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CORPORATION OF GLASGOW.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

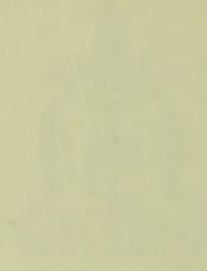
CITY OF GLASGOW.

1925.

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PREFACE.

During the first half of the year under review Dr. A. K. Chalmers was still in office, and this report, therefore, deals with administrative work carried out by him up to the end of June, and maintains, for the most part, the form and continuity of record of previous years.

At the beginning of several of the sections there has been inserted a brief epitome of the more important aspects of the year's activities, which may be convenient for ready reference. Special reports on various aspects of Public Health are included in the text.

The reports of the several hospitals have also been incorporated.

A. S. M. MACGREGOR,
Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
GLASGOW, *June, 1926.*

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1925.

PART I.

SECTION I.

POPULATION, &c.

The estimated population of Glasgow as at the middle of the year 1925, was 1,097,841, compared with the 1924 estimate of 1,095,969. These numbers are based on a return of the occupied houses at Whitsunday of each year, as supplied by the City Assessor, multiplied by the average number of persons occupying each house, ascertained at the last Census, and a special enumeration of the inmates of hospitals and institutions. The estimate given by the Registrar-General is 1,057,100.*

The following statement shows the births and deaths registered since the year 1920, together with the natural increase of the population, *i.e.*, excess of births over deaths. Since 1921, when the Census was taken, the total natural increase has reached a figure of over 50,000, so that the present local estimate of the population, as well as that of the Registrar-General, is considerably below the figure that would seem to be indicated by this method, which however does not make any allowance for emigration.

*NOTE:—This difference in the estimates leads to variations in the rates of births and deaths calculated thereon, but as has been explained in previous reports the above local method of estimating the population gives the nearest approach to accuracy.

Year			Births Registered	Deaths Registered	Natural Increase— Excess Births
1920	...	...	32,992	17,090	15,902
1921	...	...	30,072	16,051	14,021
1922	...	...	28,547	18,139	10,408
1923	...	...	27,038	15,311	11,727
1924	...	...	25,710	17,334	8,376
1925	...	...	25,832	15,882	9,950

In Table XXIV in the Appendix will be found the population of the City since 1860. Marked increases at various periods are mostly associated with extensions of the boundaries when smaller burghs or suburbs have become integral parts of the City. At other times considerable increases have taken place during periods of industrial prosperity.

The mode of growth of a City has an important bearing on its public health problems. The following brief account of the expansion of the population illustrates what has taken place in recent years. The history of Glasgow during last century was one of continued expansion beyond the boundaries at a rate greater than took place in the City itself. For instance, between 1861 and 1891 the population of Maryhill (then outwith the City) increased by 393 per cent. Similarly, between 1871 and 1891 Partick and Govan (also outwith the City) increased by 278 and 367 per cent. respectively. Between 1891 and 1901, after the annexation of 1891, there followed an era of very rapid building within the enlarged area.

An important change took place in the next decade between 1901 and 1911. There set in an era of decline of house building in the City (the number of empty houses reaching 20,000), associated with an increasing growth of population beyond the boundaries. This salutary process did not continue long. From 1911 onwards, the decline in the erection of houses became general and marked. The empty houses, good, bad, and indifferent, were reoccupied; the demand became much greater than the supply, building diminished, practically to cease altogether in 1917, since when it has been slowly resumed at a rate quite insufficient to meet the normal demand, far less the extraordinary demand which these events have created. To these causes are due the extreme congestion and overcrowding of the present population along with the continued occupancy of houses which should have been vacated and closed long ago.

To a certain extent, the same trend of events as was manifest from 1901 to 1911 is again in evidence. Growth of population over the boundary, especially in the salubrious districts to the south and the south-west, is taking place, but this expansion is scarcely, if at all, affecting the large group of the population who stand most in need of additional accommodation.

Ward Populations.—In Table I of the Appendix information is given as to the ward distribution of the population together with the number resident in institutions and in ships in the harbour. Owing to restrictions on the movement of the population there has been little variation since the war because of the small number of empty houses available. Any variations in ward populations which do occur can be explained by the opening of new houses, mostly in Corporation Housing Schemes on the one hand, and on the other by the clearance of slum areas.

The occupancy of houses in Newbank Housing Scheme explains an increase of 908 in Parkhead Ward. An increase in the population of Cowcaddens is due to the opening of houses in another scheme (Hamiltonhill), and in Whiteinch Ward an increase of nearly 400 is mostly due to the occupancy of houses in Knightswood Housing Scheme which is partly situated within that ward. The increase in Cathcart Ward is associated with a certain amount of private building in that district.

Decreases of 550 in Mile-End, 418 in Gorbals, and 203 in Blythswood, are the result of slum clearance and rehousing schemes. All of these differences, however, are small, while in other wards the estimated populations are practically the same. The industrial and working class wards of Gorbals, Dalarnock, and Cowcaddens, have populations in excess of 40,000, while the residential wards of Langside and Cathcart have less than 20,000 inhabitants.

Institutional Population.—The number of persons resident in institutions at 30th June, 1925, was ascertained to be 29,815, or 289 less than the number at the same date of the previous year. The ward distribution of this population is more or less determined by the situation of large institutions, such as hospitals, hotels, and lodging houses. Lodging houses predominate in Calton, Exchange, Blythswood, and Anderston, while hospitals form the larger portion of the institutional population in such wards as Parkhead, Cowlairs, Springburn, Ruchill, and Fairfield.

Density.—The acreage, which is the same as for the preceding year, is shown in Table I in the Appendix. Although slight variations in the number of persons have occurred in several wards as the result of housing operations, the density of the City remains the same at 57 persons per acre. The building of houses in open situations in the peripheral wards has not increased the density of any of these wards by more than one person per acre. In the case of Mile-End the density is three persons and in Gorbals two persons, less than the density for the preceding year.

Inhabited and Empty Houses.—The number of these in each Municipal Ward, as at Whitsunday, 1925, is given in Appendix Table II. In comparison with the numbers for the previous year, the variations in the number of inhabited houses are small and the reasons for such changes are similar to those given in connection with populations. There is a total increase of only 489 for the whole City.

The following wards have the largest increases:—Parkhead, 223; Ruchill, 182; Springburn, 53; and Kelvinside, 85, all of which contain Corporation Housing Schemes. Increases of 123 in Cathcart and 67 in Whiteinch are mainly due to private building.

The number of unoccupied houses, 366, is still very much less than is necessary for the large population of the City. The ward distribution of these is given in the last column of Appendix Table II. The largest number available in any ward is 69, in Kelvinside, and most of these are of five apartments and over.

The following summary contains the figures for the pre-war year 1913, when there were 18,710 empty houses. Most of the unlet small houses are of the uninhabitable class.

NUMBER OF UNOCCUPIED HOUSES CLASSIFIED ACCORDING TO
NUMBER OF APARTMENTS.

	1913	1919	1920	1921	1922	1923	1924	1925
One apartment,	4,169	319	120	33	27	43	93	91
Two apartments,	9,762	181	72	17	27	55	82	76
Three „	2,731	21	9	9	10	32	27	28
Four „	954	13	15	8	20	32	42	21
Five „ and up,	1,094	103	75	76	116	163	205	150
	18,710	637	291	143	200	325	449	366

Linings Granted by Dean of Guild Court.—A summary of the linings granted by the Dean of Guild Court is given in Table III of the Appendix, together with similar information for the preceding ten years.

Linings were granted in 1925 for 1,394 houses. 504 of these were for houses of two-apartments, mostly to replace houses in slum clearance schemes, while 674 were for three-apartment houses, the latter figure alone being almost 50 per cent. of the total. There were only 111 linings granted for houses of four-apartments, and 105 for houses of larger size.

TEMPERATURE AND RAINFALL.

The weather conditions during 1925 may be described generally as good. There were considerable periods of bright weather, with sunshine, during early spring, summer, and late autumn. Particulars of monthly variations of temperature and rainfall are shown in Appendix Table IV, which contains an abstract of the meteorological observations taken at Springburn Park. A comparison of the totals for the ten years 1916-25, is also given.

Although the maximum temperature, 83 degrees, which occurred in June, was not exceeded during any of the ten years included, the lowest of 18 degrees is not extreme. The average for the year was comparatively low at 46·7 degrees. There were 222 days on which rain fell and the amount recorded, 38·22 inches, is only slightly below the average.

BLIND PERSONS.

In the Report for 1921, on pages 14-25, there were included considerable extracts from a memorandum on an investigation regarding blind persons in Glasgow. The information then dealt with was based on an inquiry made by the Inspectors as to the housing and economic conditions, &c., of the blind persons known to be resident in the City. In order, however, to obtain a proper medical survey of the blind population in their area the Joint-Committee for the South-West of Scotland for the Administration of the Blind Persons Act authorised the appointment of an Eye Specialist to carry out a routine examination of all blind persons.

The information obtained was embodied in special "Reports on Blindness in Glasgow":—

- (1) A Statistical Inquiry into the Causes of Loss of Vision among the Adult Blind; and
- (2) A Report on the Social and Economic Conditions of Blind Persons.

The following introduction to the reports affords a general summary of their principal features:—

The investigations on which this report is based were undertaken on the recommendation of Dr. A. K. Chalmers at the instance of the Joint-Committee for the South-West of Scotland constituted to administer the Blind Persons Act.

For this purpose Dr. Freeland Fergus was appointed to carry out the routine examinations and to inquire into the condition of the eyes and the causes of blindness among the adult blind population of the City, which included those under training or employed at the Royal Asylum for the Blind or who were at the time on the roll of the Outdoor Mission to the Blind.

It was the intention that the whole blind population, as far as known and accessible, in the areas represented on the Joint-Committee should be passed under review, in order to ascertain the relative proportion of the several causes of blindness. The inquiry was, however, interrupted as soon as the examination of the adult blind persons in the City of Glasgow had been completed by Dr. Freeland Fergus, as it was thought advisable that the data thus ascertained should first be analysed. This report, therefore, deals with the City group, which comprises 1,206 adult blind persons out of a known figure of approximately 1,587 persons over 16 years of age, on the register of the blind, and may be regarded as reflecting fairly accurately, in point of numbers, the adult blind population of the City.

In the reports which follow, the first is the work of Dr. J. L. Halliday, a Medical Officer in the Public Health Department, who carried out the analysis and wrote the text in collaboration with Dr. Freeland Fergus, who conducted the routine examination of the blind. The second report—by Mr. William Jones, Secretary to the Department—gives a statistical review of the economic and other data collected during the inquiry.

REPORT No. I.—This is, I think, the first time that an inquiry into the causes of blindness at work in a large industrial area has been completed and the report gains in value from this feature alone. It will also serve as a basis with which to compare the future incidence of the various causes of loss of vision in the area of the committee.

For these reasons, and also because of the variety of factors which enter into the production of blindness, the data have been analysed and discussed in a comprehensive, rather than in a brief and summarised manner. At the end of the report will be found grouped the several causes of blindness in the order of their incidence.

A considerable group, 17 per cent., and probably much more, owe their disability to the venereal diseases, syphilis—congenital or acquired—or to gonorrhœal ophthalmia in the newly born. The report discusses these affections fully, and points out that the prevention of blindness from these causes is bound up with the prevention and treatment of the original diseases. The provision of facilities for treatment by Local Authorities has been in process of development since 1917, and there is evidence that diminution in the incidence of syphilis is taking place from year to year. Among measures for the prevention of congenital eye affections facilities for ante-natal treatment take a prominent place. The prevention of the serious consequences of syphilis depends upon the assiduity with which individual patients attend for treatment, and although some improvement in this respect is taking place, there still remain some 30 per cent. of patients whose attendances at the clinics cease prematurely. This is a feature which has received serious consideration and is one of the arguments in favour of some form of notification.

As regards gonorrhœal ophthalmia, an affection which has been notifiable since 1912, an instructive description and chart have been inserted in the report showing the increase in incidence which took place during the war and the very considerable decline which has followed since 1919. Total blindness due to this cause is now happily a rare event, although a number recover with impaired vision in one or both eyes. Out of 168 who have recovered with impaired vision since 1914, only 18 occurred during the past three years (1922-24). The prevention of these

defects is closely bound up with the adequacy of the arrangements for treating ophthalmia in the newly born, among which are supervision of midwives under the Midwives Act, prompt notification, and prompt treatment, especially institutional treatment, such as has been established at Baird Street Reception House.

Injuries as a cause of blindness were found to be responsible to the extent of 16 per cent. The inquiry revealed the unexpected result that the accidents of civilian life, to which children are specially liable, caused twice as many cases of blinding as did occupational injuries. This is fully discussed in the report.

The figures for blindness resulting from occupational injuries are such as to reflect credit on those employers who have made adequate arrangements for the prevention, as far as possible, and for the prompt treatment of accidents to the eye. Indeed, in many of the larger industrial concerns the arrangements are known to be satisfactory.

The Departmental Committee on the Causes and Prevention of Blindness (1922) reported very fully on industrial accidents to the eye and made certain recommendations to the Home Office and the Department of Mines, in whose hands the adoption of safeguards against industrial accidents very largely rests.

There is reason to believe that the public are not sufficiently aware of the importance of early and prompt treatment where the eye is involved in injury, especially in the case of children, and there is room for propaganda along these lines as regards both prevention and treatment.

Among other infections of the eye which result in blindness, the report deals with such causes as measles (responsible for 35 cases, 2·9 per cent. of blindness); trachoma (7 cases); and meningitis (11 cases). Trachoma was made notifiable in Glasgow in 1914, and its treatment provided for at a special dispensary and in hospital. Measles is accountable for a comparatively high proportion of blindness.

Senile cataract appears third among the causes of blindness. It is apt to supervene as age advances and blinding can only be avoided as a complication if the person affected is kept under skilled supervision until it be decided whether or not an operation is likely to be successful. In this series, sixty of the cataract

cases had never been operated upon. Failing vision among the middle-aged and elderly is an important symptom and should not be lightly regarded.

The report does not disclose any wide region which is not already covered by preventive measures within the power of Local Authorities to apply. The results will be effective in proportion as these schemes are efficient.

Points which have emerged are as follows:—

1. Prevention of eye defects and blinding due to syphilis in adults depends on efficient treatment, and in the case of children on efficient ante-natal treatment.

2. Children suffering from eye defects which might result in defective vision and blindness should be kept under observation and appropriately treated.

3. Prompt treatment of injuries to the eye, especially among children, might be aided by propaganda.

4. The question of providing glasses in necessitous cases, where this would improve the eyesight of a blind person or lift him out of this category altogether, might be considered.

REPORT No. II.—Data having an economic and social bearing were also collected, and this report traverses ground which may be of service to the committee from an administrative point of view. A statistical review of the blind in Scotland and in the area of the committee is followed by an analysis of the information gathered during the special inquiry.

Under the heading, "Relation to Employment," a useful table is given in respect of 2,903 blind persons in Glasgow and the South-Western counties administered by the Joint-Committee. Among these persons, 177 are of school age and under, 227 are employed in institutions, 184 are under training, while 414 are otherwise employed. Two important groups remain, comprising 198 persons returned as untrained but employable, and a large residual group of 1,703 (742 males and 961 females) included under the heading "Unemployable," and forming about two-thirds of the whole. There would thus appear to be room for absorption into training of a proportion at any rate of those returned as employable. This opens up the question of the adequacy of existing facilities for training, the use to which they are put, so as to secure the maximum of efficiency, and

the form which expansion might take; *e.g.*, centralisation or decentralisation in the form of subsidiary local workshops combined with home employment.

The term "Unemployable" is not quite an accurate description of the large residual group so designated. It includes, for instance, many married women. Apart from this, however, there is a large proportion, composed mostly of middle-aged and elderly people, dependent for their maintenance on a variety of sources—Poor Law relief, charitable agencies, insurance societies, old-age pensions, &c., as is shown clearly in a table in the latter part of the report. The question of augmentation of income in respect of this group has been under the consideration of the committee, and the information in the report will be of some assistance. There is, however, still too little direct knowledge available of the circumstances of this class of blind persons, and the whole position is very obscure.

The question of registration of blind persons, and the subsequent procedure, remains to be considered. During the course of his examinations, Dr. Freeland Fergus found a number of cases which, in his opinion, did not come within the definition of blindness as expressed in the Blind Persons Act. As regards admission to the register, it would be advisable that, in future, this should be controlled by medical examination, and that in cases of doubt a specialist should be consulted. It would also be of advantage if the Board of Health were to determine what degree of ocular defect should entitle a person to be registered as blind, so as to secure uniformity throughout the country, and to serve as a guide in border-line cases.

There is need for closer co-operation between voluntary agencies and the Joint-Committee, and I think it would clear the position, especially as regards the outdoor blind, if the Joint-Committee were to keep local registers, containing such information as would be of service, especially on the economic and social side of the problem, so as to preserve continuity of information as to the condition and movement of blind persons. It is difficult to base administration on the rather imperfect data collected from time to time by a sort of *tour de force*. I would suggest that the duties of the Manager be enlarged, and that he be entrusted with the keeping of the register.

A. S. M. MACGREGOR,

Medical Officer of Health.

25th January, 1926.

HEALTH LECTURES.

During the winters of 1924-25 and 1925-26 the Corporation have co-operated with the Glasgow Burgh Insurance Committee, the Scottish Committee and the Glasgow Branch of the British Social Hygiene Council in the organisation of lectures on health subjects of interest to the public generally. Two of the lectures in each course were especially devoted to aspects of venereal disease. The lectures were illustrated by lantern slides and suitable films. Attendances numbered from 700 to over 1,000, and the lectures were much appreciated.

In addition to the above during the past winter three district lectures on (1) Child Welfare; (2) Venereal Diseases and their Serious Effects; and (3) Health in the Home, were given by members of the staff in Corporation Halls in four districts of the City as follows:—

(1) Shettleston—Estimated Attendance	..	..	..	2,550
(2) Partick	..	..	..	1,250
(3) Kingston	..	..	..	2,300
(4) Maryhill	..	..	..	1,700

LEGISLATION.

During the year the following Acts of Parliament and Regulations dealing directly with Public Health or having a bearing thereon came into operation:—

ACTS OF PARLIAMENT.

Town Planning—

Town Planning (Scotland) Act, 1925,
consolidates all previous enactments.

Housing—

Housing (Scotland) Act, 1925,
consolidates the enactments relating to the housing of the working classes.

Rent—

Rent and Mortgage Interest (Restrictions Continuation) Act, 1925,
prolongs the duration of the Act of 1920, and postpones the date of expiry of Part II of the 1923 Act.

Dangerous Drugs—

Dangerous Drugs Act, 1925,
amending the Dangerous Drugs Acts, 1920 and 1923, to include cocoa leaves and Indian hemp.

Churchyards—

Church of Scotland (Property and Endowment) Act, 1925,
transferring the powers and duties over the parish churchyards from
the Parish Council to the Local Authority administering the Burial
Grounds (Scotland) Act, 1855.

Pensions—

Widows', Orphans', and Old Age Contributory Pensions Act, 1925,
making provision for pensions for widows, orphans, and persons between
the ages of 65 and 70, and for the payment of contributions; it also
amends the enactments relating to health and unemployment insurance
and old age pensions.

REGULATIONS, CIRCULARS, AND MEMORANDA.

Maternity and Child Welfare—

N.M. and C. Circular No. 11925. Maternity Service and Child
Welfare Schemes. Prevention and Treatment of Ear, Nose,
and Throat Ailments resulting from Infectious Diseases.

Infectious Disease—

Circular No. 593. Pemphigus Neonatorum.

Memo. No. 103/Medical. Pemphigus Neonatorum.

Infectious Disease Circular/No. III—1925. Public Health
(Infantile Paralysis, Polio-Encephalitis, and Encephalitis
Lethargica) Regulations (Scotland), 1925, and Public Health
(Infective Jaundice) Amendment Regulations (Scotland),
1925.

Order No. 1244/S.82. Public Health (Infantile Paralysis, Polio-
Encephalitis, and Encephalitis Lethargica) Regulations
(Scotland), 1925.

Order No. 1243/S.81. Public Health (Infective Jaundice)
Amendment Regulations (Scotland), 1925.

Tuberculosis—

Circular letter *re* Approved Institutions. St. Andrew's Home,
Millport.

Order No. 681. Animal. Diseases of Animals. Tuberculosis
Order, 1925.

Silicosis—

Order No. 79. The Refractories Industries (Silicosis) Scheme.

Port Sanitary Administration—

Circular letter No. D.D.B. 149060. Fumigation of vessels
proceeding to U.S.A.

Aliens Order No. 760, 1925. Amending the Aliens Order, 1920.

Unsound Meat Regulations—

Order No. 412/S.44. Public Health (Scotland) Unsound Food
Order.

Order No. 411/S.43. Public Health (Scotland) Oversea Meat.

Housing—

Statutory Procedure. Improvement and Reconstruction Schemes.

Milk—

Circular/Public Health No. XII, 1925. Milk and Dairies (Scotland) Order, 1925. Model Dairy Bye-laws.

Order No. 883/S.63. Milk and Dairies (Scotland) Order, 1925.

Public Health/Circular No. XVIII, 1925. Model Regulations for Veterinary Inspectors.

Diseases of Animals—

Order No. 4116. Diseases of Animals (Disinfection) Order, 1925.

SECTION II.

VITAL STATISTICS.

The death-rate of 13·97 compares favourably with that of 15·39 for the preceding year. The rate of 13·66 for 1923, which was an exceptionally favourable year in respect of the absence of causes which lead to deaths from respiratory diseases, was the lowest yet recorded for the City as a whole. The rate for the year under review was the second lowest.

The principal events which impressed themselves on the vital statistics of the year were (*a*) the presence of epidemics of whooping-cough and measles of considerable magnitude, the former with 12,194 cases, and a case mortality rate of 537 per million, and the latter with 6,507 cases, and a case mortality rate of 107. The outbreak of whooping-cough was one of comparatively slight severity, while the measles epidemic was unusually mild. (*b*) An increased incidence of respiratory diseases (bronchitis, pneumonia, &c.), due to the fog which prevailed with unusual intensity in the month of November, affecting chiefly older persons. This is described in the section on pneumonia. (*c*) The continued fall in the death-rate from pulmonary tuberculosis has produced a figure of 0·9 for the City—the first time that the rate has been under 1 per thousand of the population. (*d*) The outbreaks of measles and whooping-cough in young children have affected adversely the infant mortality rate. In spite of this, however, the rate of 102 deaths per 1,000 births compares favourably with 119 for 1924, though higher than that for 1923, and was the second lowest recorded for the City. Further details are given in their appropriate places in the report.

The corrections of the number of births and deaths consist of the exclusion of births and deaths of persons whose home addresses are outwith the City, and the inclusion of others occurring elsewhere but with home address in the City.

The Registrar-General's estimate of the population of the City, as at the middle of the year, was 1,057,100. This lower estimate accounts for differences between rates given in this report and those quoted from the Registrar-General's Report.

SUMMARY.

	1923	1924	1925
Population,	1,088,987	1,095,969	1,097,841
Acreage,	19,183	19,183	19,183
Persons per acre,	57	57	57
Number of Inhabited Houses,	238,849	240,283	240,772
Deaths—Number registered,	15,311	17,334	15,882
„ After correction for Institu- tions, &c.,	14,875	16,868	15,336
Births—Number registered, ...	27,038	25,710	25,832
„ After correction,	26,710	25,330	25,416
Death-rate per 1,000 living—			
All causes,	13·66	15·39	13·97
Birth-rate per 1,000 living, ...	24·53	23·11	23·15
Deaths under One Year—After correction,	2,388	3,005	2,591
Deaths under One Year—Per 1,000 births,	89	119	102

BIRTHS.

The births during the year numbered 25,416, compared with 25,330 in 1924—an increase of 86. This is the first year in which an increase has occurred since the high post-war birth-rate of 1920.

On the estimated population and corrected births the birth-rate is 23·15 per 1,000, compared with 23·11 in 1924 and 24·53 in 1923. For these years the Registrar-General estimates the birth-rate at 24·1, 24·1, and 25·6 respectively.

A slightly higher birth-rate coinciding with a small increase in the marriage rate thus falls to be recorded, although, as will be seen from the data given in the following tables, the general trend of the birth-rate is downward. The rates for Glasgow and Liverpool are quite definitely higher than those for the other towns quoted; only Dundee and Aberdeen have rates above twenty. As the marriage-rates remain remarkably constant, the general fall in the birth-rate is due to other causes.

The number of births in each ward and the rate per million of the population compared with the corresponding rates for previous years are shown in Appendix Table V. High rates are again recorded in the industrial and working-class wards and

low rates in the residential quarters of the City. Among the former are Mile-End, with 34·0 per 1,000 persons; Dalmarnock, 31·6; and Calton, Exchange, and Cowcaddens, with rates in excess of 30. Wards with low rates are Kelvinside, 7·8; Cathcart, 9·9; and Park and Langside with rates below 12.

Eighteen wards have birth-rates higher than those for the previous year, but the differences are small, with the exception of that for Mile-End, which is 2·5 higher than that for the previous year; Cowcaddens, 2·1; and Maryhill, 2·0.

The following information from the Registrar-General's returns shows the birth-rates for Glasgow and Scotland since 1871:—

				Glasgow	Scotland
1871-1880,	...	...	...	36·6	34·9
1881-1890,	...	...	...	36·5	32·4
1891-1900,	...	...	...	33·7	30·3
1901-1910,	...	...	...	31·2	28·4
1911-1915,	...	...	...	27·4	25·4
1916-1920,	...	...	...	24·1	22·9
1921,	...	...	...	28·7	25·2
1922,	...	...	...	27·3	23·5
1923,	...	...	...	25·6	22·8
1924,	...	...	...	24·1	21·9
1925,	...	...	...	24·6	21·3

On the basis of local returns, the following comparison is made of the rates for several periods in Glasgow and other towns:—

			1923	1924	1925
Glasgow,	...	...	24·5	23·1	23·2
Edinburgh,	...	...	20·5	20·0	18·6
Dundee,	...	...	24·6	22·6	21·8
Aberdeen,	...	...	23·8	21·9	21·6
London,	...	...	20·1	18·6	17·9
Liverpool,	...	...	24·9	24·6	23·3
Manchester,	...	...	20·5	19·2	18·6
Birmingham,	...	...	20·4	19·2	18·8

Illegitimate Births.—There were 1,481 births registered as illegitimate, which is equal to 5·8 per cent. of the total births. The proportion of illegitimate births has shown definite contraction over a long series of years, but exact comparisons cannot be established owing to the altered regulation regarding

registration when parents subsequently marry. The proportion for last year was 5·9 per cent. of the births.

The explanation of the high proportion of illegitimate births in Blythswood Ward (12·1 per cent.), Park (11·5 per cent.), and Exchange (10·5 per cent.) is that there are a number of institutions situated in these wards to which women are admitted for confinement.

MARRIAGES.

The following table shows the marriage-rates since 1871 per 1,000 persons living. The rates are fairly constant around 9, when taken on an average of decennial periods. During 1925 there was a very slight increase on that given for the previous year, but this may be explained by the larger number of houses now becoming available.

GLASGOW.—MARRIAGES PER 1,000 PERSONS LIVING.

1871-1880, ...	...	9·1	1919, ...	...	9·0
1881-1890, ...	...	9·3	1920, ...	...	12·4
1891-1900, ...	...	9·4	1921, ...	...	10·7
1901-1910, ...	...	8·8	1922, ...	...	9·1
1911-1915, ...	...	9·8	1923, ...	...	9·6
1916, ...	...	8·6	1924, ...	...	8·4
1917, ...	...	8·3	1925, ...	...	8·5
1918, ...	...	9·4			

DEATHS.

The number of deaths in each municipal ward, together with the rates for the present and two preceding years, are given in Appendix Table VI. None of the ward rates are excessive, the highest being 17·7 in Mile-End, 17·6 in Calton, and 17·5 in Blythswood. North of the river Whiteinch is the only ward with a death-rate under 10, but in the south the death-rate for Cathcart and Pollokshaws Wards is 9·5, and Camphill and Govanhill are also under 10. The contiguous wards of Langside and Pollokshields have rates of 10·1 and 10·3 respectively. Quite a number of other wards have similarly low rates.

According to the Registrar-General's returns, the rates for Glasgow since 1881 have been as follows:—

GLASGOW.—ALL CAUSES—DEATH-RATE PER 1,000 LIVING.

1881-1890, ...	24·22	1919, ...	16·36
1891-1900, ...	21·53	1920, ...	15·30
1901-1910, ...	19·56	1921, ...	15·10
1911-1915, ...	17·04	1922, ...	17·20
1916, ...	15·16	1923, ...	14·28
1917, ...	15·10	1924, ...	16·10
1918, ...	16·50	1925, ...	14·83

The following is a comparison of death-rates based on local returns of several large towns in England and Scotland:—

GLASGOW AND SEVERAL TOWNS—DEATH-RATE PER 1,000 LIVING.

	1923	1924	1925
Glasgow, ...	13·7	15·4	14·0
Edinburgh, ...	13·9	15·0	14·5
Dundee, ...	14·7	16·4	16·7
Aberdeen, ...	13·6	14·7	13·8
London, ...	11·4	12·2	11·9
Liverpool, ...	13·7	13·6	14·1
Manchester, ...	13·3	14·0	14·4
Birmingham, ...	11·0	11·6	11·7

Transfer Deaths.—The deaths on which the above rates for Glasgow are calculated include those of persons formerly resident in Glasgow, but dying in institutions or elsewhere outwith the City. On the other hand, those dying within, but with home addresses outside, are excluded. The “inward transfers” numbered 786 during 1925, compared with 910 and 791 for the two preceding years, while the “outward transfers” numbered 1,332, compared with 1,376 and 1,227. The causes of deaths in both these groups are given in Appendix Table No. VII.

CAUSES OF DEATH.

The principal causes of death are summarised as follows:—

SUMMARY OF DEATH-RATES PER 1,000 FROM PRINCIPAL CAUSES.

General Diseases—	1923	1924	1925
(a) Infectious,	1·46	1·71	1·24
(b) Septic,	·11	·12	·13
(c) Tuberculous—			
(1) Phthisis,	1·01	1·01	·92
(2) Others,	·42	·39	·36
(d) Malignant (cancer, &c.),	1·19	1·16	1·26
(e) Other General Diseases,	·12	·42	·25
Diseases of the nervous system,	1·62	1·60	1·45
Diseases of the circulatory system,	1·78	1·90	2·02
Diseases of respiration, ...	2·17	3·18	2·52
Do. digestion,	·55	·49	·52
Congenital defects and malformations (including premature births),	·81	·85	·78
Violence,	·47	·52	·56
All other causes,	1·95	2·04	1·96
All causes,	13·66	15·39	13·97

The death-rate from infectious diseases during 1925, which was 1·24 per thousand, is the lowest recorded since 1921, when, however, the child population of susceptible ages had been considerably reduced by the low birth-rates during the war. The rate for 1924 was 1·71. The low rate for 1925 was the result mainly of the reduction in the death-rate from measles, which was 107, and influenza, 191 per million, compared with 471 and 376 respectively for the previous year, and of smaller reductions in scarlet fever and diphtheria. On the other hand, the death-rate from enteric fever was 13, as against 5 in 1924 when the rate was exceedingly low. There has been little change in the death-rate from erysipelas during the past three years, but septicaemia and other septic diseases were heavier.

The pulmonary tuberculosis death-rate in 1925 was 922 per million. This is the first time on record that the death-rate in the City has been below one per thousand. For 1924 it was 1,006. The death-rate from tubercular meningitis, 147, is considerably lower than 180, the rate for 1924, but similar to that

of 1922. Abdominal tuberculosis, with a rate of 97 per million, was 2 less than last year, while other forms of tubercular disease had a slight increase.

Malignant disease has been increasing over a considerable number of years, and during 1925 this tendency is again quite marked. The rate, 1,261, is 100 higher than that of 1924. These rates, however, are those of the group classification of deaths, and as the subject is of some considerable importance it is hoped to make a special analysis of the various forms of the disease for the report for next year and to issue a leaflet for the general information of the public.

Among nervous diseases cerebro-spinal meningitis had the same fatality rate as in the previous year, while the rate for meningitis (not tubercular), 91, is practically the same. Cerebral hæmorrhage (apoplexy) at the rate of 644 per million is considerably below the rates of recent years. There is considerable variation in the incidence of this cause of disease throughout the wards, Langside having a rate of 1,080 and Park Ward 937, compared with 231 in Mile-End, and 353 in Shettleston, and as in the case of cancer, is probably closely related to the age distribution of the population, these being diseases of older ages. Diseases of the respiratory system are dealt with in Section V of this report. The death-rate, 2·52, compares with 3·18 per 1,000 persons in 1924, when, however, pneumonia was prevalent in the early months of the year.

The death-rate from digestive diseases which formerly exhibited considerable oscillations depending on the temperature and rainfall of late summer and early autumn, has in recent years been quite constant at a fairly low average. This is in great part due to the absence of diarrhœal disease among young infants, which was a determining factor in the death-rate, and will be referred to in the next section on infant mortality.

The mortality from congenital defects and malformations is lower than that of recent years, but with the declining birth rate, death rates would require to be calculated on the number of births occurring in order to establish a proper comparison.

Details of death rates from these and certain other causes and groups of causes, together with a comparison with previous years will be found in Appendix Table VIII.

AGE AND SEX DISTRIBUTION.

This information is given in Appendix Tables IXA and IXB. In every 1,000 deaths during 1925 there were 518 males and 482 females, as compared with 512 and 488 for the preceding year.

PROPORTION OF MALE AND FEMALE DEATHS PER 1,000.

	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+	Total
Males,	101	29	18	9	7	10	14	23	37	56	83	85	46	518
Females,	68	28	19	9	8	11	14	28	33	44	69	80	71	482

Influenza is much more severe in adult years of life in both sexes, especially among females, where there were 122 at all ages compared with 88 for males. Erysipelas, septicaemia, and other septic diseases are all more numerous among males, there being a remarkable disparity in the first year of life.

Malignant diseases among males numbered 628, and among females 720, this disparity being in greater ratio than the difference in the relative number of the sexes would account for. The higher incidence among females is largely due to cancer of the generative organs at the age of 35 and upwards when the excess of female deaths is very definite. Bronchitis is much more fatal among males, there being 447 deaths among them, compared with 281 among females. The disparity is most evident at ages under one and over 65. Pneumonia deaths among males numbered 944, against 661 for females, while other respiratory diseases were also heavier among the male sex.

A similar observation applies to diarrhoea, the greatest difference being for ages under one year, when there were 153 male, as against 11 female deaths. Other digestive diseases were also more fatal amongst males. Congenital debility, malformations, and premature births were the cause of 522 male and 328 female deaths, while violence was the cause of more deaths at all ages among males.

Quarterly Death-Rates.—For comparative purposes a table, is here introduced, showing the quarterly death-rates for years 1923-25:—

GLASGOW.—QUARTERLY DEATH-RATE PER 1,000, 1923-1925.

	1923	1924	1925
First Quarter,	14·3	21·5	14·7
Second „	14·1	14·7	13·1
Third „	11·3	11·1	11·3
Fourth „	14·9	14·2	16·7
Year,	13·7	15·4	14·0

Deaths in Hospitals, Nursing Homes, and other Institutions.
—Details of the deaths in Glasgow institutions are given in Appendix Table X, which indicates that over 30 per cent. of the total deaths registered occurred in such institutions. Table XI shows the numbers of those dying in several classes of institutions who had no home address.

Uncertified Deaths.—The number of uncertified deaths has shown a gradual decrease over many years. During 1925 the uncertified deaths recorded numbered 44, as compared with 47 during 1924. The following table shows the number of these at several age-periods, together with percentages. The percentage of deaths among legitimate children not certified under 1 year was only 0·4 during 1925. Among illegitimate children the rate was 3·0, compared with 0·7 for 1924. Between 1 and 5 years there were none.

GLASGOW.—UNCERTIFIED DEATHS, 1923-1925.

	Year	1923	1924	1925
Not Certified,	- 1 year,	22	13	18
	- 5 years,	1	2	1
	5 + years,	27	25	21
No Medical Attendance,	- 1 year,	4	2	1
	- 5 years,	—	—	—
	5 + years,	3	—	1
Attending Dispensaries,	- 1 year,	—	4	2
	- 5 years,	—	1	—
	5 + years,	—	—	—
Deaths of Illegitimate Children,	- 1 year,	244	270	233
	- 5 years,	108	115	81
Of these not Certified,	- 1 year,	3	2	7
	- 5 years,	—	2	—
Percentage not Certified,	- 1 year,	1·2	·7	3·0
	- 5 years,	—	1·7	—
Deaths of Legitimate Children—				
Percentage not Certified,	- 1 year,	0·9	0·4	0·4
	- 5 years,	0·1	—	0·1

EXPECTATION OF LIFE.

