 females and 396 children. As there are four nurses constantly visiting in the City, each has approximately 430 patients upon her books. The infectious cases of pulmonary tuberculosis were visited once a month. The others at longer intervals.

X-ray Examinations.—If the diagnosis of a case is uncertain an X-ray examination gives valuable assistance. This is carried out either at the Sanatorium Pavilions, City Hospital, Walker Gate, or at Newcastle General Hospital. During the year a total of 1,072 films were taken in connection with Dispensary patients, 669 at the City Hospital, Walker Gate, and 403 at Newcastle General Hospital.

Sputum Examinations.—An effort is made to examine the sputum from every possible case and in many instances repeated examinations are necessary. 1,083 specimens of sputum were examined at the Dispensary, of these 260 contained tubercle bacilli. In addition 550 sputum examinations were carried out at the University of Durham Bacteriological Laboratory in the City, to which medical practitioners may send specimens. 67 of these were positive.

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

Lectures.—During the year I gave six lectures in the City, three under the auspices of the Industrial Health Education Society and three to private Associations. In four instances I made use of a set of lantern slides, which I have, illustrating the work of this Department.

Notifications.—646 notifications were received during the year, but some were duplicates, so that the total number of new cases was 604, of whom 464 were certified to be suffering from "pulmonary" and 140 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, 1934.

(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.....	3	2	13	12	23	34	54	50	45	21	8	265	284
Females	2	4	12	14	30	37	51	22	15	12	...	199	211
Non-Pulmonary—													
Males.....	1	13	17	18	10	7	6	5	2	1	1	81	89
Females	1	3	15	13	5	7	5	4	3	2	1	59	62
TOTALS	7	22	57	57	68	85	116	81	65	36	10	604	646

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 604 cases notified, 482 attended the Dispensary and 39 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 44 patients in this category, and 32 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.

With reference to the 7 cases not accounted for in the above, some were living in institutions and others did not wish 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 1934. 333 of the 464 patients notified as suffering from pulmonary tuberculosis were treated in beds belonging to, or controlled by the City Council, and 55 out of a total of 140 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 159 (equal to 26.3 per cent.) of all the new cases died in the same year as they were notified.

NOTIFICATIONS OF TUBERCULOSIS DURING 1934.

Part Affected.	Notifications.	Attended Dispensary.	Visited by Nurse but not attended Dispensary.	Received Institutional Treatment.					Died during the Year.
				Barrasford Sanatorium.	Sanatorium Pav. Walker Gate.	Stannington Sanatorium.	Newcastle Gen. Hosp.	Totals.	
Pulmonary—									
Male	265	225	14	47	139	5	...	191	74
Female.....	199	178	6	32	104	6	...	142	45
Non-Pulmonary--									
Male	81	44	10	...	...	8	26	34	23
Female.....	59	35	9	...	...	2	19	21	17
TOTALS	604	482	39	79	243	21	45	388	159

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 222 cases (36.7 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.....	692	538	1,230	292	237	529	1,759

Deaths.—There were 331 deaths from tuberculosis of Newcastle-upon-Tyne residents. 280 pulmonary and 51 non-pulmonary, giving a death rate per 1,000 population—

	Number of Deaths.	Death Rate per 1,000 Population.
Pulmonary Tuberculosis	280	0·97
Non-Pulmonary	51	0·18
All forms of Tuberculosis	331	1·15

Page 40A in the report of the Medical Officer of Health gives further particulars of deaths from tuberculosis.

86.8 per cent. of the pulmonary cases were known to the Dispensary staff, 234 having visited the Dispensary and an additional 9 having been attended in their homes by the visiting nurses.

33.3 per cent. of the " non-pulmonary " were attended at or from the Dispensary. This is much lower than the pulmonary cases; the main reason being that 37.3 per cent. of the non-pulmonary cases were not notified before death.

Of 280 deaths from pulmonary tuberculosis the diagnosis was verified bacteriologically in 214 instances, i.e., 76.4 per cent.

Seven other Dispensary patients who were known to be suffering from pulmonary tuberculosis, and in whose sputum

tubercle bacilli had been found, died during the year. The cause of death being registered as :—Suicide 2, accident 2, carcinoma of sigmoid 1, broncho-pneumonia 1, tuberculous meningitis 1.

Duration of Illness.—Whenever possible, in pulmonary cases, enquiry was made as to the length of time the deceased had been ill, and the average duration of illness was found to be 49.4 months. As in previous years, important differences were discovered when age and sex were considered, the figures being 57.0 months for adult males, 38.8 months for adult females and 35.2 months for those below 15 years of age (both sexes).

The period between notification and death was, as one would expect, longer in the adult males than in the adult females and children, but averaged 29.3 months for all cases.

28.6 per cent. of the patients had either not been notified prior to death (8.9 per cent.) or died within 3 months of notification (19.7 per cent.).

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

RETURN OF DEATHS FROM PULMONARY TUBERCULOSIS OCCURRING IN :—

	Deaths which occurred in these years.								
	Average for 1913–17.	Average for 1918–22.	Average for 1923–27.	Average for 1928–32.	1933	1934.			
						M.	F.	C.	Total.
Persons not notified	43	51	33	23	17	15	7	3	25
„ notified under 1 mth.	35	47	50	38	29	22	9	2	33
„ between 1 and 3 „	94	48	44	45	24	16	6	...	22
„ between 3 and 6 „	53	30	38	36	26	17	15	4	36
Total under 6 months ...	226	183	166	140	96	70	37	9	116
Persons notified between—									
6 and 12 months	47	46	40	36	31	16	14	2	32
„ 12 and 18 „ ...	28	21	25	22	27	8	9	1	18
„ 18 and 24 „ ...	15	15	17	17	17	7	7	1	15
„ 2 and 3 years.....	20	18	22	21	25	12	11	1	24
„ over 3 years	21	47	53	59	66	51	22	2	75
TOTALS	357	331	324	296	262	164	100	16	280

The figures for non-pulmonary forms of tuberculosis show that in 19 instances out of 51 deaths, the disease had not been notified prior to death ; 12 of the 25 fatal unnotified cases of pulmonary tuberculosis, and 15 of the 19 fatal unnotified cases of non-pulmonary tuberculosis, died in hospitals ; included in the 15 " other forms " were 7 cases of tuberculosis meningitis.

Family History.—In 94 instances amongst the 253 cases of pulmonary tuberculosis known to the Dispensary who had died during the year, i.e., in 37 per cent., there was a history that some near relation was suffering from, or had died of pulmonary tuberculosis. The figures were 33 per cent. for males and 44 per cent. for females.

House Accommodation.—The home conditions of the working classes are intimately associated with occupation and family history as predisposing to tuberculosis. The numbers of rooms in the dwellings occupied by the above 253 persons were as follows :—

Rooms in Dwelling.	1	2	3	4	More than 4	Common Lodging Houses.	Not Known.	Total.
Deaths	29	63	57	67	25	7	5	253

As regards the type of house occupied, 109 were flats, 76 tenements, 56 self-contained, 7 were common lodging houses, and in 5 cases the particulars were not known.

It is noteworthy that of the 243 patients suffering from pulmonary tuberculosis who attended the Dispensary and died in 1934, 220, or 90 per cent., had received institutional treatment, on one or more occasions. This is a high percentage and shows what a large proportion of the cases visiting the Dispensary avail themselves of the accommodation provided.

INSTITUTIONAL TREATMENT.

Approximately 76 beds were provided at Barrasford Sanatorium for Newcastle-upon-Tyne patients suffering from pulmonary tuberculosis and 136 hospital beds at the Sanatorium Pavilions, City Hospital for Infectious Diseases, Walker Gate ; 60 beds at Newcastle General Hospital for the treatment of non-pulmonary tuberculosis, and 30 beds at Stannington Sanatorium for children for both surgical and medical cases.

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

Sanatorium Pavilions, City Hospital, Walker Gate.—510 patients were admitted (307 males and 203 females) and included 52 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 1934.

		Sex.	In Institution on 1st January, 1934.	Admitted during the Year.	Discharged during the Year.	Died in Institution during the Year.	In Institution on 31st Dec., 1934.
Number of Patients.	Adults	M.	51	210	175	39	47
	Do. ...	F.	28	128	104	24	28
	Children...	M.	3	10	11	2	...
	Do. ...	F.	1	13	9	1	4
Observation Cases.	Adults	M.	6	71	48	16	13
	Do. ...	F.	8	46	42	6	6
	Children...	M.	...	16	14	1	1
	Do. ...	F.	1	16	11	3	3
TOTALS.....	...	...	98	510	414	92	102

N.B.—32 patients were re-admitted and are counted as 64 admissions.

Of the 141 patients discharged who had been under observation 98 were found to be suffering from tuberculosis. The total number of days of those who received treatment was 42,008 giving an average length of stay as 83 days.

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

	Males.	Females.	Total.
Improved	201	135	336
Without Improvement	47	31	78
Died in Hospital.....	58	34	92
TOTALS	306	200	506

Many of those discharged "improved" were fit for light work ; 48 were transferred to Barrasford Sanatorium and 4 to Stannington Sanatorium. 8 patients were sent to the Newcastle General Hospital for special treatment.

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

X-Ray Examinations.—During the year 1,147 thoracic films were taken. These included 669 Dispensary patients, 236 inmates of the Sanatorium Pavilions, 93 patients from the City Hospital for Infectious Diseases, 88 in connection with artificial pneumothorax treatment and 61 nurses and maids belonging to the staff of the Hospital. In addition, 1,040 routine screen examinations were made.

Artificial Pneumothorax.—There were 38 initial inductions of artificial pneumothorax and 1,353 refills performed at Walker Gate Sanatorium during the year. Since the year 1922, 315 patients have received this form of treatment at Walker Gate Sanatorium.

Sanocrysin.—This has not been used during the year owing to the absence of suitable cases, but at the time of writing two patients are having this form of treatment.

Lipiodol has been used to assist with diagnosis in several cases.

NEWCASTLE GENERAL HOSPITAL.

86 patients were admitted (50 males and 36 females). Details are given in the following table :—

PATIENTS SUFFERING FROM NON-PULMONARY TUBERCULOSIS WHO RECEIVED TREATMENT IN NEWCASTLE GENERAL HOSPITAL DURING THE YEAR 1934.

	Sex.	In Institution on 1st Jan., 1934.	Admitted.	Discharged.	Died in Institution.	In Institution on 31st Dec., 1934.
Pulmonary ...Adults	M.	...	4	...	...	4
Do. ... Do.	F.	...	2	1	...	1
Non-Pulmonary... Do.	M.	26	30	24	15	17
Do. ... Do.	F.	12	20	13	6	13
Do. Children	M.	16	16	11	4	17
Do. Do.	F.	16	14	17	4	9
TOTALS		70	86	66	29	61

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

	Males.	Females.	Children.	Totals.
Improved	20	10	26	56
Without Improvement	4	4	2	10
Died in Hospital	15	6	8	29
Totals	39	20	36	95

The total number of days of those who received treatment was 19,098, giving an average length of stay of 201 days.

Thoracic Surgery.—The most important development during the year has been the co-operation of George Mason, Esq., F.R.C.S., in the surgical treatment of thoracic disease. Two or three beds have been put at his disposal in Newcastle General Hospital and cases have been admitted by arrangement with Dr. G. P. Harlan.

Four patients were transferred from the Sanatorium Pavilions, City Hospital, Walker Gate, to Newcastle General Hospital, and four sent there from the Tuberculosis Dispensary. Of these eight, Mr. Mason has operated upon seven as below :—

Phrenic Evulsion	2
Lobectomy	2
Thoracoplasty	3

Thoracoplasty deserves special mention. The complete operation consists of the removal of the ribs on one side of the chest. A partial operation consists in removing certain ribs or parts of ribs. The operation is done in cases where a collapse of the lung cannot be brought about by artificial pneumothorax or where there is a cavity, which it is desired to close.

The cases of lobectomy that have been done have been persons suffering from bronchietasis and not from pulmonary tuberculosis.

While I am very enthusiastic about treatment by artificial pneumothorax a review of our cases shows that the mortality continues to be very high in patients having this treatment. It may be that a more careful selection of cases should be made and that some having artificial pneumothorax, but with a poor collapse of the lung, would be improved if, instead of a pneumothorax, a thoracoplasty or partial thoracoplasty was performed. I feel that the development of this work is very important, and I look forward to its further progress.

STANNINGTON CHILDREN'S SANATORIUM.

The 30 beds maintained in this Institution for the treatment of Newcastle-upon-Tyne patients were kept fully occupied throughout the year and 48 children completed treatment. The details appear below :—

CHILDREN WHO RECEIVED TREATMENT IN STANNINGTON SANATORIUM DURING YEAR 1934.

	In Sanatorium on 1st Jan., 1934.	Admitted during the Year.	Persons who completed Treatment during the year.			In Sanatorium on 31st Dec., 1934.
			Number	Total Number of Days.	Average length of stay in Days.	
Pulmonary Males	6	12	12	2,051	171	6
Do. Females	7	18	14	2,633	188	11
Non-Pulm. Males	8	13	13	2,730	210	8
Do. Females	9	5	9	2,960	329	5
TOTALS	30	48	48	10,374	216	30

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

	Males.	Females.	Total.
Disease quiescent	12	14	26
Improved	13	9	22
Without Improvement	...	...	...
TOTALS	25	23	48

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

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

Yours faithfully,

GEORGE HURRELL, M.D., D.P.H.,

Tuberculosis Medical Officer.

Tuberculosis Dispensary,
91, *New Bridge Street,*
Newcastle upon Tyne, 2.
3rd April, 1935.

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 1934.

General.—The Nurses' Hostel, opened late in the year reviewed in the last report, has undoubtedly been effective in improving the conditions under which the female staff live. Nurses and maids now have the privacy and the comforts which are their due, and the conditions of overcrowding and general lack of hygiene have been removed—one hopes—for ever.

During 1934, a full-sized hard tennis court, completely enclosed by netting, has been laid down to the south of the hostel. It is of porous composition, requires no watering or rolling, and can be played on within a short period after rain. It can be used at any time of the year, and is therefore a great boon to the staff.

Much of the ground around the Hostel has been levelled, part of it in time to be sown with grass in the early summer (1934), and very shortly it is hoped that the appearances will be completely changed, in the substitution for wide expanses of rough clay left by the builders by level areas of grass.

At the same time, under the care of the new gardener (Mr. J. Henderson), the grounds are being developed and a very great change in the appearance of the surroundings of the Institution can be expected confidently.

X-Ray Plant.—As for many years, a radiograph has been taken of every case on admission to the Sanatorium and subsequently when circumstances indicated that further radiological evidence was necessary or desirable. Similarly in connection with treatment by lung collapse, the result of each refill is checked by screening, i.e., the examination of the chest by X-rays but without the taking of a film.

During the year, 198 films were completed and the interpretation entered up in the patients' notes. The screenings numbered 745, and the appearances were reproduced by diagram in the patients' records.

The X-ray plant, which has been in use since 1923 without interruption, is now feeling its age, but it is understood that it will be replaced this year by a set of more modern pattern and of greater power. The diagnosis and treatment of chest conditions in modern practice demand X-ray facilities of a high standard, and it is satisfactory to know that those at Barrasford are to be improved.

Dental Clinic.—The dental condition of a large proportion of incoming patients continues to be very bad and, in many cases, incompatible with a sound state of general health. An attempt is made to improve the state of the mouth in all cases in which decayed teeth and infected gums are present. Clinics under the supervision of Mr. G. Hutchinson, L.D.S., are held every fortnight, and the following work was completed :—

Extractions	308
Fillings	55
Temporary fillings	9
Scalings	38
Dressings	6
Attention to dentures	12
Impressions	2
Examinations	32
Gingivectomy	1

The total attendances numbered 341.

Occupational Therapy.—Employment of patients has continued to hold a high place in the routine. It is equally valuable to the patients who have been able to undertake the long walks for a considerable period, as to those who are only capable of very short walks and on whose hands time is likely to lie heavily.

As in the past, occupational therapy is divided into two main types—handicrafts, and woodwork combined with suitable sorts of estate work. The former is carried out in workshops, and the patients are instructed by a handicrafts instructor (Mr. J. A. Caughey).

The crafts include leather, raffia and cane work, rug and basket making, poker work, making of lamp shades, simple handmade jewellery, and numerous other suitable articles requiring mild concentration and care.

There is surprisingly little wastage of materials, as the standard of the finished work is actually very good and secures a sale of the bulk of the articles made.

The attendances numbered 5,232 ; the women worked 5,276 hours and the men 5,188.

The woodworking section is under the control of the joiner (Mr. F. C. Gerdes), and is centred in a specially built workshop adequately heated and ventilated. Only men are employed, and as far as possible patients who normally earn their livings by the use of tools are given the opportunity of keeping in practice whilst under treatment.

In this department wooden stools are made for the handicrafts shop, and numerous smaller requirements in woodwork for the Institution are carried out. The men are able also to help in the repairs and improvements about the estate.

In addition, men patients assist the gardener in the gardens and grounds which are being developed.

Admissions.—The total number of cases admitted to the Sanatorium during 1934 was 158, 1 less than in the previous year. The number of Newcastle admissions was 120, as against 110 in 1933. Gateshead Corporation had 25, Tynemouth Corporation had 3, and West Hartlepool Corporation had 10.

During 1934, the West Hartlepool Corporation agreed to maintain 6 beds in the Sanatorium.

Of the 158 admitted cases, 18 had been in the Sanatorium previously, and were disposed as follows :—

1	case had been admitted twice previously.....	in 1926 and 1931
1	„ „ „ „ „	in 1930 and 1933
1	of the re-admitted cases was first admitted in.....	1918
1	„ „ „ „ „ „	1925
1	„ „ „ „ „ „	1926
2	„ „ „ were „ „	1929
2	„ „ „ „ „ „	1930
1	„ „ „ was „ „	1931
4	„ „ „ were „ „	1932
4	„ „ „ „ „ „	1933

Of these 18 re-admitted cases, 16 had had at some time or other tubercle bacilli demonstrated in the sputum, and in 2 cases tubercle bacilli had never been seen.

ADMISSIONS TO THE SANATORIUM DURING 1934.

Authority.	Male.	Female.	Total.
Newcastle Corporation	70	50	120
Gateshead Corporation	25	...	25
Tynemouth Corporation	1	2	3
West Hartlepool Corporation	8	2	10
Private	...	...	...
	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 144 discharges during 1934, as compared with 165 in 1933. No case died in the Sanatorium during the year. There were no summary dismissals during the year, and the total of these is only 7 since 1921 when the Corporation acquired the Sanatorium.

DISCHARGES FROM THE SANATORIUM DURING 1934.

Authority.	Male.	Female.	Total.
*Newcastle Corporation	66	42	108
Gateshead Corporation	25	...	25
Tynemouth Corporation	...	3	3
West Hartlepool Corporation	4	1	5
Private	2	1	3
	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

* 2 Patients were each discharged twice during the year, and are counted as 4 discharges.

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

SUMMARY OF MOVEMENTS OF PATIENTS DURING 1934.

Authority.	In residence night of Dec. 31st, 1933.	Admitted during 1934.	Discharged during 1934.	In residence night of Dec. 31st, 1934.
Newcastle Corporation	54	120	108	66
Gateshead Corporation	10	25	25	10
Tynemouth Corporation	2	3	3	2
West Hartlepool Corporation ...	2	10	5	7
Private.....	3	...	3	...
	71	158	144	85

Details in connection with Discharged Cases.

The particulars of patients, and the results of their treatment, which are set out later, are based on the completed cases discharged. Of these 144, 2 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 142 cases of definite tuberculosis.

(*a*) Length of stay—

The average duration of treatment of all cases was 189·63 days.
Excluding the 2 non-tuberculous cases, 190·40 days.
The 108 Newcastle cases alone averaged 234·12 days.
The longest stay was 870 days, the shortest 24 days.

(*b*) Beds occupied and patient days—

Average number of beds occupied, 84·5. 53·1 by males, and 31·37 by females.

Total number of patient days was 30,848. 19,397 male, and 11,451 female.

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

Authority.	Average Beds occupied daily.	Patient Days.
Newcastle Corporation	67·96	24,807
Gateshead Corporation	10·0	3,650
Tynemouth Corporation	2·0	730
West Hartlepool Corporation	3·80	1,387
Private	0·75	274

(*c*) *Social Status*—

	Male.	Female.	Total.
Single	54	38	92
Married	39	8	47
Widowers	3	...	3
Widows	...	...	...
TOTAL	96	46	142

(*d*) *Age*—

Years.	Male.	Female.	Total.
16—20	13	10	23
20—25	20	18	38
25—30	21	9	30
30—35	11	5	16
35—40	10	4	14
40—45	11	...	11
45—50	5	...	5
50—55	3	...	3
55—60	1	...	1
60—65	...	...	...
65—70	1	...	1
TOTAL	96	46	142

(*e*) *Occupations of* 96 *Male Patients*—

Labourers	9
Engineering and metal workers	5
Motor drivers and mechanics	5
Clerks	4
Miners	4
Commercial travellers	4
Grocers	4
Machinists	3
Shop assistants	3
Salesmen	3
Ex-Service-men	2
Butchers	2
Electricians	2
Bus conductors	2
Plumbers	2
Medical students	2
Electrical engineers	2
Joiners	2
Policemen	2
Railway workers (Inside)	2
Railway workers (Outside)	1

and one each of the following :—boiler coverer, warehouseman, accountant, ironmonger, electric crane driver, plasterer, laboratory assistant, male nurse, engine driver, commission agent, cinema sound engineer, hotel steward, radio repairer, civil servant, publican, barman, lead smelter, postman, post office sorting clerk, seaman, blacksmith's fireman, transport worker, shopkeeper, stable boy, upholsterer, printer, lead glazier, errand boy, foundry worker, motor trimmer, and one had no occupation. Total 96.

(*f*) *Occupations of* 46 *Female Patients*—

Housewives	8
Domestic workers at home	7
Domestic servants	7
Shop assistants	6
Sick nurses	4
Waitresses	3

and one each of the following :—tailoress, school teacher, pottery worker, cashier, carpet sewer, hairdresser, booking clerk, solderer, machinist, barmaid, clerk. Total 46.

Diagnosis.

The diagnosis of pulmonary tuberculosis was confirmed bacteriologically either before admission or during residence in 109 cases (79 males and 30 females). 25 patients (14 males and 11 females) were apparently without tubercle bacilli in the sputum, and 8 patients (3 males and 5 females) said they had no expectoration ; making 33 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	2
Definite pleural tuberculosis without evidence of lung tuberculosis	21
Definite physical signs and X-ray evidence of lung tuberculosis without demonstrable bacilli	12

In the cases of the 12 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. 65 sputum examinations were made in connection with these 12 cases, and as 4 had no sputum the average examinations in those that had was 9 each. 829 sputum examinations were made at the Sanatorium during the year ; of these 304 were positive as regards the presence of tubercle bacilli, and 525 were negative. 888 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 2 cases were discharged as not suffering from pulmonary tuberculosis, and the diagnoses in those cases were as follows :—

Pulmonary abscess	1
No pathological condition detected	1

These 2 non-tuberculous cases were included in the 4 patients sent for observation for the purpose of making a diagnosis. One was found to be suffering from pleural tuberculosis and one from pulmonary tuberculosis—inactive.

The period of observation for the purpose of diagnosis is set out below :—

	Under 1 week.		1 to 2 weeks.		2 to 4 weeks.		More than 4 weeks.	
	M.	F.	M.	F.	M.	F.	M.	F.
Tuberculous	1	1	...	...	...	...	...	...
Non-tuberculous	...	...	...	...	1	...	1	...
Doubtful	...	...	...	...	...	...	...	...

In connection with diagnosis, lipiodol was used in one case. The material was introduced by the inter-crico-thyroid route and no abnormal appearances were displayed.

Treatment.

Rest, diet, graduated exercise going on to occupation, are the points regarded as most important in routine treatment. It is essential, however, on admission and subsequently, to be certain that the bodily temperature is ranging normally. Unless there is any cause other than lung tuberculosis, a raised temperature is usually an indication of active disease, and rest in bed is essential until it has been reduced by bedrest alone or in conjunction with some form of special treatment.

62 of the 142 definite cases of tuberculosis were found to have normal temperatures during the whole of their residence, whilst 80 patients were feverish at some time or other of their treatment in the Sanatorium, spending amongst them 6,459 days in bed.

Afebrile throughout Treatment.	Febrile on Admission, Afebrile on Discharge.	Febrile Intermittently.	Febrile throughout Treatment.	Afebrile on Admission, Febrile on Discharge.
62	27	38	14	1

Lung collapse or artificial pneumothorax was used to a considerable extent as in previous years. It continues to give effective results in a large group of cases, which would probably not be attained by any other means. It controls symptoms and restores working capacity in successful cases, and is by far the most useful and widely used form of special treatment at the command of the tuberculosis worker. The rest provided by successful lung collapse allows stable healing to occur if the treatment is kept up sufficiently long.

39 of the 142 cases discharged in 1934 (=more than 25 per cent.) were considered to be suitable for treatment by lung collapse, but in 4 of them changes in the chest in the course of the disease on the chosen side prevented the treatment from being carried out.

Of the 35 discharged cases treated, 21 were right sided and 14 were left. In addition to these, 9 cases had had an artificial pneumothorax induced before admission, bringing the number treated during the year to 44 (27 right, and 17 left).

In connection with all the above cases, all of whom were discharged during the year, 477 insufflations of air were performed, whilst during the year the total number of such operations was 654.

In 32 cases the induction of lung collapse seemed to be effective in controlling symptoms—in the remaining 12 the procedure was ineffective and was abandoned. One of the cases admitted with an artificial pneumothorax, had a purulent effusion on arrival; one case developed a pyopneumothorax and was transferred to the Newcastle General Hospital for a thoracoplasty.

On discharge, the lung collapse is maintained by the Tuberculosis Medical Officer in most cases.

Since 1922, 389 cases have been treated by lung collapse at Barrasford, exclusive of those cases where it was induced before admission, which total 51.

Phrenic Evulsion.—2 of the discharged cases had a phrenic evulsion performed whilst they were in-patients, and one case had had this done before admission. In all three cases the operation was required to aid a lung collapse which alone was not effective.

This small operation is most effective in chosen cases, and facilities for its performance should be available in the Sanatorium. Its simplicity and its limited requirements in equipment and personnel renders the transferring of cases for this operation to

a general hospital unnecessary. It is quite different from the major operation of thoracoplasty, which demands a team and specialised equipment and nursing.

Sanocrysin.—12 cases were treated with injections of this salt. In 7 cases it seemed to be effective, in that symptoms previously resistant were controlled. In the remaining 5 cases the use of sanocrysin had to be discontinued on account of reactions of various types.

Ultra Violet Radiation was employed in only one case—that was for a tuberculous ulcer of the tongue in an advanced case of lung tuberculosis; 11 exposures were made without any improvement, though the patient thought it made him more comfortable.

Results of Treatment.

Gain of weight is probably the most important evidence of improvement from the point of view of patients, but it is of little use in judging the degree of improvement of the lung disease. It is, of course, a valuable sign of improvement in general health, and weight records are carefully kept.

They are as follows for the 142 definite cases of tuberculosis and the 2 non-tuberculous cases.

		Gained up to 7 lbs.	Gained 7 to 14 lbs.	Gained over 14 lbs.	Remained stationary.	Lost up to 7 lbs.	Lost over 7 lbs.	Not weighed on discharge.	Total.
142 definite cases.	Gained weight...	45	45	31	...	...	...	...	121
	Lost weight.....	...	...	...	...	14	2	...	16
	Stationary	...	...	...	3	...	...	...	3
	Not weighed on discharge	...	...	...	...	...	...	2	2
Total		45	45	31	3	14	2	2	142
2 non-tuberculous cases.	Gained weight...	1	...	1	...	...	...	...	2
	Lost weight.....	...	...	...	...	...	...	...	...
	Stationary	...	...	...	...	...	...	...	...
	Not weighed on discharge	...	...	...	...	...	...	...	...
Total.....		1	...	1	...	...	...	...	2

The majority of the cases have improved in general health, and this is especially shown in the cases treated by lung collapse.

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

T.B. Minus.

	M.	F.	Total.
Quiescent	9	9	18
Improved	7	7	14
No material improvement...	1	...	1

T.B. Plus.

		M.	F.	Total.
G.1	Quiescent	...	...	...
	Improved	1	...	1
	No material improvement...	...	...	...
G.2	Quiescent	...	...	...
	Improved	55	20	75
	No material improvement...	9	6	15
G.3	Quiescent	...	...	...
	Improved	1	1	2
	No material improvement...	13	3	16

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.

I wish to acknowledge the spirit of co-operation shown by the Matron (Miss F. Baguley, A.R.R.C.) and the rest of the staff both nursing and lay.

Yours faithfully,

CECIL G. R. GOODWIN, L.R.C.P., M.R.C.S.,

Medical Superintendent.

Barrasford Sanatorium,
Northumberland,
March 13*th*, 1935.

REPORT OF THE
MEDICAL SUPERINTENDENT,
NEWCASTLE GENERAL HOSPITAL.

V.—GENERAL DISEASES HOME AND HOSPITAL.

DOMICILIARY MEDICAL SERVICE.
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.

An additional district which became vacant on the 1st September, 1934, was subsequently added to the six already referred to, and the seven districts are now designated the Joint Medical Relief District.

It is proposed to add to the Joint Medical Relief District any other districts which may become vacant.

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

A report on the working of the " open choice " method during the ten months ending 31st August, 1934, is reprinted as Appendix " B " of the present report.

The following table gives particulars of the work carried out during 1934 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.
7	Dr. W. Simpson	1,866	3,441	1,605
8	Dr. R. W. Nevin	2,753	3,017	3,918
9	*Dr. W. T. Hall	547	219	815
10	Dr. T. J. Ryan	1,271	3,987	4,376

* Figures refer to period 1st January—31st August, 1934.

NEWCASTLE GENERAL HOSPITAL.

To the Medical Officer of Health.

Sir,

It affords me much pleasure to submit for your consideration this report on the year's work in the **Newcastle General Hospital.**

Again I have to report an increased activity in all departments of the Hospital, the admissions having increased by 728 and the discharges by 792. As will be seen from the figures accompanying this report, the increase has been due particularly to the larger number of women and children admitted. On account of this it was found necessary to increase the accommodation for female surgical cases by taking over A1 Ward formerly occupied by men.

During the year 1,572 letters were sent out to doctors, of these 467 being medical and 1,105 surgical.

The Sunday Morning Lectures were continued, and, from the increase in the number of practitioners attending, would appear to be appreciated. As an indication of this appreciation a complimentary dinner was given to the medical staff.

Quite a number of cases of pulmonary tuberculosis continue to be admitted, usually undiagnosed, but, working in close co-operation with the Tuberculosis Medical Officer, these cases are, without much loss of time, transferred to the City Hospital.

A new feature during the year has been the setting up of a clinic for the surgical treatment of diseases of the chest. It is too soon to express any definite opinion on the results, but in suitable cases it would appear to provide a hopeful form of treatment for cases formerly considered hopeless. Some of the results obtained have been excellent. One patient whose condition was looked on as hopeless, since his operation, has been able to go out, all cough and expectoration having disappeared.

This year's work in the Maternity Ward has again been a record one, 225 patients having been treated, compared with 191 in 1933. The maternal mortality was 0.4 per cent. The alteration to the Labour Ward has been completed and with certain new equipment the work should be much facilitated. It would be advantageous, if the work has to be encouraged and continued, to consider increasing the number of maternity beds.

The number of patients admitted to the Mental Wards was lower than in 1933, which was a record one, but was above the average for recent years. It was found necessary to certify 30.6 per cent. of the patients, the remainder being discharged or transferred to other departments. A feature of the year's work has been the large number of cases of attempted suicide admitted for observation, the most frequent method being coal gas poisoning. The majority of these have been remanded from the Police Court. It would certainly appear that very many people are influenced by reading more or less detailed accounts in the Public Press of such suicidal attempts.

The proposal to transfer the Mental Wards to the Hospital, I consider a very proper one, as no distinction should be made between the treatment of physical and mental ailments.

There was nothing outstanding in the occurrence of infectious diseases, the number on the whole being lower than during the previous year. Eighteen cases of whooping cough were treated, all of them being of a much milder type than met with in former years. No fresh cases of encephalitis lethargica were under treatment but 15 patients suffering from the after effects were admitted. This is a type of chronic illness which is most difficult to manage, many of the patients being very unstable, unreliable, self-righteous and very much lacking in moral rectitude. Many of them also have vicious propensities, and a number suicidal tendencies. These cases cause great worry in their own homes, and in general wards frequently are a source of annoyance, being very prone to make false accusations, without any foundation whatever. It has been found necessary to certify some of them under the Mental Treatment Act, and it would be very advantageous if some special accommodation could be found for the others.

There was a reduction in the number of sporadic cases of cerebro-spinal meningitis and dysentery admitted to Hospital.

The number of operations performed in the theatres was 2,076, an increase in the year of 516. A notable feature has been the increasing number of women suffering from surgical conditions. There was also a slight increase in the number of miscarriages, but in none was it possible to prove any criminal intent, although suspicion was aroused in quite a number. Any death following a miscarriage must now be notified to the Coroner so that an investigation is made.

Special steps were taken to deal with neuro-surgical, genito-urinary, plastic and chest cases by the appointment of specialists in these particular branches of surgery and this has added to the usefulness and reputation of the Hospital. It necessitated the appointment of an additional Surgical Registrar.

A second Medical Registrar and an additional House Surgeon were also appointed in place of the Resident Medical Officer who left to take up the position of Deputy Medical Superintendent in the Birkenhead Municipal Hospital.

It has been found necessary to utilise the services of the part-time Anaesthetists in many of the special surgical operations, as these frequently extend over lengthened periods. The greatly increased work in the operating theatre has thrown a very heavy strain on the nursing staff, but I am hoping that the increase of staff which has been sanctioned will go a long way to overcome this difficulty.

Treatment by raising the body temperature by means of high frequency was carried on during the year and arrangements have been made to continue it. Its use has been extended to other diseases and many patients appear to have derived advantage from it.

It will be noted that 229 more children were admitted during the year, there being a definite increase in the cases of lobar pneumonia, broncho pneumonia and chorea. There was nothing outstanding as regards the incidence of infectious diseases. The number of children passing through the Louisville Convalescent Home was 124, a slight increase on last year. All the children, with a few exceptions, improved in health and gained weight.

The number of paying patients admitted for treatment continues to increase, as will be seen from the following returns for the last five years :—

Year.	Number of Paying Patients.	Year.	Number of Paying Patients.
1930.....	67	1933.....	124
1931.....	63	1934.....	170
1932.....	105		

I would strongly recommend that accommodation of a more private nature, at an increased fee, should be provided as soon as can be conveniently arranged. I am sure that it would fill an urgent need.

The re-laying of the floors in the Old Block has been completed and has provided eight excellent wards, now wholly devoted to the treatment of medical cases. The provision of two laboratories is receiving attention. The floors in the bottom wards of the present Children's Block have also been relaid and the improvement produced is a most striking one.

During the year a Diabetic Clinic was instituted and has proved a very great success. Over 60 patients attend periodically for examination and advice. Many of these patients would otherwise have had to be admitted to Hospital. A similar arrangement exists as regards cases of pernicious anæmia, and it is interesting to record that only one of these patients has had to return for indoor treatment, so that, judged only from the financial point of view, the scheme must be considered as an economical one. The advantage to the patient must be very great indeed.

A notable increase of work was done in the X-ray and Massage Departments, and also in the Laboratory, as will be seen from the statistical return accompanying this report.

During the year it was necessary to admit 54 nurses to the sick wards for treatment, and of these six were under treatment on two different occasions. As usual the most prevalent sickness was "Septic throat," and again with a few exceptions occurred in Probationers during the first six months of their training. The outstanding illnesses were as follows :—

Septic throat	17	Acute rheumatism	1
Appendicitis	4	Dysentery	1
Catarrhal jaundice	3	Scarlet fever	1
Pleurisy	1	Varicella	1
Lobar pneumonia	1		

One nurse, while on trial duty, developed tuberculous phthisis, and although treatment was offered, after discussion with the Tuberculosis Medical Officer, the nurse's parents desired to take her home.

The Matron underwent a serious operation in the beginning of the year and made a very good recovery, being able to undertake all her duties in a comparatively short time.

In conclusion I would like to say that considerable progress has been made, but that many things still require to be done. Of these the most urgent is increased accommodation for the Medical Nursing and Clerical staffs.

I would take this opportunity of thanking you and your staff for their valuable co-operation, and also to place on record my appreciation of the work done, during a very strenuous and difficult period, by the Hospital staff.

ADMISSIONS AND DISCHARGES, ETC., FOR THE YEAR ENDED 31st DECEMBER, 1934.

	Males.	*Females.*	*Children.*	*Total.*
Admissions.....	2,049	2,380	1,115	5,544
Discharges	2,076	2,355	1,124	5,555

Of the Discharges—Cured	1,353
Relieved	3,335
Died	867
Total	5,555

(There were also 8 deaths in the Elswick Grange.)

TABLE OF AGES OF PATIENTS TREATED.

Men over 60	656
Women over 60	517
Men under 60.....	1,410
Women under 60	1,846
Boys, 3–16	284
Girls, 3–16	306
Children under 3	536
	5,555

TRANSFERS FROM OTHER HOSPITALS, HOMES AND UNIONS.

Royal Victoria Infirmary.....	52
Cottage Homes	5
Gateshead P.A.C.	12
Shotley Bridge Colony	3
South Shields	5
Prudhoe Hall Colony	1
Northumberland County Council.....	17
West Hartlepool.....	2
North Riding of Yorks.....	1
Durham County Council.....	30
Sheffield	1
City of Glasgow	2
Barnsley Corporation.....	1
Hull	3
Darlington P.A.C.	2
Carlisle	3
Private Cases admitted	170
Inquests held :—	
Hospital cases (47); Elswick Grange cases (3)...	50

OPERATIONS.

FOR YEAR ENDED 31ST DECEMBER, 1934.

Hernia (varieties)	133	Spina bifida	1
Gastroenterostomy	24	Amputation penis	1
Gastrostomy	3	Trigeminal nerve root extirpation	2
Cholecystenterostomy	1	Bunions	5
Gastrectomy	1	Fractures plated or wired	3
Appendicectomy	186	Fractures reduced and P.O.P.	27
Laparotomy	64	Osteotomy	6
Anastomosis	6	Rhinoplasty	19
Colostomy	18	Amputations	21
Cholecystectomy	27	Popliteal aneurysm	1
Cholecystostomy	9	Excision joints	9
Hysterectomy	8	Sub-temporal decompression	3
Hysteropexy	3	Resection of rib	43
Nephrolithotomy	2	Cystoscopy	50
Nephrectomy	4	Strictures dilated	34
Bronchoscopy	3	Sigmoidoscopy	3
Salpingo-oophorectomy	10	Carotid aneurysm	1
Splenectomy	1	Mastoidectomy	16
Prostatectomy	6	Scrapings	15
Supra-pubic cystostomy	24	Ischio rectal fistulæ	16
Orchidectomy	6	Incisions (various)	250
Herschprungs disease	1	Excisions (glands, etc.)	36
Hydrocele	5	Foreign bodies removed	2
Caruncle	1	Blood transfusions	10
Varicocele	7	Complete fothergill	10
Papilloma of bladder	1	Kraske's operation	1
Hæmorrhoids	56	Intussusception	1
Curettage	127	Ventricular estimations	2
Colpoperineorrhaphy	16	Halstead operation	8
Circumcision	13	Spasmodic torticollis	2
Thyroidectomy	4	Internal urethrotomy	1
Carbuncle	14	Prepatella bursae	3
Dissection of glands	11	Re-sutures	5
Tonsils and adenoids	100	Examinations	35
Oesphagoscopy	1	Semilunar cartilages	12
Sequestrectomy	15	Skin grafts	2
Ovariotomy	5	Brain tumours	78
Artificial pneumothorax	2	Teeth extractions	355
Epithelioma vulva	2	Lobectomy	1
Aural polypus	2	Phrenecectomy	9
Deirated septum	7		

Total, Major and Minor, performed in theatre	2,035
Cases of teeth extraction under local anaesthetic not included	41
TOTAL	2,076

RETURN OF CASES TREATED IN MASSAGE DEPARTMENT.

	Massage.	*Medical Electricity.*	*Sunlight.*
Treatments	3,398	1,472	1,330

X-RAY DEPARTMENT.

Cases X-rayed	1,453	Exposures	2,745
,, ,, T.B. Dispensary	404	,, T.B. Dispensary	404
,, ,, Babies' Hospital	84	,, Babies' Hospital	84
Total cases X-rayed	1,941	Total exposures	3,233

RETURN OF MENTAL CASES, 1934.

	Men.	*Women.*	*Total.*
Under treatment, January 1st, 1934.....	6	4	10
Admitted during 1934	196	169	365
	202	173	375
Discharged during 1934 :—			
Cured	29	12	41
Improved	47	39	86
I.S.Q.	11	4	15
Transferred to :—			
Mental Hospital	56	60	116
General Hospital	40	36	76
A. and I. Wards	2	3	5
House (Able-bodied)	2	6	8
,, (Chronic)	10	4	14
Deaths	1	2	3
Under treatment December 31st, 1934	4	7	11
	202	173	375

PATHOLOGICAL LABORATORY.

Total number of reports issued	**3,648**
Total number of Specimens analysed	**4,811**

Comprising—

Sputum examinations	612
Fæces examinations	385
Blood Sugar estimations	181
Blood Urea estimations	149
Blood Cell counts (including films and reticulocyte counts)...	200
Gastric Contents analysis	749
G.C. Smears examined	90
Pleural Fluids and Pus examined	126
Cerebro-spinal Fluid examinations	123
General Urinary examinations	877
Miscellaneous Blood Tests	11
Urea Concentration (Urine)	155
Diabetic Clinic Specimens	549
G.C. Clinic Specimens	604
	4,811

ADULTS.—CLASSIFIED LIST OF DISEASES TREATED.

MEDICAL.

RESPIRATORY.

Bronchitis	167	Infarction	1
Asthma	43	Gangrene of Lung	1
Pleurisy	42	Broncho pneumonia	52
Bronchiectasis	7	Lobar pneumonia	66
Bronchitis and Emphysema.....	1	Hypostatic pneumonia.....	6
Pyo pneumothorax	1	Others	4

DIGESTIVE.

Gastritis	44	Dyspepsia	6
Gastric Ulcer	67	Gastro-Enteritis	13
Constipation	27	Cirrhosis of Liver	4
Duodenal Ulcer	32	Jaundice	8
Colitis	5	Others	12

NERVOUS.

Cerebral Hæmorrhage	92	Neuritis	7
Cerebral Thrombosis	39	Neurasthenia	61
Functional	38	General Paralysis	22
Disseminated Sclerosis	5	Mental	37
Epilepsy	50	Attempted Suicides	4
Locomotor Ataxy	20	Neuralgia	14
Peripheral Neuritis	3	Others	16
Paralysis Agitans	5		

DEFICIENCY DISEASE.

Scurvy	6

INFECTIOUS DISEASES.

Encephalitis Lethargica	13	Meningitis—Septic	1
Influenza	18	Paratyphoid	1
Erysipelas	8	Cerebro-Spinal Meningitis	4
Dysentery	3	Malaria	1

CIRCULATORY.

Valvular disease of Heart	126	Aneurism	12
Myocarditis	135	Pernicious Anæmia	20
Pericarditis	2	Leukæmia	3
Arterio-sclerosis	69	Secondary Anæmia	23
Acute Endocarditis	5	Senility	35
Hyperpyesia	25	Debility	32
Angina Pectoris	6	Others	9

RHEUMATIC.

Acute Rheumatism	74	Sciatica	12
Chronic Rheumatism	35	Acute Arthritis	12
Rheumatoid Arthritis	19	Chorea	8
Lumbago	10	Others	5

EXCRETORY.

Acute Nephritis	5	Uræmia	8
Chronic Nephritis	57	Cystitis	9
Pyelitis	24	Others	7

INTERNAL SECRETORY.

Myxœdema	4	Diabetes Mellitus	60
Goitre	8	Others	3

FOR OBSERVATION.

Cases for Observation	29

TUBERCULOSIS.

Pulmonary	57	Non-Pulmonary	47

ADULTS.—CLASSIFIED LIST OF DISEASES TREATED.

SURGICAL.

Carcinoma	218	Septicæmia	10
Rodent Ulcer	4	Other Diseases Male Organs	9
Sarcoma	4	Pyæmia	1
Hernia	150	Septic conditions	36
Appendicitis	158	Ulcers	21
Cholecystitis	70	Cellulitis	34
Gastric Ulcer	34	Abscess	48
Duodenal Ulcer	13	Gangrene	22
Intestinal Obstruction	17	Mastitis	20
Jejunal Ulcer	4	Carbuncle	25
Brain	45	Varix	6
Gastroptosis	5	Phlebitis	10
Peritonitis	6	Hæmorrhoids	63
Plastic cases	5	Empyema	18
Renal Calculus	10	Diseases of Bone	17
Floating Kidney	1	Diseases of Rectum	36
Perinephritic Abscess	4	Cystitis	6
Fractures	83	Displaced Cartilage	13
Dislocations	2	Bursitis	8
Injuries, Wounds, etc.	53	Deformities	13
Burns	9	Post operative	3
Prostate	31	Simple Tumours	16
Hydrocele	10	Glands	10
Varicocele	5	Teeth	101
Undescended Testicle	1	Subphrenic Abscess	1
Urethral Stricture	14	For Observation	38
Extravasation of urine	3	Others	22
Retention of urine	8		

PREGNANCY AND DISEASES OF WOMEN.

Pregnancy	248	Ovarian Cyst	4
Albuminuria of Pregnancy	3	Salpingitis	21
Hyperemesis Gravidarum	15	Uterine Fibroid	8
Pyelitis of Pregnancy	11	Pelvic Cellulitis	6
Placenta Prævia	1	Diseases of Uterus	53
Retained Placenta	1	Disorders of Menstruation	29
Miscarriage	110	Nursing	10
Puerperal Pyrexia	2	Menopanse	6
Ectopic Pregnancy	3	Others	16
Puerperal Sepsis	3		

DISEASES OF THE SKIN.

Dermatitis	20	Scabies	11
Psoriasis	6	Impetigo	6
Erythema	6	Eczema	17
Verminous	4	Others	10
Sycosis	6		

VENEREAL DISEASES.

Syphilis	10	Gon. Rheumatism	6
Gonorrhœa	18	Late Syphilis	16

DISEASES OF THE EYE.

Conjunctivitis	7	Others	9
Corneal Ulcer	2		

DISEASES OF THROAT, NOSE AND EAR.

Tonsillitis	28	Sinusitis	4
Tonsils and Adenoids	41	Mastoid	4
Otitis Media	6	Others	7
Deflected Septum	3		

CHILDREN.—CLASSIFIED LIST OF DISEASES TREATED.

MEDICAL.