The important series of life tables for Glasgow, prepared by Mr. William Jones, Secretary to the department, and published during the year by the Committee on Health, mark

an epoch in the life history of the City. The results of Municipal progress receive striking expression in these tables which show the remarkable increase in the expectation of life that has taken place within the last fifty years, and the corresponding saving in life capital. This is also the first time that life tables have been constructed to show the expectation of life of the inhabitants of houses of various size. The more important tables are reproduced.

The following summary shows the expectation of life in Glasgow at birth, and at 10 years of age at the periods of the various Life Tables:—

	Age	1821-27	1832-41	1870-72	1881-90	1920-22
Males, -	0	34·12	...	30·93	35·18	48·41
„ -	10	42·27	37·40	40·15	44·32	50·81
Females,	0	36·64	...	32·61	37·70	52·22
„	10	45·24	39·95	41·83	45·44	53·19

A series of abridged life tables was also constructed to give a comparison with other cities. These abridged tables are repeated here in full:—

ABRIDGED LIFE TABLES, 1920-22—EXPECTED YEARS OF LIFE AT VARIOUS AGES IN GLASGOW, LIVERPOOL, AND MANCHESTER.

MALES.

Age.	Glasgow (Extended Life Table).	Glasgow.	Liverpool.	Manchester.	Differences between Glasgow and	
					Liverpool.	Manchester.
12	49·02	48·99	48·68	49·10	-·31	+·11
17	44·69	44·70	44·24	44·67	-·46	-·03
22	40·53	40·54	40·11	40·44	-·43	-·10
27	36·37	36·38	36·08	36·28	-·30	-·10
32	32·30	32·31	32·02	32·12	-·29	-·19
37	28·36	28·36	28·18	28·11	-·18	-·25
42	24·50	24·50	24·49	24·37	-·01	-·13
47	20·76	20·76	20·92	20·69	+·16	-·07
52	17·25	17·25	17·53	17·26	+·28	+·01
57	13·99	13·99	14·37	14·07	+·38	+·08
62	11·10	11·11	11·50	11·22	+·39	+·11
67	8·58	8·58	8·95	8·72	+·37	+·14
72	6·46	6·47	6·88	6·63	+·41	+·16
77	4·98	5·00	5·33	5·22	+·33	+·22
82	3·98	3·99	3·83	3·95	-·16	-·04

FEMALES.

Age.	Glasgow (Extended Life Table).	Glasgow.	Liverpool.	Manchester.	Differences between Glasgow and	
					Liverpool	Manchester.
12	51.41	51.37	52.37	52.74	+ 1.00	+ 1.37
17	47.05	47.02	48.06	48.50	+ 1.04	+ 1.48
22	42.87	42.84	43.91	44.34	+ 1.07	+ 1.50
27	38.80	38.77	39.80	40.18	+ 1.03	+ 1.41
32	34.83	34.79	35.74	36.02	+ .95	+ 1.23
37	30.94	30.91	31.67	31.37	+ .76	+ .46
42	27.09	27.16	27.57	27.78	+ .41	+ .62
47	23.27	23.23	23.61	23.75	+ .38	+ .52
52	19.55	19.51	19.89	19.91	+ .38	+ .40
57	16.16	16.12	16.45	16.38	+ .33	+ .26
62	13.08	13.03	13.24	13.19	+ .21	+ .16
67	10.16	10.09	10.33	10.24	+ .24	+ .15
72	7.67	7.64	7.88	7.77	+ .24	+ .13
77	5.77	5.76	6.01	5.97	+ .25	+ .21
82	4.61	4.64	4.60	4.76	- .04	+ .12

On the basis of the Census population of 1911, for which special data were available showing the age and sex incidence of the population according to size of house, and the mortality experience of the three years October, 1909, to September, 1912, the following abridged life tables were also constructed:—

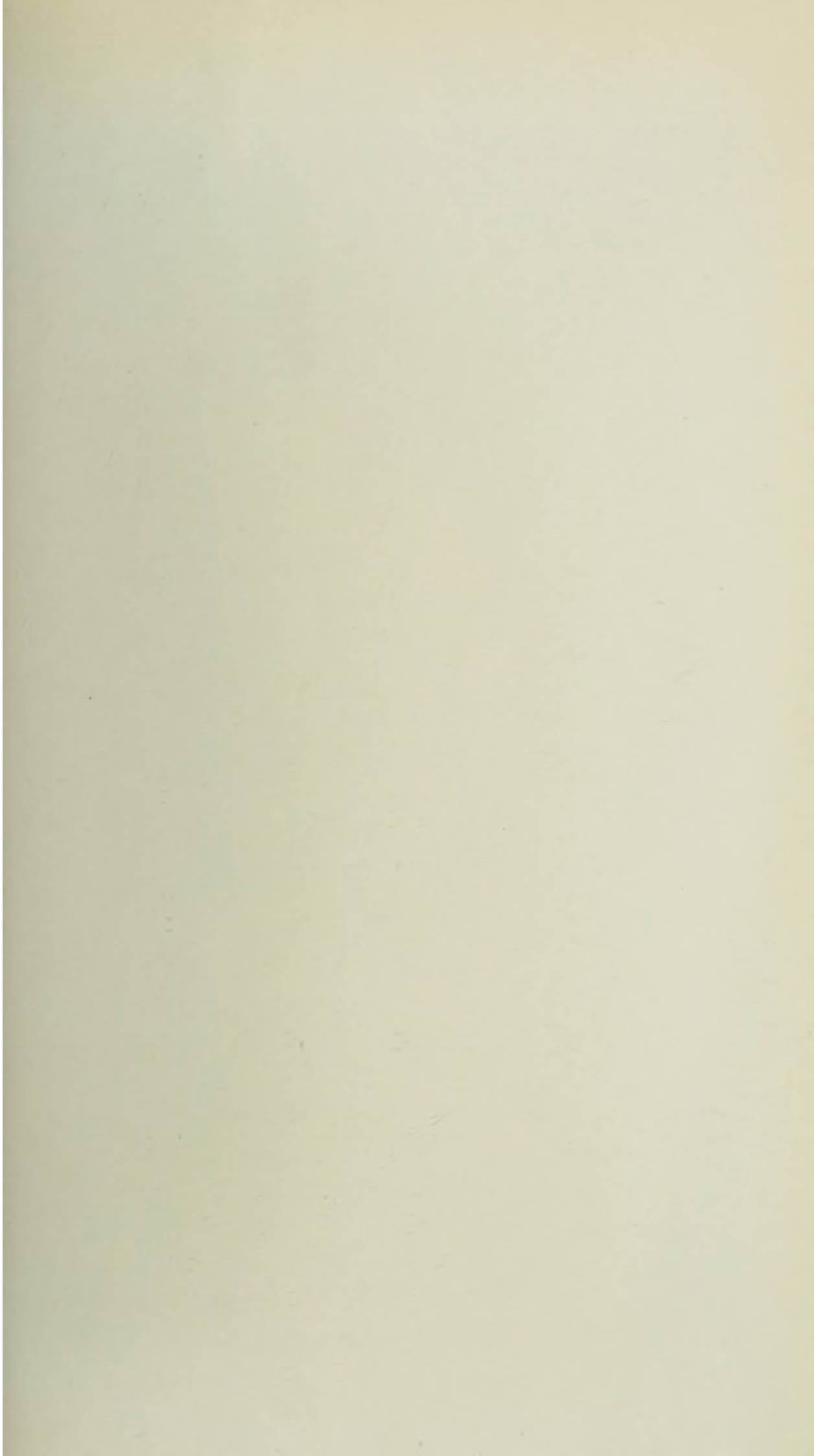
GLASGOW.—COMPARATIVE STATEMENT SHOWING EXPECTED YEARS OF LIFE FROM CERTAIN AGES AND ACCORDING TO SIZE OF HOUSE, ON THE BASIS OF THE CENSUS OF 1911 AND THE MORTALITY EXPERIENCE OF THE THREE YEARS, OCTOBER, 1909, TO SEPTEMBER, 1912.

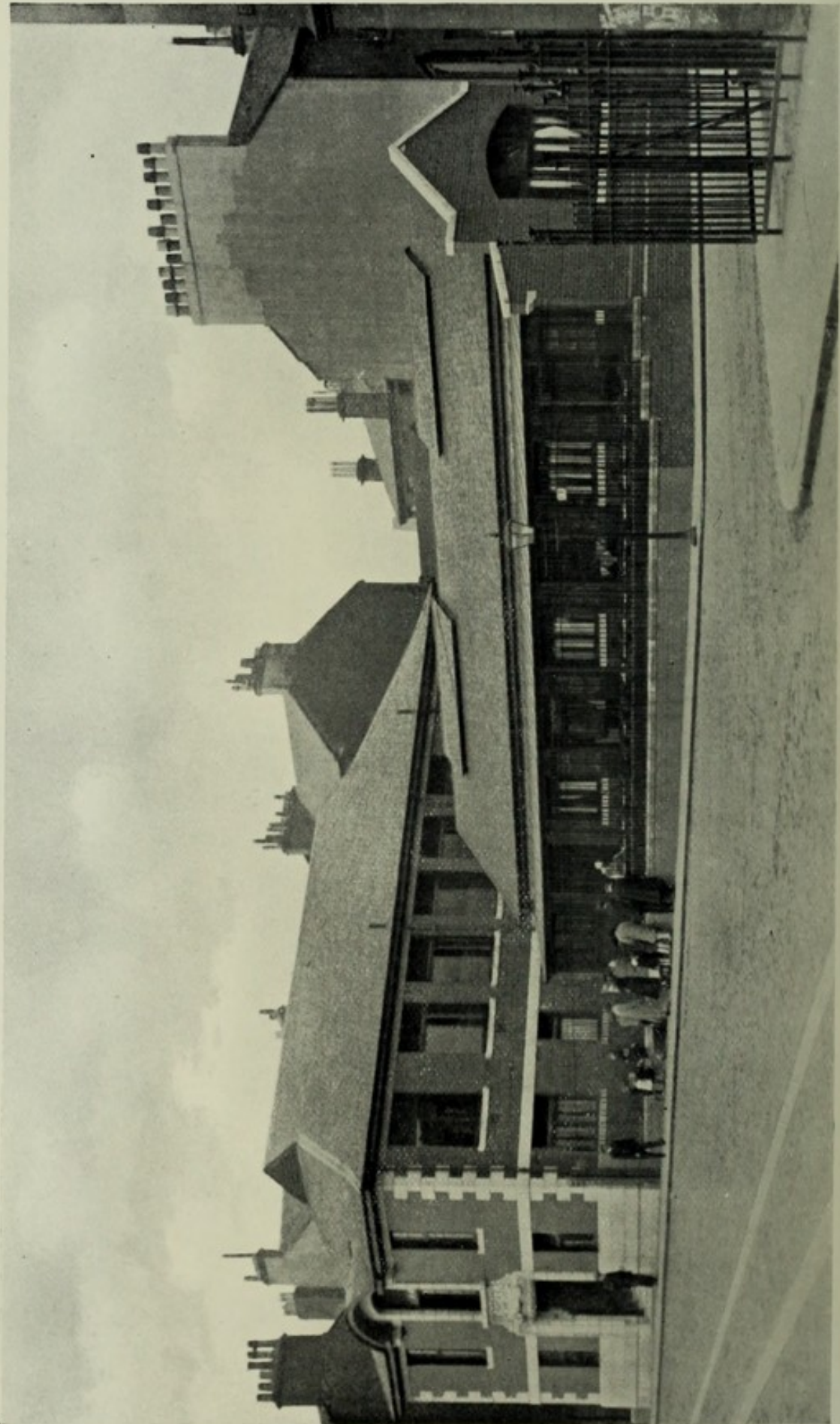
MALES.

Age.	1 Apt.	2 Apts.	3 Apts.	4 Apts. and Up.	Whole City.
10	46.96	49.56	52.52	53.09	49.77
15	42.99	45.33	48.06	48.54	45.46
20	38.98	41.19	43.81	44.16	41.26
25	34.94	37.24	39.60	39.77	37.16
35	26.49	29.02	31.32	31.16	28.94
45	19.36	21.27	23.39	23.47	21.44
55	14.26	14.72	16.28	16.35	14.92
65	9.05	9.52	10.16	9.97	9.44

FEMALES.

Age.	1 Apt.	2 Apts.	3 Apts.	4 Apts. and Up.	Whole City.
10	46.85	49.90	54.71	58.80	51.73
15	42.85	45.67	50.32	54.20	47.45
20	38.98	41.53	46.00	49.62	43.26
25	35.06	37.62	41.77	45.05	39.14
35	27.35	29.80	33.49	36.10	31.08
45	20.94	22.33	25.52	27.64	23.59
55	15.87	15.82	17.71	19.53	16.78
65	10.85	10.45	11.29	12.35	10.88





BRIDGETON CHILD WELFARE CENTRE.

SECTION III.

INFANT MORTALITY.

MATERNITY AND CHILD WELFARE.

The details of infant mortality and the various ramifications of the Maternity and Child Welfare Scheme are given below under their respective headings. The salient aspects of the year's experience and work may be mentioned here. The infant mortality rate of 102 compares favourably with 119 for 1924, and unfavourably with 89 for the previous year. It may be pointed out that the factor which most influences these rates in Glasgow is the extent to which diseases which affect or tend to cause complications in the respiratory system, *e.g.*, bronchitis, pneumonia, influenza, measles, and whooping-cough, prevail during the year. The considerable outbreaks of measles and whooping-cough which occurred in 1925, the former in the early part and the latter during the winter months of the year, affected the infant mortality rate. Respiratory affections are more severe in poor and congested areas, and one of the main causes of the dissimilarity in the infant death-rates as between the several wards of the City is the enhanced opportunities for infection in crowded and congested areas. An analysis of the mortality of various ward groups is given later in the text.

During the year the new Consultation Centre and Day Nursery at Sister Street, the plan of which was described in the last report, was completed, and opened by the Prime Minister in October. The new Clinic at Maryhill was almost completed at the end of the year, and has since been opened. Those at Springburn and West Govan are in course of erection, while the plans for that at Shettleston were approved during the year. The needs of other areas of the City are being passed under review. The design and size of these buildings has been difficult to determine, mainly because it is not possible to anticipate what will be the ultimate scope and function of these various centres. At all of them (except one) there is ground available for future

expansion if necessary. There has again been an increase in the number of sessions to 60 per week at the thirteen centres, including 8 sessions for ante-natal work, 12 for children from one to five, and 3 for artificial light treatment. The total attendances were 146,000, an increase of 20,000 over those for the previous year. At four centres arrangements have been made for the diagnosis and treatment of venereal diseases among those attending the clinics. In the section on venereal disease reference will be found to the relation of the V.D. Scheme to Maternity and Child Welfare, and to the work of the special nurse appointed for home visitation.

A report by Dr. E. D. Chalmers Smith on the light treatment clinics at Cochrane Street is included. This branch of the work has met with success, and the question of further extension is under consideration.

In co-operation with the Directors of the Royal Maternity Hospital a series of refresher courses for midwives was inaugurated during the year. Three courses of sight lecture demonstrations were given by Dr. James Hendry and one of the sisters, each course being attended by 35 midwives. This arrangement has proved a popular one, and will be continued, as many midwives who intimated their desire to attend could not be accommodated.

Measures for the prevention and treatment of middle ear disease were taken. The appointment of two visiting aural surgeons to the isolation hospitals received approval for child welfare purposes, in order to secure for children who contract otitis media as the result of scarlet fever and other infections appropriate operative or other treatment likely to prevent the condition from assuming a chronic form. After treatment will also be supervised.

Milk and meals in necessitous cases continued to be granted under the conditions approved by the Corporation and the Board of Health. The increases in both reflect the continued depressed industrial conditions.

With the approval of the sub-committee, certain rearrangements were made in the rules governing the granting of milk to children under five years of age, with a view to simplifying the procedure and to assisting in reducing the congestion at the clinics. These alterations came into force at the end of the year.

Ante-natal work has also increased in amount; 3,878 women attended this department at the Maternity Hospital, an increase of 1,000 over the figure for last year. Similar clinics are now held at five centres, including Adelphi Street and Partick. The numbers attending have risen from 770 to 988 for the year under review.

South York Street Reception House was utilised during the year as a quarantine admission station for children before proceeding to the country homes. Several cases of infectious disease were detected there, but this measure has not wholly sufficed to eliminate the occurrence of infectious disease in the homes. During the year 519 children suffering chiefly from rickets or malnutrition were admitted to the three country homes.

Reports will be found on domestic helps, a branch of work which appears now to be gaining acceptance, training of pupils under the Industrial Training Scheme of the Education Authority and the Ministry of Labour, the work of the Infant Health Visitors' Association, operations under the Midwives' Act, &c. Under Puerperal Fever, there is given a note of the results of Dr. Napier's investigation into 500 cases admitted to Belvidere Fever Hospital.

INFANT MORTALITY.

The deaths of infants under 1 year during 1925 numbered 2,591, compared with 3,005 in the preceding year. The death-rate per 1,000 births was 102, compared with 119 in 1924, and 89 in 1923.

The deaths under 1 year in each ward of the City during 1925, with the relative rates per thousand births, are contained in Appendix Table XII, together with a comparison of the rates during the preceding year.

The following tables show (1) the infant death-rates in Glasgow since 1891; (2) the rates in other large towns; and (3) the death-rates among legitimate and illegitimate children per 1,000 births in each group.

During last year the rate among legitimate children was 99, while that of the illegitimate children was 157.

GLASGOW—INFANT DEATH-RATE DURING SEVERAL PERIODS.

	Per 1,000	Per 1,000
Average of 10 years, 1891-1900,	149	120
" 10 " 1901-1910,	135	89
" 5 " 1911-1915,	134	119
" 5 " 1916-1920,	115	102
1921,	105	

COMPARISON WITH SEVERAL LARGE TOWNS.

	1923	1924	1925
Glasgow.	89	119	102
Edinburgh, 	82	89	96
Dundee, 	98	120	126
Aberdeen, 	104	122	109
London, 	61	69	68
Liverpool, 	99	103	99
Manchester, 	88	100	96
Birmingham, 	72	83	78

GLASGOW.—DEATH-RATE PER 1,000 LEGITIMATE AND ILLEGITIMATE BIRTHS.

	Legiti- mate	Illegiti- mate		Legiti- mate	Illegiti- mate
1899-1900, ...	144	286	1922, ...	116	181
1901-1910, ...	126	257	1923, ...	85	163
1911-1915, ...	127	217	1924, ...	115	182
1916-1920, ...	110	175	1925, ...	99	157
1921, ...	102	163			

Causes of Infant Mortality.—There were 1,537 deaths of male children and 1,030 deaths of female children during the year, compared with 1,701 and 1,278 respectively for the previous year. Male deaths were fewer by 164, and females by 248.

The various causes which operate during each month of the first year of life in each sex are contained in Appendix Tables XIII and XIV; the principal factors are given in summarised form below. The deaths in the first month of life again form fully one-third of the total, most of these occurring in the first week. This initial mortality, which is largely composed of deaths due to "immaturity," remains remarkably constant from year to year.

Respiratory diseases take second place as a cause of infant mortality, and as a matter of fact have most influence in determining the variations that occur in the total rate from year to year. For instance, in the summary of rates since 1911, given below, the death-rate from respiratory diseases varied from 43

in 1922 to 20 in 1923. Last year it was 30 for males and 20 for females. Pneumonia was prevalent during the first two months of the year.

Even with the relatively high temperatures which prevailed during the summer the death-rate from diseases of the digestive system was comparatively low. This, however, may have been due to the fact that the warmer weather was experienced in the early summer, rather than during August and September, the usual period of diarrhœal prevalence. During recent years, deaths from autumnal diarrhœa have ceased to be a serious factor in the mortality of childhood.

Nervous diseases as a cause of infant mortality were much the same as in the previous year, while tuberculous diseases among males was less fatal. The group of infectious diseases among both sexes was the cause of fewer deaths, although 135 males and 137 females died from whooping-cough.

The ratio of male to female deaths has been added to the following table which gives the chief groups of causes of infant deaths.

CAUSES OF DEATH.	Average Average							
	1911-15	1916-20	1921	1922	1923	1924	1925	
MALES—								
I. Immaturity,	46	46	41	40	36	42	41	
II. Diseases of Respiratory System,	30	27	22	43	20	39	30	
III. Diseases of Digestive System,	23	18	21	12	12	14	15	
IV. Diseases of Nervous System,	10	8	7	7	7	6	8	
V. Tuberculous Diseases, ...	6	3	3	2	3	3	2	
VI. Infectious Diseases, ...	18	11	14	17	13	17	13	
VII. Suffocation,	1	—	—	1	—	—	—	
VIII. All other Causes, ...	12	10	9	12	8	9	9	
All Causes, ...	146	123	117	134	99	130	118	
FEMALES—								
I. Immaturity,	36	36	36	34	31	31	27	
II. Diseases of Respiratory System,	24	21	16	29	16	29	20	
III. Diseases of Digestive System,	19	14	15	9	8	11	10	
IV. Diseases of Nervous System,	8	6	5	5	4	5	4	
V. Tuberculous Diseases, ...	4	3	2	2	2	1	1	
VI. Infectious Diseases, ...	18	11	12	16	12	17	14	
VII. Suffocation,	1	—	—	1	—	1	1	
VIII. All other Causes, ...	9	9	6	9	6	9	6	
All Causes, ...	119	100	92	105	79	104	83	
Ratio—Males to 100 Females, ...	123	123	127	127	125	125	142	

Table XII in the Appendix shows the variations in infant mortality which occur from ward to ward and the differences which individual wards display from year to year. For instance, with one or two exceptions, the mortality rates generally are lower this year than last year. The rate for Mile-End changes from 162 to 137, Calton from 148 to 128, Dalmarnock from 142 to 119, Cathcart from 80 to 31, Whiteinch from 60 to 94, Anderston from 116 to 136.

As regards the detailed causes which contribute to these rates, the figures are too small to enable reliable comparisons to be made between one ward and another. This can only be done by comparing groups of City wards. Owing to the changes which are liable to occur from year to year, these groups have been selected on the basis of the infant mortality rate over a period of four years (1921-1924). Group I—This contains wards with mortality rates between 40 and 65, those in Group II between 65 and 100, those in Group III between 100 and 120, and Group IV between 120 and 140. The following table shows the various wards arranged in order of their infant mortality rates. The four groups represent a convenient though broad stratification of the City:—

GROUP I. Residential. Rates, 40—65.	GROUP II. Residential and Industrial. Rates, 65—100.	GROUP III. Mainly Industrial. Rates, 100—120.	GROUP IV. Industrial and Po Rates, 120—140.
Langside, 44	Whiteinch, ... 73	Parkhead, ... 100	Anderston, ...
Cathcart, 47	Govanhill, ... 74	Shettleston and	Blythswood, ...
Camphill, 48	Fairfield, 74	Tollcross, ... 104	Cowcaddens, ...
Kelvinside, ... 49	Cowlairs, 74	Partick, E., ... 104	Kingston, ...
Park, 61	Pollokshaws, ... 81	Townhead, ... 111	Dalmarnock, ...
Pollokshields, ... 63	Maryhill, 86	Woodside, ... 111	Whitevale, ...
Dennistoun, ... 64	Partick, W., ... 88	Kinning Park, 112	Exchange, ...
	North Kelvin, ... 88	Sandyford, ... 112	Gorbals,
	Ruchill, 92	Hutchesontown, 114	Calton,
	Springburn, ... 96	Provan, 115	Mile-End,
		Govan, 116	

The statistics of infant mortality have been arranged in accordance with this grouping for purposes of comparison. The data for the years 1923 and 1924, when the mortality rates were 89 and 118 respectively, are given below.

GLASGOW.—CAUSES OF INFANT MORTALITY IN VARIOUS GROUPS OF WARDS
DURING 1923 AND 1924.

	Ward Groups.—1923.					Ward Groups.—1924.				
	I.	II.	III.	IV.	City.	I.	II.	III.	IV.	City.
I. IMMATUREITY—										
(a) Premature Birth, ...	16.0	16.7	17.8	18.4	18.0	11.4	13.7	16.8	19.5	17.0
(b) Congenital Malformations,	4.3	3.2	3.9	3.3	3.6	4.6	4.1	3.7	2.5	3.5
(c) Atelectasis, ...	.5	.4	.3	.2	.3	.5	.2	.9	.8	.7
(d) Atrophy and Debility, ...	9.0	7.8	11.2	12.8	11.3	11.4	11.7	14.6	18.5	15.8
	29.8	28.1	33.2	34.7	33.2	27.9	29.7	36.0	41.3	37.0
II. DISEASES OF RESPIRATORY SYSTEM, ...	3.7	12.2	18.7	23.0	17.9	8.3	24.1	35.5	44.3	34.3
I. DISEASES OF DIGESTIVE SYSTEM—										
(a) Diarrhoeal, ...	2.1	5.5	8.7	9.7	8.2	.5	7.1	11.0	12.3	10.1
(b) Others, ...	1.6	.7	1.8	2.6	1.8	2.6	1.9	3.0	1.8	2.3
	3.7	6.2	10.5	12.3	10.0	3.1	9.0	14.0	14.1	12.4
V. DISEASES OF NERVOUS SYSTEM,	3.2	3.9	6.8	5.7	5.5	4.1	5.6	5.0	6.1	5.4
V. TUBERCULOUS DISEASES—										
(a) Abdominal Tuberculosis,	—	.4	.2	.6	.4	—	.9	—	.2	.2
(b) Tubercular Meningitis,	1.1	1.9	1.3	1.6	1.5	—	1.7	1.7	1.2	1.4
(c) Other Forms, ...	—	—	1.0	.7	.6	1.0	.2	.7	.4	.6
	1.1	2.3	2.5	2.9	2.5	1.0	2.8	2.4	1.8	2.2
I. ACCIDENTS OF BIRTH—										
(a) Injury, ...	2.1	.4	1.2	1.1	1.1	1.5	1.5	1.0	.8	1.1
(b) Umbilical Hæmorrhage,	1.1	.4	.1	.1	.2	—	—	.2	—	.1
	3.2	.8	1.3	1.2	1.3	1.5	1.5	1.2	.8	1.2
II. INFECTIOUS DISEASES—										
(a) Whooping-cough, ...	1.1	4.3	4.6	5.4	4.8	5.7	4.7	9.4	13.4	9.6
(b) Measles, ...	1.1	1.8	6.4	7.6	5.5	2.1	4.3	6.4	6.6	5.8
(c) Scarlet Fever, ...	—	—	—	.2	.1	.5	.4	.2	—	.2
(d) Cerebro-Spinal Fever, ...	—	.4	.3	.8	.5	—	.2	.5	.9	.6
(e) Erysipelas, ...	—	.4	.5	.3	.4	—	.2	.6	.2	.3
(f) Diphtheria and Mem. Croup,	.5	.2	1.3	.7	.8	—	.4	.6	.4	.4
(g) Chickenpox, ...	—	—	.1	.1	.1	—	—	.3	.4	.3
(h) Smallpox, ...	—	—	—	—	—	—	—	—	—	—
	2.7	7.1	13.2	15.1	12.2	8.3	10.2	18.0	21.9	17.2
III. SYPHILIS, ...	—	.2	.7	1.8	1.1	—	.8	.6	1.4	.9
IX. SUFFOCATION, ...	.5	—	.5	.5	.4	—	.9	.3	.7	.6
X. OTHER VIOLENCE, ...	.5	.5	.7	1.1	.9	1.0	.6	1.0	.8	.9
XI. ALL OTHER CAUSES, ...	2.7	3.0	4.5	4.0	3.9	4.1	4.9	6.9	5.8	5.6
	51.1	64.0	92.6	102.4	88.9	59.3	89.7	119.9	139.0	117.6
No. OF BIRTHS, ...	1880	5641	9113	9991	*26,710	1938	5319	8874	9115	*25,330

*The totals include births in institutions—85 in 1923, and 84 in 1924.

This analysis shows that the infant mortality rate in the first group of wards is just half that for the fourth group in 1923, when the rate for the City was low (89), and rather less than half in 1924, when the City rate was moderately high (118). The data make it clear that the most important causes of gradation among the four groups of wards are to be found in the respiratory diseases column and in the infectious diseases column, especially measles and whooping-cough. All these diseases are particularly severe among children in small houses in congested areas. In 1923 the mortality among infants from respiratory diseases was 17·9 for the City, but the rates in the wards grouped as above were 3·7, 12·2, 18·7, 23·0 respectively. In 1924 a much higher rate of 34·3 showed such differences as 8·3, 24·1, 35·5, and 44·3 among the several ward groups. Similarly with measles and whooping-cough, which attack chiefly the respiratory system, the same marked gradations are manifest. These large groups of diseases thus tend to cause decided variations in infant mortality from year to year and are responsible for marked differences in different areas of the City according to their incidence and severity. Affections which attack the respiratory system are undoubtedly more severe in children affected by rickets, which, although diminished in prevalence, is still a factor which influences adversely the course of diseases of the chest.

Although diseases of the digestive system, especially those associated with diarrhœa, have greatly declined in recent years, they are still responsible for similar though less steep gradations, due largely, no doubt, to the fact that babies are still being imperfectly fed, and that the principles of infant feeding are imperfectly understood.

NOTIFICATION OF BIRTHS.

The number of notifications of births received during 1925 is shown in Appendix Table XV, compared with the corresponding figures for the two preceding years. As notifications include still births, the notifications are always in excess of the number of births registered. Omissions to notify births in terms of the Act average around $2\frac{1}{2}$ per cent., but most of these are formally intimated after attention has been directed to the omission.

Nature of Attendance at Births.—The proportion of births medically attended has fallen from 48·6 per cent. in 1914 to 40·3 in 1924, while in 1925 the proportion was 40·1. This leaves a balance of almost 60 per cent. of births not medically attended.

Still Births.—The percentage of still births known to occur in Glasgow usually averages about 4, which was also the rate for 1925.

The percentage of still births occurring among those attended medically at home and in institution is 5·6 for 1925, compared with 2·9 non-medically attended, but if those medically attended in institutions are excluded the former rate is reduced from 5·6 to 3·4. This larger percentage among medical cases is usually due to the fact that a doctor has been ultimately summoned in certain cases where a midwife was in the first instance employed. Among the births medically attended in institutions there were 349 still births, or 10·7 per cent. of the total.

DISTRICT MATERNITY CENTRES.

The question of additional provision for maternity and antenatal patients in the City has been under consideration, and the following report dealing with the form which this extra provision might take, was submitted to the Sub-Committee on Child Welfare:—

REPORT ON THE PROVISION OF ACCOMMODATION FOR MATERNITY CASES IN GLASGOW.

The minute of the Sub-Committee on Child Welfare of 6th August, 1923 (Print No. 22, page 2045), reads as follows:—

“With reference to minute, of date 23rd ultimo (Print No. 21, page 1930), regarding the proposed erection of Child Welfare Centres at Maryhill and Shettleston, there was submitted a letter, of date 31st ultimo, from the Board stating that while the Board are at the moment not in a position to commit themselves to the giving of grant, they will, on receipt of specific proposals for additional provision for maternity cases in the City, give the matter their most careful consideration, and that the Board consider that the provision of Maternity Homes will be of greater advantage in realising the objects of Maternity Service and Child Welfare Scheme for the City than the provision of Day Nurseries under present conditions, and the Sub-Committee, after discussion, agreed to continue consideration of the subject-matter pending a report thereon by the Medical Officer of Health.”

This minute refers to the erection of Maternity Homes at Maryhill and Shettleston, but the question of providing a similar home at Springburn has also been under consideration.

These proposals were made apparently in pursuance of a policy to establish small Maternity Homes consisting of about 20 beds in suitable localities convenient to the needs of the local population. The first and most important question that arises is whether the objects in view would not be more satisfactorily and more economically met by a larger and more central Maternity Hospital than by a group of smaller and scattered homes. Careful consideration should be given to the relative advantages of these two schemes.

(1) The capital expenditure involved in the erection of a number of small Maternity Homes will be much greater than would be the case if an equivalent number of beds were provided under the same roof.

(2) The running expenses of a number of smaller institutions will be greater than they would be in a single institution with the same aggregate number of beds. There are special reasons which make these statements as to cost applicable to Maternity Homes. The Ministry of Health have published a statement showing the costs per week in the Municipal Maternity Homes throughout England. An extract of that for the year 1922-23 is given in an appended note.* These are all small institutions varying from 10 to 30 beds, with the exception of a few below the former figure. It will be observed that the cost of treatment in all of these is high and in many of them excessively so. One of the chief reasons for this high cost is the small size of the institution.

(3) The same advantages must be afforded by a small institution as by a larger one. For instance, a staff to conduct labours must be available at short notice. The smaller the institution the more infrequently will their services be required. Staffing has therefore to be provided on a relatively larger scale.

(4) The same facilities are also required in the smaller as in the larger institution—for instance, operating theatre, double labour room, observation ward, &c.—factors which add to the cost of construction. In order to simplify the construction of the proposed home at Shettleston it was suggested that its main or sole function should be the treatment of normal cases, and that abnormal cases should either not be admitted or should be sent on to the Maternity Hospital. This arrangement, however, would not work well in practice and it would be impossible to avoid the admission of abnormal cases. Again, labour is often attended by unforeseen difficulties. For instance, serious injury might result to a patient with a contracted pelvis if the condition were not discovered until delivery had been attempted.

(5) This raises another important point, viz., that a Maternity Home should have the best facilities and skilled attention for the patients. An institution too small to have a resident medical officer, where the confinements are conducted by the patient's own medical attendant or by a practitioner in the district, would not satisfy this condition.

* Note.—This is not reproduced, but the costs varied more or less inversely to the number of beds.

(6) The function of an institution of this kind necessarily comprises:—

- (a) Treatment of normal cases whose home conditions are unsatisfactory;
- (b) Treatment of abnormal cases;
- (c) Isolation accommodation for cases with inflammatory conditions (venereal diseases, &c.);
- (d) Accommodation for a proportion of ante-natal patients would be advisable; and
- (e) Facilities for training of midwife pupils.

The necessity for providing these elements on a small scale for scattered districts will lead to complexity in plan and extravagance in administration and staffing much greater than if similar provision were made on an equivalent scale in a larger institution.

(7) The principal advantage of the small Maternity Home serving local needs is its convenience of access, but with facilities for rapid transport this advantage is not so great as it seems. In any case, the provision of scattered homes throughout the City in preference to a larger and more central institution would not, in my opinion, be worth the relatively greater expenditure, while the services rendered by a larger institution serving a larger area would be much more efficient.

15th June, 1925.

It was decided that meantime the proposed clinic only for the Shettleston area at Tollcross Park should be proceeded with, and the Scottish Board of Health gave their approval for the erection of a new building, as described in the following report:—

PROPOSED CHILD WELFARE CLINIC, SHETTLESTON AND TOLLCROSS.

The clinic proposed is intended to take the place of that now held at Edrom Street in a Church Hall which is unsatisfactory, being too small for the purpose.

The plans accompanying this report are:—

(1) *Site Plan*.—This shows the proposed location of the building at the back of the halls at the north-eastern corner of Tollcross Park. The building, which has a southern exposure, has been placed at the corner of the site so as to conserve the remainder for other purposes, if necessary. There is convenient access from Wellshot Road by a road between the library and the hall.

(2) *General Plan of Proposed Clinic*.—This shows a central waiting room measuring 40 feet by 20 feet, with a granolithic platt in front. The front of the waiting room will be made to open on to this platt. At the back of the waiting room convenient to the entrance corridor are situated an office, 12 feet by 14 feet, a dispensary, 10 feet by 14 feet, and a small kitchen, 7 feet by 14 feet.

To the east of the waiting room is situated the infants' weighing room measuring 25 feet by 15 feet. The weighing room opens direct from the waiting room and in turn has direct access to the consulting room.

Opposite the consulting room on the other side of the corridor is placed a treatment room. This is a convenient arrangement for carrying out simple forms of treatment under the supervision of the Clinical Medical Officer. A staff lavatory and public lavatory with housemaid's closet are arranged in this part of the building.

To the west of the waiting room are situated an ante-natal room, 20 feet by 15 feet, which will be served by two of the dressing boxes on the opposite side of the corridor, and a toddlers' rest room, 20 feet by 17 feet 6 inches. On the opposite side of the corridor is situated a special treatment room, 15 feet by 17 feet 6 inches, which will be utilised for the treatment of venereal disease and will be served by two adjacent dressing boxes. The remainder of this part of the building is occupied by a slunge room where specimens of urine will be taken and disposed of, a children's lavatory, a w.c. and sitz bath.

The suite of rooms to the west of the waiting room can be utilised for purposes of treatment, &c., other than those primarily intended.

The heating chamber will be placed underneath the staff and public lavatories, while at the entrance a verandah, as shown in the plan, will be utilised as a pram shelter.

21st August, 1925.

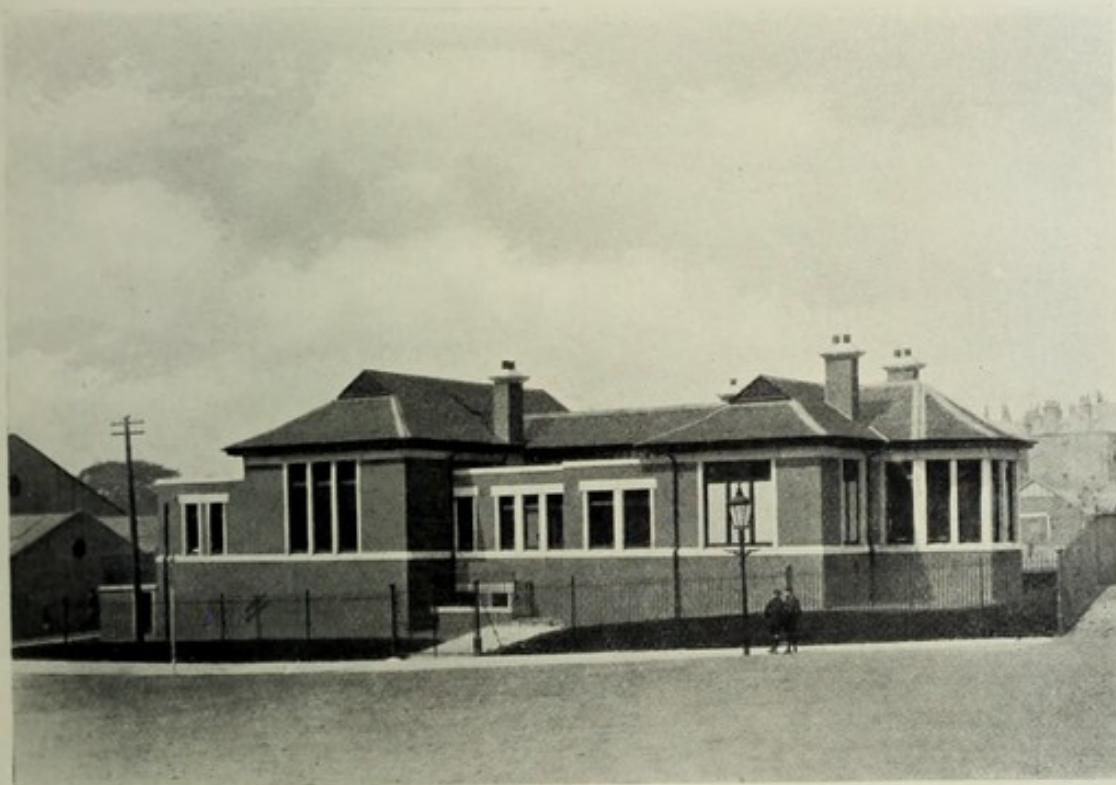
West Govan Child Welfare Centre.—This building which is in course of erection has been designed on lines similar to those described above.

Maryhill Child Welfare Centre.—The need for suitable premises for infant consultations in Maryhill district has been under consideration by the Child Welfare Committee for a considerable time, and in erecting a centre at Avenuepark Street, Maryhill, provision was made for further extension should this become necessary.

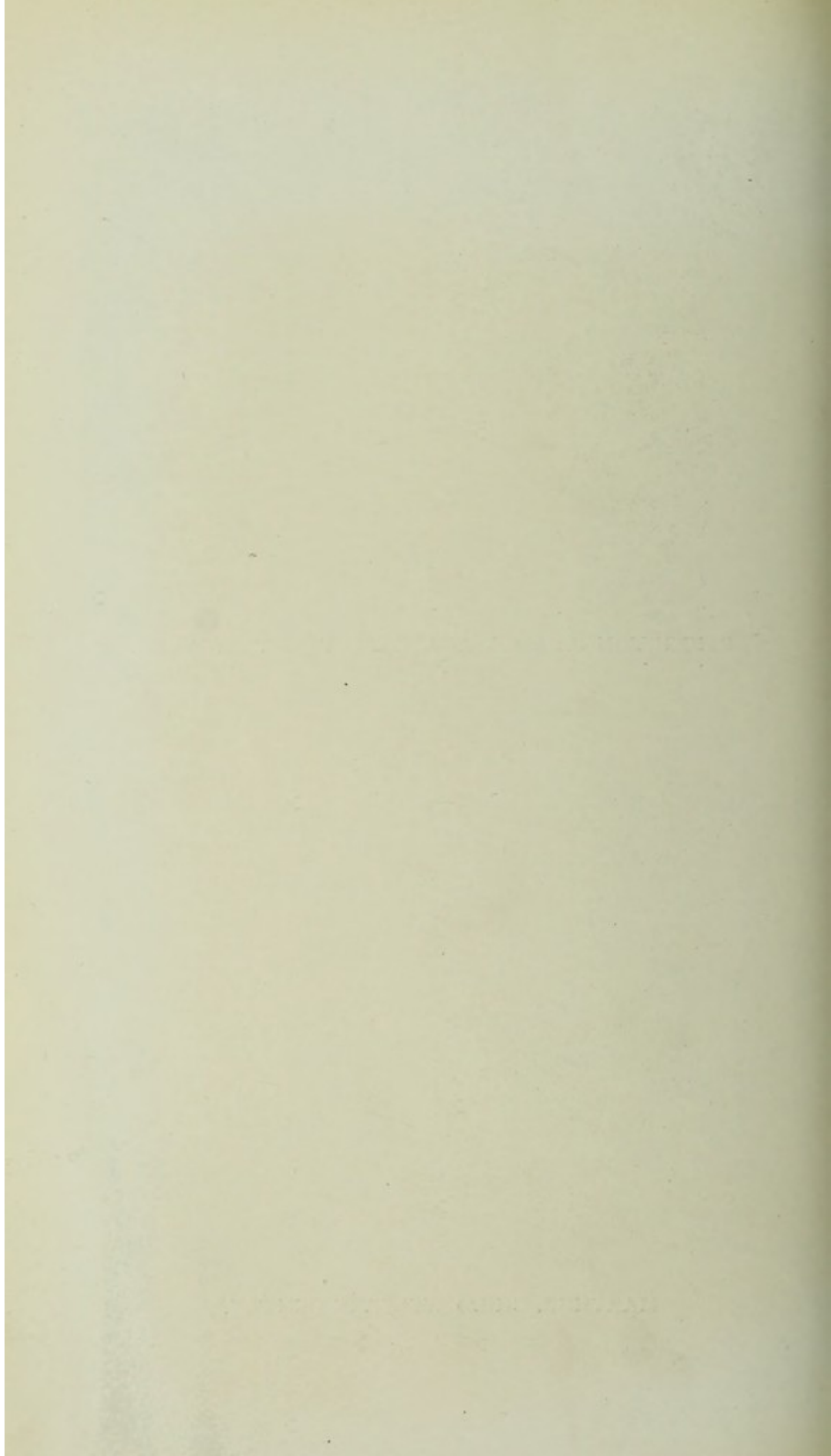
The design of this new centre and that at Springburn are similar and may be briefly described as follows:—At the new centre there is on either side of the entrance hall a rest room and office, both communicating with the waiting hall which measures 40 feet by 20 feet. This in turn opens on to a corridor leading to the weighing room, measuring 22 feet by 15 feet. On the other side of the weighing room are situated rooms each measuring 15 feet by 12 feet and used respectively as consulting room and ante-natal room. There is also a treatment room, together with lavatory and other accommodation entering off the corridor, which thus separates the waiting room from the main working portion of the building.



BRIDGETON CHILD WELFARE CENTRE—VERANDAH.



MARYHILL CHILD WELFARE CENTRE.



Ear, Nose, and Throat Ailments.—On 3rd March, 1925, the Scottish Board of Health issued a circular dealing with the provision and treatment of ear, nose, and throat ailments resulting from infectious diseases, and the Committee, after consideration of the following memorandum, approved of the appointment of two visiting aural specialists to undertake such remedial and preventive treatment as might be required. These appointments were made at the end of the year.

PREVENTION AND TREATMENT OF EAR, NOSE, AND THROAT AILMENTS RESULTING FROM INFECTIOUS DISEASES.

The circular of the Scottish Board of Health (No. 1, 1925), of 3rd March, calls attention to the importance of radical measures for the treatment of middle ear disease and for the prevention of impaired hearing which sometimes follows later in life. Among the causes of the condition the infectious fevers of childhood (scarlet fever, measles, &c.) take a prominent place, and it is pointed out that there are about 9,000 school children in Scotland affected with disease of the middle ear.

It has now been shown that appropriate treatment applied in the early stages during the acute or subacute period causes this condition to heal rapidly in many cases, and is therefore a valuable preventive measure which should be available within the wards of a fever hospital.

At my request Dr. Elliott visited the City Fever Hospital, Edinburgh, where work of this kind is being carried out with a large measure of success. A specialist in diseases of the ear, throat, and nose has been appointed who visits the hospital twice weekly, examines all patients with discharging ears and carries out the necessary treatment. One of the principal factors which has been found to delay the cure of this condition is the presence of enlarged infected tonsils and adenoids, and in many cases after removal of these the ear discharge dries up within a week and does not recur.

Dr. Elliott reports that the results are striking and that few cases have now to be discharged from hospital with middle ear disease uncured. He is satisfied that radical treatment at the onset of the condition will have the following results:—

(1) It will appreciably lessen the average duration of stay of children in hospital. At present the rule is that children with discharging ears are detained for twelve weeks or longer in case they carry infection back to their homes.

(2) It will in the majority of cases effect a permanent cure.

(3) It will prevent the lighting up of the condition as often happens after a child apparently cured is discharged from hospital.

As regards the incidence of this complication in the four hospitals, it is found that middle ear disease develops in 7 per cent. of scarlet fever patients, in almost 2 per cent. of diphtheria patients, in 5 per cent. of measles patients and in over 2 per cent. of whooping-

cough patients, the total being 344 for last year (see appended table). These proportions vary from year to year according to the prevailing severity of the disease.

If a scheme such as is suggested be adopted for Glasgow, it would be necessary to appoint at least two specialists who might divide between them the work at four hospitals, each paying (say) two visits per week to one of the larger hospitals—Ruchill or Belvidere—and one visit per week to either Knightswood or Shieldhall, unless experience should dictate otherwise.

11th June, 1925.

INCIDENCE OF EAR DISEASE.

YEAR ENDED 31ST DECEMBER, 1924, FOR THE FOUR FEVER HOSPITALS.

	Scarlet Fever.	Diphtheria.	Measles.	Whooping- Cough.
No. of Cases treated,	3,005	1,666	1,295	1,195
No. developing middle ear disease during currency of treatment,	224	29	65	26
No. developing mastoid disease during currency of treatment,	4	1	1	...
No. of cases dismissed with discharging ears,	25	1	1	...
No. of Cases operated on in Hospital, ...	4	1	1	...

WORK OF THE MATERNITY AND CHILD WELFARE CENTRES.

The number of sessions at the various centres both for ordinary and ante-natal purposes has again expanded during the year. There are now 60 consultations which are held weekly in addition to those held on each of the weekdays at the Royal Maternity Hospital. Of the 60 consultations, 8 are for ante-natal cases and 12 for children from 1 to 5 years of age, while 3 are clinics at which Light treatment is given.

During the year the consultation centre in the Maryhill district was transferred from hall rented from the Ruchill U.F. Church, to the new Corporation Centre, in Avenuepark Street, Maryhill.

The total number of consultations held during the year was 2,450, compared with 2,239 in 1924, an increase of 211. The total attendances at these Centres numbered 146,283, compared with 126,035 during the preceding year, of which 10,090 and 9,655 respectively were primary attendances. More than half of the attendances were of children between 1 and 5 years of age.

The following table gives the attendances at each consultation centre during the years 1924 and 1925.

	No. of Consultations held.	Children - 1 Year.		Children + 1 Year.		Total No. of Attendances.		1924	
		No. of Attendances.		No. of Attendances.		No. of Attendances.		Total No. of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Adelphi Street,	289	1,012	7,727	396	7,563	1,408	15,290	1,342	13,732
Campbellfield St.,	52	155	1,651	64	1,573	219	3,224	197	2,849
Cowcaddens,	294	1,014	8,871	549	10,567	1,563	19,438	1,635	17,293
Elderpark,	98	332	3,351	—	—	332	3,351	361	3,184
Garngadhill,	149	304	2,760	152	4,794	456	7,554	463	6,275
Govan,	204	465	4,002	205	6,577	670	10,579	727	9,900
London Road,	354	1,500	13,487	454	12,141	1,954	25,628	1,696	21,802
Maryhill,	146	315	3,233	126	3,703	441	6,936	470	5,869
Partick,	204	495	4,596	152	3,737	647	8,333	660	8,028
Port Street,	152	455	4,669	185	3,541	640	8,210	562	6,801
Shettleston,	104	421	4,172	233	5,767	654	9,939	536	6,647
Weir Street,	301	595	5,775	218	8,512	813	14,287	772	12,045
Cochrane Street,	103	181	1,496	112	1,928	293	3,424	234	1,955
	2,450	7,244	65,790	2,846	70,403	10,090	136,193	9,655	116,380
		73,034		73,249		146,283		126,035	

The illness, &c., recorded at the consultations are here summarised:—

INFANT CONSULTATIONS.—ILLNESSES, &C., RECORDED.

	1924		1925	
	- 1 Year	+ 1 Year	- 1 Year	+ 1 Year
Debility and Malnutrition (including Underweight), ...	444	283	404	218
Birth Debility, ...	81	5	79	2
Prematurity, ...	70	—	72	4
Marasmus, ...	54	7	15	1
Anæmia, ...	2	10	—	3
Diseases of Digestive System, ...	16	16	37	13
Diseases of Respiratory System, ...	8	6	2	7
Tuberculosis, ...	1	1	1	2
Syphilis, ...	10	2	1	—
Measles, ...	—	5	—	1
Post-Measles, ...	1	10	—	—
Whooping-Cough, ...	—	—	3	4
Rickets, ...	25	147	29	229
Others, ...	19	5	14	4
TOTAL, ...	731	497	657	488

Artificial Light Treatment.—For the information of the Corporation a report was prepared and issued in January showing the arrangements for and the results of treatment by artificial light. Part of that report dealt with the treatment of rickets and malnutrition in children, but in view of the further experience which has been gained since that report was issued, Dr. Chalmers Smith, of the Child Welfare Department, has revised and extended the information as given in the following memorandum:—

ACTINO-THERAPY CLINIC,

SANITARY CHAMBERS, 20 COCHRANE STREET.

Treatment by exposure to ultra-violet radiation began on 22nd May, 1925.

Four 20-ampère carbon arc lamps, in series, on 250 volts, have been used and have been satisfactory in running. Since October, 1925, cored carbons have taken the place of plain carbons, and the amperage has been raised to 25, the length of the arc being $\frac{3}{4}$ inch. They are operated by a single switch.

The cases treated have been those of children under 5 years of age who suffer from rickets, malnutrition, or debility after infectious or other disease. Generally they are recommended by the Medical Officers in charge of the Child Welfare Centres throughout the City. Attendances are well maintained in spite of difficulty in many instances.

The cost of cored carbons is somewhat higher, but the exposure time is shorter. A greater number of children can therefore be dealt with in a given period, although erythema is more readily produced and the danger of over-exposure is somewhat increased. It is, at all times, necessary to estimate the response to the initial exposures, by personal observation at a period following one exposure and before the next. Children are relatively sensitive to the action of the rays, and cases of idiosyncrasy do occur. Observation of each case and an estimation of its response is therefore advisable over the whole period of treatment.

LAMPS.—Cost—Consumpt of Carbon per hour,	= 16d.
„ „ current (at 1·25d. per hour),	= 6·25d.
Total „ „ carbon & current („ „),	= 22·25d.
Average number of children treated per hour approx.	= 32
(8 are exposed simultaneously, one on each side of each lamp).	
Cost of each exposure per child,	= less than $\frac{1}{4}$ d.
Average number of exposures to each child,	= say 24
Cost of average course of treatment per child,	= $\frac{1}{5}$

The treatment involves general irradiation of the body. Children are exposed naked, and simultaneously, at a distance from the lamps varying from 2 to 3 feet. They are held by their mothers or fathers in a comfortable position, and are rotated to the light at intervals indicated by the observer in charge. The length of exposure begins at 2 to 4 minutes, and is gradually increased, according to response, to approximately 30 minutes. Children under 1 year are given a shorter initial exposure. They all attend three times weekly, when possible, and there are definite indications that short, frequently repeated exposures, very gradually increased, give better results than those of long duration.

Although at first some of the children are afraid of the unaccustomed conditions, they come, after two or three sittings, to enjoy treatment thoroughly, and they and the mothers eagerly anticipate it. During exposure of the back, the head and neck are protected by a water-cooled screen of wetted muslin. Before entering the irradiation room they are bathed by their mothers, under the supervision of a nurse, whilst, after exposure, their bodies are lightly oiled and dusted with starch powder. Goggles are worn by mothers and children to protect the eyes, and this requires careful watching, as children, especially at first, dislike them, and are apt to pull them aside.

Whilst in the irradiation room each mother is, under supervision, in charge of her own child. Mothers themselves frequently express their experience of benefit, shown in improved general health and in an increased sense of well-being. Several have volunteered statements as to the disappearance of local "neuritis" and "rheumatic" conditions, and as to their increase in capacity and fitness for various duties which, for some time previously, they had been unable to undertake.

During the year 194 children were treated. The clinical results have been good, and in some cases surprising. In practically all the earliest response is evinced in the attainment of a greater nervous stability. This is immediately followed by an increase in appetite, general vigour, and muscular activity.

I. *Nervous and Mental*.—Sleep and contentment improve, irritability, restlessness, and fretfulness diminish, whilst mental alertness increases. The child plays more freely with other children, talks more distinctly, and is generally more amenable and easier to manage. The rapidity of this response, in a few cases, is most striking, and makes a great impression on the mothers. Thus, in a typical case, with such an immediate reaction, the child sleeps soundly for an hour or two, on leaving the Clinic, after the first or second exposure; thereafter sleeps soundly all night, "a thing he hasn't done for months"; awakes content, more cheerful, with improved appetite, and completes the picture by walking a few steps "for the first time in his life," or for the first time since he went "off his feet," as the case may be.

These rapid or immediate cases are admittedly few.

In the larger number of cases, response is much more gradual; in a small number it is slow, so that there comes to be a definite classification according to the rate of response into:—

- (1) Immediate or rapid cases;
- (2) Gradual cases; and
- (3) Slow cases.

The period, therefore, of duration of treatment and the regulation of exposure time will depend largely on the type of case.

I. *Speech*.—Delayed powers of speech are developed—

- (1) In adding new words; and
- (2) In better articulation of words already used.

II. *Muscular Activity is Constantly Increased*—

- (1) Muscular movements of limbs and trunks apart from progressive movements, *e.g.*, flexing, extending, &c.;
- (2) Development of delayed powers of sitting and standing and of movements of progression, *e.g.*, creeping, walking, running;
- (3) Increase of muscular firmness or tone and flexibility; and
- (4) Spasmodic conditions, *e.g.*, tetany, laryngo-spasm, habit-spasm, as manifested in head-nodding and head-rolling, disappear at an early stage in treatment.

III. *Body Weight is increased*, in some cases markedly, especially where the weight is much below normal. In many cases weight was being lost or was persistently stationary before treatment. In several instances the presence, at the beginning of irradiation, of an obstinate diarrhœa or bronchial catarrh prevented, for some time, an increase in weight. In fact, in a few of these cases there was an initial loss of weight. These conditions improve, and gain in weight follows continued irradiation, whilst in cases of the "pot belly" of rickets, abdominal girth lessens as muscular tone asserts itself.

IV. *Bony System*.—X-ray examination has been undertaken by Dr. Henderson at the X-ray Department, Ruchill Hospital, in 39 cases during 1925.

Definite improvement is observed in the structure of the bones as a result of treatment. Thinning of shafts and indistinct, jagged and blurred outlines are replaced by better structure, clearly defined epiphyseal lines and the absence of cupping.

Clinically, there is diminution in the size of the epiphyses and straightening of the legs to a marked extent. Height measurements (stem and total) are regularly taken, and the increase in the length of the lower limbs is shown by the increased total height relative to the stem. This is evident not only in cases of genu varum but also in genu valgum, and in the acute curvature often found just above the malleoli. Lordosis and kyphosis improve and the wide fontanelle diminishes in size. This diminution in deformity is the more definite the younger the child.

V. *Alimentary System*.—Improvement in appetite and in powers of digestion and assimilation is general. Diarrhœa usually clears up with the improvement in the rachitic condition. This also applies to the bronchial catarrhs so common in rickets. When these or other conditions, however, are acute, *e.g.*, as in bronchitis, otorrhœa, adenitis, the greatest care is necessary in measuring initial exposures, in order to avoid an exacerbation.

VI. *Skin*.—Pigmentation is slight or moderate in the majority of cases. Where it definitely occurs improvement is generally more decided. Erythema occurs to a slight extent in practically all cases; it is frequently followed by a branny desquamation and gives no trouble. The skin generally becomes more healthy in colour and texture, subcutaneous resilience increases and impetiginous affections improve.

EXAMINATION OF THE BLOOD IN RACHITIC CHILDREN.

An investigation has been made of the condition of the blood in a series of twelve rachitic children before and after Light treatment, and the following observations, made by Dr. Wiseman, are based upon an analysis of his results.

Hæmoglobin and Erythrocytes.—An outstanding feature which is uniformly present is the low hæmoglobin percentage before treatment. In the twelve cases this ranged from 40 to 66 per cent. The rise in this percentage after treatment is well marked in every case, the range then being from 61 to 90. The maximum figure before treatment has practically become the minimum after treatment. Corresponding with low hæmoglobin content there is generally a high erythrocyte count, and vice versa. This count becomes lowered to more normal proportions with the rise in hæmoglobin.

Leucocytes. There is no constancy in respect to the total count, but as a considerable number approach what may be reckoned as twice the normal, the figures are striking. A high leucocyte count may be associated with a normal erythrocyte count and there may be a considerable rise in the leucocytes with relatively small change in the erythrocytes. For the most part, rises in the leucocyte count are seen in the cases whose count was in the vicinity of normal at the start, and might be regarded as a normal leucocyte response to a physico-chemical stimulus; three cases showing a fall had high counts before treatment and these falls are each accompanied by an erythrocyte fall. With regard to the differential leucocyte count, the picture is practically constant and not a little distinctive. The chief feature is the elevation of the lymphocyte percentage. In only one case does this fall below 40. In five of the twelve cases it ranged from 50 to 71. The polymorphs show a corresponding decrease. It appears that with one exception there was no notable alteration in the differential count following treatment, the lymphocytes continuing to outnumber the polymorphs.

Apropos the prevailing high leucocyte counts, it is of interest to note regarding the possible phagocytic power of these bloods, that a blood with 40 per cent. polymorphs and a white count of 12,000, contains approximately as many phagocytes as normal blood.

Blood Platelets.—No constant feature was noted in regard to these bodies. It was clear, without resort to actual counting, that they might be more numerous than the normal, or on the other hand quite scanty.

Conclusion.—In dealing with this type of child for the purpose of an investigation like this at a clinic, there are factors which may tend to lessen the value of the association of any particular set of figures with rickets or with the treatment given, such as the simultaneous or recent existence of other diseases and the uncertainty of the period of the second test. Nevertheless, the data ascertained sustain in a concrete fashion and from another point of view the satisfaction derived from clinical observations of the value of the Light treatment in those cases.

The following is a Record of Attendances at the Light Treatment Clinic from 22nd May, 1925, to 31st December, 1925:—

Number of Consultations, 92			
1st Visits. - 1 Year.	1st Visits. + 1 Year.	Subsequent Visits. - 1 Year.	Subsequent Visits. + 1 Year.
29	165	102	1,571
Total Visits,			1,867
Total Number of Cases,			194
Sex { Male,			105
{ Female,			89
			194
Present Ages of those attending—			
- 1 Year,			9
- 2 Years,			76
- 3 Years,			53
- 4 Years,			26
- 5 Years,			30
			194
Reasons for Treatment—			
Rickets {		Early cases,	19
{		Marked cases,	114
{		Prophylaxis,	6
			139
Debility—post-infectious disease,			29
Malnutrition,			23
Debility—post-poliomyelitis,			2
Tuberculosis,			1
			194

SUPPLY OF MILK AND MEALS TO NECESSITOUS MOTHERS AND CHILDREN.

During the year supplies of milk and meals continued to be given to expectant and nursing mothers, and to children up to 5 years of age, under the following general conditions, viz. :—

- (1) Regular attendance at a Child Welfare Centre;
- (2) When the case was necessitous; and
- (3) When supply of milk or meals was certified by the Medical Officer of the Centre to be required on grounds of health.

While compliance with the above general conditions is usually required, exception is made where a mother or child, on first attendance at an Infant Consultation, presents conditions of health which suggest that an immediate grant of either milk or meals may be desirable or necessary.

(a) *Fresh Milk*.—The following table shows the number of applications for milk granted during the year:—

ORIGINAL APPLICATIONS.

Rate charged to Applicant	Number of Families	Number of Expectant and Nursing Mothers	Number of Children under 5 years	Total Number of Pints ordered
Half-Price, ...	103	36	86	3,416
Free, ...	3,249	1,398	2,394	106,176
	<u>3,352</u>	<u>1,434</u>	<u>2,480</u>	<u>109,592</u>

REPEAT APPLICATIONS.

Half-Price, ...	865	240	1,074	36,792
Free, ...	34,703	10,860	42,869	1,504,412
	<u>35,568</u>	<u>11,100</u>	<u>43,943</u>	<u>1,541,204</u>

TOTALS.

Half-Price, ...	968	276	1,160	40,208
Free, ...	37,952	12,258	45,263	1,610,588
	<u>38,920</u>	<u>12,534</u>	<u>46,423</u>	<u>1,650,796</u>

This table shows that 3,352 original applications were made during the year for supplies of fresh milk, covering 1,434 expectant or nursing mothers and 2,480 children under 5 years of age, or, together, 3,914 individuals. Repeat applications to the number of 35,568 were received, which is equivalent to 10·61 repeats per original application. As each supply is ordinarily given for a period of 28 days, it follows that each family was in receipt of a supply of milk averaging, approximately, 325 days throughout the year. The total quantity of milk ordered was 1,650,796 pints, and the cost, approximately, £17,000.

Certificates for grants of fresh milk were given by the Medical Officers at the various Centres for the following reasons :—

SUMMARY OF MEDICAL CERTIFICATIONS ON APPLICATION
FOR FRESH MILK.

Diseases	Mothers		Children		Total
	Expectant	Nursing	- 1 year	- 5 years	
Debility,	2,209	2,394	2,187	9,000	15,790
Progressing,	—	—	4,336	14,474	18,810
Insufficiency of Breast Milk,	—	7,726	—	—	7,726
Child losing Weight,	—	—	410	2,381	2,791
Child under Weight,	—	—	2,248	6,944	9,192
Child's Weight stationary, ...	—	—	405	1,948	2,353
Malnutrition,	—	—	23	46	69
Marasmus,	—	—	5	1	6
<i>Infectious Diseases (Debility following)—</i>					
Chickenpox,	—	—	12	84	96
Measles,	—	—	14	119	133
Mumps,	—	—	2	9	11
Whooping-Cough,	—	2	115	475	592
<i>General Diseases—</i>					
Anæmia,	228	125	10	74	437
Rickets,	—	—	190	1,078	1,268
Influenza,	—	—	4	9	13
<i>Diseases of Circulatory System and Lymphatic Glands—</i>					
Cardiac Disease,	3	—	—	—	3
<i>Diseases of Nervous System and Organs of Special Sense—</i>					
Neuritis,	5	1	—	—	6
Neurosis,	9	—	1	4	14
Blepharitis,	1	—	—	8	9
<i>Diseases of Respiratory System—</i>					
Bronchitis,	10	1	60	224	295
Pneumonia,	—	1	15	46	62
<i>Diseases of Digestive System and Intestines—</i>					
Dyspepsia,	9	3	—	1	13
Stomatitis,	—	—	—	3	3
Gastro-Enteritis,	—	—	33	129	162
Tonsillitis,	—	—	—	6	6
Gall-stones,	3	—	—	—	3
<i>All other Causes—</i>					
Albuminuria,	47	2	—	3	52
Totals,	2,524	10,255	10,070	37,066	59,915

(b) *Dried Milk*.—During the year supplies of dried milk were also given in suitable cases, the brands in use being “Glaxo,” “Dorsella,” “Cow and Gate,” and “Lacta,” the number of applications received being as follows:—

	Number of Families	Number of Expectant and Nursing Mothers	Number of Children under five years	Number of Packets Ordered
Original Applications,	532	43	490	600
Repeat „	7,454	141	7,571	10,788
Total, ...	7,986	184	8,061	11,388

While the same scale of “necessitousness” is applied to applications for dried milk as to applications for fresh milk, the conditions of grant are somewhat different, for, while grants of fresh milk are refused to families whose income is over the scale, supplies of dried milk may be given at the wholesale rate. The following summary shows the number of packets and the amount recovered, as well as the loss falling upon the Corporation, for the supplies of dried milk issued under these conditions:—

Price per Packet	Number of Packets Issued	Cost to Corporation	Amount Recovered	Gain or Loss to Corporation
Full Price—				
1s. 6d., - -	7,753	£530 14 5	£581 9 6	+ £50 15 1
Part Price—				
1s., - - -	137	9 9 9	6 17 0	- 2 12 9
Free, - - -	3,498	238 10 6	—	- 238 10 9
	11,388	£778 14 8	£588 6 6	- £190 8 2

In all, 11,388 packets were distributed under the scheme, of which 7,753 were charged at full price, 137 at part price, while 3,498 were given free, the net loss to the Corporation being £190 8s. 2d.

The reasons given in the medical certificate forms are shown in the following summary:

SUMMARY OF MEDICAL CERTIFICATIONS ON APPLICATIONS FOR DRIED MILK.

Diseases	Mothers		Children		Total
	Expectant	Nursing	-1 Year	-5 Years	
Debility,	2	7	206	13	228
Gaining,	—	—	351	19	370
Insufficiency of Breast Milk,	—	10	—	—	10
Losing Weight,	—	—	26	3	29
Under Weight,	—	—	149	19	168
Weight Stationary,	—	—	36	1	37
Malnutrition,	—	—	4	—	4
Congenital Heart Disease, ...	—	—	1	—	1
Marasmus,	—	—	1	—	1
<i>Infectious Diseases (Debility following)</i>					
Measles,	—	—	1	1	2
Whooping-Cough,	—	—	5	—	5
Chickenpox,	—	—	1	—	1
<i>General Diseases—</i>					
Anæmia,	1	—	1	—	2
Rickets,	—	—	8	—	8
Influenza,	—	—	1	—	1
<i>Diseases of Respiratory System—</i>					
Bronchitis,	—	—	4	1	5
Pneumonia,	—	—	1	—	1
<i>Disease of Digestive System—</i>					
Gastro-Enteritis,	—	—	3	1	4
Totals,	3	17	799	58	877

Economic Conditions.—The following summary shows the conditions under which applications came within the scale of allowances:—

Applications Refused—

Income over scale, 410

Applications granted at half-price, 1,463

Applications granted free—

On Unemployed Relief Scale, 44,653

Illegitimacy, 321

Employed full-time, but under Scale, 2,486

Waiting L.B. and Parish, 924

Employed part-time, 1,023

Pension only, 121

Bureau only, 3,855

Deserted Wife, 299

Health Insurance, 2,031

Compensation, 153

Labour Bureau and Pension, 1,221

Just started work (14 days), 1

Labour Bureau and room let, 1,263

Labour Bureau and Society, 7

Army Allowance, 13

58,371

60,244

Supply of Meals.—The arrangement with the Education Authority for the supply through their feeding Centres of meals for mothers and children, granted under the Child Welfare Scheme, was continued during the year, and the following table shows the numbers supplied from each of these Centres:—

Centre	Children (3-5 Years)	Infants (9 Months- 3 Years)	Expectant and Nursing Mothers	Total
Hayfield School, ...	2,237	2,516	4,311	9,064
Kinning Park School, ...	7,567	8,781	9,346	25,694
Dalmarnock School, ...	—	—	63	63
Broomloan School, ...	9,376	9,224	7,629	26,229
Bishop Street School, ...	2,815	5,706	4,652	13,173
Campbellfield Mission Hall,	—	—	127	127
Greenside School, ...	422	367	749	1,538
Rosemount School, ...	6,111	6,233	4,676	17,020
Milton Street School, ...	9,323	12,761	11,575	33,659
Dovehill School, ...	3,352	2,914	2,148	8,414
Keppochhill School, ...	1,669	2,739	1,989	6,397
Eastpark School, ...	1,620	2,232	1,969	5,821
Anderson Street School, ...	533	253	673	1,459
All Centres, ...	45,025	53,726	49,907	148,658

The charge by the Education Authority is 3½d. per meal, and the total cost for the year worked out at £2,048 10s. 1d.

COOKERY, &c., CLASSES.

Classes for cookery and sewing and social evenings for mothers were arranged at various Centres during the winter months, as shown below:—

CLASSES IN ASSOCIATION WITH CHILD WELFARE.—WINTER, 1925-26.

Centre.	Nature of Class.	Period.	Day and Hours.	Average Attendance.
COWCADDENS	- Sewing	Nov. to Mar.	Mon., 7 p.m.	40
BRIDGETON	- Sewing	Oct. to Mar.	Wed., 7 p.m.	50 to 60
HUTCHESONTOWN	Sewing (Conducted by Gorbals Branch G.I.H.V.A.)	Oct. to April	Tues., 2 p.m.	12
PARTICK	- Sewing (Conducted by Partick Branch G.I.H.V.A.)	Oct. to Mar.	Tues., 2.30 p.m.	27
GOVAN	- Sewing (Conducted by Govan East Branch G.I.H.V.A.)	Oct. to Mar.	Thurs., 7 p.m.	30
ELDER PARK	- Sewing and Lectures (Conducted by Govan West Branch G.I.H.V.A.)	Oct. to Mar.	Wed., 7 p.m.	25

JUVENILE UNEMPLOYMENT CLASSES, &c.

In October, 1924, the Sub-Committee on Child Welfare agreed to give facilities to girls enrolled in the juvenile unemployment classes, organised by the Education Authority in association with the Ministry of Labour, to attend certain of the Day Nurseries for training purposes, the period of training to be spread over one month, two girls to attend at each Centre in the mornings and other two in the afternoons for alternate periods of two weeks each.

In all, 226 girls have been received for training under these arrangements, with the following results:—

TRAINING COMPLETED—				
Work satisfactory,	...	...	...	165
Work unsatisfactory,	...	...	...	8
				173
TRAINING NOT COMPLETED—				
Left to take up employment,	...	...	...	33
Attained 18 years and ceased to attend Juvenile Unemployment Classes,	...	...	...	2
Other reasons (mainly unsuitability for the work),	...	...	...	18
				53
				226

At the Bridgeton Child Welfare Centre one of the girls was subsequently taken on as a probationer nurse and another as a maid, while one girl who attended the Cowcaddens Centre was taken on the staff at Mount Blow Country Home.

The experiment in training these adolescent girls in the care and management of children has proved fairly satisfactory, and is being continued. They evince little desire, however, to continue in that particular employment or as nursemaids in private families, and are mainly desirous of obtaining work in factories and similar establishments.

The arrangement was also continued during the year under which pupils attending the College of Domestic Science attended at the Child Welfare Centres for a period of two weeks' training in the care of children, 55 pupils having passed through the Nurseries during the year.

ANTE-NATAL CONSULTATIONS.