Bronchitis	75	Stomatitis	1
Pleurisy	9	Constipation	3
Asthma	1	Catarrhal Jaundice	1
Lobar Pneumonia	48	Diabetes Mellitus	4
Broncho Pneumonia	82	Epilepsy	9
Endocarditis	7	Prematurity	9
Acute Nephritis	14	Marasmus	4
Acute Rheumatism	15	Rickets	4
Chorea	25	Nursing	256
Arthritis	1	For Observation	29
Gastro-Enteritis	44	Others	24

SKIN.

Impetigo	49	Tinea	3
Scabies	6	Verminous	3
Dermatitis	6	Seborrhœa	4
Eczema	4	Congenital Syphilis	7
Pemphigus	4	Others	3

DISEASES OF THE EYE.

Conjunctivitis	3	Blepharitis	1
Keratitis	1		

DISEASES OF THE THROAT, NOSE AND EAR.

Otitis Media	10	Tonsils and Adenoids	36
Tonsillitis	13	Others	2
Mastoid	11		

SURGICAL.

Appendicitis	36	Abscess	26
Hernia	10	Septic conditions	8
Intussusception	5	Cellulitis	2
Intestinal obstruction	3	Spina Bifida	2
Empyema	11	Osteo-Myelitis	9
Enlarged Glands	22	Phimosis	9
Fractures	4	Teeth	7
Brain Tumours	13	Foreign body swallowed	3
Burns and Scalds	5	Others	16
Injuries, Wounds, etc.	11		

INFECTIOUS.

Scarlet Fever	8	Typhoid	1
Influenza	1	Meningitis	4
Pertussis	18	Erysipelas	1
Measles	7	Dysentery	3
Acute Anterior Poliomyelitis	1	Diphtheria	3
Varicella	1	Encephalitis Lethargica	2

TUBERCULOSIS.

Pulmonary	5	Non-Pulmonary	36

GEO. P. HARLAN, M.D.,
Medical Superintendent.

Newcastle General Hospital,
15th March, 1935.

MAINTENANCE IN OTHER INSTITUTIONS.

Eight 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	*1	1	Epileptic.
St. Elizabeth's School for Epileptics, Much Hadham	...	1	Epileptic.
St. Vincent's Hospital for the Dying, Liverpool	...	1	Advanced Phthisis.
St. John's Institution for the Deaf and Dumb, Boston Spa	...	1	Blind, Deaf and Dumb.
St. John's Home, Birmingham	...	1	Deformity.
Hospital of St. John of God, Scorton	2	...	Cripples.
TOTAL	3	5	

* Admitted 17th September, 1934.

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

VI.—FOOD.

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

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

TUBERCULOUS MILK.

During the year ten samples were reported by the Bacteriologist to contain tubercle bacilli. The samples were from six different farms, five of which were situated in the County of Northumberland, and one in the County of Durham.

The results of the investigations may be summarised as follows :—

Cases in which tuberculous cows were found and the subsequent "Check" samples were negative.....	5
Case in which a tuberculous cow was found and the subsequent "Check" sample was positive..... (In this case a second "Check" sample was taken and found negative).	1

The following table shows the percentage of milk samples found to contain tubercle bacilli during the past 15 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

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 1934.

Tuberculosis.

During the year, five animals, four of which were housed in registered cowsheds, and one in a licensed lair within the City, were found affected with one of the forms of the disease which required them to be dealt with under the Tuberculosis Order of 1925.

The animals were subsequently slaughtered and the owners compensated according to the valuation before slaughter, as agreed upon by the Veterinary Officer, on behalf of the Corporation, and the owners, in accordance with the Order. 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 Order, whilst in the remaining four, the animals were found to have been suffering from " tuberculosis advanced," necessitating the condemnation and destruction of the entire carcass and organs of each as unfit for human consumption.

When the amount paid as compensation to the owners, costs for cartage and slaughtering, commission on sales, etc., were deducted from the amount obtained through the disposal of the carcasses, hides, offals, etc., together with the amount recoverable from the Ministry of Agriculture, there remained a balance of £5 4s. 0d. in favour of the Corporation on the administration of the Tuberculosis Order during the year.

In the case of the animal found in the lair, the Local Authority exercised the powers contained in section 20 of the Diseases of Animals Act, 1894, by withholding compensation because of the owner having failed to isolate the animal and notify the authorities concerned, as required by the Tuberculosis Order of 1925.

In the course of milk and meat inspection during the year, 1,057 animals were found on slaughter to be affected with the disease, this being an increase of 8.3 per cent. as compared with the number found diseased during the previous year.

In 840 cases some part of the carcass or internal organs of each was condemned and destroyed as diseased, whilst in the case of each of the remaining 217 animals it was found necessary, owing to the extent and distribution of the disease, to destroy the entire carcass and internal organs.

The Milk and Dairies Order of 1926.

Within the City there are 14 cow-keepers, who occupy 22 registered cowsheds, and possess a total of 223 milch cows. During the year, 180 visits were made to the cowsheds and dairies for the purpose of inspecting the animals, buildings, conditions as to cleanliness, etc.

In addition to the five tuberculous animals previously referred to, ten milch cows within the registered sheds were found suffering from mastitis and other illnesses. As with the tuberculous animals, it was found necessary in six cases, immediately the presence of disease was detected clinically, to adopt precautionary measures by excluding the milk from the public supply. In each of these the animal was found suffering from mastitis, five being due to streptococcal infection, the causal organism in the remaining animal being staphylococci.

Diseased Cows found in Registered Premises within the City.

Year.	No. of Cow-keepers.	No. of Registered Cowsheds.	No. of Milch Cows in City.	No. of Diseased Cows.				
				Tuberculosis.		Other Diseases.		Destroyed (under the Tuberculosis Order, 1925)*
				Of Udder.	Other than Udder.	Udder.	Other than Udder.	
1920	26	40	565	...	...	...	...	...
1921	25	38	574	...	...	...	...	...
1922	25	39	489	...	...	...	...	...
1923	25	39	484	2	...	8	...	1
1924	22	34	436	3	2	2	...	4
1925	21	33	337	9	...	1	...	4*
1926	20	31	410	5	2	1	3	5*
1927	18	29	334	2	4	2	3	6*
1928	19	31	308	3	1	1	3	4*
1929	19	30	258	4	1	1	2	4*
1930	17	28	251	2	3	1	4	4*
1931	16	27	243	4	7	1	3	9*
1932	16	27	246	4	2	7	3	6*
1933	**16**	**27**	**243**	**1**	...	**5**	**4**	**1***
1934	14	22	223	3	2	6	4	5*

Note.—Figures relating to the years 1907–1919 are given in the Annual Report for the year 1932.

INSPECTION OF MEAT AND OTHER FOODS.

The number of animals slaughtered within the City for food purposes during the year was 228,633. Whilst there were 1,345 more cattle and 1,230 more calves, there were 4,097 fewer sheep and 3,544 fewer pigs, slaughtered than during the previous year.

ANIMALS SLAUGHTERED ON LICENSED PREMISES WITHIN THE CITY.

YEAR 1934.		1933.	1932.	1931.	1930.
Horses	982	950	1,266	1,983	2,784
Cows 1,624 Heifers 12,753 Bulls 392 Bullocks 6,854	21,623	20,278	18,895	18,246	19,823
Calves	4,705	3,475	2,976	2,895	5,242
Sheep	163,556	167,653	186,662	127,106	107,997
Pigs	37,737	41,281	48,642	33,160	24,425
Total Animals	228,603	233,637	258,441	183,390	160,271

Four hundred and sixty-three and one quarter animal carcasses, together with 2,519 lbs. of meat (excluding offal, etc.) were condemned and destroyed as being unfit for human consumption, as compared with 354¾ animal carcasses and 4,567¾ lbs. of meat condemned and destroyed during the previous year. Of the 463¼ carcasses, 218½ were condemned on account of tuberculosis, as compared with 165 carcasses condemned on account of that disease out of the previous year's total of 354¾ carcasses.

The total number of carcasses of beef condemned for tuberculosis during 1934, namely, 158¾, is the highest since the year 1920. This also applies to carcasses condemned for all causes.

With regard to pigs, of the 37,737 slaughtered during the year under report, 628 were found affected with tuberculosis, which proportion—approximately 16 per 1,000—is practically the same as that of the pigs found tuberculous amongst those slaughtered during the previous year. As occurred during the previous year, the percentage of cases in which lesions of the disease were found confined to the region of the throat was high, for, during the year under report, out of the 628 found affected, in 560, or 89.0 per cent., were the lesions so localised.

Cattle, Calves and Pigs Slaughtered within the City. (See also previous Table).	Number of Animals found Diseased, Unsound or otherwise unfit for Human Consumption.		Number of Animals found Tuberculous.	
	Whole Carcasses Condemned.	Parts or Organs Condemned.	Whole Carcasses Condemned.	Parts or Organs Condemned.
Year 1934.	Year 1934.			
Cows..... 1,624	112	113	93	107
Heifers 12,753	42	54	37	45
Bulls..... 392	3	4	3	4
Bullocks 6,854	29	29	25	24
Sex not known ...	...	226	...	74
Totals 21,623	186	426	158	254
Calves 4,705	88	7	15	2
Pigs 37,737	76	661	44	584

* The figures representing the numbers of animals found tuberculous on slaughter do not necessarily indicate the total number of animals affected with disease, because under the present slaughter-house system it is impossible to guarantee that all those slaughtered are subjected to inspection.

CARCASSES OF BEEF CONDEMNED WITHIN THE CITY DURING THE PAST FOURTEEN YEARS.

Total condemned.		Numbers condemned on account of Tuberculosis.	Percentage Tuberculous.
Year.	Carcasses.	Carcasses.	Per Cent.
*1920	198	171	86·36
1921	90	78	86·66
1922	85	79	92·94
1923	69	58	84·05
1924	66	61	92·42
1925	157	130	82·80
1926	126	102	80·95
1927	123	107	86·99
1928	115	109	94·78
1929	124	118	95·16
1930	147	124	84·35
1931	117	94	80·34
1932	135	120	88·89
1933	128	116	90·62
1934	186	158	84·94

NOTE.—The above refers to whole carcasses and quarters, but does not indicate the total number of animals found tuberculous, and therefore does not include those carcasses in which only the organs or parts were found diseased and condemned. See preceding table.

* Figures relating to the years 1907–1919 are given in the Annual Report for the year 1932.

Public Health (Meat) Regulations of 1924.

For the purposes of these Regulations, 7,070 visits were made to meat and provision shops, restaurants, stalls, vehicles, etc., and, as a result, 22 contraventions were found requiring to be dealt with, but in no instance, after the offender's attention had been drawn to the matter, were further proceedings necessary.

INSPECTION OF CARCASSES SENT INTO THE CITY FROM OUTSIDE DISTRICTS DURING THE YEAR 1934, INCLUDING THE CARCASSES OF ANIMALS TAKEN UNDER THE TUBERCULOSIS ORDER, 1925, BY OTHER LOCAL AUTHORITIES AND SLAUGHTERED WITHIN THE CITY.

Material Examined.	Condition Found.	How Dealt with.
*Cow Carcass and Organs...	Tuberculosis.....	Lungs, liver, mesenteric fat and udder condemned.
* ,, ,, ...	,, ...	Lungs, liver, head and mesenteric fat condemned.
* ,, ,, ...	,, ...	Lungs condemned.
* ,, ,, ...	,, ...	Carcass and organs condemned.
* ,, ,, ...	,, ...	Head, lungs, liver and udder condemned.
* ,, ,, ...	,, ...	Lungs, udder and mesenteric fat condemned.
* ,, ,, ...	,, ...	Carcass and organs condemned.
* ,, ,, ...	,, ...	Lungs, liver and udder condemned.
,, ,, ...	,, ...	Carcass and organs condemned.
,, ,, ...	,, ...	Head. (Liver : Cirrhosis).
,, ,, ...	Decomposition.....	Head, liver, lungs and heart condemned.
,, ,, ...	,, ...	Head, liver, lungs and heart condemned.
Heifer, 4 quarters	Normal	Passed.

* Slaughtered under the Tuberculosis Order, 1925, certificate of examination in each case being sent to the local authority concerned.

Imported Foodstuffs.

During the year, 242 vessels carrying meat and other foods from Denmark, Holland, America, Canada, Australia and Madagascar, arrived at the Quayside, this being a decrease of twenty as compared with the number of arrivals during the previous year.

Three hundred and thirty-four visits were made to the wharves and vessels alongside, 3,226 packages, containing meat, etc., being opened and examined. Both before and while being discharged from the vessel, it is not practicable to make more than a general survey or superficial inspection of frozen beef quarters and carcasses of mutton, but these, as well as imported meat arriving by rail within the City, are subjected to supervision and inspection within the cold storage depots and wholesale meat shops.

Caseous Lymphadenitis.

During the year, of 24,230 carcasses of mutton, comprising eight separate consignments arriving at the Quayside direct from Australia, 927 were examined, one being found affected with the

disease, as compared with the arrival of 17,272 Australian carcasses, comprising six separate consignments, during the previous year, of which 800 were examined, four being found diseased.

Foreign Meat, etc., arriving by Vessel.

Salted Meat, Offals, etc. (Packages).

PORK.—70 loins, 9 steaks and 145 barrels.

Offal.—2,029 feet, 1,462 maws, 903 heads, 221 tongues, 31 casings and 3 diaphragms.

Frozen Meat.

BEEF.—19,179 crops and 12,607 fore and hind quarters.

(Packages).—142 loins, 110 flanks, 100 shins, 78 blades, 75 tops and rumps and 66 necks.

Offal (Packages).—8,194 livers, 2,239 kidneys, 1,306 tails, 388 tongues, 201 cheeks, 150 tripes, 119 skirts, 93 (mixed) offals, 40 hearts, 20 heads and 10 sweetbreads.

MUTTON AND LAMB.—38,716 carcasses and 250 hind quarters.

Offal (Packages).—50 kidneys.

PORK.—1,365 carcasses. (Packages).—839 loins and 100 legs.

Offal (Packages).—449 kidneys.

Other Goods.

680,462 sides of Danish, Dutch and Canadian bacon. (Cases).—2,801 American bacon and hams, 78,623 tinned meats and 106 sausages.

NUMBER OF VESSELS AND ORIGIN ARRIVING WITH FOOD.

Denmark.	Holland.	America.	Canada.	Australia.	Madagascar.
116	92	6	19	8	1

Exported Foodstuffs.

The number of horses slaughtered within the City, for the purposes of the carcasses being exported for consumption on the Continent, was 982, or 32 more than during the previous year. In accordance with the requirements of the authorities in Denmark

as to horse casings having been prepared by being salted for 14 days, certificates were granted in respect of three consignments, comprising 13 tierces, prior to their being exported to that country.

NUMBER OF VISITS AND INSPECTIONS OF PREMISES DURING THE YEAR 1934.

	Central Markets.			Meat Shops.		Fish Shops.	Provision Shops.						
Slaughterhouses.	Meat and Provisions.	Fruit and Vegetables.	Fish.	Wholesale.	Retail.	Wholesale.	Wholesale.	Wharves and Vessels.	Cold Stores.	Goods Stations (Fish Docks).	Restaurants.	Stalls, Carts, etc.	Food Preparing Factories.
16,947	509	367	351	3431	774	15	13	334	15	3	20	2222	101

Poultry, Game, Fish, Fruit and Vegetables, Provisions, &c., Destroyed as being Unfit for Human Consumption during the Year 1934.

Cause of Unfitness.	Poultry and Game.	Fish.	Fruit and Vegetables.	Provisions, etc.
Unsound and Unwholesome.		lbs.	lbs.	lbs.
	Chickens 41	Fillets, 8 boxes..... —	Apples..... 200	Bacon 60
	Ducks 8	Haddocks 122½	Cauliflowers—4 bags and 1 cask (pickled) ..... —	Beef Fat 142
	Fowl 1	Halibut..... 364	Cranberries 448	Cheese—4 cases, 225 portions..... 27¾
	Hare 1	Kippers..... 12	Dates 1,225	Lemon Peel—11 casks..... —
	Pheasants..... 14	Lemon Soles..... 669	Onions 117 bags..... —	Pies 30
	Rabbits..... 60	Plaice..... 108	Oranges 70 cases..... —	Pork (cooked)..... 36
	Turkeys..... 3	Salmon 7½	Peaches 23 trays..... —	Sausage..... 158½
		Skate, 5 boxes..... 263	Potatoes 43 cwts..... —	*Wheat—175 tons.
		Sprats 840	Raspberries 14 baskets..... —	
		Trout..... 50	Tomatoes 69 boxes..... —	
		Shell.		
		Shrimps—6 cases.		

Tinned Goods.	tins.	lbs.
Apples	3	—
Brawn	—	4,546
Cherries.....	24	—
Corned Beef.....	—	3,474
Crab	90	—
Cream	3	—
Fruit (mixed) 5 cases	48	—
Grape Fruit.....	1	—
Ham	—	2,682
Lamb Livers.....	—	10
Loganberries	98	—
Lunch Tongue.....	—	1,622
Milk 30 cases	263	—
Oranges 74 cases	33	—
Paste	—	23
Peaches.....	1,388	—
Pears	11	—
Peas	1	—
Pineapples.....	1	—
Pine cubes	13	—
Plums	31	—
Pork	—	444
Salmon	3	—
Sardines 16½ cases.....	—	—
Shrimps	6	—
Soups	24	—
Spaghetti	3	—
Tomatoes	19	—
Tomatoe Puree	7	—
Veal	—	319

* Damaged by sea water and, after treatment, utilised for animal feeding.

TOTAL CARCASSES, &c., DESTROYED AS BEING UNFIT FOR

	Carcasses, etc.				Lungs.					Livers.		
	Beef.	Veal.	Mutton.	Pork.	Sets Ox.	Sets Sheep.	Sets Pig.	Ox Hearts.	Ox Kidneys.	Ox.	Sheep.	Pig.
Tuberculosis	158+ 3 qrs.	15	...	44+ 3 qrs.	229	...	1	37	...	105	...	1
Johne's Disease	1	...	...	...	...	...	...	...	...	...	...	...
Caseous Lymphadenitis	...	...	1	...	...	...	...	...	...	...	...	...
Swine Erysipelas	...	...	...	1	...	...	...	...	...	...	...	...
Actinomycosis	...	...	...	...	...	...	...	...	...	...	...	...
Pyrexia	4	...	...	4	...	...	...	...	...	...	...	...
Pyæmia	...	1	2	1	...	...	...	...	...	...	...	...
Pericarditis (including septic and traumatic)	1	...	2	...	...	...	...	2	...	...	...	...
Septic Conditions	1	3+ 28 lbs.	12+1qr. 31 lbs.	2+ 28 lbs.	7	...	...	...	...	30	...	...
Uræmia	...	...	...	1	...	...	...	...	...	...	...	...
Jaundice	...	...	...	4	...	...	...	...	...	...	...	...
Melanosis	1	...	...	...	1	...	...	...	...	...	...	...
Fatty Degeneration	...	...	...	...	...	...	...	...	...	2	...	...
Fatty Infiltration	...	...	...	...	...	...	...	...	...	2	...	...
Hyaline Degeneration	150 lbs.	...	...	...	...	...	...	...	...	...	...	...
Pneumonia	...	...	...	...	5	...	64	...	...	...	...	...
Pleurisy	...	...	1+ 10 lbs.	...	13	3	17	...	...	...	...	...
Peritonitis	1	...	1	1+ 40 lbs.	...	...	...	...	...	...	...	...
Pleurisy and Peritonitis	1	...	...	4	...	...	...	...	...	...	...	...
Mastitis	...	...	...	6 lbs.	...	...	...	...	...	...	...	...
Cirrhosis	...	...	...	...	...	...	...	...	...	158	8	3
Cavernous Hæmangioma	...	...	...	...	...	...	...	...	...	8	...	...
Œdema and/or Emaciation	7	...	37	2	...	...	...	...	...	...	...	...
Parasites Distomatosis, Cysts, &c.)	...	...	...	...	3	5	...	...	...	8	86	17
Dead, Moribund, Imperfect, Bleeding, Congestion, etc.	8	9	35	7	2	...	...	...	...	2	...	...
Immaturity	...	1	...	...	...	...	...	...	...	...	...	...
Traumatism	3 qrs.+ 456 lbs.	...	73 lbs.	1 qr.+ 20 lbs.	...	...	...	...	...	...	...	1
Decomposition	2+1 qr. +1,177 lbs.	59+ 74 lbs.	18+ 3 qrs.+ 145 lbs.	5+2 qrs. +281lbs.	70	3	...	20	30 + 27 lbs.	63	6+ 30 lbs.	...
Unmarketable (including animals from centres of infection of scheduled diseases)	1	...	...	...	...	...	...	...	...	...	...	...

Human Consumption during the Year 1934.

Heads.				Plucks.			Sets, Stomachs and Intestines.								Tongues.		
Ox.	Calf.	Sheep.	Pig.	Calf.	Sheep.	Pig.	Ox.	Pig.	Ox Fat.	Cow's Udders.	Ox Tails.	Pig Cheeks.	Pig Maws.	Pig Rinds.	Ox.	Sheep.	Pig Feet.
56	1	...	527 +33 halves	...	...	72	3	2	25	3	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	2	...	8	1	...	...	...	4	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	2	...	9	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	3	4	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...
...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	72	7	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	3	12	18	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	6	78	10+ 7 cwts.	23	167	162	1 set	23 sets	...	...	10+ 192 lbs.	2 cwts	78 cwts	42 lbs.	2	2	56 lbs.
...	...	...	...	...	...	...	...	128 sets	...	...	...	...	...	...	...	...	...

Total Weight of Meat and Other Foodstuffs Condemned.

The approximate total weight of meat and other foodstuffs condemned during the year was 85 tons 5 cwts. 17 lbs., comprising :—

	tons.	cwts.	qrs.	lbs.
Beef, Mutton, Veal, Pork.....	64	15	2	18
Offal and Provisions.....	20	9	1	27
	85	5	0	17

The above total of meat and other foodstuffs condemned represents an increase of 41 per cent., as compared with the total condemned during the previous year.

Microscopical Examinations.

During the year, microscopical examinations were carried out as an aid to, or confirmation of, diagnosis in connection with 31 cases under investigation.

The material examined comprised specimens of milk, blood, pus, tissues, and swabs taken from the throats of cows. Of the samples of milk examined for tuberculosis, three were found positive and twelve negative ; and of the throat swabs examined for the same disease, two were positive and one negative. In none of the specimens of blood and other tissues examined for anthrax was that disease found present. Of material other than milk or throat swabs examined for tuberculosis and other conditions, none were found positive.

Microscopical Examinations.

	Specimens Examined.	Result of Examination.	
		Positive.	Negative.
Samples of Milk examined for Tuberculosis	15	3	12
Throat Swabs examined for Tuberculosis...	3	2	1
Smears made from Tissues and examined for Tuberculosis and other Organisms.....	2	...	2
Blood examined for Anthrax.....	11	...	11
	31	5	26

Slaughterhouses.

During the year, 75 separate premises were licensed for slaughtering purposes, this being three fewer than during the previous year. Of the three premises not re-licensed, one is in

use as a hunger-house, and two at the East end of the City were closed by the City Property Department on account of their having become dilapidated and dangerous.

Of the 75 licensed premises, 12 were vacant during 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, 159,957, or 69.9 per cent., were slaughtered by wholesale firms, the remaining 68,646, or 30.1 per cent., being slaughtered by retail butchers.

Rats and Mice (Destruction) Act, 1919.

During the year, 134 visits were made to premises in respect of 99 complaints received, 192 premises, including others than those complained of, being inspected and dealt with.

Of the 192 separate premises, rats were found infesting 150, the remaining 42 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 shops, these accounting for a little more than 69 per cent. of the whole.

RATS AND MICE (DESTRUCTION) ACT, 1919.