Glasgow Royal Maternity Hospital.—The total number of cases attending the dispensary for the first time increased from 2,957 during 1924 to 3,878 in 1925, while the total attendances during the respective years were 6,572 and 8,205. During 1925, 2,129 cases were treated to a termination in delivery, of which 680 were attended in their own homes. Of this total 91 were miscarriages.

The number admitted to the ante-natal wards during 1925 was 730, compared with 706 in 1924.

At the infant consultations held at the Maternity Hospital there were 6,394 attendances, as compared with 6,508 during the previous year. The first attendances numbered 1,095.

	1923	1924	1925
ANTE-NATAL DISPENSARY—			
Number attending for first time,	2,786	2,957	3,878
Total attendances,	6,749	6,572	8,205
Number treated to a termination in delivery, ...	1,583	1,735	2,129
Number sent to Hospital from Dispensary—			
(a) For confinement,	961	1,100	1,458
(b) „ treatment,	275	311	231
(c) „ miscarriage,	98	88	91
ANTE-NATAL WARDS—			
Average number under treatment,	19	19	22
Number admitted,	606	706	730
Total days,	6,809	6,984	7,933
Condition on dismissal :—			
(1) Recovered,	105	137	123
(2) Improved,	179	168	142
(3) Confinement completed,	277	340	437
(4) Died,	—	2	1
(5) No change,	47	51	31
INFANT CONSULTATION—			
First Attendances,	1,096	1,216	1,095
Subsequent Attendances,	4,670	5,292	5,299
Total,	5,766	6,508	6,394

During the year two Ante-natal Clinics were begun, one in Partick and the other in Hutchesontown. The first consultation in each was held during the week ending 14th November, but as the period to the end of the year is so short, information regarding the work done at these clinics will not be dealt with in this report.

At the three other Centres—Bridgeton, Cowcaddens, and Govan—where five consultations are held weekly, 988 cases attended during the year, compared with 770 during 1924. The

following tables show (1) the age of mothers who attended, and (2) the conditions requiring attention which were found:—

Ages of Mothers	London Road	Cowcaddens	Govan	Total
- 20	8	10	20	38
- 25	69	40	68	177
- 30	124	104	93	321
- 35	103	80	86	269
- 40	58	34	38	130
- 45	11	17	12	40
45+	2	3	1	6
Not Pregnant, ...	...	7	...	7
	375	295	318	988
Conditions Found				
Venereal Disease,	5	10	2	17
Varicose Veins, ...	26	63	55	144
General Debility,	89	46	84	219
Anæmia,	75	62	30	167
Cardiac Disease,...	29	34	16	79
Alimentary System,	59	...	11	70
Do. (constipation),	137	48	72	257
Dentition (Bad),	126	57	109	292
Contracted Pelvis,	12	46	7	65
Kidney Disease				
(Albuminuria),	38	71	28	137
Respiratory Disease,	30	27	38	95
Ante-partum Hæmorrhage,	...	5	..	5
No apparent disease,	15	17	45	77
Other conditions,	...	26	...	26
	640	512	497	1,650

The conditions found on medical examination are enumerated in the above statement, but as in many cases two or three causes of illness were present, the total number of conditions is much in excess of the number of mothers. The most frequent conditions requiring attention were those of the alimentary system (including constipation), general debility, anæmia, varicose veins, albuminuria, &c.

About 10 per cent. were primiparæ, as shown in the following summary:—

	London Road	Cowcaddens	Govan	Total
Primiparæ, ...	27	31	47	105
Multiparæ, ...	348	264	271	883
Total,	375	295	318	988

The results, so far as known, as to whether pregnancy resulted at full term, prematurely, &c., are here given, together with the number of still births:—

Result	London Road	Cowcaddens	Govan	Total
Alive,	344	246	240	830
Full-term,	342	245	247	834
Premature,	10	6	8	24
Still Births,	8	5	15	28
Abortion or Miscarriage,	2	4	2	8

The total number of still births (28) occurring among the pregnancies included in this analysis represents a rate of 3·4 per cent., which may be compared with the average of 4 per cent. for the City generally. The percentage of still births among cases attending during the previous year was 4·8.

A similar comparison as to whether the births occurred at full time or otherwise shows that during 1925 the premature births formed about 3·4 per cent. of the total, as compared with 4·4 per cent. for the previous year.

The month at which the first attendance was made at the clinic is given below, and shows that, although the majority came during the seventh month, more than one-third of the total attended at an earlier period:—

Month of Attendance	London Road	Cowcaddens	Govan	Total
1	3	35	1	39
2	18	46	14	78
3	28	34	17	79
4	31	37	16	84
5	61	44	30	135
6	57	34	64	155
7	98	29	79	206
8	62	19	58	139
9	17	7	20	44
Not stated, ... ..	...	3	19	22
Not pregnant, ... ..	...	7	...	7
	<u>375</u>	<u>295</u>	<u>318</u>	<u>988</u>

INFANT VISITATION.

Under the scheme of infant visitation every birth is visited if the notification does not state that a medical practitioner has been in attendance, and the following table shows the record of

those visited, together with certain information obtained:—

	1923	1924	1925
Enquiry cards returned, ...	19,910	19,243	18,927
Full information obtained, ...	18,465	18,144	17,844
Doctor found in attendance, ...	66	42	43
Wrong addresses, ...	6	1	—
Others, ...	1,373	1,056	1,040
Enquiry cards issued, ...	20,156	19,102	19,240

Of those for whom full information was obtained—

Legitimate, ...	17,705	16,971	17,077
Illegitimate, ...	1,008	1,069	1,044
<hr/>			
Born at full term, ...	17,839	17,152	17,327
Premature births, ...	874	888	794

Condition of Infant at Birth—

Well nourished, ...	15,911	14,556	14,825
Fairly nourished, ...	1,247	1,922	1,875
Badly nourished, ...	768	832	710
Still-born, ...	787	730	711

Nature of Feeding at First Visit—

Breast, ...	15,476	14,640	14,668
Artificial, ...	1,274	1,441	1,542
Breast and Artificial, ...	567	570	593
Still-born, ...	787	730	711
Dead at First Visit, ...	604	659	594
Adopted, ...	5	—	13

In addition to home visitation, the nurses attend the Child Welfare Consultations in their own districts. They thus have an opportunity of reporting to the doctor any illness or condition requiring medical treatment, and of following up the case afterwards to see that the treatment recommended is carried out.

The following series of summaries indicate the number of first and revisits overtaken, together with a record of conditions found:—

FIRST VISITS.

	1923	1924	1925
Infants visited under 1 year of age,	16,777	16,586	16,343
Infants visited over 1 year of age,	—	—	—
	<hr/>	<hr/>	<hr/>
	16,777	16,586	16,343

	1923	1924	1925
<i>Forward,</i>	16,771	16,586	16,343
Removed and new address not traced,	380	409	387
Out at time of visit, ...	3	—	—
In hospital or nursery, ...	93	130	101
Dead,	637	666	640
Refused admittance, ...	12	15	6
Doctor in attendance, ...	39	42	50
Information refused, ...	26	21	25
Still-born,	761	752	700
Visits unnecessary, ...	632	387	416
Adopted,	53	61	60
Nursed out,	6	9	19
	<u>19,419</u>	<u>19,078</u>	<u>18,747</u>

REVISITS.

	1923	1924	1925
Infants visited under 1 year of age,	1,548	1,438	1,164
Infants visited over 1 year of age,	1,917	2,063	1,715
	<u>3,465</u>	<u>3,501</u>	<u>2,879</u>
Removed and new address not traced,	652	656	468
Out at time of visit, ...	125	242	157
In hospital or nursery, ...	23	29	18
Dead,	398	559	422
Adopted,	32	23	16
Refused admittance, ...	4	10	3
Doctor in attendance, ...	3	—	2
Visits unnecessary, ...	1	3	2
Nursed out,	4	9	8
Information refused, ...	—	—	1
Visits resented,	—	—	3
	<u>4,707</u>	<u>5,032</u>	<u>3,979</u>

The children found alive on the occasion of the first visit by the Health Visitor are classified in the following table under three groups:—

	Well	Fair	Bad	Total
1923, ...	14,900	1,753	124	16,777
1924, ...	14,331	2,083	172	16,586
1925, ...	14,201	2,008	134	16,343

Generally speaking, those classified as "well" on the occasion of the first visit were not revisited. The following table is a summary of results found at final visit:—

REVISITS.

	Still Good	Much Improved	Slightly Improved	No Improvement	Worse	Total
1923, ...	2,540	841	43	41	—	3,465
1924, ...	2,594	855	30	22	—	3,501
1925, ...	2,065	783	21	10	—	2,879

GLASGOW INFANT HEALTH VISITORS' ASSOCIATION.

Working in association with the Public Health Department is the Glasgow Infant Health Visitors' Association, to whom are reported children whom it is desirable to keep under observation during a longer period than is possible by the official visitors. The number of visitors fluctuates around 300.

As the period of visitation generally extends over the first twelve months of life, a complete year must elapse before the results of the visitation can be summarised.

The following is a summary of the results for the years 1922-1924:—

Year	Year old	Removed	Dead	Ceased to be Visited	Visits Un- necessary	No In- formation	Visits Resented	No Visitor	Total
1922	1,560	231	129	15	53	2	5	5	2,000
1923	1,686	288	199	26	17	2	3	—	2,221
1924	1,932	266	182	26	34	4	4	1	2,449

DOMESTIC HELPS.

In the Report for last year details were given of the scheme which had been inaugurated towards the end of that year for providing Domestic Helps to households, especially during the lying in period, or at other times when the mother is ill and there are children under five years of age. The Helps are provided by the department and are remunerated at a rate of five shillings per day (without food), while the payment for services is determined in relation to the scale of family income applicable in connection with grants for milk and meals under the Child Welfare Scheme, with, however, a minimum charge of one shilling per day.

Leaflets giving particulars of the scheme were widely distributed through the Child Welfare Centres, by the Voluntary Visitors' Association, at certain of the Labour Exchanges and through the Lord Provost's Relief Fund. Posters were also exhibited at the Child Welfare Centres and opportunity was taken on many occasions to

inform Midwives regarding the scheme. Between thirty and forty persons regarded as suitable for employment were registered by the department. The following summary shows that the services of the Helps were given on 17 occasions covering a total of 246 days in all:—

SUMMARY OF CASES ATTENDED FROM NOVEMBER, 1924,
TILL DECEMBER, 1925.

No. of Cases.	Number of Days Attended.	Rate per Day Paid by Patient.	Amount Paid.
9	168	1/-	£8 8 0
2	22	1/6	1 13 0
1	10	2/-	1 0 0
2	14	2/6	1 15 0
1	17	3/-	2 11 0
1	7	3/6	1 4 6
1	8	5/-	2 0 0
<u>17</u>	<u>246</u>		<u>£18 11 6</u>

While the average is thus slightly over 14 days the usual period of employment is about nine or ten days, the average being raised by one or two cases in which the illness of the mother was somewhat prolonged.

The total amount paid in wages to the Helps thus employed amounted to £61 10s., while the amount recovered has been £18 11s. 6d., leaving a deficit to be borne by the department of £42 18s. 6d.

Besides the cases summarised above, 16 other applications were received and while preliminary arrangements were made no subsequent call was received for the services of the Help. With a view to reawakening interest in the scheme the following circular letter was issued to Doctors and Midwives in practice in the City, and there has been quite a satisfactory response; more Helps are now being employed than at any time previously.

“ Sanitary Chambers,
“ Glasgow, C.1, 11th December, 1925.

“ DEAR MADAM,

“ DOMESTIC HELPS.

“ A year ago the Local Authority introduced a scheme of Domestic Helps, as outlined in the enclosed reprints of circulars, which in the one case describes the scheme generally, and in the other states particularly the duties of the Help. While the scheme has to some extent been taken advantage of, the numbers supplied have not been as great as might be; but in so far as the services of Helps have been used, they have, without exception, been found to be very satisfactory and much appreciated by the households concerned.

“ I am taking this opportunity of directing your attention to the scheme, so that if in the course of your practice you come across a family in which the services of a Help may usefully be engaged, you might refer them here, when full particulars will be furnished as regards payment, &c.

“ Yours faithfully,

“ A. S. M. MACGREGOR,

“ Medical Officer of Health.”

Another satisfactory feature is that besides the applications which come within the scope of the scheme others have been received from families anxious to obtain the services of a Help. In these cases while a Help is recommended to the family it is left to the employer to make arrangements direct with her. There is evidence that in these cases the assistance afforded has been much appreciated.

The experience of the first year of the scheme does not suggest that it is a popular one; on the other hand reports in every instance indicate that the services of the Help have been entirely satisfactory. It may illustrate an attitude towards the scheme to mention that the services of a Help were offered free to the family of a mother who was injured on the first day of the Ardgoil trips, but both wife and husband refused the offer. Whether this attitude explains the failure to take fuller advantage of the scheme, the number of applications made and in which the services of the Help were not subsequently called for suggest also that present economic conditions may have had some influence in limiting the number of engagements during the year. As already indicated, however, there is now an increased demand for the services of Domestic Helps.

Maternity Bundles.—In the estimates for the year provision was again made for supplying material for maternity bundles, the continued industrial depression necessitating such an arrangement. While the material is supplied by the Corporation, the work of making up is undertaken by voluntary workers and by members of the Glasgow Infant Health Visitors' Association. Applicants were expected to pay the cost of the material (9s.), payment being taken in small instalments. In many cases, however, the application was not made until after the birth, and in these circumstances recovery of the amount was sometimes difficult, although an average of 5s. per bundle was obtained. In very necessitous cases no charge was made. Besides, numerous gifts of used clothing were received, and these were distributed by members of the nursing staff to necessitous cases.

DAY NURSERIES.

Including the Phœnix Park Kindergarten, there are six Centres with nursery accommodation. The total attendances of children at these Centres during 1925 was 36,092, in comparison with 36,456 during the previous year. The day nursery in Bridgeton, in the new premises in Sister Street, with accommodation for 22 children and 19 infants, replaces the hut in London Road, now demolished.

The following figures show the number of attendances, &c., at each Centre during the year:—

Nursery	No. of days open	Total Attendances during the year	Average	Maximum number in one day
London Road, ...	251	7,824	31	45
Cowcaddens, ...	125	6,644	26	33
Phoenix Park Kindergarten,	183	4,840	26	32
Milton, ...	229	6,752	29	40
Hutchesontown, ...	252	6,178	24	34
Weir Street, ...	223	3,854	17	30

During the war, when a large number of women took up munition and other work, there was considerable demand on day nursery accommodation. This tendency of mothers to take up outside employment is also in evidence during periods of industrial depression, and a special enquiry was made during the year in order to ascertain the reasons for making use of the day nurseries. The following is a summary of the information obtained:—

**REASONS FOR ADMISSION OF CHILDREN TO DAY NURSERIES
AND KINDERGARTEN.**

	Weir Street.	Adelphi Street.	Bridge-ton.	Miltcn.	Cow-caddens.	Phoenix Park.	Totals.
A.—ECONOMIC REASONS—							
Mother Working—							
(1) To augment Family Income, ...	19	12	23	29	18	11	112
(2) Father not living with Mother—							
(a) Child illegitimate, —		9	3	—	7	1	20
(b) Father abroad, —		—	1	1	—	—	2
(c) Father in Epileptic Home, ...		—	1	—	—	—	1
(d) Deserted Wife, —		—	1	2	—	—	3
(e) Father and Mother legally separated, 1	1	1	2	3	—	—	7
(3) Father dead, ...	—	1	1	2	—	1	5
B.—NO GUARDIAN FOR CHILD—							
(1) Mother dead, ...	1	—	1	2	1	—	5
(2) Mother in Hospital, —	—	1	—	—	—	—	1
(3) Mother separated from Father, ...	—	—	—	1	—	—	1
(4) Mother delicate or ill, ...	—	—	—	—	5	2	7
C.—HEALTH OF CHILD—							
(1) Child delicate, ...	1	—	—	—	—	4	5
D.—“RECOGNITION OF BENEFIT”—							
(i.e., Other members of the family had previously been inmates of Kindergarten), ...	—	—	—	—	—	10	10
	22	24	33	40	31	29	179

COUNTRY HOMES.

A factor which interferes with the utility of the Country Homes and prevents the full use of their accommodation is the occurrence of infectious disease in the children admitted during the prevalence of epidemics, especially measles and whooping-cough. The occurrence of German measles and chickenpox has also proved troublesome. In order to obviate this, a dormitory in South York Street Reception House has been utilised for preliminary quarantine purposes. This experiment has met with success, enabling infections to be detected prior to the admission of the children to the Homes, although in spite of this precaution infectious disease occasionally occurred.

The following analysis shows that 519 children were admitted to the three Country Homes during the year, the two principal reasons for admission being rickets and malnutrition:—

	Mount Vernon	Scotstoun	Mount Blow	Total
	Readmis- sions	Readmis- sions	Readmis- sions	
Rickets,	77	126	69	272
General Malnutrition, and Debility,	35	106	45	186
Bronchitis,	3	—	—	3
Paresis,	—	1	1	2
Debility after acute illnesses,	3	17	10	30
Anæmia,	10	6	5	21
Nervousness,	2	—	2	4
Healthy, but mother about to be confined, ..	1	—	—	1
	131	256	132	519
	131	256	132	

The dismissals during the year were 133 from Mount Vernon, 247 from Scotstoun, and 131 from Mount Blow. The condition on dismissal is summarised in the following statement:—

	Mount Vernon	Scots- toun	Mount Blow	Total
Much improved,	93	117	98	308
Not improved,	3	2	3	8
Parents leaving city, ...	2	5	—	7
Transferred suffering from in- fectious disease,	5	20	7	32
Taken home by parents (fretting, &c.),	5	19	11	35
Died,	—	—	—	—
For admission to other In- stitutions,	1	3	—	4
Sent home— Ringworm (?),	—	—	2	2
Contacts with cases of Infect- ious Disease sent home,	24	81	10	115
	133	247	131	511

Apart from those dismissed from the Homes for special reasons, 308 were much improved and only 8 not improved on discharge.

Garscube Cottage Hospital.—As explained in last year's report, this Home was taken over for the purpose of giving debilitated mothers with young children an opportunity of recuperating their health by a fortnight's rest. During the year, 190 mothers with 192 infants were admitted, while dismissals numbered 187 mothers and 189 infants. Of the total, 103 completed fourteen days' residence, while 14 others were kept in for a few days longer; the remainder left before the end of the fortnight, mostly for domestic reasons.

MIDWIVES (SCOTLAND) ACT, 1915.

The present is the ninth year of the operation of this Act, and the summaries which follow indicate the work done in its administration throughout the year 1925.

During the year, 307 midwives intimated their intention to practice; 26 of these did so for the first time, 25 of whom were entitled to registration by examination, while one had been in practice in 1914 (a country midwife, who conducted a single case only in the Glasgow area). Two midwives have died; 1 has resigned; 5 have gone abroad; 5 have moved to other addresses in the United Kingdom; and 2 were struck off the roll. The difference in numbers is, as usual, made up by those who simply cease to notify their intention to practice, the general reason being that they have drifted into maternity nursing under medical men.

The investigation of complaints in 1925 resulted in five midwives being reported to the Board, and, as already mentioned, two had their certificates cancelled, and two were put on six months' probation. In one of these this period has expired, and the midwife is retained on the register; in the other the probation period is still current. The fifth midwife has not yet appeared before the Board.

This year, as will be seen from the table, while the total births in the City are increased by 31, midwives have attended 333 more cases, and they have 35 more still births (last year's number being 299, this year's 334), but in 39 more of these cases

they had the assistance of registered medical practitioners. This increases the midwives' rate for still births from 25·8 to 28·1 per thousand, which might suggest that the midwives are not strictly adhering to Rule 1 (*b*), which deals with the necessity for securing medical advice where abnormality has occurred in previous pregnancies. During the periodic examinations of the registers there have been many cases recently where attention has had to be drawn to this rule.

A feature of this year's work has been the success of the Refresher Courses for Midwives, arranged for at the Maternity Hospital by the Local Supervising Authority. The courses consist of eight lectures with demonstrations, conducted by Dr. James Hendry and a hospital sister. Thirty-five midwives attend each course, and the second and third courses are at present going on.

Probably two more courses will be needed to take in all midwives who have expressed their willingness to attend. Much emphasis is laid, at these classes, on the question of the suitability of cases which should be booked by midwives, the importance of careful inquiry into past pregnancies, and the value of ante-natal precautions. It is hoped that this instruction will enable midwives to apply the above rule with a proper sense of responsibility towards their patients.

As suggested by the Committee on Puerperal Morbidity, an effort has been made to obtain information as to deaths occurring within 28 days of child birth, or where the death may have had a direct connection with pregnancy. There have been collected 177 cases (exclusive of puerperal fever deaths), among which 36 death certificates do not suggest such a connection. It is impossible to say how many have been missed.

No handy-woman has been reported to the Fiscal this year. Twenty-one births were not supervised by professional persons, a figure which may be misleading, as amongst these are numbered 3 foundlings, 2 cases where there was concealed pregnancy, and in others the patient was attended by a mother, or in emergency by a neighbour. No woman has two such births to her credit this year.

In the table attached, showing the incidence of puerperal sepsis, it will be noted that among midwives' cases the incidence is 7·5 cases per thousand births, as compared with

a figure 11·2 in the practice of the outdoor staff of the Maternity Hospital, who are engaged on a similar class of practice. It will also be noted that the figure for midwives' cases compares favourably with those attended by medical practitioners, *i.e.*, 11·9 per thousand births. This comparison is all the more striking when it is remembered that, owing to the supervision under which midwives work, every case of puerperal fever in their practice is immediately reported.

The following tables summarise the numbers for the year, with relative figures for the two preceding years:—

	1923	1924	1925
Midwives in Practice during year,	333	310	307

THE QUALIFICATIONS FOR CERTIFICATION UNDER
ACT, HELD BY THE FOREGOING WERE—

In Practice, December, 1914,	170	142	131
C.M.B. (Scotland) Examination,	111	119	126
Other recognised qualifications,	52	49	50

In the following table some indication is afforded of the number of births attended during the year by individual midwives. It would seem that of the 11,906 births attended by midwives 9,123 occurred in the practice of midwives with 50 confinements or more in the year:—

BIRTHS NOTIFIED BY MIDWIVES.

	Births Notified		1925	
	1923	1924	Births	Midwives
Under 50 Notifications,	3,063	2,772	2,783	172
50-100 ,, ...	3,432	3,206	2,625	39
100-200 ,, ...	4,223	3,694	4,551	34
200-300 ,, ...	1,688	1,577	1,639	7
300-400 ,, ...	335	324	308	1
400-500 ,, ...	—	—	—	—
Over 500 ,, ...	—	—	—	—
	<u>12,741</u>	<u>11,573</u>	<u>11,906</u>	<u>253</u>

STILL-BIRTHS NOTIFIED BY MIDWIVES.

Notifications	Midwives			Still-Births notified		
	1923	1924	1925	1923	1924	1925
1-5,	114	98	119	236	204	251
6-10,	14	15	8	95	95	59
11-15,	1	—	2	12	—	24
Over 15,	—	—	—	—	—	—
	<u>129</u>	<u>113</u>	<u>129</u>	<u>343</u>	<u>299</u>	<u>*334</u>
Percentage of Births attended,				<u>2·7</u>	<u>2·6</u>	<u>2·8</u>

* In 111 cases, Doctors assisted.

The figures in the two following summaries contain records of ophthalmia occurring in the practice of midwives, so that the numbers are not the same as the actual cases referred to in other sections of this Report:—

CASES OF OPHTHALMIA NEONATORUM OCCURRING IN PRACTICE OF MIDWIVES.

Notifications	Midwives			Cases notified		
	1923	1924	1925	1923	1924	1925
1-5, ...	112	88	93	239	185	209
6-10, ...	12	15	17	86	107	125
11-15, ...	5	3	2	64	37	27
16-20, ...	—	1	2	—	17	35
21-25, ...	—	2	1	—	49	22
Over 25, ...	1	—	—	30	—	—
	130	109	115	419	395	418
Percentage of Births attended, ...				3·3	3·4	3·5

CASES OF PUERPERAL FEVER OCCURRING IN PRACTICE OF MIDWIVES.

	Midwives			Cases		
	1923	1924	1925	1923	1924	1925
1 Case, ...	55	45	45	55	45	45
2 Cases, ...	13	8	14	26	16	28
3 „ ...	2	3	3	6	9	9
4 „ ...	1	—	2	4	—	8
5 „ ...	2	—	—	10	—	—
	73	56	64	101	70	90

NUMBER OF REQUESTS FOR ASSISTANCE TO MEDICAL PRACTITIONERS IN CASES OF EMERGENCY UNDER RULE.

Notifications	Midwives			Requests made		
	1923	1924	1925	1923	1924	1925
Under 10, ...	141	128	111	608	504	466
„ 20, ...	34	39	38	472	543	522
„ 30, ...	23	19	24	589	446	580
„ 40, ...	11	12	15	389	403	511
„ 50, ...	6	4	5	271	175	207
Over 50, ...	3	3	5	244	215	330
	218	204	198	2,573	2,286	2,616

During the year there were 2,616 occasions on which medical help was called by midwives, which represents 22·0 per cent. of the total births occurring in the practice of midwives, and compares with 19·8 per cent. in 1924 and 20·2 per cent. in 1923. The present is the highest point reached. Details of the nature of emergency are not given this year, but the following indicates the period during which medical assistance was called.

NATURE OF EMERGENCY.	1923	1924	1925
In all cases in which a woman during pregnancy, labour, or lying in appears to be dying or is dead,	2	2	6
PREGNANCY.—In cases of a pregnant woman, where there is any abnormality or complication,	161	151	168
LABOUR.—In the case of a woman in labour at or near term, when there is any abnormality or complication,	1,608	1,416	1,671
LYING-IN.—In the case of a lying-in woman, when there is any abnormality or complication,	312	268	261
THE CHILD.—In the child, when there is any abnormality or complication,	469	444	485
Cannot be classified,	21	5	25
Total,	2,573	2,286	2,616

DEATHS (NOTIFIED BY MIDWIVES) BEFORE A

DOCTOR WAS IN ATTENDANCE,	1 mother	24 infants
LAYING OUT THE DEAD,	6 adults	8 infants
ARTIFICIAL FEEDING... ..	...	26 Notifications

INTIMATION OF EXPOSURE TO INFECTION.

Diseases	1923	1924	1925
Puerperal Fever,	71	57	67
Measles,	21	11	9
Whooping-Cough,	1	3	4
Scarlet Fever,	5	7	4
Diphtheria,	9	2	3
Influenza,	1	2	—
Pneumonia,	2	8	5
Erysipelas,	3	1	—
Enteric,	1	—	1
Chickenpox,	—	3	1
Others,	4	—	5
	118	94	99

Fees to Doctors in Emergency Cases.—In the following table the total amount of accounts for the year ending November is shown, that being the period at which doctor's accounts are made up.

Year ended November, 1922,	...	...	£2,040	7	0
Do. do., 1923,	...	...	1,829	17	0
Do. do., 1924,	...	...	1,229	0	0
Do. do., 1925,	...	...	1,416	18	0

The practice of issuing accounts with the object of recovering some part of the fee, which was begun as from June, 1922, has been continued, and during the past year £281 19s. has been so recovered, while £71 15s. was withdrawn from medical practitioners' accounts. Since this procedure was begun, a total of £881 4s. 6d. has been recovered and £199 0s. 6d. withdrawn.

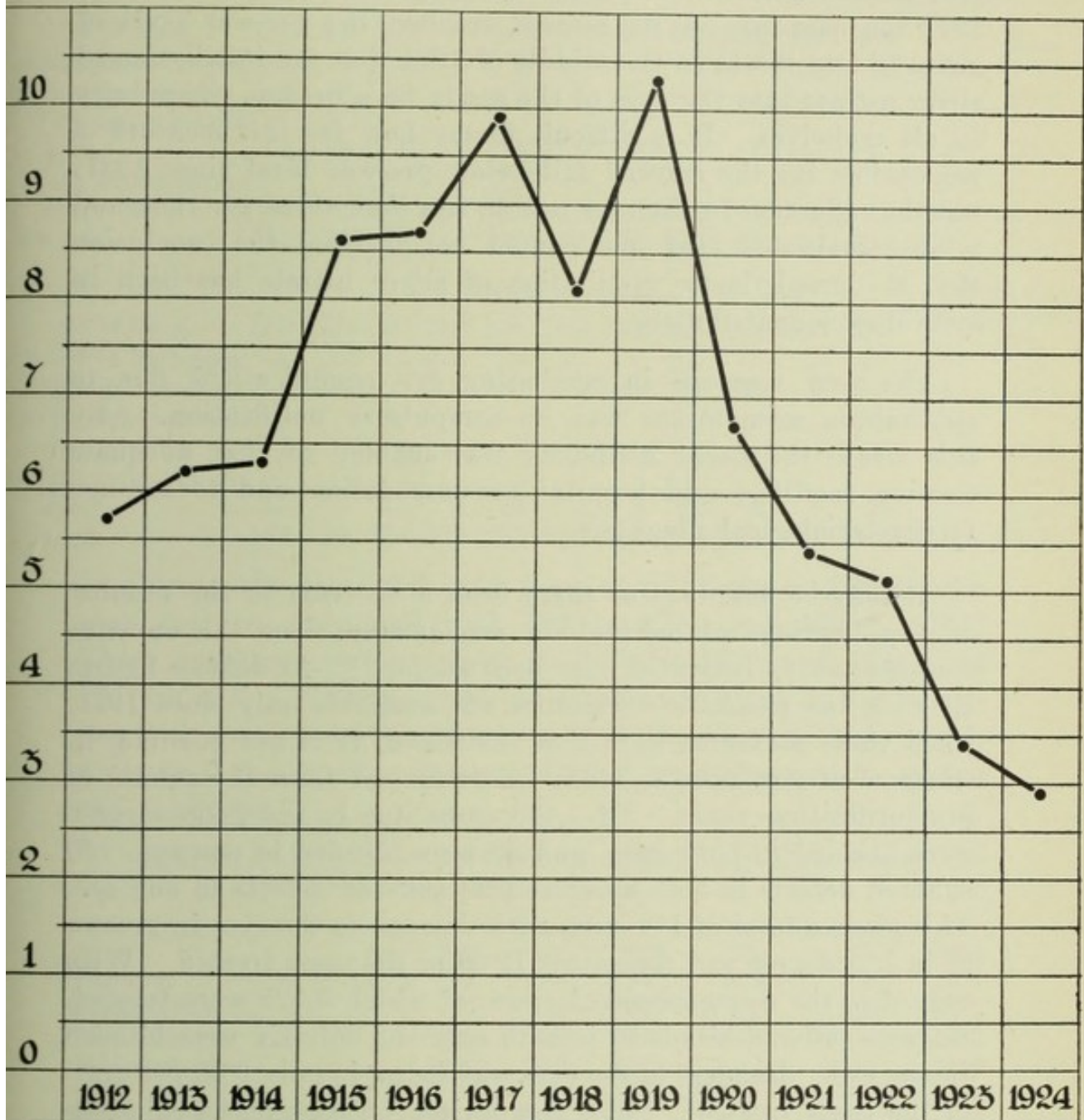
OPHTHALMIA NEONATORUM.

Before dealing with the work of the year, it will be of interest to review the history of the incidence and effects of the gonorrhœal and non-gonorrhœal forms of ophthalmia in the newly-born child. This inquiry was undertaken in connection with an investigation into the causes of blindness in the City, and is given in full in the "Report on Blindness in Glasgow," presented to the Joint-Committee for the South-west of Scotland for the administration of the Blind Persons' Act.

The chart which is here reproduced gives, in the form of a graph, case rates of gonococcal ophthalmia per 1,000 births for each year since 1912. The graph should be interpreted in the light of the notes printed below it, which give the administrative steps which were taken at certain periods.

This chart is especially interesting in that gonorrhœal ophthalmia is the only manifestation of a venereal disease which is notifiable. Its yearly fluctuations, therefore, must bear some relationship to the prevalence of gonorrhœa throughout the civilian population, and in this respect it provides a good index of the life history of gonorrhœa. Before the outbreak of war gonorrhœa affected the eyes of six out of every thousand babies born. In 1915 the case-rate rose and a war peak of 9·9 was reached in 1917. A fall occurred in 1918, but this was interrupted by the maximum rate of 10·3 occurring in 1919 which was probably

GLASGOW.—OPHTHALMIA NEONATORUM (GONOCOCCAL).
CASE-RATE PER 1,000 BIRTHS FROM 1912.



HISTORY OF OPHTHALMIA NEONATORUM AS A NOTIFIABLE DISEASE.

Ophthalmia neonatorum was first made notifiable in Glasgow on 1st August, 1911, for a period of three years, and was then defined as "The form of Infantile Ophthalmia known as Ophthalmia Neonatorum." On July 10th, 1913, the definition of ophthalmia was extended to include "any inflammation of the eyes accompanied by discharge in the newly born," and in August of 1914 an order was made by the Corporation making ophthalmia permanently notifiable under that definition. On 1st November, 1918, the Scottish Board of Health issued regulations making ophthalmia neonatorum notifiable generally, and the definition adopted was "Ophthalmia Neonatorum shall include any inflammation that occurs in the eyes of an infant within twenty-one days from the date of birth and is accompanied by discharge." This regulation superseded the previous definition and orders made by Glasgow. In July, 1921, a circular was issued to Local Authorities instructing them that midwives were to use a one per cent. solution of silver nitrate for application to the eyes of newly born infants with a view to reducing the incidence of ophthalmia neonatorum.

associated with demobilisation. A rapid fall took place in the year following and this continued till the end of 1924. During 1921 the case-rate in its descent reached the pre-war level of about 6, and it was in the middle of 1921 that the instillation of silver nitrate into the eyes of the newly born became compulsory on all midwives. It is difficult to say how far this measure is responsible for the marked fall below pre-war level since 1921, but the reduction in the case-rate to less than three per thousand is so remarkable that one cannot escape from the conclusion that the prophylactic instillation of silver nitrate has been in some degree contributory.

The first measure in combating eye complications due to ophthalmia neonatorum was its compulsory notification. By this means the Local Authority was enabled to offer adequate nursing facilities and hospital accommodation and to arrange for bacteriological diagnosis.

It may be asked: Has there been a decrease in the number of complications of ophthalmia neonatorum since the curative measures above indicated have been adopted? As definite figures showing the results of treatment are available only since 1911, when these measures were first instituted, it is not possible, in Glasgow at any rate, to study in numerical form the results of pre-notification years. Of 1,439 cases due to the gonococcus 6 were blinded in both eyes, and 30 were blinded in one eye. 39 suffered defects in both eyes, and 99 suffered defects in one eye. This gives a total of 174 cases with damage to the eyes in greater or in less degree and represents 12·09 of the cases treated. With regard to the non-gonococcal cases, of which 3,525 were treated, no cases suffered blindness in both eyes and only six were blinded in one eye. Damage to the eyes was found in only 0·68 per cent. of the cases treated. This comparison of the gonococcal cases with the non-gonococcal cases shows that a considerable though lessening part is still played by gonorrhœa in producing impairment of vision.

The subjoined table shows the shrinkage that is taking place in the incidence of ocular defect as the result of gonococcal infection. Out of 168 who have recovered with some degree of impaired vision since 1914 only 18 have been so affected during the three years 1922-24.

OPHTHALMIA NEONATORUM.—RESULTS OF TREATMENT.

No. of Cases.	(a) <i>Gonococcal.</i>											Total.	Percentage of Grand Total.
	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924		
Blind in both eyes,	—	1	—	—	2	1	—	—	—	1	1	6	0·41
Blind in one eye,	3	3	2	1	2	2	10	7	—	—	—	30	2·08
With defect in both eyes, ...	4	5	2	2	5	6	6	5	1	—	3	39	2·71
With defect in one eye, ...	12	7	5	7	14	17	12	13	3	5	4	99	6·87
Cured, ..	111	171	177	166	108	137	108	109	93	46	39	1,265	87·93

No. of Cases.	(b) <i>Non-Gonococcal.</i>											Total.	Percentage of Grand Total.
	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924		
Blind in both eyes,	—	—	—	—	—	—	—	—	—	—	—	—	—
Blind in one eye,	3	—	—	—	1	1	—	1	—	—	—	6	0·17
With defect in both eyes, ...	1	1	3	—	1	—	—	1	—	—	—	7	0·20
With defect in one eye, ...	—	—	—	1	1	—	2	2	3	1	1	11	0·31
Cured, ...	173	135	253	315	258	305	364	639	392	326	341	3,501	99·32

During the year 1925, 615 cases of Ophthalmia Neonatorum were notified, compared with 592 in 1924, and 620 in 1923. These numbers represent rates of 22·2 for 1923 and 1924, and 24·0 for 1925. Particulars of these years are given in the following table, according to attendance at birth, which would seem to indicate that a greater number of cases were reported by nurses and midwives.

OPHTHALMIA NEONATORUM CASES AND CASE-RATES PER 1,000 BIRTHS.

NOTIFIED BY	Year	CASES.			RATES.*		
		1923	1924	1925	1923	1924	1925
Doctors,	42	43	44	5·3	5·7	6·1
Institutions,	67	56	41	21·2	17·5	14·1
Inst. Nurses,	109	98	113	25·9	23·2	29·2
Midwives, &c.,	400	395	416	31·4	33·9	35·9
Regd. by P.H.D. Staff,	618	592	614	—	—	—
Treatment refused,	1	—	—	—	—	—
Dead,	1	—	—	—	—	—
Removed,	—	—	1	—	—	—
Total cases of Ophthalmia Neonatorum,	620	592	615	22·1	22·2	24·0
Not Ophth. Neon., but notified as such,	1	—	—	—	—	—
Notifications received,	621	592	615	22·2	22·2	24·0

* Calculated on Live Births notified, less duplicates. "Doctors found in attendance" are included in "Doctor in attendance," and deducted from "Midwives," &c.

The period at which symptoms appear is given in the following summary which shows considerable uniformity with regard to the interval after birth at which ophthalmia develops.

Cases occurring at Age—	1923	1924	1925
— 12 hours,	66	46	63
— 4 days,	215	221	208
— 8 ,,	226	206	226
+ 8 ,,	111	119	117
	618	592	614

Association with Syphilis.—Swabs of the discharge from eyes are obtained from as many cases as possible for examination for gonococcus, and the results are shown in the following table, together with information as to association with clinical syphilis, verified by bacteriological tests or otherwise. Of all the swabs examined for gonococcus only about 8 per cent. proved positive, compared with 12½ per cent. for the previous year.

Among the gonococcal cases only one was associated with syphilis, while among the non-gonococcal cases there were two instances of this nature.

	GONOCOCCAL.			NON-GONOCOCCAL.			UNCLASSIFIED.			TOTAL.		
	Total Cases	Syphilis present	Per Cent. with Syphilis	Total Cases	Syphilis present	Per Cent. with Syphilis	Total Cases	Syphilis present	Per Cent. with Syphilis	Total Cases	Syphilis present	^h Syphilis
1923,	58	2	3.0	333	—	—	227	—	—	618	2	3
1924,	49	1	2.0	348	3	0.9	195	—	—	592	4	7
1925,	32	1	3.1	366	2	0.5	216	—	—	614	3	0.5

Although the number of cases of ophthalmia neonatorum reported exceed those of the preceding year, those of gonococcal origin are again considerably lower, there being only 32 cases during 1925, compared with 49 in 1924 and 58 in 1923. The number of cases of gonococcal ophthalmia represents a rate of 1.25 per 1,000 of all births occurring during 1925, compared with 2.88 in 1924 and 10.34 in 1919.

Gonococcal Cases.—The results of treatment of this group of cases were very satisfactory. Of the 32 cases, 26 recovered with no corneal defect, and no case of blindness occurred during the year. Corneal scar remained in only 3 instances in one eye, and these were cured without impairment to vision.

Non-Gonococcal Cases.—Of this group 354 recovered without defect, while of those with corneal scar remaining, there was 1 case whose sight was not impaired, 1 slightly impaired, while 2 others lost the sight of one eye. One of the latter cases was associated with syphilis, while in the other the loss of vision was due to an infection of the lachrymal sac. There was no instance of scarring or blindness of both eyes.

RESULT.	1923		1924		1925	
	No Syphilis	Syphilis Present	No Syphilis	Syphilis Present	No Syphilis	Syphilis Present
GONOCOCCAL—						
No Corneal Scar, ...	45	1	39	—	25	1
Corneal Scar remaining						
In one eye—						
Sight not impaired,...	4	—	3	—	3	—
„ impaired, ...	1	—	1	—	—	—
Blind, ...	—	—	—	—	—	—
In both eyes—						
Sight not impaired,...	—	—	1	—	—	—
„ impaired, ...	—	—	1	1	—	—
Blind, ...	1	—	1	—	—	—
One eye good and one eye blind, ...	1	—	—	—	—	—
Removed, ...	3	—	—	—	1	—
Died, ...	1	1	2	—	2	—
	56	2	48	1	31	1
NON-GONOCOCCAL—						
No Corneal Scar, ...	326	—	339	2	354	—
Corneal Scar remaining						
In one eye—						
Sight not impaired,...	1	—	—	1	2	—
„ impaired, ...	—	—	—	—	1	—
Blind, ...	—	—	—	—	1	1
In both eyes—						
Sight not impaired,...	—	—	—	—	—	—
„ impaired, ...	—	—	—	—	—	—
Blind, ...	—	—	—	—	—	—
Removed, ...	2	—	—	—	1	—
Died, ...	4	—	6	—	5	1
	333	—	345	3	364	2
UNCLASSIFIED—						
Cured, ...	227	—	191	—	212	—
Corneal Scar remaining						
In both eyes—						
Sight not impaired,...	—	—	—	—	1	—
Died, ...	—	—	4	—	3	—
	227	—	195	—	216	—
Total, ...	616	2	588	4	611	3

PUERPERAL FEVER.

In recent years there has been considerable variations in the number of cases of puerperal fever registered. During 1925 the number of cases recorded was 300, compared with 239 during 1924. The number of cases varies more or less with the number of births occurring, but the small increase in the birth-rate during the year does not account for the difference. Calculated on the number of births, the rate per 1,000 during 1925 was 11·8, compared with 9·5, and is the highest recorded for the City.

The following table summarises the cases and mortalities, &c., during the past five years:—

	Cases	Deaths	Case Mortality per cent.	Cases per 1,000 Births	Deaths per 1,000 Births
1921,	321	72	22·4	10·8	2·4
1922,	294	94	32·0	10·4	3·3
1923,	278	72	25·9	10·4	2·7
1924,	239	61	25·5	9·5	2·4
1925,	300	68	22·7	11·8	2·3

Although the number of cases is considerably higher than the previous year, the case mortality and deaths per 1,000 births are both lower. These figures again emphasise the fact referred to in the report for last year, that cases of the disease are now being recorded which were formerly not brought to notice.

The following table gives an analysis of the cases and deaths during 1925 in relation to attendances at birth:—

PUERPERAL SEPSIS—CASES AND DEATHS OCCURRING IN GLASGOW DURING THE YEAR, 1925.

	Births.	Total Cases.	Cases per 1,000 Births.	Deaths.	Deaths per 1,000 Births.
Midwives' Cases,	11,949	90*	7·5	14	1·2
Maternity Hospital—					
Outdoor,	3,840	43	11·2	8	2·1
Indoor,	2,897	49	16·9	26	9·0
Oakbank,	138	2	—	2	—
Barnhill,	35	2	—	1	—
Southern General Hospital, ...	82	1	—	1	—
B. B., per Glasgow Institutions, ...	—	4	—	1	—
No one (Abortions),	—	19	—	2	—
Doctors' cases,	7,414	90†	12·1	17	2·3
Institutions and others with no cases,	569	—	—	—	—
Total,	26,924	390	11·1	72	2·7

*In 20 cases assisted by Doctors.

†In 14 cases assisted by Midwives.

CLINICAL NOTES ON PUERPERAL FEVER.

Dr. William Napier, Superintendent of Shieldhall Hospital, has recently concluded a survey of 500 consecutive cases of puerperal fever admitted to Belvidere Hospital between April, 1923, and November, 1925, and the following is a summary of his observations:—

Clinically the cases are divided into two main groups—firstly, uncomplicated cases, *i.e.*, cases in which the inflammatory process was limited to the genital canal; secondly, complicated cases, *i.e.*, cases where foci of infection appeared in other parts of the body.

Uncomplicated cases numbered 328, *i.e.*, 65·6 per cent. of the total. It is of interest to note that complete absence of lochia, once considered typical of septicæmia, did not often occur. The temperature chart was usually that of intermittent or remittent fever, the amount of daily variation indicating only roughly the degree of severity of the illness. Some of the gravest cases had practically a normal temperature. 51 cases ended fatally, giving a mortality-rate of 15·5 per cent.

The second group of *complicated* cases comprised 34·4 per cent. of the total. These included all the cases where one or more foci of infection appeared outwith the genital canal. While this “metastasis” added, as a rule, to the severity of the genital condition, particularly in infections of the peritoneum and joints, it seemed to exert a strikingly beneficial effect on the course of the illness in cases of pelvic cellulitis and phlegmasia. Pelvic inflammation, including pelvic cellulitis, pelvic peritonitis, and salpingitis, numbered 62 cases. Four cases ended fatally, this rate of 6·4 per cent. comparing favourably with that of the uncomplicated cases. Of the 35 cases of general peritonitis, only 2 recovered, and these after operation. Of the 24 cases of pyæmia, in which the joints were principally involved, 6 cases died, a mortality in this group of 25 per cent. The cases of phlegmasia alba dolens numbered 51. Two deaths occurred in this group as the result of severe genital infection. Dr. Napier summarises this section as follows:—“Of the 500 cases of the series, 96, *i.e.*, 19·2 per cent. ended fatally. This high mortality is contributed to chiefly by the occurrence of general peritonitis. The septicæmic and pyæmic forms of the disease also account for many deaths. Pelvic inflammation and phlegmasia, while not of themselves a menace to life, often result in prolonged invalidism.”

A bacteriological examination of the blood, uterine contents, and pus showed that the predominating organisms were streptococci. As regards type, the organism was not found to be constant in its reactions, but in the great majority of cases it was hæmolytic, and produced the reactions associated with streptococcus pyogenes. Gonococcus, although it was a frequent cause of salpingitis, appeared to play a very small part in the production of a general infection.

As regards treatment, curetting the uterus with the finger, followed by a douching, was found to be a dangerous procedure, and

this line of treatment was abandoned except in cases of hæmorrhage. With reference to specific treatment, polyvalent antistreptococcus serum was frequently given in large doses without apparent benefit. Autogenous vaccines appeared to be of benefit in some of the more chronic cases of pelvic cellulitis. Treatment by "abscess of fixation" gave more encouraging results. In the cases of general peritonitis, most patients were admitted to hospital with this condition too far advanced for treatment to be of any avail. Where the general condition warranted it, laparotomy with drainage of the abdomen was carried out. In all, 12 cases were operated on, with 2 recoveries. Since the unoperated cases all died, it appears that laparotomy, if carried out early, is to be recommended in every case of peritonitis where there is a chance of success.

SECTION IV.

INFECTIOUS DISEASES.

In this section a general review is given of the various affections which now fall to be dealt with by the department. Over 42,000 cases in all were notified or reported, and of these 12,700 were treated in hospital. The principal features which affected the returns for the year were (*a*) the epidemic of measles, which began in October and was continuing at the close of the year; it was of a type unusually mild for its magnitude: (*b*) an epidemic of whooping-cough, which prevailed chiefly in the earlier part of the year; is also was comparatively mild in type: (*c*) a considerable prevalence of pneumonia and bronchitis, especially during the later months of the year, associated with the fog which prevailed during November: and (*d*) a continued high incidence of scarlet fever.

In the part of the section dealing with measles a brief account of the outbreak is given. The progress of the epidemic and its characters have been closely studied, and the data collected will be reported in full later. The incidence of pneumonia and other respiratory diseases, and the effect of the fog, is reported more fully in the portion dealing with pneumonia, as is also the strain on the hospital resources occasioned by the demand for the treatment of this affection.

Although there was no definite outbreak of encephalitis lethargica (sleepy sickness)—40 cases in all occurring during the year—the problem created by the presence of patients suffering from disabling sequelæ of past outbreaks is one of considerable magnitude and importance. A full account of the nature and extent of this problem is given in the portion dealing with this disease.

For the second year in succession there has been an entire absence of typhus fever. The figures also show the continued shrinkage that is taking place in enteric fever and other diarrhœal diseases—probably due to improving sanitation. Only 44 cases of enteric fever occurred during the year, and the results of further observations on the role of the carrier are described. The number of new cases of pulmonary tuberculosis, 1,600, is the

lowest on record. Under scarlet fever there is an account of two small outbreaks which occurred on unpasteurised milk supplies.

The measures which have been taken to give effect to the useful provision for the supply of insulin to diabetic patients are reported at the end of the section. There were at the close of the year 27 patients in receipt of free supplies.

Appendix Tables XVII and XVIII show the number of cases of the various diseases registered during the year, and the rates per million of the population, together with a comparison with previous years.

The case-rates of the diseases dealt with under the Infectious Diseases (Notification) Act, 1889, are summarised in the following table since the year 1913. The case-rates given in the column headed "All Others" include in the earlier years only measles, whooping-cough, and chickenpox, but more recently ophthalmia neonatorum, trachoma, malaria, dysentery, certain forms of acute disease of the central nervous system, and the various forms of pneumonia made notifiable from time to time are embraced:—

GLASGOW.—CASE-RATE PER MILLION OF THE POPULATION FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED SINCE 1913.

YEAR	Typhus Fever.	Enteric Fever.	Continued and Undefined.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Group	Cerebro-Spinal Fever.	Phthisis.	Non-Pulmonary Tuberculosis.	All Others.	TOTAL.
1913,	39	232	7	144	...	4,005	1,934	35	2,552	...	26,247	35,195
1914,	18	340	7	206	...	5,337	1,440	45	2,284	1,088 ¹	21,675	32,440
1915,	9	248	5	175	...	5,973	1,257	167	2,169	1,375	25,389	36,667
1916,	17	158	8	178	...	3,719	1,220	131	2,285	1,270	17,001	25,987
1917,	1	82	4	148	...	1,634	1,146	75	2,435	1,433	27,005	33,963
1918,	49	128	12	151	1	1,193	1,379	67	2,258	1,273	16,045	22,556
1919,	30	103	8	163	5	2,443	1,626	72	1,834	1,083	21,359	28,726
1920,	8	204	13	267	477	3,378	1,809	76	2,009	1,063	25,509	34,813
1921,	6	100	7	299	19	3,272	1,727	56	1,902	1,061	23,965	32,414
1922,	18	79	6	272	...	3,212	1,561	62	1,806	970	31,419	39,405
1923,	2	116	20	255	...	3,277	1,623	59	1,584	1,133	25,453	33,522
1924,	...	75	17	216	2	2,905	1,733	60	1,669	1,114	30,259	58,050
1925,	...	40	8	273	...	3,472	1,581	56	1,457	1,016	30,959	38,862

¹ Non-pulmonary tuberculosis made compulsorily notifiable, July, 1914.

For the reason given above, little or no comparison over the period since 1913 can be made for the total column or for "all other diseases." The great volume of cases included in the latter column is made up of measles, whooping-cough, and chickenpox, while since the coming into operation of the Infectious Disease Regulations, 1919, a considerable number of cases of acute primary pneumonia and acute influenzal pneumonia are also included. No new diseases were added to the list during 1925.

Notes on prevalence, &c., of the various diseases are given in the following pages:—

DISEASES FORMERLY CALLED "PRINCIPAL ZYMOTIC DISEASES."

The death-rates for several periods have been:—

1881-90, ...	3·600 per 1,000 living.	1921, ...	1·116 per 1,000 living.
1891-1900,...	3·282	1922, ...	1·997
1901-1905,...	2·660	1923, ...	1·46
1906-1910,...	2·450	1924, ...	1·70
1911-1915,...	2·424	1925, ...	1·24
1916-1920,...	1·607		

In this comparison only those infectious diseases that have been notifiable for most of the period given are included.

SMALLPOX AND VACCINATION.

No case of smallpox was registered during the year, although contacts of cases occurring on board ship arriving here, or from other ports, have been kept under observation from time to time.

VACCINATION.

With the increasing numbers attending Child Welfare Consultations, a large proportion of parents would appear to be taking advantage of the arrangement for free vaccination at the district Clinics. The lower number vaccinated during the past two years, compared with that of 1923, is misleading in this respect, because of the reduced number of births. The children vaccinated at these Centres form slightly under 10 per cent. of the total births in 1925, compared with 10 per cent. during the preceding year and 10·6 per cent. in 1923.

The following table shows the numbers of children vaccinated at the various Centres during the past three years:—

STATEMENT SHOWING NUMBER OF INFANTS VACCINATED AT THE CHILD WELFARE CONSULTATIONS DURING THE YEARS 1923-1925.

	1923	1924	1925
Public Health Office,	255	424	425
Garngad,	95	57	80
Port Street,	134	108	80
Ruchill,	183	139	155
Merryland Street,	140	142	124
Adelphi Street,	168	175	191
Partick,	191	133	115
Weir Street,	142	170	190
London Road,	779	697	629
Shettleston,	221	163	212
Campbellfield Street,	154	72	51
Cowcaddens,	296	264	175
Elder Hospital,	65	84	104
	<u>2,823</u>	<u>2,628</u>	<u>2,531</u>

VACCINATION (SCOTLAND) ACT, 1907.

The following shows the number of declarations of conscientious objection to vaccination made each year since the Act came into operation:—

1907-10 (annual average),	2,119	1920,	4,342
1911-15, ,,	5,922	1921,	4,992
1916,	7,013	1922,	5,668
1917,	7,017	1923,	5,497
1918,	6,049	1924,	5,090
1919,	6,489	1925,	5,345

The reduction in the numbers of conscientious objectors to vaccination in 1918 and 1919 coincided with the reduced birth-rates towards the end of the war. Despite the largely increased birth-rates of the years 1920-21, the further contraction in the numbers by over 30 per cent. was due to the outbreak of smallpox which occurred at this time; the number has tended to increase since then.

The numbers of conscientious objectors in each municipal ward are given in Appendix Table XXII, which shows that the largest proportion of exemptions in this respect occur in the industrial wards of Fairfield (41 per cent.) and Pollokshaws (40 per cent.). This may be compared with 9 per cent. in Kelvinside and 15 per cent. in Pollokshields.

The following abridged table has been included to illustrate the salient features as regards child vaccination since the Conscientious Objection Act was passed in 1907:—

Table showing Results of Primary Vaccination of Children born during several years.

(From the Detailed Annual Reports of the Registrar-General).

Year	Successfully vaccinated Per cent.	Insusceptible of vaccine disease Per cent.	Died before vaccination Per cent.	Conscientious objection to vaccination Per cent.	Vaccination postponed Per cent.	Unaccounted for Per cent.
1906,	82.9	0.5	10.6	0.2	0.8	5.0
1907,	75.0	0.7	10.7	4.9	1.5	7.2
1908,	69.5	0.8	10.8	9.2	1.7	8.0
*	*	*	*	*	*	*
1914,	51.7	0.9	12.1	25.1	1.8	8.4
*	*	*	*	*	*	*
1920,	73.7	1.4	8.5	11.2	1.4	3.8
1921,	63.4	2.0	9.6	19.1	1.8	4.1
1922,	64.3	1.8	7.8	20.6	1.7	3.8
1923,	63.9	1.2	8.1	21.0	1.8	4.0

These figures speak for themselves. They illustrate (a) the effect of the Act referred to, and (b) the reduction in the proportion of children vaccinated, the year 1914 marking the lowest point when little more than half of the children born were vaccinated. The percentage of protected to unprotected children rose in 1920 when smallpox prevailed, since when it has declined.

TYPHUS FEVER.

No case of typhus fever has occurred since January, 1923.

ENTERIC FEVER.

This disease has now reached small dimensions. Last year 82 cases occurred (although considerably more were notified), while this year the number is only 44 (although 91 were reported).

Owing to the absence of typical symptoms this affection has become difficult to recognise. Of the 44 cases, only 16 were males and 28 were females, whereas before the war the male patients were always in excess. The following table of death-rates since 1881 shows the marked decline which is taking place in this affection:—

1881-1890, ...	·230 per 1,000	1921, ...	·016 per 1,000
1891-1900, ...	·215 „	1922, ...	·011 „
1901-10, ...	·127 „	1923, ...	·013 „
1911-15, ...	·058 „	1924, ...	·005 „
1916-20, ...	·023 „	1925, ...	·013 „

Investigations into the possible sources of infection in individual cases, with special reference to the detection of carriers, which were described in the last Annual Report, have been continued. The following is a review of the 1925 cases:—

During 1925 the cases notified as enteric fever, or (?) enteric fever, numbered 91, of which 89 were admitted to hospital, and 2 were treated at home. In 44 of the cases notified a diagnosis of enteric or paratyphoid was established; in the remaining 47 cases it was unconfirmed. The verified cases included:—

Enteric or Typhoid Fever, ...	34 cases.
Paratyphoid (A), ...	2 „
Paratyphoid (B), ...	8 „
	—
Total belonging to the Enteric group, ...	44 „
	==

In connection with 34 of the verified cases it was found possible to carry out bacteriological examination of the urine and faeces of the other inmates of the houses in which the infected person resided, with a view to ascertaining the possible presence of “carriers” among them. The following table shows the number of contacts in these 34 households, the number examined bacteriologically, and the number in which positive results were obtained:—

	Enteric Fever.	Paratyphoid Fever (A).	Paratyphoid Fever (B).	Totals.
Number of verified cases, ...	34	2	8	44
Number of cases in connection with which urine and faeces of contacts were examined. ...	25	1	8	34
Number of contacts +10 ...	79	5	30	114
Number of contacts -10 ...	32	2	5	39
Total number of contacts, ...	111	7	35	153
Number of Contacts examined, ...	89	—	21	110
Number found positive, ...	3	—	—	3

The table shows that in contact—living in the same houses—with 34 cases of enteric, or paratyphoid fever, there were 153 persons, that

110 of these were examined bacteriologically, and that 3 of the 110 were found to be carriers of typhoid. The details of the 3 carriers are as follows:—

Patient's Age.	Nature of Affection.	No. of Contacts in same House, as patient.	Contacts found Positive.	Orgs. found in Contacts.		Subsequent Examinations.	Remarks
				Fæces.	Urine.		
F. 16	Typhoid	2,	1 (Female friend, 33 years).	B. Typh.	—	2 subsequent Examinations Negative.	Contact with case of Typhoid Fever in Kilcreggan.
M. 30	do.	7	1 (Mother 61 years).	do.	—	1 subsequent Examination Fæces positive.	The family has been infected for 3 years past by the mother, a carrier for probably many years.
F. 39	do.	8	1 (Daughter 17 years).	do.	—	Subsequent Examination of Fæces Negative.	The daughter, aged 17, was a missed case of Enteric, having sickened in Rothesay in July and infected her mother in August, 1925.

The first of the three positive contacts was a young lady who had been residing in Kilcreggan with friends, one of whom developed enteric fever during her stay with them. She herself showed no sign of illness, and though typhoid bacilli were found in the fæces on one occasion, two subsequent examinations gave negative results. Probably, therefore, this individual was merely a temporary, and not a true, typhoid carrier.

The second positive contact, the mother in the household, aged 61 years, appeared to be a true, or permanent, typhoid carrier, as it was ascertained that she had suffered from pneumonia (probably in reality enteric fever) at the age of 43, *i.e.*, 18 years earlier, and that within the past three years three in succession of her children residing at home had contracted enteric. As repeated examinations of this carrier continued to show B.T. in the fæces, the remaining three members of the household were given protective inoculations of typhoid vaccine, and no further case has occurred in the household.

The third positive contact was a girl, aged 17 years, who, on her mother's removal to hospital with enteric fever on 26th August, was examined bacteriologically, and found to have typhoid bacilli in the fæces. The girl, when on holiday in Rothesay, about six weeks before, had suffered from an illness which, though diagnosed at the time as gastritis, was almost certainly enteric fever. When detected she was, therefore, a missed case of enteric, convalescent, but still in an infective condition rather than a true "carrier." She was accordingly admitted to hospital, where she remained till no longer infectious.

These observations corroborate the results of the previous investigations that the "carrier" plays a small part in the production of the current cases of infection.

SCARLET FEVER.

The table summarising the case-rates from infectious diseases, given at the beginning of this section of the report, indicates that scarlet fever was more prevalent during the year. The case-rate per million of the population was 3,472 for 1925, compared with 2,905 during the previous year. This was the highest figure since 1915.

Apart from the question of infection, there is evidence of the direct effect of the altered age constitution of the population. The high birth-rates of 1920 and the two subsequent years are now increasing the population of susceptible ages around five years, which is the period of life at which a large number of cases occur. The total number of cases registered during the year numbered 3,812, of which all but 162 were treated in hospital. The usual seasonal prevalence was evidenced by the increase which occurred in the autumn, the highest number recorded in any month being in October.

The following notes refer to two of the more important groupings of cases which occurred during the year:—

Scarlet Fever Traced to a Farm Supply.—During the period 28th July, 1925, to 30th August, 1925, there occurred in Cathcart a sharp outbreak of scarlet fever, in which twelve families, comprising fifteen persons, were involved, as follows:—

DATES OF SICKENING OF THE CATHCART CASES.

	May.			June.				July.				August.				Sept.	
Week ending,	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5
No. of weeks,	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
No. of Cases,	1	1	1	1	—	—	—	—	—	—	—	1	—	2	4	7	1

The source of infection was traced to a dairy farm in the Middle Ward of Lanarkshire, with a distribution of 30 gallons of milk in Cathcart through two dairies and the farm milk cart.

A labourer's daughter on the farm sickened of scarlet fever on 15th August, and was removed to hospital on 18th August. Thereafter, as cases continued to occur in the distribution area of the milk supply from the farm, a further medical examination was made on 26th August, when a child, aged 8 years, the daughter of the farmer himself, was found to be suffering from otorrhœa. Although there was no history of scarlatinal symptoms, this condition was regarded as the result of a missed attack of scarlet fever, and the child removed to hospital. This child was probably the source of infection from which arose the later cases of scarlet fever in the Cathcart district, which occurred subsequent to the removal to hospital, on 18th August, of the first-mentioned child.

The mothers of these two children had been milking the cows. From the time of detection of the first case, on 18th August, the milk was pasteurised under the direction of the County Medical Officer of Health, but in spite of this the source of the mischief was not removed until the child with otorrhœa was discovered and isolated.

Prior to this outbreak there had occurred during May 4 cases on the same milk supply traceable to two children, daughters of the farmer, who had sickened of scarlet fever, the first on 10th May, removed to hospital on 13th May, and the second on 14th May, 1925, removed to hospital on 21st May.

On 4th and 18th July respectively these two children had been dismissed from hospital well; one or other may have infected her sister with the mild attack followed by otorrhœa, the case which was apparently the cause of the subsequent outbreak during August.

CASES AT FARM.

	Sickened.	To Hospital.	Dismissed Hospital.
(a) Farmer's daughter (4), - - -	10-5-25	13-5-25	4-7-25
(b) Do. do. (6), - - -	14-5-25	21-5-25	18-7-25
(c) Farm Labourer's Daughter (5), -	15-8-25	18-8-25	—
(d) Farmer's daughter (8) - - -	?	26-8-25	—

There are two points of interest in this outbreak. When the later cases were occurring there were two possible sources of infection at the farm:—(a) the two children who had returned from hospital, and who may have still been infective—an unlikely event; (b) the presence of the child with otorrhœa, presumed to be scarlatinal in origin—the more likely source. The pasteurisation of the milk at the farm was either unsatisfactory or the milk was infected subsequent to pasteurisation.

Scarlet Fever Traced to a Farm Supply.—Another small outbreak of scarlet fever in Cathcart, associated with a farm milk supply, with a distribution through five dairies, occurred between 26th August and 11th September, in which 6 families, comprising 6 children, were affected. They sickened on 26th August, 5th, 6th, 9th, 10th, and 11th September respectively.

The first case of scarlet fever, a son of the farmer, occurred on 30th May, and he returned from hospital on 18th July; the second case, the farmer's daughter, sickened of scarlet fever on 24th August, and was removed to hospital on 26th August, so that there was an interval to be accounted for between 18th July and 24th August, during which infection continued on the farm.

A medical examination at the farm on 10th September, the date upon which the second Glasgow case in connection with this milk supply was notified, revealed the presence of otorrhœa (double) of a week's duration in the baby of a widowed daughter of the farmer. This child was presumably a missed case of mild scarlet fever, infected from the first case, either when he sickened or at the time of his

dismissal from hospital. The mother of this child had all along been one of the milkers, and thus ottorrhœa, following a missed mild attack of scarlet fever, was the probable cause of this group of cases in Cathcart, as was also ottorrhœa following a missed mild case in the farm epidemic already described in a former memorandum.

No cases of scarlet fever occurred either on the farm or in connection with the distribution of the milk after the mother and her baby with ottorrhœa left the farm to stay with other relatives.

The death-rate from the disease since 1881 has been as follows:—

1881-90, ...	·490 per 1,000	1921, ...	·050 per 1,000
1891-1900, ...	·295 "	1922, ...	·069 "
1901-10, ...	·116 "	1923, ...	·066 "
1911-15, ...	·163 "	1924, ...	·073 "
1916-20, ...	·060 "	1925, ...	·062 "

The number of return cases—*i.e.*, cases sickening after return of a previous case from hospital—has remained at 2 per cent. of the dismissals during the past eight years. Of the return cases, 25 occurred within one week of the hospital dismissal, 39 within two weeks, and 20 over that period.

Secondary Cases.—The number of secondary cases fell to one per cent. The number occurring within one week after disinfection for a previous case was 32, the second week 16, and 4 over that period.

DIPHThERIA AND MEMBRANOUS CROUP.

The course of diphtheria is more indefinite than that of scarlet fever. The case-rates of the former appear generally to be about half those of the latter, with less variation in the maximal and minimal incidences.

Appendix Table XVII shows the numbers treated at home and hospitals, the latter representing about 96 per cent. of the total, while the seasonal incidence in months is given in Appendix Table XIX. Like scarlet fever, the disease is most prevalent during the latter part of the year. The largest number of cases recorded was in Gorbals Ward, while the contiguous Wards of Hutchesontown and Kingston were also heavily infected.

The following table shows the death-rates per 1,000 living since 1881:—

1881-90, ...	·280 per 1,000 living.	1921, ...	·120 per 1,000 living.
1891-1900, ...	·231 "	1922, ...	·128 "
1901-05, ...	·134 "	1923, ...	·133 "
1906-10, ...	·205 "	1924, ...	·126 "
1911-15, ...	·187 "	1925, ...	·103 "
1916-20, ...	·143 "		

ERYSIPELAS.

There were 1,002 cases of erysipelas during 1925, of which 486 were treated in hospital. During the previous year the cases numbered 858. The case-rates for the respective years are 913 per million and 783. The latter rate, however, was lower than that of any year since 1917.

The death-rate of the City was 42 per million of the population, and the highest ward rates were 164 in Partick East and 110 in Calton.

CEREBRO-SPINAL FEVER.

The numbers of cases registered during the past three years are contained in Table XVII in the Appendix, while the case-rates are given in Table XVIII. In 1925, 62 cases were registered, 54 of whom were removed to hospital. The number of cases recorded has not exceeded 100 in any year since the prevalence of the disease in 1915 and 1916, despite the prevalence of other acute nervous diseases which occurred during 1924.

With this disease it is very rare for a second case to occur in the same household. Last year the highest number recorded was 6 in Dalmarnock, and also in Govan, although the distribution indicates a higher incidence in the working-class districts.

ENCEPHALITIS LETHARGICA.

It is impossible to give an accurate account of the incidence of this disease because of the uncertainties surrounding its early recognition. On the one hand, it is apt to be confused with other affections of the central nervous system, and on the other hand many cases are missed altogether, and only recognised when the later chronic stages have been reached after varying intervals extending to months or even years. These difficulties were discussed in the Annual Reports for 1923 and 1924, which were both years of considerable prevalence. The year 1925 passed without a serious outbreak. A good deal of trouble has again been taken to sift out the cases reported, with the result that although there were in all 162 notifications, only 73 were accepted as correct; of these again, only 45 contracted the disease in the City during the year under review. The most serious feature is the presence of a considerable number of patients of all ages

who have been disabled in various ways as a result of this infection. The administrative problem to which they give rise is a considerable one, and has recently received the attention of the Scottish Board of Health and of the Local Authorities concerned. The serious and complex damage to the nervous system which encephalitis may cause in individual cases is well known, but for the reasons stated above it is difficult to give more than an approximate estimate of the extent and degree of these disabilities throughout the population. There is reason to believe that the incapacity rate among those who survive the original attack is in the neighbourhood of 42 per cent.; even this is possibly a low estimate.

In the following memorandum Dr. Andrew Davidson reviews the incidence during the year, and gives the results of his own investigations, and those of other members of the staff, on the sequelæ which followed the outbreak of the preceding year:—

Encephalitis lethargica has been compulsorily notifiable in Glasgow since 3rd September, 1918. The available statistics regarding the number of definite cases and deaths for each year since 1919 are as follows:—

Year.	Cases.	Deaths.
1919,	—	13
1920,	61	20
1921,	28	11
1922,	20	10
1923,	110	26
1924,	391	46
1925,	73	48

This disease was mildly prevalent in the City during 1920, but in 1924 it reached the crest of an epidemic wave which commenced in 1923. The yearly numbers of cases recorded above do not accurately reflect the incidence of the disease in the City for any particular year, as numerous cases pass unrecognised in the acute stage of the illness, and are only diagnosed on the appearance of the characteristic sequelæ, being notified for the first time when in the chronic stage. It thus happens that, although many patients are registered in the year of notification, the acute stage of the illness may have existed one or more years previously.

The experience of 1925 again illustrates the difficulties met with in estimating the incidence. During the year, 162 patients were notified as cases of encephalitis lethargica. In 73 of these the diagnosis was confirmed, but of this latter number only 52 sickened with the acute illness during the year. Included in the 52 definite cases sickening during 1925 were 7 notified from the Royal and Western Infirmaries, who had contracted the infection outside of the City. There were,

therefore, 45 cases of encephalitis lethargica in which the illness was contracted in Glasgow during the year. No doubt, others will yet come to notice whose primary attacks have been completely missed.

The following table gives the distribution of these cases according to Public Health Divisions of the City:—

Division.	Cases Notified.	Diagnosis Confirmed.	Cases sickened in Glasgow during 1925.	Cases sickened outwith Glasgow in 1925; notified in Glasgow.
Central,...	44	21	13	4
Northern, ...	30	16	8	3
Eastern, ...	35	11	6	—
South-Eastern, ...	14	9	4	—
South-Western, ...	39	16	14	—
Total, ...	162	73	45	7

The cases were distributed equally over the City, more than 3 cases occurring in only two wards. Four cases occurred during the year in Ward 15 (Anderston), but these were widely separated in the district from one another. Six cases occurred during the year in Ward 30 (Govan), and with two exceptions the patients resided in different areas of the ward. The two exceptions resided in the same street, but at some distance from each other, and there was no association between them.

Age and Sex Distribution.—

Sex, ...	1	2	5	10	15	20	25	35	45	55	65	+65	Total.
Male,...	1	—	—	4	3	6	4	2	3	3	1	—	27
Female,	—	1	1	5	1	1	3	2	2	1	1	—	18
Total,	1	1	1	9	4	7	7	4	5	4	2	—	45

There was a wider distribution over the age groups than during 1924, when the maximum for males was between 10 and 15 years of age, and for females between 15 and 20 years of age.

The sex ratio remained substantially the same as that for 1924. In 1924 the ratio of males to females infected was 1·7 to 1; the corresponding ratio in 1925 was 1·5 to 1.

Seasonal Prevalence.—In the following table the dates of sickening of the patients are recorded in monthly grouping:—

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
6	11	3	4	11	2	1	2	1	1	1	2	45

During 1924 the disease was prevalent during the second quarter of the year. In 1925 the period of prevalence had extended to include the first quarter of the year, in addition to the second quarter; there was a greater prevalence during the former period. A table showing months of registration of the 73 verified cases which were notified during the year is included in Appendix.

Mortality.—The number of deaths registered as encephalitis lethargica during 1925 was 50, but the number of deaths in cases sickening during 1925 was only 26. In other words, 24 deaths from encephalitis lethargica occurred in patients who had sickened in previous years. As the total number of persons in Glasgow suffering from encephalitis lethargica is not known, a case mortality cannot be accurately calculated.

SEQUELÆ OF ENCEPHALITIS LETHARGICA.