Complaints received	99
Number of premises inspected and dealt with in connection with the above	192
Number of premises infested with rats	150
Number of visits	134

KIND OF PREMISES DEALT WITH.

Dwellings	103
Shops	31
Slaughterhouses	18
Warehouses	9
Workshops	6
Poultry Runs	5
Allotments	4
Marine Stores	2
Piggeries	2
Storeyards	2
Car Park	1
Drill Hall	1
Destructor	1
Hospital	1
Office	1
Public House	1
Restaurant	1
School	1
Stable	1
Waste ground	1
Total	192

CONTRAVENTIONS.

Offence.	No. of Cases.	Action taken, etc.
Newcastle upon Tyne Slaughterhouse Bye-Laws.		
Dirty slaughterhouses, utensils, etc.....	5	Offenders cautioned.
Public Health (Meat) Regulations of 1924.		
Meat, unprotected, lying on floor.....	5	Offenders cautioned.
Meat conveyed in dirty vehicles.....	5	Offenders cautioned.
Dirty food factories	2	Offenders cautioned.
Dirty butchers' shops	2	Offenders cautioned.
Meat exposed outside shop windows.....	2	Offenders cautioned.
Meat carried by person not wearing head covering	1	Offender cautioned.
Premises used for domestic washing where food is prepared for sale.....	1	Offender cautioned.
Gut scraping in slaughterhouses.....	3	Offenders cautioned.
Blowing mutton carcasses with the breath	1	Offender cautioned.

THOMAS PARKER, F.R.C.V.S., *Veterinary Officer.*

FOOD AND DRUGS ADULTERATION, Etc.

Total Samples.—The number of samples of foods and drugs obtained for analysis during the year was 1,142, as against 1,162 in 1933. They were of a varied nature, and included most articles in common use in the household. Of this number 613 were submitted to the Public Analyst, the remainder being samples of milk which were tested in the office and found to be genuine.

Informal Samples.—196 informal samples were taken, as against 224 last year. Although legal proceedings cannot be taken in the event of such a sample not being genuine, this method is a useful guide to the general quality of food stuffs sold in any particular district. Any adulterated samples are followed up by "formal" or "official" samples, so that legal proceedings may be taken if necessary.

Milk Samples.—As usual, the greatest number of samples obtained has been of milk, one of the most important articles of food, and one which unfortunately lends itself to fraudulent practices. 942 samples were taken, and of these 23 were certified to be below the minimal limits fixed by the "Sale of Milk Regulations, 1901." Of this number 6 were deficient in non-fatty solids and 17 in milk-fat. The percentage of deficiency in fat varied from 3.3 to 21.6 (the average being 9.87), and of solids not fat from 1.0 to 7.5 (average 3.18).

Samples taken for Analysis during the Year 1934.

Article.	No. of Samples obtained.			Result of Analysis.		Action taken.			Remarks.
	Formal.	Informal.	Total.	Genuine.	Not Genuine.	Prosecutions.	Convictions.	Cases Dismissed.	
New Milk	937	5	942	919	23	17	7	10	In 5 instances the vendors were cautioned by order of the Health Committee. The remaining sample (of the 23 "not genuine") was an "appeal to cow" sample—not for proceedings.
Skimmed Milk	1	...	1	1	...	...	...	...	
Condensed Milk	2	7	9	9	...	...	...	...	
Dried Milk	1	3	4	3	1	1	...	1	The sample "not genuine" (taken "informally") was deficient in fat 11.5%. A subsequent formal sample being genuine, the case was met by a caution.
Cream	...	8	8	8	...	...	...	...	
Butter	...	21	21	21	...	...	...	...	
Margarine	...	18	18	18	...	...	...	...	
Cocoa	...	1	1	1	...	...	...	...	
Baking Powder (inc. Pudding Spice and Bi-carbonate of Soda)	...	3	3	3	...	...	...	...	
Custard and Blancmange Powders	...	4	4	4	...	...	...	...	
Vinegar	...	4	4	4	...	...	...	...	
Ground Almonds	...	4	4	4	...	...	...	...	
Candied Peel	...	4	4	4	...	...	...	...	
Dried Fruits (Currants, Sultanas and Prunes)	...	9	9	9	...	...	...	...	
"Chocolate" Roll	1	1	2	...	2	...	...	...	These samples (informal and formal, respectively, from one vendor) contained chocolate in such small quantities as to be practically negligible. The manufacturers were cautioned.
Household Drugs, Ointments, etc.—Tincture of Rhubarb, Syrup of Rhubarb, Paregoric, Pot. Bromide, Sodium Citrate (and Solution of), Camphorated Oil, Olive Oil, Glycerine, Gregory Powder, Castor Oil, Syrup of Squills, Syrup of Figs, Comp. Liquorice Powder, Composition Essence, Lanoline, Boric Ointment, Zinc Ointment, Sulphur Ointment, Chemical Food and "Ex-Lax" Tablets	1	48	49	47	2	1	...	1	The two samples "not genuine" (informal and formal, respectively, from one vendor) consisted of Syrup of Squills, which were deficient in vinegar of squills by 50% and 73.5%, respectively. The vendor was summoned, the case being dismissed on payment of costs (including Solicitor's and Analyst's fees).
Cod Liver Oil, Cod Liver Oil Capsules, and Cod Liver Oil and Malt (Extract)	...	8	8	8	...	...	...	...	
Sausage	3	38	41	36	5	1	(Case adjourned die)	sine	The samples "not genuine" contained preservative (sulphur dioxide) the presence of which was not "declared" as required. Apart from the prosecution referred to, the cases were met by cautions.
Whisky	—	3	3	3	...	...	...	...	
Rum	...	2	2	2	...	...	...	...	
Wines	...	5	5	5	...	...	...	...	
Totals	946	196	1,142*	1,109	33	20	7	12	Amount of Penalties :—£16 0s. 0d.†

* Includes 244 samples taken "in course of delivery" (at railway stations, hospitals, etc.).

† Including £1 0s. 0d. in respect of "Offences other than Adulteration." (See page 172.)

"Appeal to Cow" Samples.—In only one case was it found necessary to visit a farm for the purpose of obtaining samples direct from the cows. 4 samples were taken, 3 being genuine and 1 deficient in fat 3.3 per cent.

Notwithstanding the large number of samples (1,142) of nearly 50 different articles of foods and drugs, it was only necessary to institute legal proceedings in 20 cases.

Samples not Genuine, etc.—The percentage of all samples not genuine to the total number taken was 2.89 (compared with 2.75 for the previous year). The percentage of non-genuine milk samples to the total number of milk samples obtained was 2.44 (as against 2.25 in 1933). The total number of samples taken was at the rate of 3.57 per 1,000 of the population (estimated) of the City for the year 1934. This is in excess of the number suggested by the Ministry of Agriculture (viz., 3 per 1,000 of the population).

Margarine.—18 samples of margarine were purchased and analysed. All were genuine, free from preservatives, and in compliance with the requirements of the Act in all other respects.

Margarine Warehouses.—41 visits were made to the registered margarine warehouses in the City. The packages were examined as regards proper marking, and all found to comply with the Act.

Preservatives in Food.—Of the total samples obtained for analysis (1,142), only 30 contained preservative, the quantity being in most instances well within the limit allowed.

Two samples of sausage contained sulphur dioxide in quantities above the permissible limit. One case (in which the excess was slight) was met by a caution, and the other by a prosecution, the case being adjourned sine die. In these instances and in three others (in which the amount of sulphur dioxide was within the prescribed limit) the presence of the preservative was not "declared" as required. The three latter samples were taken informally; in one case the subsequent formal sample was genuine and in compliance with the Regulations, the samples in the remaining two instances being followed by the formal samples first referred to.

OFFENCES OTHER THAN ADULTERATION.

Offence.	No. of Cases.	Action Taken, etc.
Milk and Dairies Order, 1926.—		
Sections 27-29.—		
Milk churns in a condition contravening the Order.	1	Offender cautioned.
Milk vessels not properly cleansed before being returned.	10	Offenders cautioned.
Section 32.—		
Boxes and crate containing bottled milk left standing on street pavement exposing the milk to contamination by "dirt, dust, rainwater, or otherwise."	1	Offender cautioned.
Section 33.—		
Vehicle used for the conveyance of milk, and which had previously carried cattle, not "thoroughly cleansed and purified."	1	Offender cautioned.
Public Health (Condensed Milk) Regulations, 1923; *Section* 4. *Public Health (Condensed Milk) Amendment Regulations*, 1927; *Section* 4.—		
Condensed milk sold in unlabelled tins.	3	Offenders cautioned.
Milk and Dairies (Amendment) Act, 1922; *Section* 3.— *The Milk (Special Designations) Order*, 1923; *Section* 3.—		
Selling "Grade A (Tuberculin Tested)" milk without being Licensed for the current year.	1	Offender summoned; fined 20/-.
TOTAL	17	Amount of penalties, £1 0s. 0d.

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

Nine samples of condensed milk were obtained. All were genuine and in compliance with the Regulations.

BACTERIAL IMPURITY OF MILK AND WATER.

Milk.—380 samples were examined by the Bacteriologist for the presence of tubercle bacilli, which were found in 10, or 2.6 per cent. This is a slight increase on last year's figures, which were 8 and 2.0 per cent., respectively.

Action taken is described on page 157.

155 samples were examined for evidence of excremental pollution, which was found to an undesirable degree in 31, or 20 per cent. In every case the Medical Officer of Health of the district from which the milk originated was informed, with the result that steps were taken to secure more cleanly methods of production.

Cleanliness of Milk Churns.—During the year 17,402 churns awaiting return to the farmers were examined at the various railway stations in the City. Of this number, 13 were found in an uncleansed condition. The offender in each case was cautioned by the Medical Officer of Health.

In addition, 4,759 churns in course of transit through the City were examined, and 11 were found in a dirty condition. The matter was reported to the Medical Officers of Health of the districts concerned.

One farmer-consignor was also communicated with respecting churns found to be defective or not in conformity with the requirements of the Milk and Dairies Order.

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

The results are described on page 105.

PREMISES ON WHICH FOOD IS PREPARED.

Bakehouses.—There are in the City 288 bakehouses, of which 36 are factories (*i.e.*, places in which mechanical power is used), and 252 are workshops.

The number of " domestic " bakehouses, or private dwelling houses in which the occupier makes bread for sale amongst the neighbours, is 92, a decrease of 11 as compared with 1933. Domestic bakehouses are under the same supervision as when the business is carried on in an ordinary bakehouse, and, generally speaking, are kept in a cleanly state. It is seldom that any contraventions are found.

Restaurant Kitchens (which include hotels, cafés, and dining rooms). The number on the register is 115. They are regularly inspected. 9 notices were served during the year (principally for lime-washing, which was overdue). These were all complied with without reporting to the Health Committee for

statutory notices to be served. Strict supervision is exercised over these places in order to ensure the preparation of food under the most hygienic conditions. Generally speaking there is an improvement and a high standard of cleanliness is generally found.

Fried Fish Shops.—The number of these is 160 (as against 157 in the previous year). For comments see " Offensive Trades " (Section VII.).

Ice Cream Manufactories and Retail Shops.—20 applications were received during the year for permission to make and/or sell this commodity. One was refused, the general sanitary conditions of the premises not being up to the required standard.

The number of makers of ice cream is 121, as compared with 106 in 1933, whilst the number of retailers only has decreased from 174 to 155.

The Milk and Dairies (Amendment) Act, 1922, *Sec.* 2, and *The Milk and Dairies Order*, 1926, *Sec.* 6.—During the year 43 applications were received for permission to retail milk, 41 being granted and 2 refused on sanitary grounds. At the close of the year there were 669 retail milk-shops in the City, including 69 belonging to the 10 larger dairy companies. Of the total, 65 were shops in which only dairy products and like commodities were retailed, 565 were shops selling other articles, and 39 were hawkers. All milk-shops and dairies were regularly inspected, and the conditions generally found to be satisfactory.

C. RAIMES,

Inspector under the Food and Drugs Acts, etc.

Health Department,
Town Hall,
1*st May*, 1935.

REPORT OF THE
CHIEF SANITARY INSPECTOR.

VII.—THE HOME AND THE WORKSHOP.

NUISANCES, HOUSING, FACTORIES AND
WORKSHOPS, Etc.

NUISANCES, HOUSING, FACTORIES AND WORKSHOPS, ETC.

The following is the Report of the Chief Sanitary Inspector.

TO THE MEDICAL OFFICER OF HEALTH.

SIR,

I have pleasure in submitting the following report on the work carried out in my section of the Department during the year ended December 31st, 1934.

NUISANCES.

The number of nuisances reported upon and dealt with during the year was 18,474, which is a considerable increase upon the previous year. As usual, they were of a most varied character. Sub-letting and overcrowding are found to be the common cause of a large number of complaints, while others are found by the District Inspectors.

A large percentage of the complaints was of a very minor nature, and in some cases frivolous, many were anonymous and unfounded, and the ulterior motive of others was to obtain a council house, by people who were in healthy and comfortable homes.

Notices Served.

The following are the numbers of notices and letters issued during the year :—

Number of notices served :—		
Informal	4,298	
Statutory	241	
		4,539
Number of special letters sent		2,001
Number of circular letters sent		2,095
Total		8,635

Magisterial Proceedings.

Considering the total number of letters sent out and notices served, it is worthy of note that it was only necessary to take legal proceedings in 4 cases. In the remaining instances in which proceedings were ordered by the Health Committee, the necessary work was carried out without recourse to summonses. The details of this part of the work are given on pages 190-191.

The Rent and Mortgage Interest (Restrictions) Acts.

Only 4 applications were received under the above Acts. A certificate was issued in each case and a notice served on the agent to carry out the necessary repairs. Both were complied with.

Conversion of Dry Closets to Water-closets.

During the year 4 pail-closets have been converted to water-closets, in addition to 6 pail-closets and 10 combined privies and ashpits demolished in slum clearance areas. This leaves only 65 in the City, as compared with nearly 4,000 ten years ago. Those remaining are all in good sanitary and structural condition, well kept and clean, and could certainly not be deemed " insufficient."

In addition, 16 " waste-water " closets (a type of w.c. which is flushed by slop and rain-water), have also been removed and pedestal w.cs. with independent flushing cisterns provided instead. These waste-water closets are really very little, if any, improvement upon the conservancy systems. In many cases the shafts are from 4 to 8 feet deep and thickly coated with excreta, which the tenant cannot cleanse ; they are practically w.c. basins without a water supply. Being on the water-carriage system they cannot be dealt with under existing legislation.

Three " dry " ashpits were also removed and replaced by regulation dust-bins (the first of which was supplied free of charge) ; 8 free bins were supplied during the year.

RETURN OF "DRY" CLOSETS IN THE VARIOUS WARDS OF THE CITY.

WARDS.	Total No. Privies.	Pail-Closets.	Cell Privies.	Privies and Ashpits.	
				Privies.	Ashpits.
St. Nicholas'	...	...	...	...	...
St. Thomas'	...	...	...	...	...
St. John's	...	...	...	...	...
Stephenson	...	...	...	...	...
Armstrong	...	...	...	...	...
Elswick	...	...	...	...	...
Westgate	...	...	...	...	...
Arthur's Hill	...	...	...	...	...
Benwell	5	2	3	...	...
Fenham	6	3	...	3	2
All Saints'	...	...	...	...	...
St. Andrew's	...	...	...	...	...
Jesmond	...	...	...	...	...
Dene	...	...	...	...	...
Heaton	1	1	...	...	...
Byker	17	17	...	...	...
St. Lawrence	...	...	...	...	...
St. Anthony's	34	34	...	...	...
Walker	2	...	...	2	2
Total in City ...	65	57	3	5	4

Smoke Abatement.

This important part of our work still continues to receive constant attention, the number of observations made during the year being 398 of 94 factory and other chimneys. With the exception of two or three old offenders, better results have been observed this year in connection with the smoke nuisance. One of the worst offenders was the City Hospital, Walker Gate, which necessitated 302 observations, resulting in 212 emissions of black smoke exceeding the 2 minutes per half-hour limit.

25 informal and 1 statutory notices were served during the year. In addition, the drivers of 7 steam wagons were verbally cautioned about the quantity of black smoke given off; 5 of these were strangers to the district and were not observed again in the City; the other two are frequently seen, but the offence has not been found to be repeated.

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.	
94	398	18	42	25	1	...

NOTE.—Not including 302 observations and 212 excessive emissions at the City Hospital, Walker Gate.

Atmospheric Pollution Records.—Three observation stations, under the immediate control of the City Analyst, are placed—one in Westgate Cemetery, one in the grounds of the Moor Hospital, and one at the Welbeck Reservoir, in connection with similar stations in other towns, the monthly results from all of which are compared and published by the Department of Scientific and Industrial Research.

The monthly readings from the Newcastle stations are appended :—

ATMOSPHERIC POLLUTION.—NEWCASTLE RECORDS, 1934.

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 SO_3.	Chlorine as Cl.	Ammonia as NH_3.	Sulphate as SO_4.
January ..	56·8	0·21	1·53	1·56	1·48	2·16	6·94	1·17	0·37	0·11	1·39
February	14·2	0·14	0·37	0·88	1·07	1·07	3·53	0·55	0·28	0·03	0·67
March	112·1	0·07	2·03	2·33	3·14	4·71	12·28	1·92	1·19	0·11	2·30
April.....	181·8	0·20	1·92	2·33	5·08	4·00	13·53	2·12	1·34	0·14	2·54
May	38·3	0·27	2·33	1·62	0·84	1·30	6·36	0·65	0·27	0·03	0·78
June	58·2	0·35	0·57	1·05	0·92	2·22	5·11	0·58	0·33	0·04	0·67
July.....	83·8	0·34	1·66	1·41	2·02	4·02	9·45	1·32	0·41	0·07	1·59
August ...	98·0	0·13	0·38	1·43	3·14	1·96	7·04	0·81	0·55	0·07	0·97
Sept.	42·6	0·20	2·17	1·24	2·39	1·70	7·70	1·19	0·28	0·03	1·43
October...	107·9	0·10	0·98	1·15	2·39	4·09	8·71	1·63	0·70	0·21	1·96
Nov.	106·5	0·13	0·47	0·91	2·98	3·20	7·69	2·05	0·68	0·06	2·46
Dec.	132·1	0·17	0·57	1·56	2·91	3·69	8·90	2·81	1·04	0·13	3·38
Total, 12 months...	1032·3	2·31	14·98	17·47	28·36	34·12	97·24	16·80	7·44	1·03	20·14
Average per month	86·0	0·19	1·25	1·46	2·36	2·84	8·10	1·40	0·62	0·09	1·68

An average of 8.10 metric tons per square kilometre per month=7.8 cwts. per acre per annum, or 249 tons per square mile per annum, as compared with 7.6 cwts. per acre, or 243 tons per square mile in 1933.

WESTGATE CEMETERY GAUGE.

Month.	Rain (Millimetres).	Metric Tons of Deposit per Square Kilometre per Month.									
		Insoluble Matter.			Soluble Matter.		Total Solids.	Included in Soluble Matter.			
		Tar.	Other Carbonaceous.	Ash.	Loss on Ignition.	Ash.		Sulphate as SO_3.	Chlorine as Cl.	Ammonia as NH_3.	Sulphate as SO_4.
January ..	44·8	0·38	3·22	2·94	0·80	1·61	8·95	0·83	0·28	0·09	0·99
February	10·9	0·11	1·85	2·14	0·81	0·98	5·89	0·49	0·23	0·07	0·58
March	86·9	0·16	3·27	3·60	1·91	3·47	12·41	1·43	0·78	0·08	1·71
April	Gauge out of order.										
May	40·1	0·32	3·02	3·50	1·68	1·20	9·72	0·99	0·43	0·04	1·19
June	64·1	0·48	1·18	2·83	1·03	3·07	8·59	0·96	0·49	0·04	1·15
July.....	69·5	0·12	3·15	3·25	1·39	3·47	11·38	1·04	0·35	0·04	1·26
August ...	74·8	0·07	2·39	3·05	2·83	1·20	9·54	0·81	0·48	0·05	0·98
Sept.	38·7	0·20	2·90	2·50	1·40	1·78	8·78	0·88	0·25	0·03	1·05
October...	82·8	0·20	1·84	2·35	1·48	2·33	8·20	1·26	0·64	0·16	1·51
Nov.	102·9	0·32	1·78	2·24	3·09	4·31	11·74	1·76	0·74	0·11	2·11
Dec.....	92·2	0·27	3·00	2·78	0·73	3·14	9·92	1·39	0·59	0·13	1·67
Total, 11 months...	707·7	2·63	27·60	31·18	17·15	26·56	105·12	11.84	5·26	0·84	14·20
Average per month	64·3	0·24	2·51	2·83	1·56	2·41	9·55	1·08	0·48	0·08	1·29

An average of 9.55 metric tons per square kilometre per month=9.1 cwts. per acre per annum, or 293 tons per square mile per annum, as compared with 9.1 cwts. per acre, or 291 tons per square mile in 1933.

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 SO_3.	Chlorine as Cl.	Ammonia as NH_3.	Sulphate as SO_4.
January ..	35·2	0·13	1·20	2·19	2·32	2·60	8·44	1·50	0·48	0·14	1·80
February	10·4	0·03	0·98	1·70	1·77	1·98	6·46	0·87	0·61	0·08	1·04
March	54·7	0·10	1·65	2·60	1·43	3·93	9·71	1·24	1·05	0·12	1·48
April	97·6	0·18	1·60	2·66	2·93	2·93	10·30	1·34	1·17	0·12	1·61
May	Gauge out of order.										
June	43·0	0·49	0·83	1·97	0·94	2·24	6·47	0·62	0·39	0·03	0·74
July.....	58·6	0·13	1·78	2·63	1·64	1·99	8·17	0·86	0·29	0·04	1·03
August ...	58·6	0·08	1·85	2·43	1·87	1·76	7·99	0·81	0·38	0·03	0·96
Sept.	26·1	0·15	1·25	2·23	0·78	1·82	6·23	0·56	0·27	0·01	0·66
October...	78·1	0·08	1·08	2·15	0·78	2·66	6·75	1·18	0·88	0·19	1·42
Nov.	63·8	0·26	0·90	2·16	1·28	2·68	7·28	0·92	0·62	0·09	1·11
Dec.	76·8	0·24	1·02	1·76	1·38	2·92	7·32	1·39	0·76	0·08	1·64
Total, 11 months...	602·9	1·87	14·14	24·48	17·12	27·51	85·12	11·29	6·90	0·93	13·49
Average per month	54·8	0·17	1.29	2·22	1·56	2·50	7·74	1·03	0·63	0·08	1·23

An average of 7.74 metric tons per square kilometre per month=7.4 cwts. per acre per annum, or 237 tons per square mile per annum, as compared with 7.3 cwts. per acre, or 232 tons per square mile in 1933.

TOTAL IN THREE GAUGES IN THE CITY—1934.

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 SO_3.	Chlorine as Cl.	Ammonia as NH_3.	Sulphate as SO_4.
Total, 12 months*	2342·9	6·81	56·72	73·13	62·63	88·19	287·48	39·93	19·60	2·80	47·83
Average per month	207·0	0·60	5·02	6·47	5·54	7·81	25·44	3·53	1·73	0·25	4·23
Average per gauge 12 mths.*	781·0	2·27	18·91	24·38	20·87	29·40	95·83	13·31	6·53	0·93	15·94
Average per gauge per month	69·0	0·20	1·67	2·16	1·85	2·60	8·48	1·18	0·58	0·08	1·41

* Two of the three gauges were each out of use for one month.

An average of 8.48 metric tons per square kilometre per month=8.1 cwts. per acre per annum, or 260 tons per square mile per annum, as compared with 8.0 cwts. per acre, or 256 tons per square mile in 1933.