The cases of encephalitis lethargica which sickened during the epidemic wave of 1924 were re-examined in December, 1925. As the period of epidemic prevalence in the City during 1924 was from April to September, an interval of 15 to 18 months elapsed between the onset of the disease and the re-examination of the patients. This period gives ample time for the development of the sequelæ. The total number of cases in the following analysis is 334, and the analysis shows the incapacity rate produced by the sequelæ of the disease. The column marked "Division" relates to Public Health Divisions of the City:—

Division.	Fit for Work.	Unfit for Work or School.	Intermittently at Work or School.	No information.	Deaths.	Total Cases.
Eastern,	23	13	2	2	7	47
Central,	31	24	3	7	7	72
Northern,	32	30	9	7	11	89
South-Eastern.	26	11	3	4	9	53
South-Western,	45	21	—	3	4	73
Total,	157	99	17	23	38	334
<hr/>						
Percentage of Total Cases,	47·00	29·64	5·09	6·89	11·38	—
<hr/>						
Percentage of Cases alive and known,	57·51	36·26	6·23	—	—	—

The sequelæ of the disease have varying effects on the capacity for work or school. Column 2 indicates the number of persons totally unfit for work or school, while column 3 indicates the number intermittently at work or school. Of the total of 334 cases, 99 were totally unfit for work or school, and 17 were intermittently at work or school. Estimated as percentage of cases "alive and known," 36·26 per cent. were totally unfit for work or school, *i.e.*, the incapacity rate was 42·49 per cent. on examination of the patients 15 to 18 months after the onset of the illness.

A group of 104 school children who had suffered from encephalitis lethargica during the 1924 outbreak was investigated. A review of their condition was also made in December, 1925. Unfortunately 26 children could not be traced, but the following table gives the results

of the inquiry into the attendance at school of the other 78 cases :—

Division.	Attending School.	Excluded by S.M.O.	Hospital.	Not attending School.	Special School.	Total
Eastern,	5	—	2	2	6	15
Northern,	14	3	—	1	3	21
Central,	12	7	—	5	—	24
South-Eastern,	6	1	—	1	—	8
South Western,	5	1	—	3	1	10
Total,	42	12	2	12	10	78

Of the 78 cases investigated, 36 children were incapacitated to a varying extent. Of this latter number, 26 were totally unable to attend school, and 10 were in attendance at special schools. The *incapacity rate* is therefore 46 per cent. It cannot be inferred that minor sequelæ did not exist in the 42 children who were able to attend school. If any disability existed, it was not present to an extent which precluded the child from attending an ordinary school.

The sequelæ of encephalitis lethargica are chiefly associated with disturbances of the higher cerebral functions, and often present a serious and tragic aspect. The manifestations are very varied, and classification is difficult. For the convenience of description, the following is a suggested classification of the types produced by the sequelæ of the disease :—

- I. Child : (a) Restless Child.
(b) Refractory Child.
(c) " Parkinson " Child.
- II. Adult : (a) Irritable Adult.
(b) " Parkinson " Adult.

Restless Child.—In this group the chief feature is the restlessness of the child, who moves about the house, especially during the night, to the annoyance of the other inmates. Apparently the brain as well as the body is in a restless state, the child rushing from one task to another and making noises of various kinds. Several mothers complained of the annoyance given by their children during the night. In their habits the children change day into night; they are unable to sleep until the late hours of the morning, very frequently not until time for rising. The child in this category is usually harmless, if annoying.

Refractory Child.—The majority of children who suffer from the sequelæ of encephalitis lethargica fall into this category. There is no real line of demarcation between the " refractory " child and the " Parkinson " child. In the latter case the mental changes vary with the degree of Parkinsonism. Both categories are included in the following description of some of the cases encountered in a special group examined.

A school child was very quiet in the house, but continually fought with his playmates at school. He was interfering in the play of other children. On the other hand, another child was noticeably quiet out of doors, but was riotous and fought with the other members of his family at home.

The irritability in many of the cases is not assisted by the general appearance of the post encephalitic. Such children are often ridiculed by their playmates, and not unnaturally their tempers are sharpened. Impulsiveness, disobedience, and a tendency to be headstrong were produced in these children by the irritability which ranged from a "snappiness" or annoyance to severe fits of temper and hysterical fits. One boy in his fits of temper kicked everything in his vicinity, and smashed everything to which he had access.

In two cases where the patients had fits of temper the parents reported homicidal tendency in the children, the intended victims being members of their own family. These reports may have been somewhat exaggerated, but the parents were sufficiently alarmed for the lives of their other children. The father of one boy (aged 18) stated, "If you don't watch him, he would knock the child's (aged 5) brains out." The mother of another patient, a typist (aged 21), stated that her daughter's temper was so bad that she would kill the younger girl (aged 11).

The patients were usually unconscious of their fits of temper until told subsequently. Disobedience in the child was frequently found, and is a trial to parents and teachers alike.

Some children had a proclivity for telling lies. In most of these cases the children would admit subsequently to telling lies, if questioned. Another form of perversion was the impulse to steal, which was found in several children.

The father of a boy (aged 18) stated that he could not believe a word the boy uttered. The father, a strong seafaring man, confessed that the boy was beyond his control; he was afraid to ask the boy about any new article produced by him in case it had been stolen. This boy had a strong impulse to jump on and off horse or motor lorries and to travel for miles. In the two weeks before his examination he had been to Greenock and Dundee by one or both of these methods of transport.

The form of mental aberration in another boy was manifested by a desire to throw himself in front of tram cars and motor cars. The use of obscene language was another condition found in post encephalitics. One girl (aged 20), from a good home, had violent outbursts of temper, associated with obscene language. She was unconscious of any indiscretion.

Undoubtedly one of the greatest problems of the sequelæ of encephalitis lethargica, from a social point of view, is the "refractory" child or "adolescent."

A specific instance of moral perversion has been brought to the notice of this Department by the Police Procurator-Fiscal. A boy,

aged 16 years, who had suffered from encephalitis lethargica in 1924, has on three occasions been reported to the Police Procurator-Fiscal for petty theft. On the first occasion he appeared before the Central Police Court for a theft of fourpence, having stolen this small sum from the till in a hairdresser's shop. He was placed on probation for three years. About ten days later he was again before the Central Police Court for a similar offence, but the charge was not proven. Less than a week later he was found guilty of stealing cigarettes to the value of ten shillings. An endeavour is being made by the police officials, to whom a certificate of his illness has been rendered, to have him admitted to a mental institution.

Irritable Adult.—Two parents who had suffered from encephalitis lethargica confessed to lack of patience with their children. In almost all cases of post encephalitis this irritability was present. Other cases in this group showed symptoms of nervous exhaustion, indicated by sleeplessness, lack of concentration, and lack of energy.

"Parkinson" Adult.—Parkinsonism was found in children as well as in adults, but in adults it aids in forming a convenient classification.

The sign-complex known as Parkinson's Syndrome is recognised as a characteristic sequelæ of encephalitis lethargica. The interval between the acute stage of the illness and the onset of Parkinsonism is variable, but in the majority of cases it appeared between 9 and 18 months after the acute illness.

In only a few cases Parkinsonism manifested itself as an early sequelæ about 6 to 8 months after the initial illness. In these cases the condition was of a severe type, and remained for a long period. A secondary school pupil of 17 years of age developed an early and sudden onset of Parkinsonism 4 months after his acute illness. He was confined to bed, and his condition has remained stationary.

An insidious onset of Parkinsonism was a feature in the majority of cases.

All the features of this syndrome were not represented in the individual cases, but were represented in the cases collectively.

The sluggish cerebration and slow deliberate action were features of many of the cases examined. Mental depression was present in several cases; this produced in some cases a disrespect even for personal appearance. In one case there was suicidal tendency. This patient had attempted suicide on two occasions. In contrast to depression was the case of an adult male whose outlook on life was very optimistic. He carried his optimism to his work, and was working on a scaffolding only three weeks before being examined, when he presented the typical features of Parkinsonism. Another Parkinsonism case, who was confined to bed, battered his head on the wall of his room in his fits of temper.

Lack of concentration and loss of memory for recent events were recorded in several cases. One adult male was charged at the Police Court with assault, and was convicted.

A corresponding investigation was made of the cases admitted to Belvidere Hospital during the 1924 epidemic of the disease, and re-examined in 1925. The condition of each patient was personally investigated by Dr. C. M. Smith at intervals of six months and twelve months after the onset of the acute illness. The following is a summary of his results:—

The sequelæ of the disease were studied in 128 patients, and to gain an estimate of the degree of disablement existing among these patients they were classified into four groups, viz. :—

- (1) Cases showing neither sequelæ nor impairment, *i.e.*, apparently perfect recoveries.
Number in group :—49, *i.e.*, 38·2 per cent.
- (2) Cases showing slight impairment, but still able to continue at work or school with more or less difficulty.
Number in group :—41, *i.e.*, 32 per cent.
- (3) Cases showing marked impairment who were totally unfit for work or school, but were still able to go about.
Number in group :—28, *i.e.*, 21·9 per cent.
- (4) Cases showing very marked impairment, with gross organic changes, who were more or less confined to bed or in other institutions.
Number in group :—10, *i.e.*, 7·8 per cent.

The incapacity rate was therefore 61·8 per cent.

These results were from hospital cases, and doubtless for this reason gave a higher incapacity rate, especially as they include the slighter degrees of incapacity.

In addition to the above results, it was ascertained by comparison of the degree of impairment and the severity of the original attack that there existed a fairly high degree of correlation between these two factors, *i.e.*, the mild cases more often recovered and the severe cases more often were impaired.

SEQUELÆ OF ENCEPHALITIS LETHARGICA.

Where the sequelæ and degree of impairment were marked Dr. Smith recognised two groups.

(1) "*The Restless Naughty Child.*"—In this class the most constant features are insomnia, nocturnal restlessness, asthenia, pallor, psychic changes, and tics. "During the day he is restless and fidgety, and constantly on the move," as the parents say. One boy has threatened on several occasions to commit suicide. In the street he will address strangers with complete familiarity, and frequently he will behave in a cruel manner to his younger brothers and sisters.

As tested by the Binet-Simon scale, there is no impairment of intelligence; in fact, there is more a tendency to precocity. In their mental processes, however, a characteristic impairment is to be found. These patients cannot maintain concentration on one subject for any

length of time; it is as if the mind, like the body, partook in a general restlessness. At night they are very troublesome; they roll, turn, and toss about in bed; they stand up and stamp, spit, sing, whistle, shout, clap their hands, and make all peculiar manner of noises, grunting, "cheeping," "clucking," and blowing. One boy wanted to sharpen something with a knife all night long.

These performances continue to a late hour, when exhaustion brings on sleep which lasts till late in the forenoon. In one patient it was reported that on alternate nights the insomnia was absolute, the entire night being spent in restlessness and excitement. During the intervening nights he slept heavily for about twelve hours.

In the worst example of this kind—a boy of 6 years—there was a striking degree of precocity, combined with very definite evidence of moral degeneration; he would play with his own filth. At one time he contracted a habit of vomiting, and without effort or apparent feeling of sickness he could bring up mouthfuls of undigested food, which, if allowed to do so, he would consume. He would also attempt to embrace every one who came near. A year after the original infection he was in another hospital, and deterioration was so marked and he was so difficult to deal with that removal to an asylum was contemplated.

(2) "*Parkinsonism.*"—Parkinsonism is now well known to be one of the most important and characteristic results of an attack of encephalitis lethargica. The salient features of the Parkinson Syndrome are muscular rigidity, slowness in movements, slowness in cerebation, slowness in speaking, walking, or eating, salivation and tremors. The impairment of the mental processes is in contrast to what is seen in the "restless naughty child"—sluggish cerebation as contrasted with inability to maintain concentration. There is a feature of this syndrome to which attention should be drawn; the same sluggishness and slowness which qualify their thinking and movements are applied to their conative faculties. These patients have little or no initiative. In the advanced stages they will sit for hours on end—motionless; in cases which are not so advanced it is frequently reported that they will sit indoors and show no desire to go out.

Nine patients, a year after the attack, showed features of the Parkinson Syndrome to a marked degree, and 7 were then in other institutions. In all these cases the condition developed in less than six months after the original attack; in one it appeared immediately after, and in most within one to three months.

The most common features of the syndrome in these cases were muscular rigidity, slowness in cerebation, movements, &c., and salivation. Tremors were uncommon, only one example being found—a slow rotary movement of the head. The muscular rigidity was generalised except in one instance, namely, that of a boy of 11 years, in whom rigidity, with a slight degree of paralysis, was found to the right side of the face, the right arm, and the right leg. In a woman of 53 years the rigidity was so great that the mouth could not be opened nor the tongue protruded, and considerable effort was required to raise the eyelids.

SIGNIFICANCE OF THE SEQUELÆ.

The serious nature of the disease lies in the high proportion of those who develop sequelæ, and the long interval which may elapse between the onset of the acute illness and the onset of the sequelæ. During this interval between the onset of the illness and the development of the sequelæ the patient may be perfectly well, and although the sequelæ usually manifest themselves within a period of eighteen months from the onset of the acute stage of the disease, it may happen exceptionally that the interval extends from two to five years.

These descriptions are sufficient to reveal the existence of a new administrative problem, which has both medical and social bearings. It would appear that comparatively few of these patients are certifiable under the Lunacy Acts, and the definition of mental deficiency has apparently to be stretched to its utmost in order to include others. Among those who have been treated for prolonged periods in institutions amelioration of the symptoms has occurred, aided by a measure of re-education, but relapses on return home are very frequent. It is possible that different kinds of institutions would suit different types of cases. Many will require permanent institutional provision, and for these a hospital ward is scarcely suitable.

The extent of the problem in Glasgow is difficult to estimate. The table given above shows that there have been reported 683 cases and 174 deaths since 1918 when the affection became notifiable. This leaves 509 as still alive. Although during the outbreaks of 1923 and 1924 the cases were carefully sifted, there is no doubt that many were missed, and such patients now showing symptoms of sequelæ similar to those described are still coming to light, traceable to attacks in former years. In Dr. Davidson's general series the incapacity rate was 46 per cent., and in Dr. Smith's hospital series this figure was estimated at 61 per cent., both of which figures no doubt include many slighter degrees of impairment. Estimating the serious incapacity rate at 35 per cent., and allowing for "missed" and unreported cases (say 20 per cent.), the number of persons showing definite disability as the result of past infection may be estimated at somewhere about 200 cases. Of these about 25 per cent. will be of the Parkinson type.

The prominent position which is now occupied by infective diseases of the nervous system was made the subject of special investigation by Dr. A. K. Chalmers, who, in his Watsonian Lectures, delivered and published during the year, has dealt comprehensively with the history and incidence of those affections, with special reference to encephalitis lethargica.

Investigations by members of the staff include:—

- (1) The Special Fluid Sugar in Encephalitis—Quarterly Journal of Medicine, April, 1925.
- (2) Difficulties in the Diagnosis of the acute phase of Encephalitis in Children—Lancet, April, 1925.
- (3) Sleeplessness in Encephalitis—B.M.J., June, 1925.
By Dr. J. L. Halliday.
- (4) Thesis on Encephalitis Lethargica—Symptoms and Pathology—Awarded High Commendation.
By Dr. C. M. Smith.

MEASLES.

During the year there were reported 6,507 cases of measles, most of which occurred in the last three months when the customary biennial recrudescence of the disease began. The incidence during the early months of the year was low, but during October 957 cases occurred, as against 221 during September. The numbers reported during November and December were 1,953 and 2,571 respectively, and the epidemic was still in progress at the end of the year under review.

This was one of the mildest epidemics for its magnitude experienced in Glasgow during recent years. The history of measles mortality is given below:—

1881-90, ...	·680 per 1,000	1921, ...	·102 per 1,000
1891-1900, ...	·784 ,,	1922, ...	1·190 ,,
1901-10, ...	·573 ,,	1923, ...	·514 ,,
1911-15, ...	·586 ,,	1924, ...	·471 ,,
1916-20, ...	·389 ,,	1925, ...	·107 ,,

The death-rate per 1,000 persons living was ·107, the number of deaths being 118, and the case mortality of known cases 1·8 per cent., a very low figure. Of the 6,507 cases, 633, or 10 per cent., were treated in hospital. Owing to the comparative mildness of the outbreak the demand for hospital treatment was not so great as usual.

Measles Epidemic.—The epidemic wave of measles commenced simultaneously in the Northern and South-Western Divisions of the

City in September, 1925, the first wards infected being Woodside and Kinning Park. The spread of the disease was primarily confined to these divisions, the other wards infected being Cowcaddens, Ruchill, Maryhill, and North Kelvin, in the Northern Division, while Fairfield and Kingston in the South-Western Division were later invaded. The Central Division of the City, lying between these two divisions, was next involved, the wards infected being Blythswood, Anderston, and Sandyford. Up to the beginning of December the Eastern and South-Eastern Divisions had remained singularly free, and, with the exception of Dalmarnock and Calton, which had a number of cases of measles during December, these divisions had not been affected by the end of December.

The progress of measles through the City takes the form of small successive outbreaks in different areas rather than of a comprehensive and uniform epidemic.

As this epidemic of measles was still in progress during the early months of 1926, a detailed account of its characteristics is reserved for the Annual Report of next year. An opportunity was taken to make a more extensive investigation than usual, with special reference to its epidemiological features and to the parts played by the school and the tenement in the spread of the infection. A special inquiry was also instituted into the clinical variations met with in the course of the epidemic and the incidence of complications. These inquiries when completed will be embodied in a special report.

The chief complications of measles were as follows:—

(1) *Bronchitis*.—This condition was found in many cases on admission to hospital, and in a robust type of child tended to clear up satisfactorily. In a debilitated child this complication often proceeded to a capillary bronchitis, characterised by noisy, wheezy respirations and acute suffocative signs.

(2) *Broncho-pneumonia*.—This type of pneumonia was not so common as the above-mentioned capillary bronchitis type. It tended to occur later in the disease, and was associated with pale toxic facies and cyanosis of the lips: this condition appeared to be a further stage in the development of a capillary bronchitis.

(3) *Croup*.—This was not a common complication. A certain number of cases which were sent into hospital as laryngeal diphtheria proved later to be laryngeal obstruction due to measles.

(4) *Otitis Media*.—This complication when it occurred primarily in association with the attack of measles must be distinguished from those cases where an attack of measles caused an exacerbation of an old focus. The condition tended to clear up in those cases where otitis media was primarily associated with measles.

(5) *Enteritis*.—This was a late and serious complication characterised by marasmus, sunken eyes, and the absence of vitality. Enteritis was a frequent cause of death.

(6) *Corneal Ulceration*.—This condition was rare during residence in hospital, and when it did occur it was usually present late in convalescence. As in the case of otitis media, a history of previous localised infection was obtained,

WHOOPING-COUGH.

The number of cases of this disease registered during 1925 was 12,194, compared with 10,042 in 1924 and 4,942 in 1923. Of the total cases, 878 were treated in hospital, and the case-rates, together with rates for previous years, are contained in Table XVIII. The heavy incidence for the present year is due to the occurrence of the disease in epidemic form during the winter and spring months.

As stated in the report for last year, the disease was made notifiable in the City for a period of three years from 10th July, 1924.

During the year a considerable volume of home visitation was undertaken by Health Visitors deputed for the purpose. The outbreak, though very extensive, was mild, its case fatality rate being 5·8 per cent.

CHICKENPOX.

There was considerable prevalence of chickenpox during 1925. The cases registered numbered 7,157, as compared with 5,076 in the preceding year. The numbers treated in hospital and the case-rate per million are given in Appendix Tables XVII and XVIII. The prevalence of this disease has been more or less heavy during the past five years, with the exception of 1922. The period of heaviest incidence was during the spring, although it was again evident during the late autumn and winter.

The incidence was similar for both sexes at each age period, and more than half the cases were registered between 5 and 10 years of age. The ward distribution was pretty general; the largest number of cases occurred in Hutesontown, Gorbals, and Dalmarnock.

OTHER INFECTIOUS DISEASES.

A record of other infectious diseases dealt with, together with the number of each treated in hospital, is given in Appendix, Table XVII. Among these is included ophthalmia neonatorum, and the various forms of pneumonia which are dealt with in other sections of the report, and there remains trachoma and certain other diseases which are here briefly referred to.

ANTHRAX.

No human case of anthrax occurred in the City during the year, although in December a man was brought here from West Perthshire by motor with a suspected pustule on the arm. He was removed to Ruchill Hospital, where the diagnosis was confirmed as anthrax. The source of infection was not traced.

On several occasions animals and carcasses affected with the disease have been reported usually at the slaughter-house. In these instances inquiries are always made as to the origin of the disease while the contacts are kept under observation. The following notes summarise the action taken in this respect:—

Towards the end of April the hide of a cow which had died from anthrax was consigned to a hide broker in Glasgow from a village in one of the near-by counties. This hide on inquiry was found to have come from Liverpool. The usual precautions were taken, and the Railway Company advised to have all employees likely to have handled the hide examined, especially any with sores.

The veterinary surgeon reported by telephone, on 20th June, that the carcass of a black bullock had just been reported from the slaughter-house as infected with anthrax. The animal formed part of a group of eight obtained at a auction sale at Perth on behalf of a firm in Glasgow. On inquiry it was found that about 70 head of cattle had been obtained by the firm in question on the same date as the infected animal, and it was not possible to trace the seller of the one affected. The carcass was cremated.

Goat-skin thongs, used for binding orange boxes, which on former occasions have been found to be infected with anthrax, are sampled at intervals. On only one occasion, during 1925, was a positive finding obtained.

DIARRHŒA AND ENTERITIS.

The incidence of these diseases has been considerably reduced during recent years, the number occurring being little more than half those of a decade ago. About 60 per cent. of the total deaths occurs among infants in the first year of life, and the variations in the numbers for that age period, now that the effect of high summer temperatures is less apparent, are largely dependent on the birth-rate.

The following table shows the numbers of deaths at three age periods for 1925, compared with the respective number during the two preceding years:—

		AGE IN YEARS.				
		-1	-5	5+	Total.	
1923,	...	219	65	74	358	
1924,	...	256	71	84	411	
1925,	...	264	68	84	416	

The age and sex distribution of these were as follows:—

Age	Males	Females	Total
- 5,	3	—	3
- 10,	6	2	8
- 15,	3	2	5
- 20,	2	5	7
- 25,	3	3	6
- 35,	2	4	6
- 45,	—	1	1
- 55,	2	—	2
- 65,	—	—	—
+ 65,	1	2	3
	<hr/>	<hr/>	<hr/>
	22	19	= 41
	<hr/>	<hr/>	<hr/>

These cases have been dealt with as follows:—

Attending Corporation Dispensary,	24
,, Private Doctor,	1
Beyond the Boundary,	8
Gone away, no address,	1
Not attending any Dispensary,	2
Resumed School,	2
In Hospital,	3
	<hr/>
	41
	<hr/>

There were admitted to hospital during the year for the first time 31 cases who could not receive the necessary treatment at the dispensary, and 5 of these were readmitted.

The cases on the register may be summarised as follows:—

1. *Under Treatment*—

At the Corporation Dispensary,	218
At other Dispensaries,	12
Treated by Private Practitioners,	9
,, in Institutions,	12
	<hr/>
	251
	<hr/>

2. *Not under Treatment*—

Refused treatment or unable to attend,	64
Eyes stated to be well,	168
Not Trachoma,	131
Left City, or removed, and not found,	76
Living beyond the Boundary,	95
Dead,	12
	<hr/>
	546
	<hr/>

TROPICAL DISEASES.

In 1925, 19 cases of malaria were registered, compared with 25 for the preceding year, while 12 cases of dysentery were notified as against 14 in 1924.

REPORT ON LOCAL MOSQUITOES.

The following memorandum on the subject of mosquitoes is a continuation of reports on this subject previously submitted by Dr. W. C. Gunn, and published in the Annual Reports for 1923 and 1924:—

The observations on the life history of mosquitoes in the Glasgow area, made in the 1924 report, have been substantially corroborated during the period under review, viz., June, 1925, till June, 1926.

An examination of the table drawn up from the Registrar-General's report shows that the weather throughout the winter months was of a severe type. During November and December there were long spells of keen frost, with hard freezing of ponds and marshland—in fact, some of the latter must have been almost frozen solid. This might at first give one the impression that the hibernating larvæ, both anopheline and culicine, would suffer severely.

A visit was paid to Possil Marsh on 29th January after the hard frosts had passed, for the purpose of comparing the numbers of larvæ present at that time with the same time last year. Larvæ were easily taken in the sheltered parts of the marsh and among the willows, but they were less plentiful. This may be ascribed to a wider dispersal of the larvæ and not to an actual diminution in numbers, because there was more water in the loch at that time than I had hitherto seen. Frost, snow, and cold weather generally do not appear to hinder materially the hibernating purpose of the larvæ.

An interesting observation was made on the longevity of hibernating larvæ in the laboratory, and specimens of *Anopheles bifurcatus* larvæ, taken on 27th August, 1925, lived without moulting until 19th March, 1926, in a bottle. However, the hope that these larvæ would live to pupate later on was not realised, as the larvæ of a stone fly appeared in the bottle, and coincidentally the mosquito larvæ disappeared.

Observations at the Marsh on 29th April revealed the presence of pupæ. It may be noted that the earliest pupation, observed in 1925, was on 16th April, when both culicines and anophelines were pupating, so that this phase in the life history may be taken to occur about this date each year.

During the early autumn, 1925, observations were made at various places on the Firth of Clyde and in the Vale of Garnock, and anopheline and culicine larvæ were found. In the flats and in brackish water, just above high-tide mark near Langbank, larvæ of

ochlerotatus detritus were taken. *Anopheles bifurcatus* were found in a ditch on the main road at Ravenscraig (Gourock). In fresh-water pools on the shore at Blackhouse, near Skelmorlie, *Anopheles bifurcatus* were found, and in brackish water pools near-by larvæ of *Ochlerotatus detritus* were also obtained. From a watering trough, at a farm near Largs (Ayrshire), larvæ of *Culex pipiens* were obtained, and both anopheline and culicine larvæ were found in abundance in the marshes at Ardeer and at Castle Semple Loch. The inference which may be drawn from these observations is that careful search in suitable marshes in the low-lying parts of Renfrewshire and North Ayrshire would reveal the presence of mosquito breeding.

Since the latter part of this spring Dr. James Turner, who was a pupil assistant in the department, has lent his help in this survey, and he has found *Anopheles bifurcatus* at the following places:—

- (1) Darnley, near the old rifle ranges.
- (2) Johnstone Loch, near Gartcosh.
- (3) Bishop Loch, near Gartloch Asylum.

At all these places culicine larvæ have also been taken, and at Glenboig. The most abundant culicine is *Culicella morsitans*.

The only type of anopheline so far found is *Anopheles bifurcatus*, but to those species of culicines reported upon last year the following have been added:—

- Ochlerotatus* (*Aedes*) *detritus*, and
Culicella morsitans (corroborated by Professor Ashworth, F.R.S.,
 Edinburgh).

The total number of species which have now been identified in this locality are:—

- (1) *Anopheles bifurcatus*.
- (2) *Ochlerotatus nemorosus* (*Aedes punctor*).
- (3) *Theobaldia annulata*.
- (4) *Culex pipiens*.
- (5) *Culicella morsitans* (*Theobaldia morsitans*).
- (6) *Ochlerotatus detritus* (*Aedes detritus*).

The following are examples of breeding places in which larvæ have been taken:—

- Marsh lands, such as Possil Marsh,
 Overgrown wayside ditches,
 Metal drinking trough for animals,
 A forgotten coal bucket,
 A jam pot,
 Tree hollow, and
 Brackish pools.

I have no doubt that if careful search is made during the breeding season, *i.e.*, from June until September, this list of breeding places could be multiplied over and over again.

METEOROLOGICAL TABLE EXTRACTED FROM THE REGISTRAR-GENERAL'S REPORT FOR
GLASGOW, 1925-1926.

WEEK ENDING.	TEMPERATURE (Fah.)			Rainfall in inches.	Hours of bright Sunshine.	REMARKS. Monthly Summary.	
	Maximum.	Minimum.	Mean.				
1925.							
July	4,	71°·3	50°·3	60°·6	0°·20	23°·3	Mean temperature for month 60·2. Mean daily range of temperature 14·8. Rain 2·02 inches.
"	11,	71·3	50·5	58·2	0·15	33·8	
"	18,	73·0	47·8	60·9	0·88	25·0	
"	25,	77·1	52·8	63·6	0·34	36·5	
August	1,	69·1	48·0	57·5	0·45	33·9	Mean temperature for month 58·4. Mean daily range of temperature 13·9. Sunshine aggregates were below normal. Rain 2·80 inches.
"	8,	69·5	48·2	58·8	1·07	27·5	
"	15,	71·2	50·0	60·3	0·71	42·4	
"	22,	69·6	47·6	58·9	0·66	37·5	
"	29,	67·7	46·0	57·0	0·66	29·1	
September	5,	64·4	43·8	53·5	0·24	37·1	Mean temperature for month 51·2. Mean daily range of temperature 12·8. Snow down to 2,000 ft. on 3rd, 4th and 9th. Rain 3·28 inches.
"	12,	59·9	38·9	50·5	0·86	23·1	
"	19,	61·7	40·7	52·4	0·94	27·4	
"	26,	57·7	38·2	49·2	0·97	33·2	
October	3,	61·1	42·9	53·0	0·14	9·0	Mean temperature for month 49·1. Mean daily range of temperature 10·9. Rain 3·34 inches. 13th, 14th, 17th, snow in N. districts.
"	10,	61·9	39·2	51·2	0·00	28·0	
"	17,	57·0	29·0	43·3	0·88	13·7	
"	24,	58·6	39·0	49·8	1·36	6·5	
"	31,	56·2	44·8	51·1	0·87	8·8	
November	7,	54·0	38·5	46·8	0·29	7·3	Mean temperature for month 37·8. Mean daily range of temperature 9·8. Rain 1·03 inches. Very wintry month. Fogs 17th to 23rd.
"	14,	43·2	27·3	35·8	0·01	20·3	
"	21,	44·3	28·4	36·3	0·21	0·1	
"	28,	48·0	25·0	36·1	0·10	19·1	
December	5,	39·4	24·9	33·5	0·14	12·1	Mean temperature for Month 35·1. Mean daily range of temperature 9·4. Rain 3·24 inches. Very wintry month. Flooding because of melting snow.
"	12,	51·2	25·3	39·6	0·91	9·3	
"	19,	50·4	23·1	36·6	0·62	5·0	
"	26,	44·3	24·0	31·1	0·64	4·6	
1926.							
January	2,	51·4	29·3	41·1	1·44	0·7	Mean temperature for month 40. Mean daily range of temperature 7·3. Rain 5·56 inches. Very wet month.
"	9,	49·9	37·8	43·0	0·96	3·1	
"	16,	52·5	30·3	40·3	0·19	0·1	
"	23,	48·2	31·6	38·7	2·08	5·1	
"	30,	51·0	36·8	43·4	0·95	7·7	
February	6,	48·2	31·2	40·7	1·38	1·1	Mean temperature for month 41·3. Mean daily range of temperature 8·1. Rain 4·69 inches. Wet month.
"	13,	44·7	27·3	36·6	0·48	7·7	
"	20,	50·6	33·0	42·2	1·30	14·4	
"	27,	54·4	42·1	47·9	1·28	3·1	
March	6,	52·2	31·2	43·7	0·90	11·7	Mean temperature for month 43·0. Mean daily range of temperature 9·7. Rain 2·56 inches. Easterly winds.
"	13,	52·0	33·0	45·3	1·17	10·8	
"	20,	52·1	37·0	44·7	0·02	7·6	
"	27,	46·5	31·0	39·2	0·02	15·8	
April	3,	62·1	35·0	46·2	0·84	13·1	Mean temperature for month 47·0. Mean daily range of temperature 13·5. Rain 2·32 inches. Mild conditions.
"	10,	60·9	38·8	49·8	0·07	21·8	
"	17,	57·8	36·6	46·6	1·10	31·1	
"	24,	53·9	38·1	46·4	0·20	31·9	
May	1,	53·9	40·0	47·2	0·59	10·0	
"	8,	53·7	35·1	45·1	0·81	29·0	
"	15,	55·8	33·0	45·8	0·84	40·1	

During the summer several reports of fatal biting by mosquitoes appeared in the Press in England. The deduction which may be drawn from a description of these cases is that septicæmia was the cause of death, and that this seemed to be consequent upon the scratching of an insect bite. The writer observed one severe case of mosquito bite near Glasgow. The bite was on the ankle, and consisted of an acutely tender and raised central papule, surrounded by a red œdematous area with a diameter of about 2 inches, causing swelling of the whole ankle and dorsum of the foot. The type of mosquito producing this lesion was not determined, but there is no doubt in this case about the insect being a mosquito.

Anti-mosquito Measures.—The problem of exterminating mosquitoes from their breeding areas bristles with difficulties, and if it were at all necessary in the vicinity of Glasgow it would be impracticable. As regards Possil Marsh, for instance, any question of oiling or draining does not at present arise, although should the area in its vicinity become developed for housing purposes, as is likely, it is possible that measures may have to be taken to prevent mosquito breeding. At present the Marsh does not give rise to any danger to public health. Much could be done throughout the country by people preventing the unnecessary collection of stagnant water about their grounds, or leaving neglected receptacles lying about which will hold water and afford breeding facilities, if they find mosquitoes or gnats troublesome.

In the treatment of mosquito bites, I have found that a solution of camphor and menthol in absolute alcohol applied to the bite appears to be an efficient remedy. Scratching should be avoided, as this appears to be the real cause of some of the fatal cases which have occurred consequent upon insect bites.

ACUTE INFECTIVE JAUNDICE.

No case has been recorded, nor any evidence of the disease discovered among rats.

DIABETES.

SUPPLY OF INSULIN.

On 10th March, 1924, the Scottish Board of Health, in anticipation of Parliamentary powers being obtained, issued a circular to Local Authorities authorising them to distribute insulin to persons suffering from diabetes, not otherwise provided for, and who, in the opinion of the Local Authority, required assistance in obtaining a supply of the drug. At that time the cost was ten shillings per 100 units, compared with two shillings at present. Following this circular the Committee on Health, on 12th March, 1924, remitted to the Chairman of the Health Committee, along with the Town-Clerk and the Medical Officer of Health, to prepare a scheme for submission to the Board.

By a further letter of 14th March, 1924, the Board sanctioned the provision of insulin for expectant and nursing mothers and children under five years of age, under the scheme of Maternity Service and Child Welfare, with power to remit the whole or part of the cost in necessitous cases.

The rapid fall in the price of insulin to two shillings per phial (100 units) rendered the proposed scale of charges inapplicable, but experience showed that no usual scale of necessitousness could be applied to the income of families which included a case of diabetes. Apart from the cost of insulin, the cost of special diet is so heavy as to upset any recognised averages, and it is a feature that the greater the income the greater the amount spent on the patient. Another consideration was that in some cases only a small quantity of insulin would be required per week, while other cases had been prescribed large doses, so that any charge would have become related rather to the degree of acuteness of the illness of a patient than to the family purse. On the other hand, the major proportion of the cases would have fallen within any reasonable scale, and the amount to be recovered from the others would have been comparatively small.

The following is a summary of the cases dealt with between March, 1924, and December, 1925:—

Cases applying in 1924,	14
„ died during 1924,	2
„ discontinued supply during 1924,	1
	— 3
	—
Cases on Roll at 31st December, 1924,	11
„ Cases applying during 1925,	33
	—
	44
Cases who died during 1925,	6
„ „ discontinued supply during 1925,	11
	— 17
	—
Leaving Cases on Roll at 31st December, 1925,	27
	—

Of the 12 cases who discontinued treatment, 3 were inmates of Corporation hospitals, and receiving treatment for other diseases, and the supply of insulin was issued from the office to the hospitals during the period of treatment.

Inquiry regarding the cases discontinuing treatment elicited the following information:—

Insulin discontinued under medical advice,	...	...	3
" " against " "	...	...	1
" No one to use needle properly,"	...	...	3
Gone on protracted holiday,	...	...	1
Indefinite,	...	...	1
			<hr/>
			9
			<hr/>

The reason given by the third group above for discontinuing treatment can scarcely be regarded as accurate, but on a recent inquiry the three were found still to be alive.

The following summary indicates the variations in dosage:—

No. OF CASES.					DAILY AMOUNT.
3	...	...	...	...	Under 10 Units.
8	...	...	...	...	" 20 "
8	...	...	...	...	" 30 "
9	...	...	...	...	" 40 "
2	...	...	...	...	" 50 "
6	...	...	...	...	50 Units and over.
11	...	...	...	...	Not known.
<hr/>					
47					
<hr/>					

The last item includes the hospital cases for whom a bulk supply was issued. The others only called at the office once, and did not make any application for a renewal of supplies, some of them preferring to purchase locally for their own use. Till the end of 1924, 506 phials of 100 units each were distributed, and during 1925, 1,688 phials, at a total cost of, approximately, £274.

The following is a brief outline of present procedure:—

- (1) Applicants or an immediate relative are requested to call at the office, where information is obtained as to duration, &c., of illness, previous treatment, nature of medical supervision, home and economic conditions;
- (2) A limited supply of insulin is then issued, based on the daily number of units to be administered, which will ensure the return of the applicant or relative within about three weeks.

Application is usually made on the recommendation of a doctor, and the patient or relative is advised that the supply will

only be continued subject to medical supervision, although that may be reduced to the lowest possible number of attendances. The main object of the limitation of supplies is to ensure the continuance of medical supervision, and when it is apparent that this is satisfactory, and that the drug is being administered under reasonable supervision, the period of supplies may be extended to four weeks, thus reducing the number of attendances on or visits from a doctor. As a rule, the doctor trains the patient or a relative to administer the drug, so that the calls on the doctor are reduced to the lowest minimum consistent with supervision.

When application for supplies is not renewed, inquiry is made through the nursing staff as to the reason therefor.

In practice a scale of necessitousness has not been applied, and appears to be inapplicable. In any event, the total cost incurred (£168 16s. for 1925) is not great, and the proportion likely to be recovered very small.

The following summary indicates the class of cases dealt with:—

Married Women,	29
Children under 16 years,	6
Young Adults not entitled to National Insurance,	2
Elderly Spinsters,	3
Retired Clergyman,	1
Corporation Hospital Cases,	6
	<hr/>
	47
	<hr/>

SECTION V.

RESPIRATORY DISEASES.

These affections, the prevalence of which largely depends on weather conditions and on the presence or absence of influenza, vary in their incidence and severity from year to year. Had it not been for the fog, accompanied by the low temperature, which prevailed during the week ending 21st November, the death-rate from these affections would have reached a comparatively low figure, as there was no exceptional prevalence of pneumonia apart from this experience. The following table which gives the death-rates for recent years shows the fluctuations which occur from year to year, and the serious mortality which they cause:—

Year.	Pneumonia.		Influenza.		Other Respiratory Diseases including Croup.	
	Deaths.	Rate per million.	Deaths.	Rate per million.	Deaths.	Rate per million.
1922	2,303	2,129	767	709	1,477	1,365
1923	1,400	1,285	65	60	972	892
1924	2,198	2,006	412	376	1,283	1,171
1925	1,665	1,517	210	191	1,098	1,000

The death-rate from pneumonia bulks prominently among these figures. Acute primary pneumonia and acute influenzal pneumonia became notifiable diseases in 1919 under the Infectious Disease Regulations of that year, since when there has been a large and increasing volume of admissions of patients to the infectious disease hospitals, causing a considerable strain on the available accommodation. The demand could, in fact, only be met by the evacuation of a tuberculosis ward at Knightswood Hospital and of two wards at Robroyston Hospital for this purpose, thus repeating the experience of previous years. Even then there was occasionally a small waiting list. The total number under treatment on any one day reached 468 on 2nd December. The extent to which the treatment of pneumonia in hospital is now undertaken is shown in the following tabular statement, which gives the yearly notifications and the number treated in hospital since the commencement of notification.

Year.	No. of Cases.		Of which removed to Hospital.	
	Prim. Pneum.	Infl. Pneum.	Prim. Pneum.	Infl. Pneum.
1919	1,008	—	230	—
1920	4,030	500	1,440	267
1921	3,318	274	1,490	179
1922	5,967	605	2,568	262
1923	4,346	119	2,576	80
1924	6,746	526	3,687	268
1925	5,802	303	3,446	177

This table shows that 3,623 patients, or 60 per cent., of the total notified as pneumonia or influenzal pneumonia were admitted to the hospitals of the Local Authority. This does not include the admissions to the hospitals of the Poor Law Authorities, who have co-operated with the department in times of pressure on the accommodation, nor does it include patients admitted to the general hospitals. Of the 5,802 patients notified during the year with acute primary pneumonia, 1,665 died—a case mortality rate of 28·7 per cent. Children suffering from broncho-pneumonia formed a large proportion of the patients treated in hospital. This policy is essentially a branch of Child Welfare work, and it may be pointed out that 51 per cent. of the admissions to hospital were children under five years of age. Of the total cases of acute primary pneumonia registered, 3,479 were males and 2,323 were females, and the incidence among both sexes was greatest in the first year of life and in children between one and five years of age. The seasonal distribution of this disease is shown in Table XIX in the Appendix.

INFLUENCE OF FOG ON RESPIRATORY DEATH-RATE.

The November fog had an important influence on the incidence and death-rates from respiratory diseases. Fog prevailed to a limited extent in the 9th, 11th, 13th, 16th, and 17th of the month, but became "dense" during the four days 18th to 21st November. The following Report was submitted to the Committee on Health:—

During the four weeks ending 28th November, 1,468 deaths were registered, as compared with 1,224 for the same period last year. This increase referred almost entirely to the last two weeks of the month—*i.e.*, during the fog week and that following—when the death-rates became 18·7 and 21·0 respectively, against 15·6 and 16·6 for the same weeks of last year. The number of deaths of children under

five years of age was practically unaffected, the increase in the mortality over last year being largely confined to those over 60 years of age. The fog thus affected principally older people. It will also be noted that the mean temperature before and during the period of the fog was low— $35\cdot8^{\circ}$, $36\cdot3^{\circ}$, and $36\cdot1^{\circ}$ for the three weeks ending 28th November. This appears to indicate that when fog is associated with low temperature the respiratory death-rate among older people is influenced very considerably, although its effect is not evident in the case of children.

The following statement was submitted by the Corporation Chemist:—

SUMMARY OF CONTINUOUS OBSERVATIONS TAKEN BY AIR FILTERS
PLACED IN POSITION IN VARIOUS PARTS OF THE CITY.
NOVEMBER, 1925.

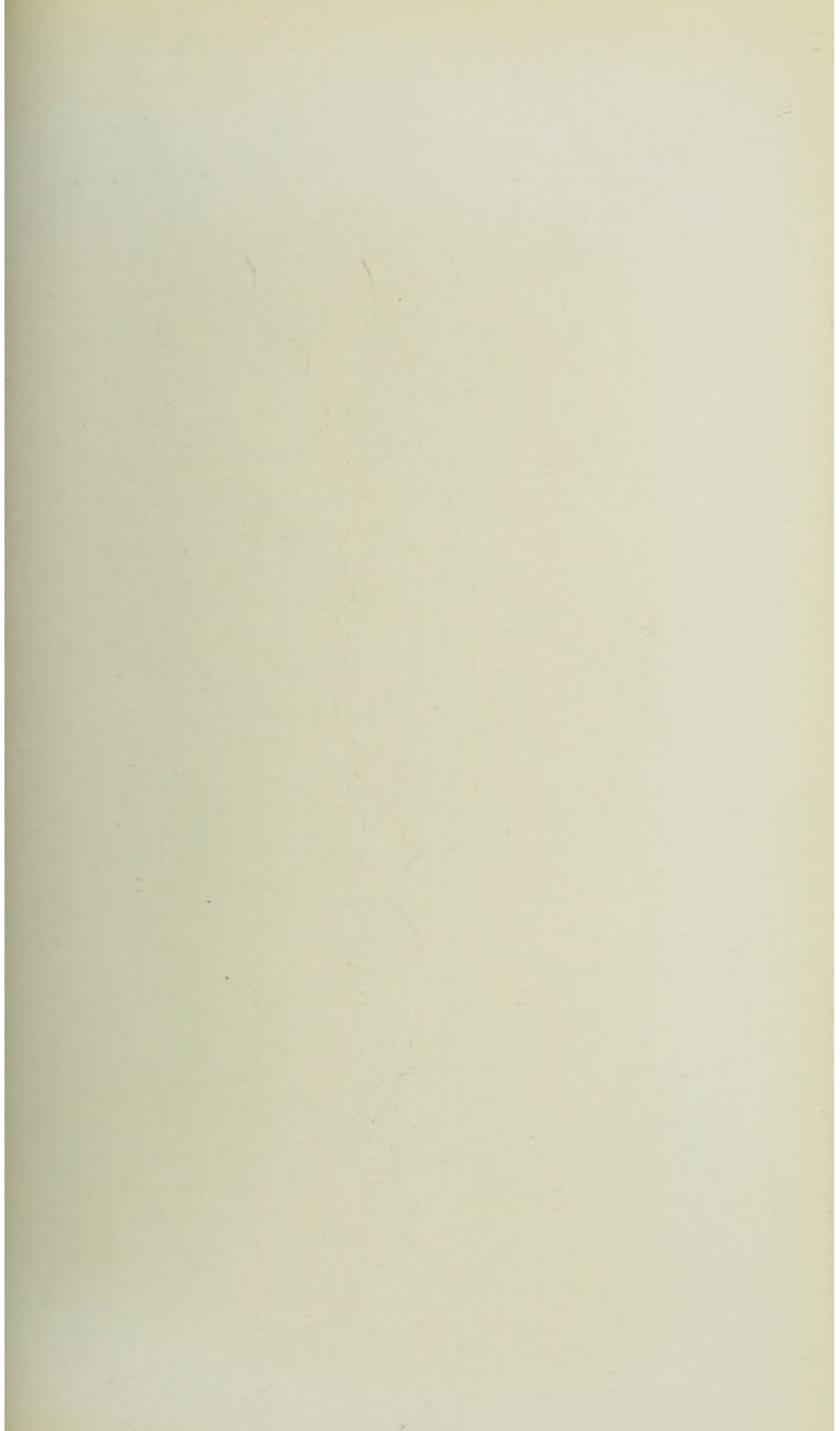
Station.	Hours of Fog.	Maximum Impurity. Expressed as Grains of Soot inhaled per 1,000 persons, per 24 Hours.	Minimum Impurity.
Glasgow Cross, ...	89½	1209·6	30·2
Govan,	73½	1088·6	24·6
Belvidere,	19½	514·1	11·3
Maryhill,	6½	362·9	11·3
Queen's Park, ...	(Filters out of order.)		

The following observations were made by Dr. R. M. Buchanan, City Bacteriologist:—

SUSPENDED PARTICLES IN THE AIR DURING THE FOG,
FOR THE WEEK ENDING 21st NOVEMBER.

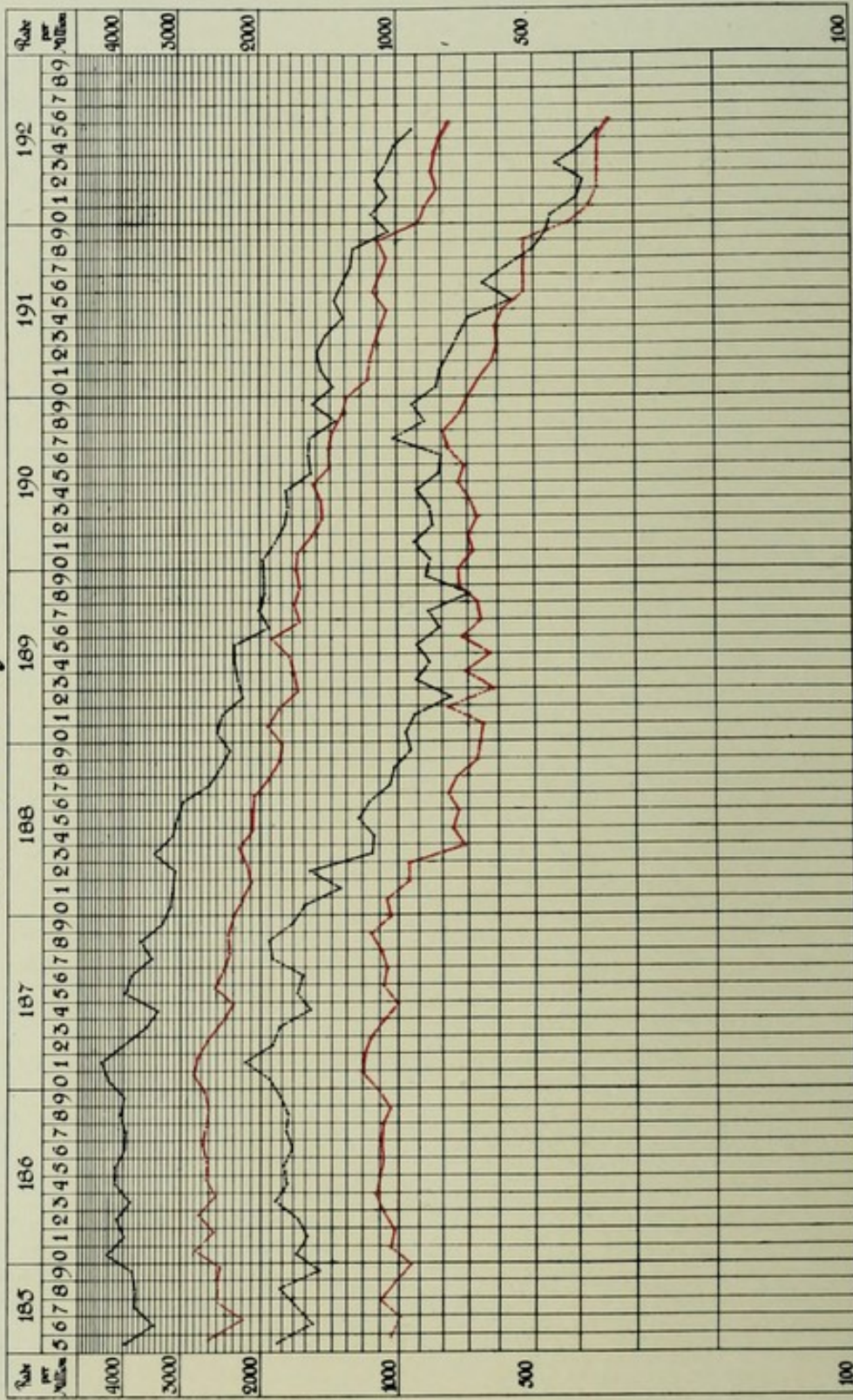
As a measure of the suspended matter in the air during the fog of last week, a microscopical count of the number of dust particles per cubic centimetre was made. Observations were taken in George Square, as representing the centre of the City. For purposes of comparison, observations were also made in Hillhead and Anniesland, as representing the middle and extremity of a four-mile radius, and at two places outside the City boundary. The air was examined by means of Owen's apparatus, and the results obtained showed an average of 31,000 of dust particles per cubic centimetre (equal to 508,000 per cubic inch) in George Square, as compared with 8,300 in Hillhead, 4,200 in Anniesland, 2,700 in Bearsden, and 180 at Auchindren, on the Stockiemuir Road. In dry weather the average number of particles suspended in the air in the centre of the City is about 5,000 per cubic centimetre; in wet weather the average stands about 3,700.

Date.	Time.	Place.	Condition of Atmosphere.	Number of Particles per Cubic Centimetre.
Wednesday, Nov. 18	4 p.m.	George Square,	... Dense fog,	39,000
Thursday, ,, 19	3 p.m.	,,	... ,,	30,500
Friday, ,, 20	3 p.m.	,,	... ,,	25,000
Saturday, ,, 21	9.45 a.m.	Hillhead,	... Slight fog,	8,300
,, ,, 21	1.30 p.m.	,,	... Dense fog,	25,600
,, ,, 21	11 a.m.	Anniesland,	... Slight fog,	4,270
,, ,, 21	11.20 a.m.	Bearsden (North End),	Haze,	2,740
,, ,, 21	11.50 a.m.	Top of Stockiemuir Rd.,	Clear,	180



Tuberculosis, Pulmonary and Non Pulmonary Death-rates per Million for Glasgow and Scotland from 1855.

Shown on Arithlog Scale.



Pulmonary Tuberculosis : Glasgow — Scotland

 Non Pulmonary Tuberculosis : Glasgow - - - - - Scotland

The following table shows the days of fog, the prevailing temperature conditions, and the vital statistics of the period. It will be noted that the effect of the fog impressed the vital statistics for a considerable period after its cessation:—

	Nov. 7	Nov. 14	Nov. 21	Nov. 28	Dec. 5	Dec. 12	Dec. 19	Dec. 26	Jan. 2
		Slight fog, 9th, 11th, 13th	Slight fog, 16th, 17th	Dense fog, 18th to 21st					
General D/R, ...	14.8	15.0	18.7	21.0	21.2	22.1	19.9	18.9	18.8
Deaths over 60, ...	100	88	148	170	162	172	153	132	154
" under 1 year, ...	70	73	64	53	66	75	70	52	51
" under 5 years, ...	97	103	104	109	113	116	104	103	91
" Pneumonia and other Resp'y Diseases, ...	62	72	82	128	137	150	114	89	76
Mean Temperature, ...	46.8	35.5	36.3	36.1	33.5	39.6	36.6	31.1	41.1
Maximum " ...	54.0	43.2	44.3	48.0	39.4	51.2	50.4	44.3	51.4
Minimum " ...	38.5	27.3	28.4	25.0	24.9	25.3	23.1	24.0	29.3

PULMONARY TUBERCULOSIS.

The steady decline in the incidence of tuberculosis has continued, and, for the first time in the history of the City, the death-rate for pulmonary tuberculosis has fallen below one per thousand, the rate being .922 per thousand, as compared with 1.006 during the previous year. This reduction, which amounts to 84 per million, is the largest annual diminution since the war years. The number of new cases reported, 1,600, is also the lowest yet recorded. As this behaviour of tuberculosis is a very striking one, the chart published in 1923 has been brought up to date, and is here republished as a logarithmic curve, which shows the decline in this affection since 1870.

No material change in administrative procedure has taken place during the year. The dispensary services are proving of increasing utility, and are being largely used for diagnostic and consultation purposes by individual practitioners. The diagnosis of tuberculosis of the lung is often a matter of considerable difficulty, in view of the prevalence of other respiratory disorders in the City. This, which is perhaps the principal function of these dispensaries, is greatly aided by the up-to-date facilities provided at Ruchill Hospital for X-ray diagnosis. A description of this work from the dispensary standpoint was included in

last year's report. This year Dr. Fergus L. Henderson, in the attached report, reviews the work carried out at both Ruchill and Robroyston Hospitals. At the former over 2,000 patients were photographed and reported upon, mostly chest cases; at the latter 600 were examined, mostly cases of bone and abdominal tuberculosis. These facilities have proved of great value to the community, and are reflected in greater accuracy in administration, as well as treatment, with corresponding saving in expense.

Artificial Light Treatment.—A special report was prepared at the end of the year, which reviewed the work done under this head in respect of the tuberculosis and Child Welfare schemes.

At Robroyston Hospital (which has about 430 beds for non-pulmonary tuberculosis) there are five arc lamps (two of 75 amperes and three of 20 amperes) and a mercury vapour lamp. The results, which have been very satisfactory, are reviewed in the report referred to, and in the Annual Report of the hospital. During the year the establishment of facilities for the indoor treatment of patients at Baird Street Reception-house was authorised, 24 beds for children up to 15 years of age being devoted to this purpose; a portion of the building was fitted with eight arc lamps and a mercury vapour lamp. The outdoor Clinic at the same place has a battery of ten lamps, and sessions are held there daily as follows:—

CARBON ARC LAMP INSTALLATIONS.

MALES.—Clinic No. 1,	...	Ground Floor,	...	9.30 a.m.
„ 2,	...	„	...	1.30 p.m.
„ 3,	...	„	...	6.30 p.m.
FEMALES.—Clinic No 5,	...	Top Floor,	...	1.30 p.m.
„ 6,	...	„	...	6.30 p.m.
CHILDREN.—Clinic No. 4,	...	In-patients,	...	—
„ 5,	...	Top Floor,	...	1.30 p.m.

QUARTZ MERCURY VAPOUR LAMP.

MALES AND FEMALES.—Top Floor—Afternoon and Evening by appointment.

Existing Institutional Accommodation.—The total available beds for the treatment of all forms of tuberculosis amounts to, approximately, 1,330, or 1·2 per thousand of the population. Of these some 450, of which 430 are at Robroyston, are for the non-pulmonary, or surgical forms, of the disease. There were treated in institutions during the year 2,594 patients in all, and 504 for non-pulmonary tuberculosis. This is somewhat fewer than were

treated last year, owing to the demand made on hospital accommodation for the treatment of pneumonia, wards at Knightswood and at Robroyston Hospitals having to be evacuated for this purpose.

The accommodation is distributed as follows:—

	Early or Sanatorium Cases.	More Advanced Cases.	Both Types.	Observa- tion Beds.	Non-Pul- monary or Surgical.	Total.
Corporation Institutions—						
Ruchill Hospital,...	—	238	—	34	—	272
Robroyston Hospital, ...	—	118	—	—	430	548
Knightswood Hospital, ...	—	44	—	—	—	44
Bellefield Sanatorium, ...	52	—	—	—	—	52
Other Institutions—						
Dunblane,...	12	—	—	—	—	12
Bridge of Weir Sanatorium,	70	—	—	—	10	80
Ochill Hills Sanatorium,...	50	—	—	—	—	50
Lanfine Home, ...	—	25	—	—	—	25
Strathblane, ...	—	—	—	—	10	10
Darnley, ...	10	—	—	—	—	10
Seaforth Sanatorium (Convalescent Cases), ...	—	—	—	—	14	14
Hairmyres (Training Colony),	7	—	—	—	—	7
Poor-Law Institutions—						
Stobhill Hospital,...	—	—	110	—	—	110
Barnhill Hospital, ...	—	54	—	—	—	54
Southern General Hospital,	—	—	30	—	—	30
Eastern District Hospital,	—	12	—	—	—	12
	201	491	140	34	464	1,330

Future Accommodation.—The completion of Mearns Kirk Hospital and Sanatorium will (a) provide additional accommodation for the treatment of the non-pulmonary forms of tuberculosis, and (b) will allow a rearrangement in the existing accommodation to be made for the treatment of male and female patients suffering from tuberculosis of the lungs. At Mearns Kirk there will be (a) provision for 328 cases of non-pulmonary tuberculosis in children, and (b) a sanatorium for 136 adult male patients, with workshop accommodation. The sanatorium of Bellefield will, when the extension is complete, provide for 102 female pulmonary patients.

At Robroyston Hospital two new buildings are in course of erection, (1) a block to contain (a) an operating theatre, in place of the small improvised theatre in one of the ward annexes; (b) a plaster-room in place of the ward compartments in which

this work is being carried out; and (c) an X-ray department, which is badly and temporarily housed in the admission block; and (2) a school, containing two rooms and annexes, for the teaching of ambulant child patients of school age, to replace that at present conducted in one of the wards in the smallpox annexe. It will also serve as an auxiliary recreation room.

The death-rates from pulmonary tuberculosis, in succeeding periods, have been as follows:—

1881-1890,	2·680 per 1,000 living.	1921,	-	1·007 per 1,000 living.
1891-1900,	2·015	1922,	-	1·074
1901-1910,	1·533	1923,	-	1·014
1911-1915,	1·346	1924,	-	1·006
1916-1920,	1·191	1925,	-	·922

The death-rates for several large towns are shown in the table which follows:—

PHTHISIS DEATH-RATE PER 100,000 IN CERTAIN TOWNS.

	1913	1920	1921	1922	1923	1924	1925
Glasgow,	143	106	101	107	101	101	92
Edinburgh,	114	85	91	87	94	101	95
Dundee,	116	99	100	98	98	85	87
Aberdeen,	109	93	91	88	81	91	97
London,	—	106	107	108	97	98	95
Liverpool,	—	141	127	140	125	130	130
Manchester,	—	133	130	127	124	118	131
Birmingham,	—	95	97	97	92	97	98

Statistical Data.—The following paragraphs give the various statistical data which it is useful to record from year to year. The total number of patients under observation was 6,124 at the end of the year. This represents the “floating register,” to which is added new patients as they are notified, and from which are subtracted those who have died, left the City, or are not traced for various reasons. It is also important to purge the register of cases where the diagnosis is revised and of those who require no further supervision. This revision is continually going on, and it may be noted that, since 1910, some 3,766 cases (or 10 per cent. of the total) have been deleted from the books as not suffering from pulmonary tuberculosis.

PULMONARY TUBERCULOSIS.

Summary of cases as at 31st December, 1925 :—

Total cases registered from 1st January, 1910, to 31st December, 1925,	36,986
<i>Less</i> —Died,	20,012
(1) Verified on notification, but subsequently—	
Removed and not traced,	2,721
Removed from Glasgow,	2,451
(2) Not discovered on notification :—	
Not found at address given,	1,061
Notified from Poor Law Institution (with no fixed abode), but still remaining on Register,	851
(3) Subsequently taken off registers as not suffering from pulmonary tuberculosis,	3,766
	<hr/> 30,862
Total cases under observation at 31st December, 1925,	<hr/> 6,124

Coincident with the reduction in the death-rate there has been a uniform diminution in the number of cases registered annually. During 1925, 1,600 new cases were registered, compared with 1,829 during the preceding year and an average annual number of over 2,400 between 1913 and 1920.

Year	Cases Registered	Year	Cases Registered
1913-1915 (annual average),	2,425	1923,	1,725
1916-1920 ,,	2,410	1924,	1,829
1921,	2,045	1925,	1,600
1922,	1,954		

Cases registered during 1925.—Of the total number of cases registered during the year, 1,441 were notified in terms of the Infectious Diseases (Notification) Act, 1889, and Tuberculosis Regulations, 1912. 20 were sent by the Pensions and Military Authorities, while 139 were ascertained from other sources as shown below :—

1. *Source of Notified Cases* :—

1. Occurring in private practice,	918
2. Occurring in public practice :—	
(a) Poor Law cases at home addresses,	28
Poor Law cases from hospitals and poorhouses,	178
Poor Law cases at dispensaries,	4
	<hr/> 210
(b) Charitable dispensaries and infirmaries,	194
Corporation dispensaries,	119
	<hr/> 313
	<hr/> 523
Total cases notified,	<hr/> 1,441

2. *Source of information in cases not notified:—*

(a) From admission and dismissal sheets of Poor Law Institutions,	7
(b) School Medical Officers,	12
(c) Port Local Authority,	4
(d) County Medical Officer,	11
(e) From death cards only,	105
	139
3. <i>From Military Authorities,</i>	20
	20
Total cases registered,	1,600

Cases among Registered Deaths.—Where the first information regarding the occurrence of the disease was obtained from returns of deaths, inquiry was made at the medical practitioner certifying the death regarding the omission to notify. The explanation given in the majority of cases was that the doctor certifying had only seen the patient a day or two before death, and had reason to believe that notification had already been made from some other source. The number of omissions of this nature varies considerably. During 1925, 105 instances of this nature occurred, which is equal to 6·5 per cent. of the total cases registered, compared with 96 in 1924 and 73 in the year previous to that.

Place of Residence at Time of Registration.—When a patient is notified from a home address this is visited, and if the case can be definitely located the patient is regarded as a “home” case, even although at the time of notification he is under treatment in an institution. The results of these inquiries may be summarised as follows:—

Cases traced to home addresses,	1,479
Cases at home, but not visited at request of medical practitioner,	46
Cases where only known address was an institution,	73
Cases not found at address given,	2
	1,600

Private and Public Notifications.—The figures given in the foregoing summary refer to the total number of cases registered during the year, while the following table refers only to notifications under the Act received regarding the 1,441 cases so notified:—

Notifications	Private	Public	Total	Percentage Public
Primary,	918	523	1,441	56·9
Multiple,	167	112	279	67·1
	1,085	635	1,720	58·5

Percentage multiple to
primary notifications
in each group, ...

18·2	21·4	19·3
------	------	------

Age Distribution of Cases Registered.—This information is given in the following table for each of the three years ending 1925:—

Age	1923		1924		1925	
	M.	F.	M.	F.	M.	F.
- 5 years, -	41	33	48	28	33	31
- 10 „ -	46	51	67	54	41	43
- 15 „ -	38	68	57	68	35	62
- 20 „ -	85	111	101	98	80	102
- 25 „ -	122	127	109	131	99	131
- 35 „ -	182	191	191	211	147	180
- 45 „ -	141	125	202	153	158	119
- 55 „ -	146	77	123	58	124	57
- 65 „ -	79	27	65	30	83	28
Over 65 years,	21	14	27	8	31	16
Total, -	901	824	990	839	831	769
Grand Total, -	1,725		1,829		1,600	

On page 128 there is introduced a chart showing the variations in the incidence of cases recorded since 1914 according to age and sex.

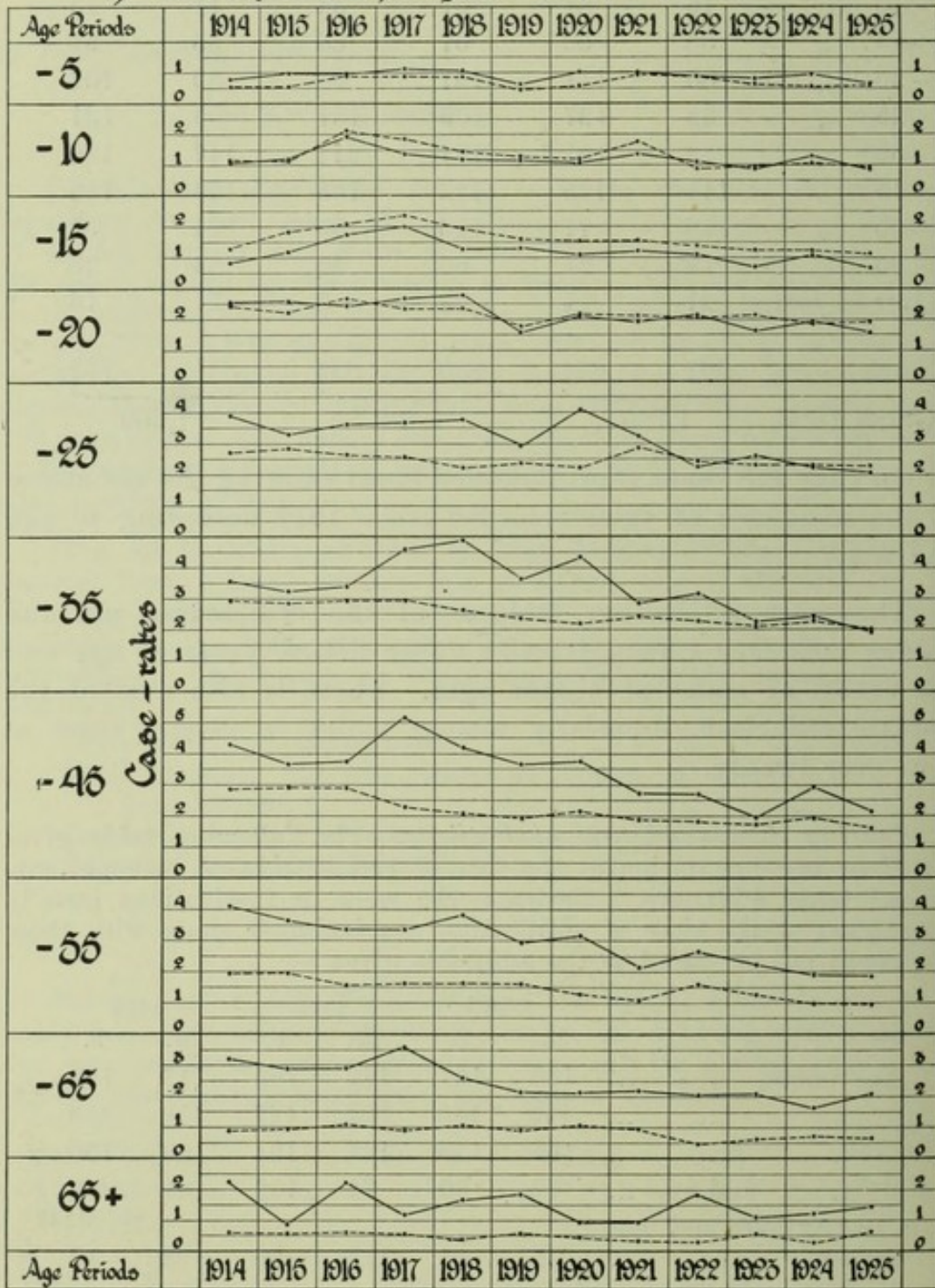
The most interesting features of the comparison are the higher incidence among females under fifteen years of age and the excess of males at higher ages. There is also evident the definite reduction, especially among males in recent years at ages over twenty.

Housing Accommodation of Patients.—The following table gives the house accommodation at the date of registration of such patients as had home addresses. Patients who were in institutions (mostly Poor Law) at the time of notification are included along with those who could not be traced at the addresses given:—

	1923		1924		1925	
	M.	F.	M.	F.	M.	F.
1 Apartment, ...	130	161	146	166	117	158
2 „ ...	458	448	504	427	418	389
3 „ ...	167	119	157	124	133	130
4 „ and up, ...	72	82	71	102	85	75
In Institutions and not traced, ...	74	14	112	20	78	17
Total, ...	901	824	990	839	831	769
Grand Total, ...	1,725		1,829		1,600	

Glasgow: Pulmonary Tuberculosis.

Sex Case-rates at several age periods per 1000
of the Population for years 1914 - 1925.



Males ———

Females - - - - -

Institutional Treatment.—The following table shows admissions to institutions of patients suffering from pulmonary tuberculosis since 1920 :—

Year	Local Authority Hospitals	Sanatoria	Poor Law Institutions	Total
1920,	1,731	739	630	3,100
1921,	1,904	725	658	3,287
1922,	2,018	714	604	3,336
1923,	1,959	690	555	3,204
1924,	1,840	499	573	2,912
1925,	1,531	457	606	2,594

Dispensary Attendances.—The following table shows the attendances and consultations at the various tuberculosis dispensaries in each year, 1923 to 1925. All forms of tuberculosis are included :—

Dispensary	Number of Consultations	Primary Attendances		Subsequent Attendances	
		Males	Females	Males	Females
Year 1923. ...	1,266	2,217		50,261	
„ 1924, ...	1,262	2,481		49,069	
1925.					
Granville Street,	149	113	156	3,115	2,180
Black Street,	252	233	258	4,984	4,624
Adelphi Street,	223	200	179	3,813	2,330
Brown Street,	291	210	247	9,363	7,839
Central Area,	153	127	108	2,399	1,751
Govan, ...	194	260	237	4,061	2,884
	1,262	1,143	1,185	27,735	21,608
Total, ... ..	...	2,328		49,343	
Grand Total, ... ..	...	51,671			

Home Visitation by Nurses.—The number of home visits by nurses during the past three years has been as follows :—

1923	1924	1925
52,228	50,723	51,075

Issue of Medical Extras, Beds and Bedding, &c., to Patients under Treatment at Home.—In 1916 the Local Authority was granted power to provide assistance in the domiciliary treatment of patients in the

form of extra nourishment and bed and bedding in necessitous cases. The following table shows the number in each year since 1916 in respect of whom such assistance was given. Extra nourishment takes the form of two pints of milk and one egg per day :—

Year	Medical Extras	Bed and Bedding
1916,	100	61
1917,	180	30
1918,	202	40
1919,	153	45
1920,	187	24
1921,	184	31
1922,	66	35
1923,	99	26
1924,	86	31
1925,	52	27

Issues of this nature are only granted after full inquiry, and in cases where the home circumstances are reasonably satisfactory. They are not regarded in any sense as a measure of out-relief, which is always readily granted by the Poor Law Authorities when required.

Issue of Clothing to Patients.—The interest on the purchase price of Bellefield Sanatorium, amounting to about £400 per annum, has continued to be applied to the purpose of providing clothing for necessitous patients proceeding to sanatoria. During the year, 217 patients were assisted in this way, compared with 280 during 1924. The total number assisted since the inauguration of the scheme in 1916 is 1,835.

NON-PULMONARY TUBERCULOSIS.

Tuberculosis in all its forms became compulsorily notifiable on 1st July, 1914. The subjoined table gives the number of cases of non-pulmonary tuberculosis registered during subsequent years :—

Year	Cases Registered	Year	Cases Registered
1914-15 (annual average),	1,303	1923,	1,234
1916-20 ,,	1,360	1924,	1,221
1921,	1,141	1925,	1,115
1922,	1,050		

The following tables show (1) the distribution of the cases registered in each year in accordance with the location of the disease and sex of the patient; and (2) distribution according to certain age periods in each year :—

TABLE I.
SHOWING NON-PULMONARY TUBERCULOSIS CASES REGISTERED DURING 1914-1925,
WITH LOCATION OF DISEASE AND SEX.