For comparison with the foregoing, the following returns of sunshine recorded at the Armstrong College, Newcastle, and at Cockle Park, near Morpeth (about 15 miles from the City), are given :—

Month.	Armstrong College. Sunshine (hours).	Cockle Park. Sunshine (hours).
January	57·1	79·4
February	80·3	101·8
March	80·6	95·1
April	81·1	111·0
May	146·6	185·9
June	139·8	165·9
July	191·5	222·0
August	140·9	146·7
September	114·0	135·1
October	84·9	92·6
November	34·1	46·3
December	7·6	23·2
Total for year	1158·5	1405·0
Average per month	96·5	117·1

CINEMAS, THEATRES, AND OTHER PLACES OF PUBLIC ENTERTAINMENT.

By a Ministry of Health Circular issued in 1920, Sanitary Authorities are required to give particular attention to premises holding a licence for music, dancing, etc., special regard having to be given to sanitary conveniences, dressing rooms, ventilation, and means of escape in case of fire.

In pursuance of this order, 10 applications were received for certificates of sanitation which must be submitted to the Licensing Justices before a music or dancing licence is granted or renewed. After a careful inspection of the premises 9 were granted, the conditions in the remaining case not warranting a certificate.

The number of places so certified is now 4 theatres and music halls, 37 cinemas, and 111 concert halls, billiard rooms, cafes, etc., 144 visits were made both during the day and night time to inspect the sanitary arrangements, dressing rooms, etc., which were generally found to be in order.

Testing of the air and ventilation systems has again been carried out, every cinema, theatre and music hall being tested

with the "Kata" thermometer, and only in 4 cases was it found necessary to communicate with the management on account of the somewhat high temperature prevailing in their houses.

In addition, tests for demonstration purposes were made in 4 classrooms at the Rutherford College and 2 in private houses, giving a total of 98 separate buildings. It may be taken that the ventilation of our cinemas and other like places is of a fairly high standard.

From personal observation of a number of such places, the closeness and stuffiness is very largely due to smoking. This, however, being one of the attractions of such places, it is most unlikely that it will ever be abolished. It is therefore incumbent on the management to have the smoke removed as quickly and effectually as possible, not only for the health and comfort of the patrons, but also to give a clearer view of the pictures.

OFFENSIVE TRADES.

28 applications for permission to establish the trade of a fish fryer were received during the year. Of that number 4 were granted and 23 refused, the proposed premises not being up to the standard required in this City, whilst 1 application was withdrawn.

This class of "offensive trade" still predominates, there being now 160 on the register (against 157 last year). As compared with the previous year there is an increase of 3 fish fryers and 1 gut scraper, and a reduction of 1 each in the number of rag and bone dealers, bone boilers, fat melters, and dealers in blood, etc.

The fried fish shops are inspected both by day and night, and only in 2 cases was it necessary to serve a notice to carry out requisite cleansing.

Complaints having been received as to the untidy condition of the streets in the vicinity of fried fish shops, owing to greasy paper and remains of fish being thrown down, a circular letter was sent to all fish fryers requesting that every endeavour be made to prevent this nuisance, and suggesting that a prominent notice be displayed in their shops requesting customers to refrain from the practice. In all 160 were sent out. These have been complied with in the great majority of cases, with the result that a very great improvement has been observed.

The need for bye-laws dealing with this trade in particular, also for others in general, is very great, and when they are made and in operation, the standard will be considerably raised, although having regard to the large number in the City the contraventions are few and of a minor nature.

The number of offensive trades now on the register is :—

Fish fryers	160
Rag and bone dealers	9
Tripe boilers	7
Gut scrapers	5
Dealers in hides and skins	4
Bone boilers	3
Fat melters and extractors	1
Glue and size makers	2
Soap boiler	1

These are systematically inspected, 1,174 such visits being made during the year.

SUMMARY OF NUISANCES, ETC., FOR THE ABATEMENT OF WHICH NOTICES WERE SERVED DURING 1934.

Foul pail-closets (to replace with water-closets)	4
Foul privy and ashpit (to replace with water-closet)	1
Defective waste water-closets (to replace with fresh water-closets with flushing cisterns, etc.)	5
Foul or defective ashpits not connected with privies (to remove and provide dust bins)	7
Insufficient water-closet accommodation (additional water-closets ordered)	14
Defective or insufficient dust bins (for houses)	1,316
,, ,, ,, (for business premises)	61
Defective water-closets	1,424
Water-closets without adequate water supply	65
Choked water-closets (mostly served on tenants)	30
Dirty water-closets (all served on tenants)	17
Dirty privies (all served on tenants)	1
Defective drains (to repair, or construct new drains)	334
Insufficient means of drainage	33
Choked drains, etc.	218
Defective, want of, or choked sinks, waste-pipes, etc.	680
No sink provided	35
Defective or choked soil-pipes, vent shafts, etc.	29
Sink waste-pipes not trapped	55
Want of or defective pavement in yards, passages, etc.	792
Dirty rooms	32
Dirty bedding	4
Damp rooms	607
Overcrowding	3
Dirty yards, passages, stairs, etc.	37
Animals, pigeons, and fowls improperly kept	11
Offensive accumulations	63
Accumulations of manure	7
Want of or defective manure pits	9
Broken roofs and want of or defective or choked spouting	1,656
Want of water (other than in tenements—see below)	116
Smoke nuisances	18
Want of proper ventilation to rooms (including to floor space), broken window cords, etc.	829
Structural defects—internal and external—(broken plaster, floors, stairs, walls, fireplaces, etc.)	7,974
Cisterns supplying water to sinks, etc., dirty or defective	6
Stables (unsuitable, defective, etc.)	10
Tripery (unsuitable)	1
Food manufactured or stored for sale under improper conditions	3
Bakehouses—Dirty, etc.	104
Fried fish shops—(Want of cleansing)	2
Billiard Saloon—(Sanitary accommodation defective, insufficient, etc.)	2
Council (and other) Schools—	
Defective water-closets	1
Dustbins required	2
Cellar dwellings illegally occupied	4
Filth thrown upon yards, streets, into dustbins, etc.	3
Rooms, staircases, etc., insufficiently lighted	5
Inadequate accommodation for storage of food (other than in tenements)	383
Inadequate accommodation for washing of clothes (other than in tenements)	219
Carried forward	17,232

SUMMARY OF NUISANCES, ETC.—*Continued.*

Brought forward	17,232
Tenements—Limewashing not done	108
No adequate accommodation for washing of clothes	105
,, ,, storage of food	254
,, ,, preparation and cooking of food	111
Water supply and sinks not adequate, conveniently accessible, etc.	163
Water supply (only) not adequate, conveniently accessible, etc.	36
Insufficient number of water-closets provided	21
Tenements—*continued.* Inadequate lighting of common staircases—Natural ....23 / Artificial 176	199
Staircases without proper handrails, etc	28
Houses converted to "tenements" without the Bye-laws being complied with	6
Cinemas—Temperature excessive	4
Other defects and contraventions	1
Tents, vans, sheds, and similar structures (kept or placed on land without the approval of the Corporation)	2
Clearance Areas—Sites not properly cleared	6
Unclassified minor nuisances	198
TOTAL	18,474

DETAILS RELATING TO CERTAIN WORKS CARRIED OUT IN THE ABATEMENT OF NUISANCES AND TO INSPECTIONS MADE DURING 1934.

Length (in yards) of old drains removed	1,187
Length (in yards) of new drains constructed	1,959
New trapped gullies provided to drains	373
Combined privies and ashpits removed—Privies	10
Combined privies and ashpits removed—Ashpits	5
Pail-closets removed	10
Defective water-closets removed	96
Water-closets provided (in place of the foregoing privies and defective water-closets removed, also in 30 cases where the accommodation was previously insufficient)	127
Dry ash-pits removed and replaced by galvanised iron dust bins	3
Dust bins substituted for dry ash-pits where water-closets existed, and provided in cases where privies have been replaced by water-closets	*8
No. of drains tested	766
No. of tests of above drains made by smoke and water	789
No. of inspections from complaints made at office (verbally or by letter)	4,287
No. of tenement inspections made	9,944
No. of contraventions of Tenement Bye-laws for which notices have been served to obtain remedy	1,706

DETAILS RELATING TO CERTAIN WORKS, ETC.—*Continued.*

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	4,392
Inspections to learn if works ordered were in progress	11,070
Supervisions of work in progress	6,696
Common yards and courts in the worst localities specially visited on Friday afternoons and Saturday mornings to obtain weekly cleansing	19,540
Inspections after infectious disease	1,959
Inspections of milk shops and ice creameries (including retail shops)	1,108
,, bakehouses	†1,603
,, offensive trades	1,174
,, wholesale margarine warehouses	41
,, as to limewashing of tenements	2,020
,, of schools	143
,, under Housing Acts	13,241
Inspection of cinemas, etc. (day visits, 103; night visits, 41)	144
Tents, vans, sheds and similar structures	45
Miscellaneous visits	6,110

* Dust bins supplied free by Corporation.

† Including 1,338 inspections made under the Factory and Workshop Acts by the Assistant Inspectors of Workshops.

SUMMARY OF LEGAL PROCEEDINGS ORDERED TO BE TAKEN BEFORE THE MAGISTRATES FOR THE ABATEMENT OF NUISANCES, ETC., DURING THE YEAR 1934.

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.
Public Health Acts :—				
Roofs and spouting defective	7	6	1	
Yard pavement defective ...	1	1	...	
Drains choked	1	1	...	
Rotten vegetable matter deposited in manure-pit	1	1	...	
Pigeons and poultry kept so as to be a nuisance	2	1	...	In 1 instance the case was dismissed on payment of costs, the nuisance having been abated.
Smoke emitted into rooms from fireplaces.....	1	1	...	
Lavatory waste-pipe discharging on street pavement	1	1	...	
Public Health Act, 1875, *Section* 36, and *Newcastle upon Tyne Improvement Act*, 1892, *Section* 53 :—				
Water-closet defective.....	1	1	...	
Public Health Acts Amendment Act, 1890, *Section* 22:—				
Only one water-closet provided for the use of both sexes of persons employed	1	1	...	
Newcastle upon Tyne Corporation Act, 1911.—				
Section 52 :—				
Ice cream sold from a barrow not marked with the name and address of the vendor	1	...	...	Offender fined 20/-.
Section 55 :—				
Want of or defective dustbins for house refuse.....	4	4	...	
Newcastle upon Tyne Corporation Act, 1892, *Section* 63 :—				
Stables unfit for the keeping of animals	2	2	...	
Carried forward.....	23	20	1	2

SUMMARY OF LEGAL PROCEEDINGS ORDERED TO BE TAKEN BEFORE THE MAGISTRATES FOR THE ABATEMENT OF NUISANCES, ETC., DURING THE YEAR 1934.—*Continued.*

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.
Brought forward.....	23	20	1	2
Newcastle upon Tyne Corporation Act, 1926, *Section* 33 :—				
Living vans placed and kept on land without the approval of the Corporation	2	1	...	In 1 instance the owner-occupier was fined 20/-.
Bye-laws with respect to Tenemented Houses :—				
Water-closet accommodation insufficient (No. 8).....	2	2	...	
Water supplies and sinks inadequate, not conveniently accessible, etc. (No. 28d)...	2	2	...	
Inadequate accommodation for—				
(*a*) Storage of food (No. 28f.ii.)	1	1	...	
(*b*) Preparation and cooking of food (No. 28f. iii.).....	3	3	...	
Common staircases not provided with adequate means of artificial lighting (No. 18c)	1	1	...	
Windows not having an area equal at least to one-tenth of the floor area of the room (No. 26a)	1	1	...	
Yard pavement defective (No. 28c).....	1	1	...	
TOTALS	36	32	1	3

Total amount of Penalties :—£2 0s. 0d.

HOUSING.

The Housing Acts, 1925 and 1930.

The number of inspections under the Housing Acts, 1925 and 1930, was 13,241.

Housing Act, 1930, Section 17.

During the year a systematic inspection, under this section, of 2,141 houses in the various districts of the City has been carried out. The properties dealt with were good type flats or self-contained houses, not by any means in poor districts or houses structurally in a neglected condition, but those which had never ordinarily been inspected.

The sums involved in the repairs varied so far as can be ascertained from £5 to £250.

The object of this section is to prevent the creation of slums by requiring owners to carry out repairs which are necessary for the purpose of keeping their houses in a reasonable state of repair.

The work involved in inspecting the houses and supervising the repairs has been very considerable. Another difficulty about this section is that the Local Authority has to decide whether the house can be rendered fit for habitation "at a reasonable expense." The Act, however, gives no indication as to what is to be deemed "a reasonable expense," and also provides that "regard shall be had to the estimated cost of the works necessary to render it so fit and the value which it is estimated that the dwelling house will have when the works are completed."

It is worthy of note that, of the large number of notices served, it has not been necessary to report any for statutory proceedings, although the cost of repairs has been high in some cases. Every assistance has been given to owners in carrying out the works required.

The nature and number of the defects so dealt with are shown in the following summary :—

HOUSING ACT, 1930; SECTION 17.

DETAILS OF WORKS CARRIED OUT UNDER NOTICE.

No. of houses involved	2,141
Roofs repaired (including chimney stacks)	817
Spouting repaired, renewed, etc.	675
External walls repaired, re-pointed, etc.	1,413
Under-floor ventilation provided	151
Yard pavements repaired or renewed	652
Dampness remedied (from causes other than those defined above)	238

Drains repaired, reconstructed, etc.	172
Water-closets repaired	988
,, ; additional conveniences provided	6
Dustbins provided	219
Accommodation for washing clothes, provided, repaired, etc.	389
Coalhouses repaired	380
Ceiling- and wall-plaster repaired or renewed	1,755
Floors repaired or renewed	477
Window sash-cords renewed or repaired	562
Windows repaired or renewed	342
Doors repaired or renewed	837
Fireplaces repaired or renewed	725
Ventilated food stores provided	513
Water supply and/or sinks provided, waste-pipes repaired, etc.	496
Staircases.—Stairs, handrails, etc., repaired or renewed	324
Light (natural and/or artificial) provided	23
Ventilation of rooms, etc., improved	27
Rooms, staircases, etc., cleansed	31
Minor repairs (not included in the above)	899
TOTAL	13,111

Individual Unfit Houses.

Sections 19 and 20 of the 1930 Act have also been put into operation in regard to such houses. Section 19, briefly, gives the Local Authority power to order the demolition of an insanitary house. The owner is requested to appear before the Health Committee, when the condition of the house and any proposals which he may desire to submit in regard to it are considered. During the year 47 houses (124 dwellings) with a population of 436, have been dealt with, with the following results :—

	Number of	
	Houses.	Separate Holdings (or Families).
Demolition Orders made	26	61
Closing Orders made	7	21
Premises retained for business purposes (owners finding alternative accommodation for tenants displaced)	3	7
Otherwise dealt with... ... ... (negotiations pending, undertakings to repair, not to occupy as dwellings, etc.).	11	35
TOTALS	47	124

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)	7,734
(*b*) Number of inspections made for the purpose	18,728
(2) (*a*) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	4,540
(*b*) Number of inspections made for the purpose	13,241
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	*2,550
(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	2,621

(** 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	773

3.—*Action under Statutory Powers during the Year :—*

(*a*).—Proceedings under Sections 17, 18 and 23, of the Housing Act, 1930—

(1) Number of dwelling houses in respect of which notices were served requiring repairs	1,368
(2) Number of dwelling houses which were rendered fit after service of formal notices :—	
(*a*) By owners	1,349
(*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	480
(2) Number of dwelling houses in which defects were remedied after service of formal notices :—	
(*a*) By owners	477
(*b*) By Local Authority in default of owners	...

(*c.*)—Proceedings under Sections 19 and 21 of the Housing Act, 1930 :—

(1) Number of dwelling houses in respect of which Demolition Orders were made	26
(2) Number of dwelling houses demolished in pursuance of Demolition Orders	15

(*d.*)—Proceedings under Section 20 of the Housing Act, 1930 :—

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made	21
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	...

Clearance Areas.

In July and November the Ministry of Health held Inquiries into 10 areas. The July Inquiry in respect of three Buckingham Street areas, concerned 396 houses, 970 separate families, and a population of 3,582 persons. The November Inquiry comprised seven areas, of 199 houses, 492 separate families, and a population of 1,780 persons.

Four areas were fully confirmed by the Minister and six with slight modifications.

The first Inquiry lasted four days, the second three days; both were largely attended by the owners and others acting for them, the opposition to the action of the Corporation being particularly strong.

Details of the confirmations are appended in the following tables.

Area.	(*a*) (As originally represented).			(*b*) (As confirmed by the Minister of Health).		
	Houses.	Dwellings.	Population.	Houses.	Dwellings.	Population.
Buckingham Street No. 1 ...	62	130	438	54	118	382
,, ,, No. 2 ...	9	23	96	6	19	84
,, ,, Compulsory Purchase Order...	325	817	3,048	321	806	3,005
City Road No. 1	3	21	52	3	21	52
,, ,, No. 2	7	25	75	5	17	58
,, ,, No. 3	27	103	366	23	98	347
,, ,, No. 4	4	13	36	4	13	36
,, ,, No. 5	3	11	38	3	11	38
Tyneside Terrace	87	169	660	86	169	660
Scotswood Road.....	68	150	553	62	139	518
TOTAL	595	1,462	5,362	*567	1,411	5,180

*EXCLUSIONS.

	Houses.	Dwellings.	Population.
(*a*) Subject to reconditioning	10	19	75
(*b*) Unconditionally	15	29	95
(*c*) Conversion to business premises	3	3	12
TOTAL	28	51	182

The houses in all the areas were very old, damp, dilapidated, congested, and quite beyond repair or reconstruction.

Amongst the outstanding defects may be mentioned :—

Structures.—Defective brick or stone work, cracked and bulging walls, damp-proof courses either defective or non-existent, chimney stacks and pots displaced and in many cases in danger of falling.

Roofs.—Slates and tiles broken, loose and missing ; flashings and spouts defective.

Floors.—Broken, rotted, worn and out of level.

Staircases.—Treads broken, worn, out of level, handrails loose and broken, dark, badly ventilated, and difficult of access.

Windows.—Rotting and perished frames and sashes, broken sash-cords and fasteners.

Doors.—Dilapidated, badly fitting, warped, and hinges broken.

Grates and Stoves.—Badly set, defective, fire-bars missing, ovens out of order.

Sanitary accommodation.—W.C.'s used in common by several tenants, dark, dirty, and 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.

Houses Demolished, etc.—Apart from action by the Health Committee, 24 self-contained houses, 4 tenemented houses (of 29 holdings), and 201 munition cottages (Scotswood) have been demolished, or have ceased to be used as dwellings, for various reasons (dilapidations, street improvements, conversion to business premises, etc.).

Houses built during the year 1934.—The City Engineer reports that there were 1,023 self-contained houses, and 250 houses in flats (499 tenancies), built privately during the year under report. In addition, 1,011 dwellings were provided under housing schemes.

Tents, Vans, Sheds and Similar Structures.

There now remain only 3 vans in the City occupied as dwellings. These are on isolated plots of land and occupied by persons unable to pay rents demanded for dwelling-houses even when they are obtainable.

They all comply with the Bye-laws and, so far as cleanliness is concerned, compare very favourably with many dwelling-houses. The large colonies which existed for some years have been removed. In one case the occupier of a van in the Walker district was summoned and fined 20/-. He then left the ground and went to reside at Gosforth.

Tenemented Houses.

Owing to the number of Clearance Areas and action taken under Sections 19 and 20 of the Housing Act, 1930, the number of these houses in the City is decreasing and will be still further reduced in the near future.

One particularly undesirable feature of this type of house is the conversion of large self-contained houses into single-room holdings, which are occupied by mixed families, and are frequently found overcrowded either from a hygienic or moral standard.

A house-to-house inspection of an area bounded on the south by Scotswood Road, north by Elswick Road, east by Rye Hill, and west by Beech Grove Road and Brunel Street, revealed a total of 191 such houses, with 933 holdings, and a total population of 3,138 persons of all ages. The houses in this area were originally self-contained and built for one family only, and for many years were the homes of some of the most prosperous families in the City. For some time past, however, owing to changing social conditions, they have been converted into tenements and now house from two to twelve families.

When it is considered that these rooms are occupied, as a rule, by the unemployed, whose only income is from Unemployment Insurance or Public Assistance allowances, and that the rents charged vary from five to eight shillings per week for one room, it is quite evident that little is left for the comforts and necessities of life.

When this conversion into tenements takes place, the requirements of the Bye-laws are put into operation, but even when these are complied with the houses cannot be said to come up to the standard of decent homes. They do not, for one thing, possess the amount of privacy essential for home life, and, further, a house originally built and planned for one family is unsuitable for the accommodation of from two to twelve.

The number of tenemented houses in the City at the end of the year was 3,216, consisting of :—

2,713	...	One-room holdings.
5,483	...	Two-room holdings.
1,053	...	Three-room holdings.
129	...	Four-room holdings.
4	...	Five-room holdings.

A total of 9,382 separate holdings. During the year 9,944 inspections have been made of this type of dwelling.

Tenement Bye-laws.

In addition to the Clearance Areas already reported upon, 155 tenemented houses, comprising 494 separate holdings, have been inspected and reported upon in detail during the year, with a view to the Bye-laws being put in force. It was found necessary to report for legal proceedings in only 11 cases, as against 20 in 1933. In all of these instances the works required were eventually carried out without having to apply for the summonses ordered.

New Buildings and Sanitary Alterations.

371 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 420 during the previous year.

Common Lodging Houses.

At the end of the year there were on the Register 23 common lodging houses, as compared with 27 in 1933, four being removed from the register, two as unfit and two owing to scarcity of lodgers. This latter is alleged to be chiefly due to the action of the Public Assistance Committee, who will not grant relief to any able-bodied person under the age of 60 residing in a house of this description.

No new houses were registered during the year.

The total number of lodgers for which the houses are registered is 767, showing a decrease of 131 from last year, due to the removal of the four houses mentioned and a re-arrangement in another. 3,372 inspections during the day time and 107 at night time have been made, and it is satisfactory to note that it was unnecessary to resort to legal proceedings to remedy contraventions of the bye-laws governing the management of the houses.

The average number of lodgers per night was 476, the highest number being 514, and the lowest 449.

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	20	669	...	...	...	669	669
TOTAL	23	747	10	10 (20 persons)	78	669	767

Summary of inspections, contraventions found, etc.

Number of houses on the register at the end of the year.....	23
Applications for registration (Newcastle Corporation Act, 1911, Sec. 63); 25 granted, 2 refused	27
Houses ceased to be occupied as common lodging houses.....	4
Inspections made in the day-time.....	3,372
Inspections made in the night-time.....	107
Notices served { *re* washing of bed clothes, 100 ; *re* lime-washing of houses, 50 }	150
Contraventions of Bye-laws, etc. :—	
Structural defects in houses	6
Defective water-closets	7
Defective roofs and defective or choked spouting.....	10
Choked W.C.'s and drains.....	7
Yard pavement defective.....	1
Dust bins defective or insufficient.....	2
Lack of efficient ventilation (broken sash-cords, etc.).....	6
Unclassified minor nuisances (burst water-pipes, etc.)	8
Deaths reported.....	1
Cases of infectious disease reported (measles 1, tuberculosis 1)	2

Factories and Workshops.

The inspection of these has been well maintained during the year, the total number of inspections being 9,185. These included visits to workshops, domestic workshops, workplaces, laundries and bakehouses, also to factories on receipt of complaint from H.M. Inspector. Generally speaking their condition as regards sanitary accommodation, ventilation, cleanliness, water supply, and other matters of a hygienic nature, was found satisfactory.

During the year 36 lists of outworkers were received, 6 employers having sent in their lists in February and August, as

required by the Factory and Workshop Act, 1901, and 24 employers only once. Included in the lists were the name and address of an outworker residing in another town, and this, in accordance with the requirements of the Act, was forwarded to the Local Authority of the District concerned. In only 2 cases was any contravention of the Act found in the 46 outworkers' premises inspected.

26 notices as to insanitary conditions in factories and workshops were received from H.M. Inspector of Factories, 17 of which related to factories (which are visited by the Health Department staff only on receipt of a complaint from H.M. Inspector), and 9 to workshops. Many of the latter had, however, been found and dealt with by the District Inspectors prior to receipt of the complaint. The others received due attention and the necessary works were carried out without having to resort to legal proceedings.

Administration of the Factory and Workshop Act, 1901, in connection with Factories, Workshops and Workplaces, during the year 1934.

Home Office Tables.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspectors.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Occupiers Prosecuted (4)
Factories (Including Factory Laundries.)	369	239	...
Workshops (Including Workshop Laundries.)	7,472		
Workplaces (Other than Outworkers' premises.)	1,344		
Total	9,185	239	...

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars. (1)	Number of Defects. Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	Number of Offences in respect to which Prosecutions were instituted. (5)
**Nuisances under the Public Health Acts :—*				
Want of cleanliness	271	271	...	...
Want of ventilation	2	2	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	2	2	...	...
Other nuisances	95	95	...	...
Sanitary accommodation — insufficient	26	24	...	...
Sanitary accommodation — unsuitable or defective	95	95	...	...
Sanitary accommodation — not separate for sexes	10	10	...	...
Offences under the Factory and Workshop Acts—				
Illegal occupation of underground bakehouse (s. 101)	...	...	...	...
Other offences (Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921.)	...	...	10	...
Total	501	499	10	...

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

OUTWORK IN UNWHOLESOME PREMISES, Section 108.

Nature of Work. (1)	Instances. (2)	Notices served. (3)	Prosecutions. (4)
As per Home Office List	None.	None.	None.

TRADES.

Particulars as to the number and nature of the various trades carried on in the workshops of the City:—

Trades.	Work-shops.	Domestic Work-shops.	Work-places.
Athletic Outfitters, etc.	12	...	...
Bacon Curing, Pickles, etc.	50	1	2
Bags, Waterproofs, etc. (making and repairing)	19	2	2
*Bakehouses	288	...	...
Blacksmiths, Plumbers, etc.	121	...	2
Bouquets and Wreaths (making, etc.)	13	...	...
Boots, etc. (making and repairing)	137	27	...
Dressmaking, Underclothing, etc.	262	48	...
Drysalters, Cleaning & Packing Fruit, Tea, etc.	33	1	97
Furniture Making, Joiners, etc.	224	9	...
Harness, etc. (making and repairing)	25	...	...
Jewellery, Watches, etc. (making and repairing)	78	2	...
Laundries	23	...	...
Machines and Tools (making and repairing)	147	3	3
Painters, Engravers, Photographers, etc.	89	5	15
Restaurant Kitchens, etc.	...	...	115
Tailoring, Shirts, etc.	267	27	...
Miscellaneous	113	...	127
Totals	1,901	125	363

* Includes 36 " Factory " and 92 " Domestic " Bakehouses.

Inspection of Council and other Schools.

During the year 143 inspections were made, and at 3 certain defects were found in connection with the sanitary conveniences, etc.

Attention was drawn to the defective or insanitary condition of the " trough " water-closets at one school.

The other defects (which were of a minor character) were remedied on being brought to the notice of the Education Authorities.

Rag Flock Acts.

There are no manufacturers of rag flock in the City, the principal users being upholsterers and bedding manufacturers, who number 26. No samples were taken during the past year. 81 visits were also made under the Factory and Workshop Act, 1901.

Exhumations.

Seven exhumations were carried out under the supervision of the Department during the year, all being 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, 32 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.

Three samples of fertilisers and 10 of feeding stuffs were obtained for analysis (informally). All proved to be satisfactory.

Merchandise Marks Act, 1926.

In the administration of this Act, 250 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 34 instances there was left a copy of a printed notice to traders (setting out the principal provisions of the Act), and in 87 cases cautions were administered (51 verbally and 36 by special letter).

Agricultural Produce (Grading and Marking) Act, 1928.

76 inspections of markets, shops and stores, were made as to the grading and marking of eggs. No contravention of the Regulations was found.

Shops Act, 1934.

This Act, which came into operation on 30th December, 1934, lays down some very definite regulations with regard to the arrangements for the health and comfort of employees in both wholesale and retail shops, and in warehouses.

Section 10 (1) briefly states that : In every part of a shop in which persons are employed there must be provided and maintained :—

(1) Sufficient and suitable means of ventilation, and maintenance of a reasonable temperature.
(2) ,, ,, sanitary accommodation.
(3) ,, ,, means of lighting.
(4) ,, ,, washing facilities.
(5) ,, ,, facilities for taking of meals.

(6) A shop may be exempted from the provisions of Nos. (2) and (4) requirements if the Local Authority grant a certificate that they are satisfied that by reason of restricted accommodation or other special circumstances affecting the shop it is reasonable that such a certificate be granted, provided that such facilities are otherwise conveniently available. This certificate may be withdrawn if the Local Authority at any time cease to be so satisfied as aforesaid. If the occupier is aggrieved by the withdrawal of a certificate he may appeal to the County Court.

Conclusion.

This will be my last annual report, in view of my impending retirement in July, 1935, after upwards of 44 years' service in the Health Department, the latter 12 as Chief Sanitary Inspector.

I therefore wish to take the opportunity of expressing my gratitude to you personally for many kindnesses and for your invaluable help and advice at all times freely given, to the members of the Health Committee for their unfailing support, to the Staff of the Department, both inspectorial and clerical, for the highly efficient discharge of their various duties, and to the Heads of other Departments of the Corporation for the cordial relationship which has always existed between us.

I am, Sir,

Your obedient servant,

C. RAIMES,

Chief Sanitary Inspector,

Inspector of Common Lodging Houses, etc.

Health Department,

Town Hall,

1*st May*, 1935.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

HOUSING ACT, 1930. PART I.

GENERAL STATEMENT.

1. The areas referred to in this statement are described in detail in the Schedule. It is to be noted that the figures given in this Statement as to number of houses, families and population, are necessarily approximate and may vary from time to time or be varied by the Council or Health Committee in defining the precise limits of the areas. The particulars given are as to areas which should be cleared prima facie as "clearance areas" but if any of them are cleared by closing orders under improvement schemes there will probably be increases to such areas by the addition of adjoining streets, etc., for the purpose of bringing in other individual houses in the neighbourhood.

CLEARANCE AREAS.

No.	Area.	Houses.	Families.	Population.	Year during which Clearance is to be effected.
(1)	(2)	(3)	(4)	(5)	(6)
1.	Buckingham Street	336	878	3,135	1933.
2.	Spring Garden Lane	50	82	323	
3.	Bentinck	101	202	876	
4.	Portland Street	27	91	323	
5.	Carliol Street	10	27	107	
6.	City Road	86	210	786	
7.	Bedford Street	80	242	622	1934.
8.	Scotswood	55	125	470	
9.	Tyneside Terrace	86	168	770	
10.	Byron Terrace	23	52	228	
11.	Edgeware Road	8	19	90	
12.	Friars	51	143	471	
13.	Percy Place	15	38	147	
14.	Prudhoe Place	26	69	261	
15.	Brandling Village	21	21	63	
16.	Camden Street	14	56	151	
17.	Wesley Street	122	459	1,676	
18.	Ingham Place	27	45	156	
19.	Barker Street	8	23	88	1935.
20.	Stepney Bank	10	33	110	
21.	Kirsop Street	3	10	28	
22.	Albion Row	12	51	180	
23	Pottery Bank	27	115	361	
24.	Miller's Hill	10	60	219	
25.	White Street	43	134	450	
26.	Long Row	23	38	100	
27.	Sycamore Street	4	14	73	
28.	Churchill Street	40	67	246	
29.	Blenheim Street	316	802	3,316	1936.
30.	Westmorland Lane	22	37	150	

No.	Area.	Houses.	Families.	Population.	Year during which Clearance is to be effected.
(1)	(2)	(3)	(4)	(5)	(6)
31.	Arthur's Hill	200	446	1,786	1937.
32.	Percy Street	18	43	133	
33.	Stepney Lane	6	27	82	
34.	Ellison Place (St. Anthony's)	5	13	45	
35.	Pearson Street	6	16	64	
36.	Bowman Terrace	12	27	112	
37.	Water Street	7	15	67	
38.	Portland Road	6	18	63	
39.	Elswick Street	57	130	420	
40.	Benwell Village	21	28	114	
41.	South Benwell	29	29	111	
	Total ...	2,023	5,103	18,973	

2. IMPROVEMENT AREAS:

1.	Church Street	137	362	1,400	1935.
2.	Whitefriar's Place	4	9	32	1936.
3.	Orchard Street	6	13	56	
4.	Sanitary Place	6	11	26	
5.	Walker Road	32	131	588	
6.	Brougham Place	77	211	790	
7.	Panmure Street	18	50	209	
8.	Arthur's Hill	225	447	1,795	1937.
	Total ...	505	1,234	4,896	

3. INDIVIDUAL UNFIT HOUSES: It is intended to deal with 104 individual unfit houses comprising 265 families with a population of 1,166.

4. REHOUSING: The number of new houses required to carry out the above schemes and based on the present percentage of 3 and 4 roomed houses will be 4,748 houses, made up as follows:—

Clearance Areas	4,217
Improvement Schemes ...	272
Individual Unfit Houses ...	259
Total ...	4,748

5. COST INVOLVED IN PROGRAMME: It is not possible at this stage to furnish an estimate of cost of the schemes, in view of the fact that it may be possible to deal with the clearance of the areas in different ways, e.g., by demolition without acquisition of the site; by building on the cleared site; and by compulsory or agreed purchase.

SCHEDULE.

CLEARANCE AREA.

1. BUCKINGHAM STREET AREA includes Buckingham Street, Oystershell Lane, Corporation Street, Hedley Street, Hedley Place, Harle Street, Seaham Street, Abinger Street, Diana Street, Oakes Place, Oakes Square, Allinson Place, Wellington Street, Nellis Court, Pitt Street (part), Cottenham Street, Centre Street, Colliery Lane.
2. SPRING GARDEN LANE AREA includes Spring Garden Lane, Spring Street, Pitt Street (part), Stanhope Street (part).
3. BENTINCK AREA includes Tweed Street, Crispin Street, Durham Street and Hull Street.
4. PORTLAND STREET AREA.
5. CARLIOL STREET AREA includes Carliol Street (part) and Erick Street.
6. CITY ROAD AREA includes Seller's, Robson's and Chapel Entries, Bagnall Lane, Soap House Lane, Sandgate (part), St. Ann Street and St. Mary Street.
7. BEDFORD STREET AREA includes Bedford Street and Place Richmond Place, Chatham Place, Blagdon and Little Blagdon Streets, Grenville Street and Terrace.
8. SCOTSWOOD AREA includes Grace Darling Yard, Chapel Terrace, Row and Court, Dene Terrace, Denton Road (part), Green Street, Cross Terrace, Danskin Place.
9. TYNESIDE TERRACE AREA.
10. BYRON TERRACE AREA includes Nos. 1a to 9, 10-40, Byron Terrace, and Nos. 13-15, Errington Street.
11. EDGEWARE ROAD AREA, Nos. 1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, Edgeware Road and 67, 69, 71, Cannon Street.
12. FRIARS AREA includes Stowell Street and Square. Friars and Friars Green, No. 1 Court, Ratcliffe's Court and Monk Street.
13. PERCY PLACE AREA includes Percy Place and Grainger Buildings.
14. PRUDHOE PLACE AREA includes Prudhoe Place and Percy Street (part).
15. BRANDLING VILLAGE AREA includes Ravensworth Cottages, Jessamine Cottages and Brandling Village (part).
16. CAMDEN STREET AREA, Camden Street (one side only).
17. WESLEY STREET AREA includes Wesley Street, Carlton Street, Canada Street, Gosforth Street (part), Copland Terrace (part).
18. INGHAM PLACE AREA includes Union Street and Terrace, Union Terrace South, Stoddart Street (part) and Ingham Place.
19. BARKER STREET AREA.
20. STEPNEY BANK AREA, includes Lime Street (part).
21. KIRSOP STREET AREA.
22. ALBION ROW AREA includes Hill's Yard and Walker Road (part).
23. POTTERY BANK AREA includes Ropery Walk.
24. MILLER'S HILL AREA includes Tyne Street, Horatio Street and Miller's Hill.

25. WHITE STREET AREA includes Mary's Place, Summerson's Buildings and White Street.
26. LONG ROW AREA includes 52-87, 89 97, 99 and 101, Long Row; 2, 4, 6, 8 and 8bk Cross Morpeth Street; 45-71 (odd numbers), 72 and 78, Morpeth Street; 93, 94, 95, 96, Cross Sheraton Street.
27. SYCAMORE STREET AREA includes Tweddle's Court.
28. CHURCHILL STREET AREA includes Sunderland Street.
29. BLENHEIM STREET AREA includes Blandford Street, Duke Street and George Street.
30. WESTMORLAND LANE AREA.
31. ARTHUR'S HILL AREA includes Tindal, Bayley, John, Edward, and William Streets, and Bell Street (part).
32. PERCY STREET AREA (Nos. 2-64).
33. STEPNEY LANE AREA (Nos. 6/8, Stepney Lane, 1/2, Tower Street, and 1/2, The Green).
34. ELLISON PLACE AREA (St. Anthony's).
35. PEARSON STREET AREA (Nos. 1-18 and 1,688-1,694, Walker Road).
36. BOWMAN TERRACE AREA (Nos. 3-20).
37. WATER STREET AREA, Nos. 3-11, Water Street, 56-62, Penn Street, and 1-9, Rowell Place.
38. PORTLAND ROAD AREA. Nos. 24-34, Portland Road, and 76, Gosforth Street.
39. ELSWICK STREET AREA.
40. BENWELL VILLAGE AREA. Includes Malton Row, Thirlwell's, Scott's and White Cottages.
41. SOUTH BENWELL AREA. Includes East, West, Motor and Riverside Cottages.

IMPROVEMENT AREAS.

1. CHURCH STREET AREA.
2. WHITEFRIAR'S PLACE AREA.
3. ORCHARD STREET AREA includes Slinn's and Pringle's Courts and Orchard Street (part).
4. SANITARY PLACE AREA.
5. WALKER ROAD AREA includes Nos. 1,552-1,686, Walker Road, and 1, Hyde Road.
6. BROUGHAM PLACE AREA includes Nos. 2-34, and 1-33, Brougham Place, and 415-417, Scotswood Road; Nos. 2-26 and 1-25, Teynham Street; and 439, 441, 447 and 449, Scotswood Road; Nos. 1-9 and 2-34, Vale Street, and 1, Byron Terrace; Nos. 2-14, Lord Milton Street; and Nos. 1-15 and 473-479, Scotswood Road; Nos. 1bk, 3-15 and 4-12, Lord Byron Street; Nos. 2, 4 and 6, Greenhow Terrace, and Nos. 1, 3 and 894, Scotswood Road; Nos. 1-11 and 4bk, 6, 6bk, 8 and 8bk, Errington Street; and Nos. 2 and 257, Scotswood Road; Nos. 1, 2, 3, 4 and 5, Gardner Street; Nos. 8-44, Water Street, and 1, Bowman Terrace.
7. PANMURE STREET AREA includes Nos. 2-22, 6/8 bk and Nos. 1-37.
8. ARTHUR'S HILL AREA. Includes Mansfield, West, Worley and Mary Streets, and parts of Prospect Place, Cookson, Cottenham and Bell Streets, and Douglas Terrace (part).

APPENDIX B.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

DOMICILIARY MEDICAL SERVICES—JOINT MEDICAL RELIEF DISTRICT.

REPORT OF THE MEDICAL OFFICER OF HEALTH ON THE WORKING OF THE RE-ORGANISED DOMICILIARY MEDICAL SERVICES IN THE JOINT MEDICAL RELIEF DISTRICT DURING THE PERIOD 8TH NOVEMBER, 1933—31ST AUGUST, 1934.

(1) Introductory.

Prior to 8th November, 1933, the District Medical Services for persons in receipt of public assistance were provided throughout the City by District Medical Officers, four of whom held permanent and six temporary appointments.

In accordance with the decision of the City Council of the 20th September, 1933, the appointments of the temporary officers were allowed to lapse, and the six medical relief districts for which they had previously provided domiciliary medical services were merged in the newly constituted Joint Medical Relief District.

As from 8th November, 1933, the domiciliary medical services of the Joint Medical Relief District were organised on the "open-choice method," whereby the person entitled to medical relief is free to select his medical attendant from the "open panel" of medical practitioners who have contracted with the Council to provide such services.

(2) Remuneration of former District Medical Officers.

The remuneration paid to the district medical officers by the late Board of Guardians had been for long the subject of considerable discussion, and as from 1929 had been augmented by the payment of certain bonuses, which were continued by the Health Committee after the transfer on the 1st April, 1930.

It should be understood that the district medical officers were obliged to provide drugs and dressings (with certain exceptions) and that the salaries paid to them were presumed to cover their expenditure on such materials. In two of the six districts (comprising Elswick, Stephenson, Benwell and Armstrong Wards) drugs and dressings were not issued by the district medical officers but were obtained at the cost of the Health Committee from the Dispensary of the Newcastle General Hospital

During the three financial years ending 31st March, 1933, the average annual cost of the domiciliary medical services in the six medical relief districts, subsequently merged as the Joint Medical Relief District, was as follows:—

	£
(1) Salaries and bonuses	1,016
(2) Special fees	6
(3) Drugs and dressings from Newcastle General Hospital	130
TOTAL—£1,152	

(3) **Statement of Services of former District Medical Officers.**

Prior to the institution of the "open choice method," considerable difficulty had been experienced in collecting any accurate or detailed information regarding the amount of work performed by the district medical officers under the old arrangements. The most that could be obtained was a summary statement of the services which had been rendered by the district medical officers of the six districts, now comprised in the new scheme, in respect of the two years—1931-32. This information, together with further details extracted from the record books of the six districts for the period 1st January, 1933, to 7th November, 1933, is set out in Table I.

TABLE I.

Year.	No. of patients treated. (1)	Attendances by the M. O. at the patients' homes. (2)	Attendances by patients at the M.O.'s Surgery. (3)	Total Attendances (Cols. 2 & 3). (4)
1931	6360*	7,212	9,306	16,518
1932	9246*	8,674	10,929	19,603
1933 1st Jan 7th Nov.	4957†	6,420	10,162	16,582

* *These figures do not strictly represent the number of patients treated. They indicate in fact the total number of treatment orders issued by the Relieving Officers. An individual might receive two or more orders in the course of a year.*

† *Actual patients treated.*

It is probable that these statistical summaries understate the amount of work performed by the district medical officers. Nevertheless, in the absence of further details any calculations necessary could only be based on the recorded information available. This showed that during the period (1st January, 1931—7th November, 1933) 52,703 services were given by the medical officers, or approximately 18,600 per annum. Their remuneration per individual service based on the average annual expenditure on salaries and bonuses amounted to 1s./1d. per unit service which included the provision of medicine. Payment on this scale was obviously inadequate.

(4) **Organisation, institution and progress of New Scheme.**

In view of the facts outlined in the preceding paragraph, the Health Committee recommended to the City Council that the remuneration for services rendered by the contracting practitioners in the newly established Joint Medical Relief District which was to be operated on the "open choice method" should be greater than the average annual amount of £1,016 paid to their predecessors. The sum of £1,200 was therefore recommended to, and approved by, the City

Council, and, in addition, it was provided that drugs and dressings, etc., should be distributed under municipal auspices from two dispensaries established respectively at the Newcastle General Hospital and the Newcastle Dispensary, New Bridge Street. It was decided also that the sum of £1,200 should constitute a "pool" from which contracting medical practitioners would be paid in proportion to the total number of services rendered to their patients. On the basis of an average number of 18,600 services per annum (para. 3 above) it was anticipated that the fee payable per unit service, exclusive of medicine, would be 1s./3½d. approximately.

The new scheme became operative on 8th November, 1933, with a medical panel of 50 practitioners representing approximately two-thirds of the National Health Insurance practitioners in the districts concerned.

On the suggestion of the responsible officers of the Ministry of Health it was proposed that the arrangements should be put into force for a period of one year only, in the first instance. For practical reasons it was found more convenient to review the working of the scheme at the end of the first ten months (31st August, 1934) rather than at the conclusion of the first completed year.

The appropriate proportion of the pool of £1,200, namely £1,000, was accordingly disbursed amongst the contracting practitioners in payment for services rendered by them during the ten month period—8th November, 1933—31st August, 1934, and subsequent to the latter date a detailed statistical investigation was carried out into the medical records for the same period.

(5) Services and remuneration under new Scheme.

In computing the amount payable to each practitioner, a visit to the home of the patient, and a consultation at the doctor's surgery were each assessed as one unit service. Where, however, the doctor at his surgery did not examine or advise a patient but simply repeated the prescription for medicine, such service was assessed as one half of one unit service. (Special services such as the treatment of patients recently removed from the National Health Insurance lists, fracture cases, confinements, and the issue of certificates, were not included as services payable from the pool).

The details of the ordinary services performed during the period—8th November, 1933—31st August, 1934, are summarised in Table (2). The data in respect of the ten months immediately preceding the inauguration of the scheme, i.e. 1st January, 1933—7th November, 1933, are included for purposes of comparison.

Two important items of information have been calculated from this data, and are recorded in Cols. 7 and 8. They are respectively:

(A) The remuneration payable per unit service from the pool.

(B) The number of unit services rendered per patient treated.

TABLE 2.

Period (1)	No of Patients Treated (2)	Home Visits by Medical Officers (3)	Surgery Consultations (4)	Repeated Prescriptions (Half-Units) (5)	Total Services (6)	Remunr. per Unit Service (7)	No. of Unit Services rendered per patient (8)
8th Nov./33 31st Aug./34	6,360	23,318	18,338	1552 = 776 whole units	42,432	5.656 pence	6.7
1st Jan./33 7th Nov./33	4,957	6,420	10,162	Information not available	16,582	Not Comparable	3.3 * (approximately)

* *This figure is based on home visits and surgery consultations only.*

It will be noted that as a result of the extraordinary increase in the total number of services called for (i.e., 42,432 as contrasted with 16,582), the fee payable per unit service was no more than 5.656 pence.

As regards the number of unit services rendered per patient treated, this has increased from approximately 3.3 services in the first ten months of 1933 to 6.7 services in the period—November, 1933—August, 1934.

The implications of these two facts are discussed further in Para. 7.

(6) **Cost of New Scheme.**

An amount of £2,270 was provided in the estimates for the year 1934-1935 for the domiciliary medical services in the joint medical relief district. The analysis of this original sum (Col. 1), as also the actual cost of working the scheme during the ten month period—November—August, 1934 (Col. 2), and a revised estimate for the whole twelve months are set out in Table 3.

TABLE 3.

Estimate for year ended 31st March, 1935. (1)	£	Actual Cost 8th Nov., 1933—31st Aug., 1934. (2)	£	Revised Estimate for year ended 31st March, 1935. (3)	£
Salaries	1,200	...	1,000	...	1,200
Special Fees ... ... (Certificates, Confinements, etc.)	50	...	230	...	250
Dispensing Services ...	1,000	...	770	...	950
Administrative Charges: Printing, Postages, Additional Clerical Assistance	20	...	175*	...	230*
	£2,270		£2,175		£2 630

*Includes Clerical assistance not previously estimated.

It will be observed that the anticipated expenditure during the complete year exceeds the estimate by £360. The excess is due to the cost of (a) Special Fees and (b) Administrative Charges.

(7) Analysis of Services rendered by Panel Practitioners under New Scheme.

The increase in the number of services rendered to persons in receipt of medical relief is undoubtedly in excess of what was anticipated and merits special consideration. It can be attributed to two causes:

(a) An increase in the number of persons treated, and

(b) additional services to the individual patient.

The following facts are submitted as relevant:—

(A) Compared with the similar period of the previous year there has been an increase of 8 per cent. in the number of persons receiving public assistance. This increase in publicly assisted persons has added to the numbers of those entitled to medical relief. The details are set out in Table 4.

TABLE 4.

Period.	Average Number of Persons receiving Public Assistance.			
	Men.	Women.	Children.	Total.
31st Oct., 1932 to 26th Aug., 1933	5,649	6,112	8,036	19,797
30th Oct., 1933 to 25th Aug., 1934	6,274	6,611	8,510	21,395 (8% increase).

(B) The cessation of medical benefit for certain persons under the National Health Insurance Acts has not been responsible for any part of the increase, as these patients have been separately provided for and are not included in the statistics of the scheme, nor is the cost of their medical attendance charged against the "pool" fund. It has been possible to do this because the number of these persons has hitherto been small, namely, 256 for the first eight months of 1934, but they are likely to increase in the future and should properly be charged to the domiciliary medical scheme.

(C) Probably the most important factor concerned in the expansion of the work of the service has been the larger number of children coming within its purview. Previously many heads of families in receipt of relief, and thus entitled to the services of the district medical officer, had been in the habit of paying small subscriptions to a medical practitioner of their choice in order to ensure his attendance upon their dependants. With the introduction of the present scheme giving free choice of doctor at the cost of the Local Authority this practice ceased almost immediately.

Proof of the truth of these statements can be found by analysing the ages of patients under the old and new schemes respectively. Under the former arrangement approximately 7.4% of the patients were under the age of five years. Under the present scheme this percentage has risen to 23.7%, or 1,510 out of the grand total of 6,360 patients who received treatment.

In some measure this large number of sick children is due to the epidemics—chicken pox, measles and German measles—which raged in the early months of 1934, but these and other epidemics are recurrent phenomena, and it is obvious that medical treatment must be provided for their victims.

(D) So far reasons have only been advanced for the increase in the number of patients. It is now necessary to consider the question of the additional services which have been received by the individual patient.

It will be observed from Table 2, Col. 8, that each patient now receives an average of 6.7 services as contrasted with 3.3 under the previous system. This is equivalent to an increase of over 100% in the rate of attendance. The question arises as to whether this increase is justified. Has there been an exploitation of the "pool" system by individual doctors, or alternatively, is the standard of attendance given by all the practitioners concerned unnecessarily high? These questions require to be discussed separately.

(1) As regards exploitation of the "pool" by individual practitioners, the available evidence does not support this contention. There are certain doctors whose attendances on their patients have been more frequent than the average, but a careful scrutiny of the record cards has shown that in every case the divergences from the normal are capable of reasonable explanation.

(2) An analysis of the services given by the practitioners under the two regimes provides interesting information.

The previous district medical officers gave to the ordinary "chronic" or "long-period" patient during a ten months period of attendance an average of 25.3 services. The services rendered by the practitioners on the new panel to the same type of patient during the subsequent ten months numbered 25.4. It would appear that as regards the medical care of the chronic patient there is no difference in the standard of attendance.

There is, however, a marked difference as regards attendance on the "short-period" or acute type of case. Under the old regime the average number of services rendered to the patient suffering from some minor acute illness—not sufficiently severe to necessitate his removal to hospital—was 2.9. The newly appointed panel practitioners have averaged 5.2 services for such a case. This would appear to suggest that the present rate of attendances is somewhat high. Evidence to the contrary can be obtained by enumerating the number of services given under the present arrangements to persons suffering from such common diseases as tonsillitis and influenza. On an average it was found that patients suffering from tonsillitis received 3.56 services (home visits and surgery consultations) from their doctors, while the victims from influenza received rather more, namely 3.75 services.

It cannot be claimed that this standard of medical care is unreasonably or extravagantly high.

In conclusion it may be said that under the old system the quantity and sometimes the quality of the medical attendance often left much to be desired, and the present increase in the supervisory activity of the medical practitioner, to which these figures bear witness, is to be welcomed rather than condemned.

Further, it is abundantly clear that if the interest and co-operation of the contracting practitioners in the new scheme are to be maintained, the low rate of remuneration, namely 5.656 pence per unit service, must receive immediate attention.

(8) Administration.

Certain other administrative questions remain to be briefly discussed.

(A) The recommendation of medical extras.

At the outset the peculiar position of the new district medical officers under the "open choice method" gave rise to considerable misgiving. The individual recipient of relief under this system is entitled to select and, if need be, discard his medical attendant. It was suggested that this procedure might induce medical officers to be sympathetically extravagant in their recommendation of medical extras; e.g., milk, eggs, etc. The regulations governing the recommendation of these extras were therefore carefully explained to all practitioners undertaking service on the panel, and alternative channels were indicated through which certain of the items could be obtained, e.g., dried milk through the Maternity and Child Welfare Services. No attempt was made, however, to limit or control the discretion of the medical officers in any way.

It can be recorded that the pessimistic anticipations regarding this matter have been entirely falsified by events.

A comparison has been made of the cost of medical extras during the ten month period under review and the comparable period of the previous year, when the old arrangements were still in operation.

There has been a definite increase in the cost of the medical extras issued under the new scheme, but this is due almost entirely to the increase in the number of patients treated, and to a minor extent to the advance in the price of milk under the Milk Marketing Board regime.

It will be seen from Table 5 that the average cost of medical extras supplied per recorded illness (i.e., per Relieving Officer's Order) under the new method is 1s./3.4d. as compared with 1s./3.9d. under the old system. To the former figure there should be added a small amount as representing the cost of additional milk supplied through the Infant Welfare Centres.

TABLE 5.

Period.	Relieving Officers' Orders.	Milk and Eggs.	Other Extras, Cod Liver Oil, etc.	Total Cost.	Cost per Relieving Officers' Order.
		£	£	£	
1st Nov., 1932. 31st Aug., 1933	5,096	297	42	339	1s./3.9d.
1st Nov., 1933. 31st Aug., 1934	8,836	513	56	569	1s./3.4d.

(B) **Certification as to fitness.**

Certification as to fitness is of importance to the public assistance authorities in determining whether a case should be transferred from ordinary to able-bodied relief. Doubt was expressed as to whether this function would be as conscientiously and adequately performed by the medical practitioners on the new panel as it had been by their predecessors. Here again the public assistance officers concerned are able to report that apart from certain isolated instances the duty of certification has been carried out to their satisfaction. Where doubtful cases have presented themselves the services of the medical referee (Dr. G. P. Harlan) have been utilised.

(C) **Admission to Hospital.**

The arrangements regarding admission to the Newcastle General Hospital were modified in 1930, and since that date medical practitioners have been able to admit patients on direct application to the Medical Superintendent. The new system of domiciliary medical services has not affected this procedure in any way except that in more and more cases admission to hospital takes place without prior reference to the Relieving Officer.

Whether the introduction of the "open choice" method has resulted in an increased use of the beds of the hospital is difficult to say. The number of admissions has advanced year by year since the transfer in 1930, as will be seen from the following table (Table 6). It is impossible at present to state the relative importance of the various factors concerned in this increase.

TABLE 6.

Year.	Admissions to Newcastle General Hospital.
1930	 3,048
1931	 3,598
1932	 4,522
1933	 4,776
1934	 5,544

(D) **Provision of Domiciliary Nursing Services.**

It has been frequently suggested by panel practitioners that in special cases not suitable for admission to hospital the treatment and care of the patient would often be facilitated by the provision

of a nurse. The Health Committee already subscribes a total sum of £330 per annum to the nursing associations of the City, and it should be a relatively simple matter to arrange for more complete co-operation with these organisations.

(E) **Dispensary Services.**

The two dispensaries at the Newcastle General Hospital and the Newcastle Dispensary, New Bridge Street, have dealt efficiently with the increased burden of work thrown upon them. In particular the interest and co-operation of the Committee and Medical Staff of the latter institution have been of the utmost assistance.

Patients and their relatives have speedily adapted themselves to the change whereby they no longer receive their drugs and dressings from the doctor's surgery, and the making of a separate visit to one or other of the official dispensaries does not appear to have occasioned any inconvenience. The fact that the prescriptions of the National Formulary of the National Health Insurance service are now the standard has certainly increased the confidence of patients in the whole scheme. Comparative details of prescriptions dispensed and working costs of the two dispensaries during the period 8th November, 1933—31st August, 1934, are given in Table 7.

TABLE 7.

DISPENSARY.	Actual Cost 8th Nov., 1933, to 31st Aug., 1934. (10 months). (1)	No. of Prescriptions Dispensed 8th Nov., 1933, to 31st Aug., 1934. (10 months). (2)	Average cost per prescription. (3)
	£		Pence
Newcastle Dispensary, New Bridge Street ...	...	14,784	9.7
Dispensers' Salaries ..	198		
Drugs	217		
Special Saturday afternoon duty	22		
Overhead Charges	163		
	600		
Newcastle General Hospital Drugs, etc. ... ... (Transfer from Hospital Dispensary Account)	170	15,435	2.6
Totals -	770	30,219	

Note:—The estimated cost of the total dispensary services is shewn in Table 3, Col. 3.

From a comparison of the cost of the individual prescriptions (Col. 3, Table 7), it is obvious that the amount of £170 charged by the Newcastle General Hospital for prescriptions dispensed in its dispensary is much too small and has no real relation to the cost of materials and services provided by the hospital. (It should be noted that the average total cost of a prescription dispensed under the National Health Insurance Scheme is 8.6 pence). On the other hand

the heavy administrative charges (£200) at the Newcastle Dispensary render the costs there comparatively high. It would appear that some economies could be effected in the latter case.

(F) **Clerical records and general administration.**

The record cards of the panel practitioners are on the whole well kept and afford a sufficient record of the patients' illnesses, and the attendances and other services given by the doctor. The present scheme necessitates that the individual services should be totalled when the cards are returned to the Health Department at the end of each quarter. Lists of patients continuing treatment have also to be prepared for the Relieving Officers who issue the continuation record cards. In the course of a year some 12,000 cards have to be dealt with, and the extraction of the necessary statistical information from these, together with the requisite checking and calculation occupies the greater part of the time of two clerks. There is no question that this detailed and repetitive work is burdensome, and any method of reducing it without impairing the efficiency of the scheme would be welcomed. In other areas (e.g., East Ham and Wiltshire) where the "open choice" method has been introduced payment is made on a capitation basis. (The capitation fee varies with the district and ranges from 16/- to 25/- per annum). Such a system avoids the necessity of enumerating the individual services ranking for payment which is the essential feature of the Newcastle scheme.

Apart from this and certain initial difficulties which rapidly resolved themselves after consultation with the Public Assistance Officer and his staff the administration of the scheme has proved much easier and more readily adaptable than was considered possible at its inception.

(9) **Conclusions and Recommendations.**

In the preceding paragraphs an attempt has been made to review the working of the new domiciliary medical service and to discuss certain points in its organisation and administration.

No effort has been made to indicate the favourable reception which has been given to the scheme by the recipients of medical relief or to emphasise its general popularity. It can be said with every confidence that from the point of view of the public assistance patient, the "open choice" method is a vast improvement upon anything which he has hitherto experienced.

The doctor also benefits, though only to a small extent financially. He has now the opportunity of continuing his relationship with such of his patients as have fallen upon hard times—an arrangement of undoubted mutual advantage to both parties.

The Health Committee in its turn has the satisfaction of knowing that the institution of an "open choice" system of domiciliary medical service has filled one of the gaps in its organisation, and brings it nearer to the ideal of a General Medical Service capable of fulfilling all the needs of the community, or at any rate that part of it for which medical relief is provided by the local authority.

From the administrative aspect the anticipated difficulties in the establishment and maintenance of such a scheme have proved to be relatively trivial.

With these facts in mind, the following recommendations are submitted for consideration.

(1) That the domiciliary medical service on its present basis of the "open choice" selection of the medical practitioner should be continued.

(2) That in so far as the continuance of the scheme is dependent upon the sympathetic co-operation of the contracting medical practitioners, steps be taken to give early attention to their request for improved remuneration.

(3) That in determining such remuneration consideration be given to the advantages of a capitation system of payment as contrasted with the present method, based on payment for individual services from a limited pool.

(4) That there is a possibility of effecting economies by a re-adjustment of the financial arrangements with the Newcastle Dispensary.

(5) That some simplification and reduction of the clerical work entailed by the present scheme is advisable.

(6) That more complete co-operation with the work of the Nursing Associations is desirable, and would enhance the efficiency of the existing arangements

J. A. CHARLES,
Medical Officer of Health.

Health Department.
Town Hall.
Newcastle upon Tyne.
23rd January, 1935.

APPENDIX C.

FURTHER REPORT OF THE HEALTH COMMITTEE AS TO THE SCHEME FOR THE PROVISION OF DOMICILIARY MEDICAL SERVICES FOR POOR PERSONS.

1. With reference to the Report of the Health Committee relative to the above matter, which was confirmed by the Council on the 20th September, 1933, the Committee have had under consideration a letter received from the medical practitioners on the panel of the Joint Medical Relief District as to the remuneration received by doctors under the Scheme, and expressing the opinion that such remuneration was inadequate. The medical practitioners further asked the Committee to appoint representatives to confer with their representatives on the matter.

2. Meetings between the representatives have been held and statistics have been presented which indicate that the average payment per unit of service amounted to 5.656 pence exclusive of medicines, etc. The representatives of the medical practitioners finally submitted for consideration, in place of the existing pool arrangements, a proposal that future remuneration should be calculated on a basis similar to that obtaining under the National Health Insurance Acts, which is equivalent to a payment of approximately 1/10½d. per unit of service, exclusive of medicines, etc.

3. The Health Committee are of opinion that the present remuneration is inadequate, and recommend the Council to approve the following scale of capitation payments, which after negotiation has been accepted by the medical practitioners on the panel of the Joint Medical Relief District:—

(1) 20/-per annum for patients receiving medical treatment throughout a period of 12 months.

(2) 5/- per quarter for short-period cases.

The special fees payable for confinements, fractures, certificates, etc., to remain as at present.

The Scheme to operate until the 31st March, 1936, and to be reconsidered again prior to that date.

This scale of capitation payments will cost approximately £2,950 per annum for the six districts originally included in the Scheme as the Joint Medical Relief District. With the same standard of service as has been given during the previous period, the fee per unit service will be approximately 1/3d. per service, as contrasted with 5.656d. the fee yielded at present under the pool arrangements, and 1/10½d. the fee received under the National Health Insurance Acts.

4. The Health Committee also propose that the payment on the new basis should apply to an additional medical relief district (No. 9) which was added in September, 1934, to the six already in the Scheme. It is estimated that the cost of the new scale of payment in this area will be £290 instead of £185, which was the amount paid in salary and bonus to the previous District Medical Officer.

5. In view of the fact that the agreement with the contracting practitioners was for a period of one year which terminated on 7th November, 1934, and that the practitioners have continued to work the Scheme at the old rates in anticipation of consideration of their claims for improved remuneration, the Health Committee are of opinion that the new rate of capitation payments should be retrospective to 7th November, 1934. It is anticipated that the cost of making this adjustment in respect of payments already made or pending to the contracting practitioners in the districts concerned will be £875.

6. The Health Committee therefore seek authority to confirm the new scale of capitation payments provisionally agreed with the representatives of the medical practitioners, and to make retrospective payments on the same basis for the period 8th November, 1934—31st March, 1935.

The following estimate of the cost of the Scheme in the seven districts now included in the Joint Medical Relief District is submitted

	£
(a) Cost of Capitation Payments—	
(1) To medical practitioners in existing Joint Medical Relief Districts	2,950
(2) To medical practitioners in the additional district No. 9	290
(b) Payments in respect of special fees, confinements, certificates, etc.—	
(1) To medical practitioners in existing Joint Medical Relief Districts	225
(2) To medical practitioners in additional district No. 9	20
Total ...	£3,485
(c) Cost of retrospective payments for period 8th November, 1934—31st March, 1935	£875

Dated this 11th day of March, 1935.

DAVID ADAMS, Chairman.

CITY AND COUNTY OF NEWCASTLE UPON TYNE

Report of the Health Committee on the Survey by the Ministry of Health of the Public Health Services of the City.

The Health Committee have had under consideration those portions of the Ministry of Health communication of 6th February, 1934, relative to Health Committee matters, and have considered a Report of the Medical Officer of Health on the subject (copy attached hereto).

The Committee recommend the Council to approve in principle of the proposals outlined therein. Before proceeding with any of the items of expenditure on buildings, equipment, Architect's charges, etc., set out in Appendix "A," further Reports will be submitted to the Council for their consideration and approval.

With regard to the following items of expenditure on services, the Committee further recommend the Council to authorise their inclusion in the estimate of expenditure for the next financial year:—

	£
Tuberculosis Services ... ... (This item has already been approved by the Council).	400
Establishment of Orthopaedic Scheme	794
Newcastle upon Tyne General Hospital ... ... (Increase of nursing and domestic staff).	484

(The item of £1,454 referred to in Appendix "A" will be the cost of such services extending over a period of 3 years).

Maternity and Child Welfare ... ... (Dental Treatment for expectant and nursing mothers).	250

Dated this 21st day of November, 1934.

DAVID ADAMS, Chairman.

Extracts from the Survey Letter of the Minister of Health Addressed to the Town Clerk on the 6th February, 1934, and presented to the City Council on the 21st February, 1934, are printed in italics.

The observations of the Medical Officer of Health submitted to the Health Committee in Accordance with the Minute dated 8th October, 1934, are printed in ordinary type.

NOTE.—The side headings are not included in the survey letter, but are provided for simplicity of reference.

INTRODUCTORY.

PARAGRAPH I.

"I am directed by the Minister of Health to state that he has had under consideration the report made by officers of the Department and of the Board of Control who recently visited Newcastle upon Tyne for the purpose of carrying out a general survey of the public health services of the Council. The Minister is glad to learn of the interest which is taken by the Council in the conduct of the health services, and he desires to express his appreciation of the efforts which are being made to maintain a high standard of efficiency and progress. There are, however, certain matters to which the Minister desires to draw the Council's attention."

The letter of the Minister of Health in respect of the survey of the health services of the City, which was carried out by officers of the Department, has been considered in detail by the Health Committee and by its ordinary and special Sub-Committees.

A number of matters to which reference is made in the survey letter had already received consideration by the Health Committee prior to its receipt, and certain others which appeared to be of greater urgency have been the subject of separate Reports to the Council.

In this Report a complete statement of the action already taken or proposed is set out, together with an estimate of the expenditure, both revenue and capital, entailed in carrying out the requirements of the Ministry of Health. In respect of the estimate of expenditure, certain proposals as to its distribution over a period of three years are submitted for consideration by the Health Committee.

Summaries of the estimated expenditure and of the three year programme are attached hereto.

TUBERCULOSIS SERVICES.

PARAGRAPH II.

"It is of the utmost importance that there should be some strengthening of the arrangements for the prevention and treatment of tuberculosis in the City. There is a high death rate in Newcastle upon Tyne from this disease, both in its pulmonary and non-pulmonary forms, and a serious feature of the local tuberculosis problem is the excess of pulmonary tuberculosis in adolescents and young adults. The Minister is advised that good work is being done under the Council's tuberculosis

scheme, but that the dispensary service suffers from a shortage of medical staff. The number of contact examinations which are carried out in the City is negligible, and very few visits to the homes of patients are made by the medical officers. The Minister is advised that the strengthening of the medical staff employed in this service is a matter of urgent importance, and he hopes that this question will receive the early consideration of the Council."

The City Council has already approved a Report of the Health Committee recommending the appointment of a Resident Medical Assistant at Barrasford Sanatorium. The presence of the Assistant at the Sanatorium will enable the Medical Superintendent to be liberated for attendance at the City Tuberculosis Dispensary on two afternoons weekly. This addition to the staff of the Dispensary will afford an opportunity to the Tuberculosis Medical Officer to increase the number of home visits and contact inspections. With this assistance it is anticipated that the Tuberculosis Medical Officer will be able to carry out not less than 840 visits and contact inspections annually as compared with 220 visits and contact inspections during the year 1933.

In the event of this provision not proving adequate, arrangements can be made to increase still further the attendances of the Medical Superintendent of the Sanatorium (or, alternatively, of the Resident Medical Assistant) at the City Tuberculosis Dispensary.

The cost of the additional services already approved by the City Council is as follows:—

Resident Medical Assistant, Barrasford Sanatorium:—

Salary	£250
Board lodging, etc., valued at ...	£100
Travelling allowances	£50
	£400

X-RAY PLANT.

PARAGRAPH 111.

"The X-Ray plant at the Walker Gate Hospital and that at Barrasford Sanatorium are both out of date and, in view of the importance of X-Ray examinations as an aid to diagnosis and guidance in treatment, it is important that they should be replaced by modern apparatus."

A special sub-committee to consider the needs of the various institutions administered by the Health Committee as regards X-Ray provision has been set up, and its opinions and recommendations may be summarised as follows:—

(1) The X-Ray apparatus at the Newcastle General Hospital, which was installed in 1929, though in excellent working order, is now inadequate to deal with the greatly increased demands of the hospital. It is proposed that this unit should be transferred to Barrasford Sanatorium where it will meet all requirements for the next five or seven years. Certain minor expenditure amounting to £60 for overhaul and installation will be entailed, but should be dealt with as a revenue charge.

(2) A new X-Ray plant, each of identical type, should be installed both at the Newcastle General Hospital and at Walker Gate. In view of the greater range of work done at the former institution, an increased expenditure as regards X-Ray tables, etc., will be necessary as compared with Walker Gate. The estimated new capital expenditure for X-Ray plant at the two hospitals is:—

Newcastle General Hospital	£1,280
City Hospital for Infectious Diseases	£720
	£2,000

(3) It will also be necessary to make provision for improvements in the existing X-Ray Department at the two hospitals. At Walker Gate the arrangements for the reception and accommodation of out-patients are extremely unsatisfactory. Patients are required to undress in a small store room, and then pass along an open corridor to the X-Ray room. Plans have been prepared by the Housing Architect which will provide adequate accommodation for both sexes at a cost of £300. It is suggested that an amount for this work should be included in the annual estimates for 1935-6.

The X-Ray Department of the Newcastle General Hospital consists of a converted side-ward in the new Hospital Block. There is neither dressing room nor film storage accommodation, and the developing and dark room (which was originally a linen cupboard) is on another floor of the building 25 yards distant. The department is overcrowded with apparatus to a dangerous extent.

The Massage Department occupies a converted day-room in the same block, and ultimately this department will also require alternative accommodation.

In addition to providing adequate space for the various sections of the X-Ray Department, consideration should be given to the future needs of the department. This arises in particular with regard to the provision of X-Ray plant suitable for giving the modern Deep X-Ray Treatment for cancer. There are many patients in the hospital who would benefit by this treatment, and although it is possible for them to be transferred on stretchers to the Royal Victoria Infirmary X-Ray Department and there receive treatment, the arrangement is not a satisfactory one.

It is suggested therefore that the Committee should consider the erection of a new X-Ray Department, which would provide for the immediate needs of the department as regards X-Ray room, dressing, staff, storage and dark rooms, and should also include an additional X-Ray room, ultimately intended for the Deep X-Ray Treatment specially referred to above, but which, as a temporary measure, could be used with advantage by the Massage Department. The building should also be capable of extension cheaply at a later date.

Plans on these lines have been prepared by the Housing Architect, and the estimated cost of such a building would be £3,172. No additional charges for personnel will arise.

SUMMARY OF PROPOSED NEW EXPENDITURE.

(1) REVENUE: Nil.

(2) EXPENDITURE ON BUILDINGS, EQUIPMENT, ETC.:		£
Barrasford Sanatorium—Transfer and Overhaul of apparatus now at Newcastle General Hospital (per Annual Estimates)		60
City Hospital for Infectious Diseases:		
New X-Ray Equipment (By Loan)		720
Provision of dressing rooms at existing X-Ray Department (per Annual Estimates)		300
Newcastle General Hospital:		
New X-Ray Equipment (By Loan)		1,280
New X-Ray Department (By Loan)	£3,050	
Architect's Charges on above (per Annual Estimates)	£122	
		3,172

SCHEME FOR ORTHOPAEDIC TREATMENT.

PARAGRAPH IV.

"The treatment of non-pulmonary tuberculosis in the City suffers from the absence of a comprehensive scheme for orthopaedic treatment. It seems probable that the facilities actually available for this form of treatment are adequate, but co-ordination is required in order to secure continuity of treatment and to avoid overlapping. The patients requiring orthopaedic treatment fall in the main into one of three classes:—(i) patients receiving treatment under the Council's tuberculosis scheme; (ii) children under 5 years of age under the care of the maternity and child welfare committee; (iii) children of school age A comprehensive scheme for these and all other classes of patient requiring orthopaedic treatment should be substituted for the unco-ordinated arrangements which exist at present. In the Minister's view (which is shared by the Board of Education) the maximum degree of co-ordination of the public medical services is best secured when the post of School Medical Officer is held by the Medical Officer of Health, and since this practice does not obtain in Newcastle upon Tyne, it is of particular importance that all possible steps should be taken to prevent overlapping."

Attention has already been given to the question of providing a comprehensive scheme for orthopaedic treatment, and proposals whereby the existing services of the Education Committee could be utilised by the Health Committee have been approved in principle. The services under this heading which would be available include the use of the Education Committee's Specialist Officer, Masseuses, and Clinic, etc. The fee payable per case treated would be £1-8-0, plus additional charges for photographs, instruments and hospital accommodation. With regard to the latter, accommodation already exists for the treatment of non-pulmonary cases of tuberculosis at the Newcastle General Hospital and Stannington Sanatorium. No provision, however, has been made for other non-tuberculous orthopaedic cases requiring insti-

tutional treatment, and it would appear advisable that this should be given at the W. J. Sanderson Hospital School, Gosforth, rather than at the Newcastle General Hospital. The annual charge per bed occupied at the Sanderson Hospital is £69, and it would appear necessary to provide for at least six beds for the treatment of children under the age of five years.

Considerable difficulty has been experienced in the ascertainment of cases under the age of five which require orthopaedic treatment, and there is a considerable discrepancy between the numbers discovered by the Maternity and Child Welfare Department (approximately 12 per annum) and those found by the School Medical Department when the children first attend school at the age of five years or under (average 46 per annum).

It is felt that in order to raise the standard of ascertainment amongst pre-school children, a trained orthopaedic nurse should be attached to the staff of the Maternity and Child Welfare Department for the period of two years—the appointment to be thereafter reviewed. This officer would be responsible for ascertainment, supervision of treatment under the specialist officer of the Education Committee, and for co-ordination of the work generally. A proportion of the expenditure under these various heads would be chargeable to the tuberculosis scheme.

SUMMARY OF PROPOSED NEW EXPENDITURE.

Revenue.	£	s.	d.
Fees payable to Education Committee at £1-8-0 per case (estimated 100 cases))	140	0	0
Additional charges—photographs, instruments, etc.	25	0	0
Maintenance of 6 beds at Sanderson Hospital at £69 per annum	414	0	0
Orthopaedic Nurse's Salary	200	0	0
Uniform, additional incidental expenses	15	0	0
	£794	0	0

Capital—Nil.

It will be appreciated that in view of the leeway to be made up the charges enumerated above will be at a maximum during the first two years and may be expected to diminish thereafter. Further, the provision of treatment before school age will reduce in many cases the expenditure on these children when actually at school.

VENEREAL DISEASES SCHEME.

PARAGRAPH V.

"Another matter which requires consideration is the improvement of the arrangements for the diagnosis and treatment of venereal disease. The Minister understands that the Council have this question under consideration and are in conference with representatives of the Royal Victoria Infirmary concerning the re-organisation of this service."

Proposals for the improvement of the arrangements for diagnosis and treatment of venereal diseases have already been appoved in principle by the County Councils of Durham and Northumberland and by the City and Borough Councils of Newcastle and Gateshead, and have been submitted to the Ministry of Health.

These proposals entail the establishment at a cost of £3,100 of a new Venereal Department on ground adjacent to the Newcastle General Hospital; the use of beds in the hospital for in-patients, and the staffing and maintenance of the out-patient department by officers of the Local Authorities. It is estimated that the total cost of the maintenance of both out-patient and in-patient departments will be £5,115 per annum as compared with £6,579, the average annual amount now paid to the Royal Victoria Infirmary for these services.

The proportion payable by the City for capital and maintenance charges is approximately 48% of the total, i.e., £1,488 for the capital cost of the new clinic, and £2,455 for annual charges. This latter sum represents a saving of £703 per annum to the City from which must be deducted £60 per annum being the sum payable by the Health Committee for the services of the Chief Venereal Diseases Officer in his capacity as administrative Venereal Diseases Officer for the City.

SUMMARY OF EXPENDITURE AS COMPARED WITH EXISTING CHARGES.

	Total.	Newcastle Proportion.
REVENUE:	£	£
(a) Maintenance of new clinic and provision of in-patient beds, salaries, etc	5,115	2,455
(b) Charges at existing Dept. (R.V.I.)	6,579	3,158
(c) Estimated saving	1,464	703
Deduct from (c) cost of administrative service of new V.D. Officer	110	60 (say)
	£1,354	£643
CAPITAL COSTS: New Clinic	£3,100	£1,488

HOSPITAL ACCOMMODATION FOR MATERNITY CASES.

PARAGRAPH VI.

"The position of the Council in regard to hospital provision and the care of maternity has been materially affected by the Local Government Act, 1929, and the transfer to the Council of the institutions formerly belonging to the Board of Guardians. The Minister has noted with pleasure the progress which has been made in giving effect to the policy of the Act as to the separation from the Poor Law of services which can be provided under other Acts, the appropriation of the Newcastle General Hospital and the development of its work, and the good standard of the medical and nursing care provided at that hospital.

The Minister is also glad to learn of the spirit of co-operation which exists between the Council and the authorities of the voluntary hospitals which serve the City, and he is confident that the Council will appreciate the importance of maintaining close and continuous consultation with these hospitals, in order that the available resources for the treatment of the sick in the City may be used to the best advantage and unnecessary duplication of facilities for treatment may be avoided.

Provision for maternity cases is one instance of the need for such co-operation. The Minister understands that at the present time there is a heavy demand for maternity beds in Newcastle and that much of the available accommodation is not of a high standard. It is important that the Council and the voluntary hospitals should co-operate in this service of common interest with a view to deciding on the best plan for improved accommodation."

In accordance with the recommendation of the survey letter several conferences have been held by the Health Committee with representatives of the Royal Victoria Infirmary and the Princess Mary Maternity Hospital. It is understood that the Management Committee of the latter hospital have agreed in principle that much of their accommodation "is not of a high standard" and are negotiating with the Royal Victoria Infirmary House Committee for a site within the grounds of the Infirmary upon which to erect a new maternity hospital.

At this stage it is impossible to state what financial assistance, if any, may be sought by the Princess Mary Maternity Hospital of the City Council, but the matter will be kept under review and will be reported on again when the occasion arises.

The Health Committee have also had regard to the demand on the maternity ward at the Newcastle General Hospital, and may find if necessary, irrespective of any action by the Princess Mary Maternity Hospital, to make additions thereto. These, however, will probably be of such a character that the cost could be defrayed in the annual estimates.

HOSPITAL ACCOMMODATION FOR CHILDREN.

PARAGRAPH VII.

"Such consultation is also important in considering the question of hospital accommodation for children. The Minister is advised that the existing accommodation in B Block at the General Hospital is not suitable for children, but before building a new block the Council will no doubt ascertain the number of beds which it is desirable for them to provide."

The Health Committee for some time past have been concerned as to the accommodation for sick children at the Newcastle General Hospital, which is described in the survey letter as "not suitable" for that purpose. Further, they have consulted with representatives of the Royal Victoria Infirmary, the Fleming Memorial Hospital, and

the Babies' Hospital on the general question of hospital accommodation for sick children available in the City.

As a result of these deliberations the Health Committee are of opinion that accommodation for sick infants and children should be provided at the Newcastle General Hospital to the number of 128 cots and beds. The average number of cots and beds in occupation at present is 112.

The survey letter also states (Para. VIII (a)) that certain basement wards accommodating 80 beds for adult patients in the Old Block are not satisfactory for nursing the sick, and should be vacated and used for other purposes. It appears to the Health Committee that the most feasible solution to these two problems is as follows:—

(a) To erect a new block of children's wards, comprising 128 cots and beds;

(b) To re-condition the ward blocks (D and E) vacated by the children, and to use them for the accommodation of adults.

Plans have been prepared by the Housing Architect and approved informally by the Ministry of Health for the new children's block. The type and cost of each of the constituent units of this scheme is as follows:—

	Beds & Cots.	Estimated Cost of Buildings.	Equipment.	Architect's *Charges.	Total.
		£	£	£	£
(1) Main Children's Block	92	28,133	700	1,125	29,958
(2) Infants' Block	20	6,011	150	240	6,401
(3) Quarantine Block ...	16	6,711	150	268	7,129
Totals ...	128	£40,855	£1,000	*£1,633	£43,488

* These are not Loan Charges, and must be met out of Revenue.

In respect of the re-conditioning of the present children's wards (D and E) so as to make them suitable for the accommodation of adults a sum of £1,800 should be allowed.

As regards maintenance charges, no special additional expenditure is in contemplation. The general position as regards the complement of nursing staff is referred to in Paragraph VIII (Section E).

SUMMARY OF PROPOSED NEW EXPENDITURE.

REVENUE: Salaries and Maintenance—Nil (See Paragraph VIII (E)).

EXPENDITURE ON BUILDINGS, EQUIPMENT, ETC.:	£
New Children's Block—(1) Buildings, etc. (Loan)	40,855
(2) Equipment £700 (Loan) ... ... £300 (Annual Estimates).	1,000
(3) Architect's Charges (per Annual Estimates)	1,633
Total ...	£43,488
Reconditioning of Blocks "D" and "E" (Loan)	£1,800

NEWCASTLE GENERAL HOSPITAL.

PARAGRAPH VIII.

(A) The ground floor wards in the "old hospital" are not satisfactory for nursing the sick. If new accommodation is provided for the children at present in Block D, the patients in the ground floor wards might be transferred to Block D, and the vacated accommodation used for other purposes.

(B) it is questionable whether it is desirable to use E Block for patients suffering from infectious diseases. It would be preferable to transfer these patients to the Infectious Diseases Hospital if sufficient accommodation is available there.

(C) The wall on the east side of D Block which separates that Block from the rest of the hospital might be taken down as it obstructs the light and appears to serve no useful purpose.

(D) Better accommodation for the resident medical staff is needed.

(E) The present complement of nursing staff is hardly adequate and the Council should consider, when circumstances permit, whether some addition cannot be made."

(A) See observations on Paragraph VII.

(B) It is now the practice to transfer all infectious cases to the City Hospital for Infectious Diseases.

(C) The wall in question has been removed.

(D) The Health Committee are aware that the accommodation provided for the Resident Medical Staff leaves much to be desired. They feel, however, that such accommodation should be within the grounds of the hospital or institution, and can be found in existing buildings.

Representations to this effect will be made to the Public Assistance Committee at an opportune moment.

(E) The present number of nurses per 100 average occupied beds at the Newcastle General Hospital is 28 per 100 beds, or one nurse for 3.6 patients. The corresponding figure for the Royal Victoria Infirmary, Newcastle upon Tyne, is 35 nurses per 100 occupied beds, or one nurse for 2.8 patients.

Information has been obtained of the numbers of nursing staff in the Municipal General Hospitals of 12 of the larger towns of England and Wales, and in a corresponding number of the Voluntary General Hospitals.

The following table shows the average number of nurses per 100 occupied beds in these two series of hospitals—the highest and lowest figures being also recorded:—

	Average No. of Nurses per 100 occupied beds.	Smallest No. of Nurses per 100 occupied beds.	Largest No. of Nurses per 100 occupied beds.
Municipal Hospitals ...	28.8	21.7	46.9
Voluntary Hospitals ...	40.3	35.5	48.0

It will be observed that the number of nurses per 100 patients at the Newcastle General Hospital is about the average for the Municipal Hospitals, but is below the average for the Voluntary Hospitals. It is understood that the Ministry of Health is exceedingly anxious that the ratio of nurse to patients in Municipal Hospitals should approximate more closely to the standard of the Voluntary Hospitals.

The Health Committee have been advised that in order to reach a standard of 33 nurses per 100 occupied beds, or appproximately one nurse for three patients, it will be necessary to increase the nursing staff of the hospital by 33 members, graded as follows:—

1 Night Sister.
2 Ward Sisters.
10 Staff Nurses.
20 Probationers.

This increase in the nursing staff will necessitate the employment of four additional domestics.

The total annual cost of this nursing and domestic staff would be £1,454, plus the cost of their maintenance.

In view of the difficulties which exist as regards accommodation for this personnel, referred to above, the Health Committee are of opinion that these additions to the staff should be made over a period of three years, unless in the meantime any marked and unanticipated increase in the work of the hospital should make the addition an imperative necessity.

The Committee have given careful consideration to the question of additional accommodation for extra staff, and are of opinion that such accommodation can be found by:—

(A) The purchase of an available house in Grainger Park Road, which is adjacent to the Nurses' Home and Highfield. The sum asked is £2.250, and a sum of £300 would be required for furniture and equipment. The latter sum could be charged against the annual estimates.

(B) The appropriation of Highfield (the present Children's Home) for this purpose. Structural alterations, furniture and equipment would necessitate an expenditure of £400. which could be provided in the annual estimates.

SUMMARY OF PROPOSED NEW EXPENDITURE.

	£
(1) Revenue: Salaries of additional nursing and domestic staff	1,454 (plus cost of maintenance).
(2) Expenditure on Buildings, Equipment, etc.:	£
(a) Purchase of additional house (Loan)	2,250
Equipment (Annual Estimates)	300
(b) "Highfield." Structural alterations and equipment ... ... (Annual Estimates).	400

HIGHFIELD CHILDREN'S HOME.

PARAGRAPH IX.

"This building is not satisfactory for use as a Children's Home, and the provision of more suitable accommodation should receive consideration."

The Health Committee are cognisant of the defects of the Highfield Children's Home, and in consultation with the Maternity and Child Welfare Committee have given instructions to the Housing Architect to prepare plans for an alternative building in the grounds of the hospital.

These plans, which have been informally submitted to the Ministry of Health, provide accommodation for 24 healthy infants and toddlers, and for 4 nursing mothers.

The total cost of this building is estimated to be £5,701 to which must be added £100 for equipment, the remainder of the equipment being already available. There will be no additional charges for maintenance.

SUMMARY OF PROPOSED NEW EXPENDITURE.

REVENUE: Nil.

EXPENDITURE ON BUILDINGS, EQUIPMENT, ETC.:	£	£
New Children's Home: Buildings, etc. (Loan)	5,481	
Architect's Charges	220	
(Annual Estimates).		5,701
Equipment		100
(Annual Estimates).		
Total ...		£5,801

CITY HOSPITAL FOR INFECTIOUS DISEASES, WALKER GATE.

PARAGRAPH X.

(a) The Council should consider, when circumstances permit, the provision of accommodation in cubicles at this hospital.

(b) Some arrangements for the cold storage of food are needed.

(c) The sluices in some of the sanitary annexes are very unsatisfactory and should be replaced by more suitable apparatus of modern design."

(A) The existing two isolation blocks with a total of 40 beds were erected in 1888. They are much below modern standards for this type of building, and though still usable, are administratively expensive and difficult to run. Their main defect is that the number of single bed wards is small, and the larger ward unit of four beds are often necessarily employed in the isolation of a single case. They are more fitted to act as emergency wards than as units for continuous occupation. In times of emergency, when the hospital at Walker Gate is full, cases are transferred to the Smallpox Hospital on the Town Moor.

The provision of adequate single-bedded isolation blocks would avoid the necessity of this transference of patients in all but the most exceptional cases. Economies could therefore be effected in the staffing of the Moor Hospital, and certain of the more ancient buildings might be demolished, thus reducing the heavy charges which their maintenance entails.

The cost of erecting one 32-bed isolation unit, or two separate units each of 16 beds would be approximately £9,600, to which must be added the sum of £800 for equipment. No additional charges for staff, etc., would arise in respect of these wards.

The anticipated saving at the Smallpox Hospital would be as follows:—

	£
Salaries and Emoluments	200
Maintenance of Buildings	50
	£250

SUMMARY OF PROPOSED NEW EXPENDITURE

CAPITAL:	£
(a) Cost of New Isolation Block—(Loan)	9,600
Equipment—(Loan)	800
	£10,400
REVENUE	
(b) Saving effected by reduction of staff and maintenance charges at Smallpox Hospital	£250

(B) This has been provided at a cost of £400 during the present financial year.

(C) An estimate has been obtained as to the cost of modernising the sluices in pavilions C. D. A. and Sanatorium 1. The total estimated cost is £1,380, and it is suggested that this can be spread over three years; an annual amount of £460 being provided in the estimates

SUMMARY OF PROPOSED NEW EXPENDITURE.

CAPITAL: Nil

REVENUE: £460 per annum for three years.

MATERNITY AND CHILD WELFARE.

PARAGRAPH XI.

"It is suggested that arrangements should be made for the provision of dental treatment for expectant and nursing mothers."

Extremely satisfactory arrangements have already been made with the Education Committee for the dental treatment of children under the age of five years, who are referred from the Child Welfare Centres.

The fee paid per case is 6/6.

It is suggested that the Education Committee be approached with a view to their providing treatment for expectant and nursing mothers on the same lines. Only cases requiring dental treatment (i.e., fillings, extractions, etc.) would be dealt with by the Education Committee's Staff.

Where dentures are required these might be obtained at an agreed contract price from the Dental Hospital, or from dental practitioners.

No estimate can be given as to the cost of this service, but the average annual expenditure of a number of towns of comparable size to Newcastle is £250. In the majority of cases schemes adopted by these towns are similar to the above in principle.

J. A. CHARLES,

Medical Officer of Health.

Health Department,
Town Hall,
9th November, 1934

SUMMARY OF ESTIMATED EXPENDITURE.

Details of Items.	Annual Revenue Charges for Salaries, Maintenance, etc.		Expenditure on Buildings, Equipment, Architect s Cnarges, etc.	
	Increase.	Decrease.	To be defrayed out of Revenue.	To be raised by Loan.
	£	£	£	£
PARAGRAPH II.—TUBERCULOSIS SERVICES.				
Provision of Resident Medical Assistant at Barrasford Sanatorium, and increased Travelling Allowances	400	...	...	...
PARAGRAPH III.—X-RAY PLANT.				
(A) Barrasford Sanatorium (Installation and Overhaul) ...	...	...	60	...
(B) Newcastle General Hospital.				
(1) New X-Ray Equipment	...	...	...	1,280
(2) New X-Ray Department	...	...	122	3,050
(C) City Hospital for Infectious Diseases.				
(1) New X-Ray Equipment	...	...	...	720
(2) Provision of Dressing Rooms in X-Ray Department ...	...	...	300	...
PARAGRAPH IV.—ESTABLISHMENT OF ORTHOPAEDIC SCHEME.	794	...	...	...
PARAGRAPH V.—VENEREAL DISEASES SCHEME.				
(1) Maintenance Charges	...	643	...	...
(2) New Venereal Diseases Clinic	...	...	...	1,488
PARAGRAPH VI.—HOSPITAL ACCOMMODATION FOR MATERNITY CASES	...	...	...	...
PARAGRAPH VII. and VIII. (a)—HOSPITAL ACCOMMODATION FOR CHILDREN AND ADULT SICK.				
(1) New Children's Block Buildings	...	...	...	40,855
Equipment	...	...	300	700
Architect's Charges	...	...	1,633	...
(2) Reconditioning of Blocks D and E	...	...	...	1,800
PARAGRAPH VIII.—NEWCASTLE GENERAL HOSPITAL.				
(B) Cases of Infectious Diseases	...	...	...	...
(C) Wall on east side of D Block	Wall has be	en removed.	...	...
(D) Accommodation for Resident Medical Staff	...	...	...	...
(E) Increase of Nursing and Domestic Staff	1,454, plus cost of maintenance.	...	...	...
Additional Accommodation for Nursing Staff—				
(1) Purchase of House and Equipment	...	...	300	2,250
(2) Alteration and Appropriation of Highfield	...	...	400	...
PARAGRAPH IX.—HIGHFIELD CHILDREN'S HOME.				
(1) New Home—Building	...	...	...	5,481
Equipment	...	...	100	...
Architect's Charges	...	...	200	...
PARAGRAPH X.—CITY HOSPITAL FOR INFECTIOUS DISEASES				
(A) New Isolation Block Building	...	...	...	9,600
Equipment	...	...	...	800
Reduction of Staff at the Smallpox Hospital	...	250	...	...
(B) Cold Storage	Already	provided.	...	...
(C) Modernisation of Sanitary Accommodation	...	...	460 (for 3 years.)	...
PARAGRAPH XI.—MATERNITY AND CHILD WELFARE.				
Dental treatment for expectant and nursing mothers ...	250	...	...	...
Totals	2,898	893	4,815	68,024

PROPOSED PROGRAMME OF CAPITAL EXPENDITURE ON BUILDINGS, EQUIPMENT, ETC., SPREAD OVER THREE YEARS — 1935-36, 1936-37, and 1937-38.

	Revenue.	Loan.
	£	£
FIRST YEAR (1935-36.)		
(1) X-Ray Scheme (Buildings, Equipment, etc.)	482	5,050
(Newcastle General Hospital, City Hospital for Infectious Diseases, and Barrasford Sanatorium.)		
(2) Venereal Diseases Scheme	...	1,488
(3) Newcastle General Hospital—		
(1) Infants' Block Building	...	6,011
Equipment and Architect's Charges	390	...
(2) Quarantine Block Building	...	6,711
Equipment and Architect's Charges	418	...
(3) Reconditioning of D and E Blocks	...	1,800
(4) New House for Nurses	...	2,250
Equipment	300	...
City Hospital for Infectious Diseases—		
Modernisation of Sanitary Accommodation	460	...
Total for First Year	£2,050	£23,310
SECOND YEAR (1936-37.)		
Newcastle General Hospital—		
Main Children's Block Building	...	28,133
Equipment	...	700
Architect's Charges	1,125	...
City Hospital for Infectious Diseases—		
Modernisation of Sanitary Accommodation	460	...
Total for Second Year	£1,585	£28,833
THIRD YEAR (1937-38.)		
Newcastle General Hospital—		
(1) New Children's Home—Building	...	5,481
Equipment and Architect's Charges	320	...
(2) Highfield (Reconditioning for Nurses' Use)	400	...
City Hospital for Infectious Diseases—		
(1) Isolation Block—Building	...	9,600
Equipment	...	800
(2) Modernisation of Sanitary Accommodation	460	...
Total for Third Year	£1,180	£15,881
Grand Total for Three Years	£4,815	£68,024