Year	Glands		Bones and Joints		Abdomen		Meninges		Multiple		Others		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1914,*	159	153	239	186	79	45	73	47	11	18	70	62	631	511
1915,	176	232	192	156	135	104	137	123	52	27	71	59	763	701
1916,	199	216	185	138	155	136	136	140	40	18	75	64	790	712
1917,	203	266	196	170	155	113	93	95	41	34	70	57	758	735
1918,	186	265	158	143	119	128	92	107	34	30	78	72	667	745
1919,	138	178	164	127	126	123	93	86	40	29	56	47	617	590
1920,	138	145	193	168	116	112	89	83	39	29	44	29	619	566
1921,	149	171	165	127	116	84	78	74	27	29	68	53	603	538
1922,	134	147	141	124	130	111	75	66	20	24	42	36	542	508
1923,	145	155	181	129	145	118	102	75	16	15	78	75	667	567
1924,	149	150	145	130	140	144	104	81	35	36	65	42	638	583
1925,	145	137	150	139	131	114	75	65	29	24	54	52	584	531
Total,	1,921	2,215	2,109	1,737	1,547	1,332	1,147	1,042	384	313	771	648	7,879	7,287
Grand Total,	4,136		3,846		2,879		2,189		697		1,419		15,166	

* Figures for six months ending 31st December, 1914.

TABLE II.
AGE DISTRIBUTION OF NON-PULMONARY TUBERCULOSIS CASES REGISTERED DURING EACH YEAR,
SINCE COMMENCEMENT OF NOTIFICATION ON 1ST JULY, 1914.

Year	Under 1 year		1-5 years		5-10 years		10-15 years		Over 15 years		TOTAL	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1914, ...	60	21	132	90	140	102	134	115	165	183	631	511
1915, ...	59	49	236	161	164	140	112	108	192	243	763	701
1916, ...	64	45	244	152	149	123	108	164	225	228	790	712
1917, ...	52	48	190	134	157	156	117	149	242	248	758	735
1918, ...	30	33	163	169	137	125	129	142	208	276	667	745
1919, ...	45	28	151	109	142	123	78	136	201	194	617	590
1920, ...	57	35	143	122	128	137	110	94	181	178	619	566
1921, ...	51	35	157	111	133	122	81	94	181	176	603	538
1922, ...	38	28	175	150	103	87	71	79	155	164	542	508
1923, ...	59	19	214	165	116	112	86	79	192	192	667	567
1924, ...	50	39	212	171	96	99	103	85	177	189	638	583
1925, ...	48	22	184	144	111	103	71	77	170	185	584	531
Total, ...	613	402	2,201	1,678	1,576	1,429	1,200	1,322	2,289	2,456	7,879	7,287
Grand Total, ...	1,015		3,879		3,005		2,522		4,745		15,166	

REPORT ON THE X-RAY DEPARTMENTS.

RUCHILL HOSPITAL.

The X-ray department at Ruchill Hospital was built in 1914, when the new tuberculosis buildings were erected, but was not fitted up until 1917. It was then realised that X-rays provided a very useful adjunct to the clinical examination of the chest, and the persistent growth of the work is sufficient proof of the assistance which is given. The number of cases examined each year has been as follows:—

Year.	Cases.	Year.	Cases.
1917, ..	472	1922, ...	1,864
1918, ...	1,046	1923, ...	1,677
1919, ...	1,128	1924, ...	2,020
1920, ...	1,564	1925, ...	2,169
1921, ...	1,778		

Large as these figures are, it is only by limiting the use of the X-ray department to the cases where it is urgently required that the work has been overtaken at all. This policy has been adopted to prevent useless expenditure of money and time on cases which are not likely to benefit thereby.

Simultaneously with the expansion in the number of chest examinations an ever-increasing number of bone cases were sent for diagnostic help. These still remain a small percentage of the total number, but the importance of X-rays in bone disease is obvious.

Various tubercular affections lend themselves to treatment by radiation. Among these glandular enlargements are most common, and, since 1920, a considerable number of gland cases have been treated at Ruchill.

It is clear that the original X-ray room, with dark room of 6 feet by 4 feet, without any ventilation (which, up to 1918, was considered perfectly suitable), soon became entirely inadequate for the work that was being done. A change had taken place in our ideas of what an X-ray department should consist of, and no longer was it found advisable to work in a small stuffy room, with funereal walls and an entire absence of pure air; so, in 1923, the X-ray department was remodelled, more accommodation being secured above the original rooms. Apparatus with the maximum amount of protection that was recommended was purchased. The old X-ray room was converted into a new spacious and well-lit dark room, with windows opening directly to the exterior. A well-protected room for X-ray treatment was built upstairs, and another room was fitted with three viewing-boxes capable of demonstrating 100 large chest films.

It is of interest to note that the induction coil and interrupter which were originally put into the department in 1917 are still in regular use. With the former all the radiograms in this department have been taken. Various changes have been made in technique: instead of glass plates laboriously rocked to and fro in developing

dishes, films developed in tanks and not handled at all are now entirely used; in place of exposures of from five to twenty seconds, which were very difficult to get in chest cases, owing to breathlessness, the average chest exposure is now under one second.

ROBROYSTON HOSPITAL.

While Robroyston Hospital was still in the hands of the military Authorities some surgical tubercular cases were accommodated at Stobhill. The first X-ray work among these cases was, therefore, carried out at the latter hospital through the courtesy of the Glasgow Parish Council.

With the opening of Robroyston Hospital the chief difficulty was the accommodation of the X-ray apparatus. Eventually it was decided to utilise part of the dismissal block. Lack of adequate space has always handicapped the work here, but in spite of this fact the following figures will show the amount of work done:—

Year.	Cases.	Year.	Cases.
1921, ...	103	1924, ...	663
1922, ...	660	1925, ...	600
1923, ...	560		

Most of these cases are cases of bone tuberculosis, but a considerable number of chest and abdominal cases have also been examined.

The Use of X-ray Examination in Chest Cases.—It cannot be too emphatically stated that diagnosis should not depend on X-rays alone. There are a number of conditions, *e.g.*, a fracture of a bone, where a good X-ray photograph must decide the matter one way or the other; but, in the average case, be it disease of chest, abdomen, or limbs, X-rays provide only one means of eliciting information, and all X-ray findings must be correlated with other clinical evidence in order that a correct definite diagnosis may be arrived at.

The number of chest examinations undertaken by the department in Ruchill and Robroyston Hospitals has increased from 472 in 1917 to 2,073 in 1925. A large number of these are cases referred from private practitioners to the dispensaries throughout the City, and are cases where no evidence of tuberculosis has been found by the clinician. A negative X-ray exposure in support of their findings is of tremendous help, as it gives increased confidence to the doctor in saying that the case is not tubercular. In many doubtful cases, on the other hand, a positive X-ray skiagram clinches the diagnosis. Particularly useful is X-ray examination in cases of slight hæmorrhage of obscure origin, as it has been proved conclusively that, if a hæmorrhage is arising from within the lungs, a definitely abnormal picture will be seen.

Aid given in Differential Diagnosis.—The differential diagnosis of chest conditions is often one of great difficulty, and X-rays are of great assistance in this connection. Tumours of the lung, bronchiectasis, postpneumonic fibrosis, cardiac abnormalities, and diaphragmatic herniæ are frequently mistaken for tuberculosis, and,

in all of these conditions, X-ray examination frequently clinches the diagnosis. During the routine examination of chests at Ruchill we have been very much impressed by the number of lung tumours seen. These are often of very slow growth, and are very misleading cases indeed. Since the influenza epidemic of 1918 there have always been a considerable number of pneumonia cases in the wards at Ruchill, and among these there is a proportion who do not clear up normally, and who develop symptoms very suspicious of tuberculosis. X-ray examination of these conditions has given great aid in the determination as to whether or not a lesion is tubercular.

Aid given in definite Lung Tuberculosis.—In definite cases of chest tuberculosis X-rays are of use in three directions:—

(a) To define the extent of the lesion. As a general rule, the amount of lung involved, as revealed by X-ray examination, is more than can be determined by other methods. Often it is possible to see the spread of disease from one lung to the other before this can be detected otherwise. On the other hand, as X-rays cause only shadows of different densities to be visualised on the fluorescent screen or sensitised film, great care has to be taken to interpret these shadows correctly and not to read into them more than can be justifiably deducted, *e.g.*, when parts of two lobes overlap in the chest, it is almost impossible in a routine X-ray examination to be sure which lobe may be affected.

(b) To differentiate between different types of tuberculosis. This is a matter of great importance in prognosis and in determining the best method of treatment. It has become the custom to divide and subdivide chest tuberculosis into twenty or more groups. This in our experience is of little value and of doubtful truth. On the other hand, X-ray examinations can, as a rule, help to divide into which of the following groups a case should be put:—

- (1) Very acute disease, likely to cause death within a few weeks.
- (2) Acute disease, likely to spread gradually and cause death within two years.
- (3) Disease likely to fibrose and go on for years.
- (4) Chronic fibroid disease, with displacement of heart and mediastinum, and running a very long course.

(c) To determine whether a lesion is advancing or receding. By successive examinations the progress of disease can be easily followed. In the most successful case calcification occurs and small shotty nodules are seen in the lung. This is accompanied frequently by some pleural thickening, and the affected part becomes fibrosed. On the other hand, the steady progress of disease from one part of the lung to the other can easily be detected. It would be of immense value if every case of lung tuberculosis could be radiographed at six-monthly intervals.

The Early Diagnosis of Lung Tuberculosis.—It is difficult to write authoritatively about the early diagnosis of chest tuberculosis. We feel that for the past eight years, *i.e.*, during the period of our

examinations, there has been a very strong tendency to over-diagnose tuberculosis. X-rays experts have unfortunately only added to this evil, as a number of markings in the roots of the lung and around the bronchii have now been shown up, the existence of which was little known. It has become customary to call these markings evidence of "Hilus Tuberculosis" or "Peribronchial Tuberculosis." It is now known that the former of these is much less common than was thought, and that the existence of the latter is at least doubtful. The difficulty may be summed up, very briefly, then: If a case which shows a few peribronchial markings is labelled "Tuberculosis" and sent to a sanatorium, and is never again troubled with chest symptoms, it is then termed "cured." If such a case is not labelled "Tuberculosis," and is not sent to a sanatorium, and if chest symptoms develop later in life, it is then said that it was missed by the clinician and the radiologist originally.

For the past six years we have in every case said that there was no abnormality present when only the root shadows and peribronchial thickenings, seen in nearly all town dwellers, were present. As recently as at the International Congress of Radiology, held in London in 1925, it was stated by one leading lung specialist that no radiologist should say that a chest was normal. From this opinion we respectfully differ, as it appears to fulfil no useful function if every chest is going to be labelled by the radiologist as abnormal. During these six years only a very small number of cases have been returned later as tubercular. If a case has been diagnosed as non-tubercular, and no positive symptoms have occurred within four or five years, then surely we are justified in assuming that it would have been unfair to have labelled that case "Tuberculosis" and sent it into a sanatorium at the time of the first examination.

One last feature of chest work which calls for note is that a special inquiry into the effect of ganister on the chests of workers in certain pits in different districts in the West of Scotland was made in 1920. The curious mottled appearance in the lungs, associated with silicotic changes, were seen in two or three of the cases examined. Similar changes are seen in the routine work at intervals in cases where the cases have been working for many years among dust containing silica particles.

X-rays in Cases of Bone Disease. — The usefulness of X-rays in bone disease is obvious. The extent of a lesion, the healing of a lesion, the differentiation between soft tissue and boney lesions, and between tubercular boney lesions and non-tubercular boney lesions are all points on which great light is thrown by X-rays.

The use of the Potter-Bucky diaphragms, purchased in 1924 for both Ruchill and Robroyston Hospitals, has enabled much greater detail of hips, lumbar vertebræ, sacro-iliac joints, &c., to be obtained. A more recent development of the work is in connection with the ultra-violet treatment of rickets. The bone lesions in these cases are usually quite obvious, and examinations before and after treatment show the extent of bone change.

X-rays used Therapeutically in Cases of Tuberculosis.—X-rays are also used therapeutically. Cases of gland tuberculosis are the most common that have been treated, and of these there have been—

Year.	Cases.	Year.	Cases.
1920, ...	40	1923, ...	84
1921, ...	56	1924, ..	46
1922, ...	77	1925, ...	38

The vast majority of these cases react to radiation very well. Unfortunately the treatment is a prolonged one, and necessitates a weekly attendance for a period of six to nine months on an average. Treatment by X-rays of a more penetrating quality produce results more quickly and requires much fewer attendances. This has already been the subject of a separate report. (See 1924 Report.)

Skin tuberculosis is more satisfactorily treated by means of ultra-violet radiation. It is too early yet to make any definite report on the effects of the different forms of ultra-violet radiation. Lupus cases react to ultra-violet more than to any other form of treatment. At Ruchill X-ray department there is a mercury vapour lamp, and undoubtedly there is no better form available at present for economy in running and for simplicity in working.

As the result of our experience in the treatment of tubercular gland enlargements, it seems clear that X-rays produce better and quicker results than any other form of treatment in cases which are unsuitable for operation. Where breaking down has occurred, X-rays will accelerate the breaking down; but where there is a mass of hard glands which cannot be satisfactorily removed, X-rays will cause a fibrosis and a remarkable diminution in the size of the mass more quickly than any other form of treatment. Where discharging sinuses are present ultra-violet radiation usually accelerates the healing to a very marked degree. The combined use of X-rays and ultra-violet rays appears to us to be the best form of treatment for the vast majority of inoperable cases.

FERGUS L. HENDERSON,
Radiologist.

SECTION VI.

VENEREAL DISEASE.

The following report on the work of the year by Dr. W. G. Clark records the cessation of the Royal Infirmary as a centre for both outdoor and indoor treatment, the transference of the latter to a specially prepared ward at Belvidere, and the temporary arrangements for the former pending the completion of the new Centre at Black Street.

With regard to attendances, the number of new patients (5,187) has declined, while the total attendances have increased, giving an average of 25·6 attendances per patient. This is on the right side, but cannot be regarded as satisfactory. It will also be noted that in 637 patients the diagnosis was not confirmed. This figure, which is 12 per cent. of the total, may be regarded as an indication of the extent to which patients who suspect themselves to be infected frequent the Centres, and is in some degree a measure of their utility.

The data again reveal two aspects of the work which have been referred to in previous reports: one-fifth of the patients did not complete their course of treatment, while a further 16 per cent., although completing their course, did not comply with the more rigid standard of attendances until the final tests of cure could be made. It is reported that in some 523 male patients the disease appears to have been a reinfection; at any rate, re-exposure to infection was admitted. From the more detailed notes on reinfection, given in the report, it will be gathered that the clinics are of considerable use to libertines.

The various clinical officers complied with the request to furnish notes on their experience, and these have been grouped and inserted in the text. Their opinion that the incidence of syphilis is either diminishing or becoming a more benign affection is borne out by the figures for certain clinics (quoted later), which indicate that the cases attending for the first time are in the proportion of one case in the primary stage to three in the secondary stage, and to six in the late or tertiary stages. Evidence of a general fall in the incidence of syphilis (recent

infections) is manifest throughout the country, and it is stated that general paralysis of the insane, which is a late manifestation, is also declining.

The work of the special nurse appointed to follow up women and children whose attendances had lapsed has met with the warm approval of the medical officers at the clinics. She has encountered practically no difficulties, and has met with considerable success as the report shows. Associated with the Maternity and Child Welfare Scheme, clinics are now held at four centres, where mothers and children attending the ante-natal and consultation centres may obtain treatment. In all, 68 new patients were treated during the year (see Table). No branch of anti-syphilitic work gives more satisfactory results than ante-natal treatment of infected mothers. While much could be done by extension of facilities for ante-natal care and increased propaganda, suitable legislation would probably be still more effective. Reference is made in the text to the success of the district lectures on venereal disease given throughout the year.

REPORT.

During the year several alterations took place in the Local Authority's scheme. As mentioned in last year's report, the Managers of the Royal Infirmary decided to cease the treatment of cases of venereal diseases, and on the last day of the year the agreement between the Royal Infirmary and the Local Authority terminated.

The indoor cases were removed to Belvidere Hospital, and accommodated in a ward which had been specially adapted for the purpose. As difficulties had arisen in connection with the building of the new clinic in Black Street, the patients attending the outdoor department of the Royal Infirmary were asked to attend at special clinics arranged for them at Bellahouston and Broomielaw Dispensaries. The provision thus made has proved adequate, but some of the old Royal Infirmary patients have apparently ceased to attend. The hours are much more suitable for men who are working, and, although the premises at both dispensaries are cramped and far from ideal for the treatment of a large number of patients, it is felt that the majority of patients will continue to have treatment until the new premises are available.

The time-table of the venereal diseases treatment centres is now as undernoted—

Centres.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
MALES—						
Western Infirmary, . . .	...	5.30 p.m.	11 a.m.	...	...	...
Victoria Infirmary, . . .	...	...	...	...	...	9.30 a.m.
Bellahouston Dispensary, 87 Paisley Road,	2 p.m.	6 p.m.	...	2 p.m.	6 p.m.	...
Corporation Dispensary, 186 Broomielaw,	6 p.m.	6 p.m.	2 p.m. 6 p.m.	6 p.m.	2 p.m. 6 p.m.	9.30 a.m.
FEMALES—						
Central Dispensary, 15 North Portland Street, . . .	9 a.m. 12.30 p.m.	9 a.m. 12.30 p.m.	9 a.m. 12.30 p.m.	12.30 p.m. 6 p.m.	12.30 p.m. 6 p.m.	9 a.m.
Western Infirmary, . . .	...	...	...	5.30 p.m.	11 a.m.	...
Victoria Infirmary, . . .	...	9.30 a.m.	...	...	...	...
Bellahouston Dispensary, 40 Morrison Street, . . .	6 p.m.	...	6 p.m.	...	...	...
Baird Street Reception House,	...	...	10 a.m.	...	10 a.m.	...
CHILDREN—						
Central Dispensary, 15 North Portland Street, . . .	9 a.m.	9 a.m.	9 a.m.	...	...	9 a.m.
Royal Sick Children's Hospital Dispensary,	2 p.m.	...	...	2 p.m.	...	...
Baird Street Reception House,	6 p.m.	...	10 a.m.	...	10 a.m.	...
EYE CASES ONLY (both Sexes)—						
Eye Infirmary Dispensary, Charlotte Street, . . .	...	5.30 p.m.	5.30 p.m.	5.30 p.m.	...	...

The experiment in connection with the treatment of venereal diseases at two of the Child Welfare centres proved that a definite requirement had been met, and during the year arrangements were made for this work being extended to other two of the Child Welfare centres. This provision is an integral part of the Child Welfare Scheme, and no cases are referred direct to these special centres. They are, therefore, not shown on the above time-table. This part of the scheme is referred to later in connection with the work of the centres.

For some time it has been felt that the work of the scheme might be improved by the appointment of a person whose definite duty would be to follow up the cases and encourage their attendance at the centres until treatment had been completed. With this aim in view the Corporation, with the sanction of the Board of Health, approved of the appointment, for an experimental period of one year, of a nurse to be attached to the Venereal Diseases Clinics at which women and girls attend, the nurse's duties being—

- (a) the following up of children under five years of age whose attendances have lapsed;
- (b) the following up of older children and adult women who have prematurely ceased attending; and
- (c) performing the functions of a social almoner who would interest herself in the social conditions of the patients with a view to assisting them in various ways.

The nurse's report of her first six months of work appears later.

During the year 41 private practitioners received 941 doses of salvarsan substitutes under the Local Authority's scheme, the number of doses supplied to individual practitioners ranging from 3 to 168. This free issue was less than in the two previous years—1,301 doses being supplied in 1924, while 1,276 were issued in 1923.

The Health Committee decided during the year that a series of Public Lectures on Health subjects should be given in the various districts of the City by members of the Public Health staff. This opportunity was taken to increase the propaganda work in connection with the scheme, and four lectures were given on "Venereal Diseases and their Serious After-Effects." Keen interest was shown in the lectures, and the audiences varied in number from 600 to 1,100. It is hoped that this part of the work will be increased next year.

WORK OF THE CENTRES.

The following is a summary of the returns made by the various centres during the year, and of the pathological examinations performed in connection with each centre. For ease in comparison, the returns of the work done at the Child Welfare Centres are shown separately, as this branch of the scheme was only inaugurated during the year:—

PATIENTS TREATED AT THE SEVERAL

IN-PATIENTS—	Royal	Western		Victoria	
	Infirmary	Infirmary	Infirmary	Infirmary	Infirmary
New cases suffering from—	M.	M.	F.	M.	F.
Syphilis,	41	8	5	11	3
Gonorrhœa,	59	—	—	—	—
Soft Chancre,	17	—	—	—	—
Syphilis and Soft Chancre,	—	—	—	—	—
Syphilis and Gonorrhœa,	8	—	—	—	—
Gonorrhœa and Soft Chancre,	—	—	—	—	—
Balanitis,	19	—	—	—	—
Venereal Warts,	5	—	—	—	—
Stricture,	18	—	—	—	—
Conditions other than Venereal,	—	—	—	—	—
Total,	167	8	5	11	3
		13		14	
Aggregate Days' Residence,	4,242	1,774	342	164	31
		2,116		195	
Average Days' Residence,	25·4	162·7		14	
OUT-PATIENTS—					
New cases suffering from—					
Syphilis,	306	143	79	9	13
Gonorrhœa,	771	10	28	—	—
Soft Chancre,	95	10	—	—	—
Syphilis and Soft Chancre,	—	2	—	—	—
Syphilis and Gonorrhœa,	20	—	3	—	—
Gonorrhœa and Soft Chancre,	2	—	—	—	—
Balanitis,	116	—	—	—	—
Venereal Warts,	23	—	—	—	—
Stricture,	66	—	—	—	—
Conditions other than Venereal,	—	37	12	1	—
Total,	1,399	202	122	10	13
		324		23	
Aggregate Attendances,	31,097	4,939	4,348	237	328
		9,387		565	
Average Attendance,	22·2	28·6		24·5	
PATHOLOGICAL EXAMINATIONS—					
Wassermann Reactions,	955	1,376		400	
Spirochætes,	91	—		—	
Gonococci,	234	126		33	
Totals,	1,280	1,502		433	

CENTRES DURING THE YEAR 1925.

Bellahouston Dispensary		Lock Hospital		Broomie-law	Baird Street Reception House		Sick Children's Hospital		Eye Infirmary		Total	
M.	F.	Ad.	Ch.	M.	M.	F.	M.	F.	M.	F.	=	
—	10	24	78	—	3	7	6	9	22	20	=	247
—	11	149	19	—	1	12	—	—	—	—	=	251
—	—	—	—	—	—	—	—	—	—	—	=	17
—	—	—	—	—	—	—	—	—	—	—	=	—
—	3	78	3	—	—	—	—	—	—	—	=	92
—	—	—	—	—	—	—	—	—	—	—	=	—
—	—	—	—	—	—	—	—	—	—	—	=	19
—	—	—	—	—	—	—	—	—	—	—	=	5
—	—	—	—	—	—	—	—	—	—	—	=	18
—	—	3	1	—	2	2	—	—	—	—	=	8
—	24	254	101	—	6	21	6	9	22	20	=	657
24		355			27		15		42			
—	698	11,198	5,562	—	216	1,639	209	143	1,103	1,068	=	28,389
698		16,760			1,855		352		2,171			
29.2		47.2		—	68.7		23.4		51.6			43.2
49	53	101	93	198	11	59	21	43	119	83	=	1,380
137	28	185	17	680	1	32	—	—	—	—	=	1,889
12	—	—	—	3	—	—	—	—	—	—	=	120
2	—	—	—	—	—	—	—	—	—	—	=	4
4	10	86	2	12	—	3	—	—	—	—	=	140
—	—	—	—	—	—	—	—	—	—	—	=	2
11	—	—	—	52	—	—	—	—	—	—	=	179
3	—	—	—	4	—	—	—	—	—	—	=	30
—	—	—	—	8	—	—	—	—	—	—	=	74
33	110	37	15	88	9	42	53	54	—	—	=	491
251	201	409	127	1,045	21	136	74	97	119	83	=	4,309
452		536			157		171		202			
9,740	4,411	13,928	1,390	37,738	178	1,525	348	581	2,590	2,071		
14,151		15,318			1,703		939		4,661		=	115,449
31.3		28.5		36.1	10.8		5.4		23.1		=	26.8
682		*1,343	*508		*241		*506		*1,245		=	7,256
48		2	130		—		—		—		=	271
957		5,723	814		*206		—		—		=	8,093
1,687		7,068	1,452		447		506		1,245		=	15,620

At Public Health Laboratory.

The total number of new cases treated at the various centres was 5,187, as compared with 5,421 in 1924, a decrease of 234. 637 cases proved not to be venereal disease, as against 524 in the previous year, so that the actual number of venereal disease cases treated in 1925 was 347 less than in 1924. The main decrease was in the number of syphilis cases, there being 1,694, as against 2,034 in the previous year. There was a slight increase in the number of cases of gonorrhœa unassociated with other venereal diseases, 2,156 cases being treated compared with 2,075.

As will be shown later in the individual returns from the various centres, there would appear to be a definite decrease in the number of acute cases of syphilis, and this would seem to be due to a true lessened incidence of the disease. The clinical officers report that they seldom see syphilis in its primary and early secondary stage.

The increase in the gonorrhœa cases may be due to a greater knowledge on the part of the community of the serious effects of neglect of treatment, and as a matter of interest it may be noted that after every public lecture individuals sought advice as to treatment, &c.

It is gratifying to note that while the number of cases has definitely declined, the number of attendances has increased, there being over 700 more, while the average attendance per case was 25·6, as compared with 24·8 last year.

Practically every centre, with the exception of Broomielaw, shows some lessening in the number of new cases. The number attending Broomielaw Dispensary was 1,045, compared with 869. For the first year since the inauguration of the scheme the number of attendances at Broomielaw Dispensary was the greatest in the City. This is accounted for by a gradual transference towards the end of the year of the patients from the Royal Infirmary.

During the year certain building alterations took place at the Lock Hospital, and admissions to that institution were limited for a short time.

TREATMENT AT MATERNITY AND CHILD WELFARE CENTRES.

It will be noted that this part of the scheme has reacted on the number of patients attending at Baird Street, as in previous years the Child Welfare doctors referred most of their cases to that centre.

The venereal diseases sessions at the Child Welfare Centres at Maxwell Street and Adelphi Street were only commenced a few weeks before the end of the year, but the other two centres have been in operation long enough to show that much valuable work can be performed at clinics of this nature. No difficulty is experienced in getting mothers to attend with their children at centres with which they are familiar, and the necessity of attending at two centres is obviated.

WORK PERFORMED AT CHILD WELFARE CENTRES.

	Sister Street, East.		Cowcaddens.		Adelphi Street, S.S.		Maxwell St., Partick.		M.	F.	Total.
	M.	F.	M.	F.	M.	F.	M.	F.			
OUT-PATIENTS—											
New Cases suffering from											
Syphilis,	6	22	4	19	1	2	—	1	11	44	55
Gonorrhœa,	—	3	—	8	—	1	—	1	—	13	13
Conditions other than Venereal,	8	39	5	92	—	5	—	4	13	140	153
Total	<u>14</u>	<u>64</u>	<u>9</u>	<u>119</u>	<u>1</u>	<u>8</u>	<u>—</u>	<u>6</u>	24	197	221
	78		128		9		6				
Aggregate Attendances,	<u>34</u>	<u>158</u>	<u>18</u>	<u>287</u>	<u>1</u>	<u>12</u>	<u>—</u>	<u>19</u>	53	476	529
Average Attendance, ...	192 2·46		305 2·2		13 1·4		19 3·1		2·4		
PATHOLOGICAL EXAMINATIONS—											
Wassermann Reactions,	55		102		13		6		—		176
Gonococci,	10		33		1		1		—		45
Total,	65		135		14		7		—		221

Dr. Wattie, who is in clinical charge of this branch, reports that there were 31 cases of acquired syphilis treated at Sister Street and Cowcaddens clinics, and of these 26 could be classified as latent syphilis, the patients showing no clinical signs of the disease. Suspicion was aroused in some of these cases from the obstetrical history, while in others the birth of a syphilitic child

was the first indication of the presence of syphilis in the parent. Of the other 5 cases, 3 were in the tertiary stage and 2 in the secondary stage, 1 being a child of three years, whose primary infection had been on the lip, and 1 an infant of eleven months, who had acquired syphilis while sleeping with an infected girl.

20 cases of congenital syphilis received treatment at these two centres, the only adult being a woman of 29 years of age.

Four of the infants who received treatment were born after the mothers had received a certain amount of ante-natal treatment, the treatment being given to prevent, as far as possible, any fear of late manifestations of the disease.

11 cases of gonorrhœa received treatment, but it is felt that until some certain diagnostic method of proving the presence of this disease in women is evolved the number of such cases will be relatively small. It is exceedingly difficult to isolate the gonococcus from the numerous flora of the cervix in cases of chronic inflammation, and it frequently happens that the onset of sequelæ is the only definite clue to the diagnosis. On medical grounds it would be desirable to treat cases on clinical signs, but at Child Welfare Centres the diagnosis has to be certain, in order to obviate any difficulties which might arise. This difficulty in diagnosis is one of the factors which stand in the way of the complete eradication of gonorrhœa.

RESULTS OF TREATMENT.

The following figures are taken from the returns for the year ended 31st May, 1925, submitted by the centres to the Scottish Board of Health:—

The percentage of patients who ceased to attend before completing a course of treatment shows an increase over the previous year, the actual number of such cases being 1,751, while 1,348 patients defaulted after completing a course of treatment but before final tests as to cure had been made. The number of such patients suffering from syphilis is greater than that suffering from gonorrhœa, and would point to the necessary long period of treatment being a factor, while undoubtedly the early disappearance of symptoms leads to a false sense of security. These figures point to the necessity for some form of control over the patient's behaviour.

Total Number of Persons under treatment—	Syphilis		Gonorrhoea		Soft Chancere		Mixed Infections		Conditions other than Venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
From 1924,	1,273	1,283	638	177	22	—	144	260	—	—	2,077	1,720
During 1925,	1,078	765	1,939	444	144	—	55	243	262	392	3,478	1,844
Total,	2,351	2,048	2,577	621	166	—	199	503	262	392	5,555	3,564
Percentage of above who ceased to attend—												
(a) Before completing course of treatment for	19.7	17.7	26.4	19.5	7.8	—	11.6	17.3	—	—	*22.3	*18.0
(b) After completing a course of treatment but before final tests as to cure of	16.9	18.6	16.8	11.8	0.0	—	1.0	12.3	—	—	15.7	16.2
Percentage of above transferred to other centres after treatment for	5.2	2.6	4.5	2.2	0.6	—	1.0	0.8	—	—	4.6	2.3
Percentage of above discharged from the centre after completion of treatment and observation for	6.3	7.2	31.7	46.5	79.5	—	53.2	25.4	—	—	22.7	17.8
Percentage of above who, at the end of the year, were under treatment or observation for	51.9	53.9	20.6	20.0	12.1	—	33.2	44.2	—	—	34.7	45.7

* The percentages are calculated on total cases less non venereal cases.

DETAILED REPORTS FROM THE CENTRES.

The clinical officers in charge of the various centres have submitted reports on the year's work, and the following information has been collected from these reports in so far as they refer to the same subjects:—

(a) *Age and Sex Distribution.*—The first two tables show age and sex distribution and the marital state in cases of acquired syphilis and gonorrhœa treated during the year. Mixed infections are excluded.

MALES.

Age.	Syphilis.			Gonorrhœa.		
	Married.	Single.	Total.	Married.	Single.	Total.
- 20 . . .	3	21	24	0	100	100
20 - 30 . . .	84	119	203	180	791	971
30 - 40 . . .	88	96	184	196	287	483
40 and over,	201	90	291	103	117	220
	376	326	702	479	1,295	1,774

FEMALES.

Age.	Syphilis.			Gonorrhœa.		
	Married.	Single.	Total.	Married.	Single.	Total.
15 - 20 . . .	2	31	33	19	93	112
20 - 30 . . .	86	28	114	84	117	201
30 - 40 . . .	100	11	111	60	31	91
40 and over, .	84	7	91	41	1	42
	272	77	349	204	242	446

These figures show that a large number of individuals are infected with venereal disease before they reach the age of twenty, the majority of cases being, of course, unmarried.

With regard to syphilis in the male, the greatest proportion of cases occurs in married individuals over the age of forty. The majority of these individuals suffer from the late sequelæ of syphilis, and represent the results of untreated or inadequately treated early syphilis. On the married female side most cases of syphilis occur between the years 30 and 40, and, again, latent syphilis dominates the diagnosis, which in many of these cases is made after the birth of a syphilised child.

The figures of the gonorrhœa cases show the heavy prevalence of this disease in comparatively early years, and also that the

unmarried community suffers most. The number of single women under the age of thirty suffering from gonorrhœa is very much lower than the number of single men of the same years, while in the later years gonorrhœa in the female is a disease of married women.

(b) *Stage of Disease.*—The following figures show the stage when the case first appeared at the centres for treatment:—

ACQUIRED SYPHILIS.

	Early.		Late. (Tertiary, Latent, Cerebro, or Neuro-Syphilis.)
	Primary.	Secondary.	
Males,	41	116	190
Females,	11	57	108
Total,	52	173	298

These figures relate only to those centres which sub-divided their cases as above, but they bear out the impression which the clinical officers have frequently expressed that early syphilis is a comparatively rare disease nowadays. From the number of cases which seek treatment only on the appearance of late sequelæ there can be no doubt that the disease in its early stages is becoming much more benign than formerly.

GONORRHŒA.

	Acute.	Chronic.
Males,	859	209
Females,	61	29
Total,	920	238

These figures show that gonorrhœa in the acute stage discommodes the individual more than syphilis does, and ensures earlier treatment.

(c) *Congenital Syphilis.*—200 fresh cases were treated during the year, in 31 of these the first symptoms appearing in adult years—several between the years 20 and 30. 10 infants died in the Lock Hospital, the mothers appearing for treatment too late in their pregnancies for treatment to have any result on the offspring. Dr. Watson reports:—

“The number of deaths of infants from congenital syphilis emphasises the importance of pregnant syphilitic women undergoing treatment—the results of ante-natal treatment being much more satisfactory than post-natal. In no case in which the mother attended sufficiently early to undergo a full course of “914”

injections was there a still-birth or death of the infant. For this purpose a period of at least two months before full time is required, and, of course, the earlier the patient comes under treatment the better for the mother and the child. There is no department of our work which gives so much satisfaction to the staff in the excellent results achieved as the treatment of pregnant women."

Among the cases treated at the Royal Hospital for Sick Children there were several who first came under treatment many years after the onset of the first symptoms.

A child commenced treatment at twelve years of age, although it had suffered from snuffles at the age of two weeks, and along with this there was a suspicious family history.

This aspect would point, on the one hand, to the necessity for teaching parents the early symptoms of congenital syphilis, and, on the other, to a more intensive teaching of venereal diseases in the medical curriculum.

(d) *Criminal Assault Cases*.—10 cases of venereal disease were contracted as the result of criminal assault—9 being cases of gonorrhœa and 1 of syphilis. One man who infected two little girls was convicted, while Dr. Snodgrass reports that in the case of a boy of twelve who was infected with syphilis the evidence, according to the police, was not sufficient to institute criminal proceedings.

(e) *Cases of Reinfection*.—The medical officers in charge of the centres treating male cases report that 523 individuals were cases of apparent reinfection. While it is difficult in the case of gonorrhœa to say that an acute discharge recurring in an individual who has been previously treated is a true reinfection, in all these cases re-exposure to infection has been admitted. Dr. Brown reports that at the Broomielaw Dispensary there were 222 individuals coming under this category, and, subject to the above provision, 10 had had venereal disease three times; 4, five times; 1, four times; while 1 individual appeared for treatment for the thirteenth time.

Dr. Watson treated at the Royal Infirmary 2 cases of primary syphilis, who were proved to have been reinfected after the cure of a previous infection of syphilis. He further adds that 24 cases of syphilis had previously suffered from gonorrhœa; 23 cases of gonorrhœa had previously suffered from syphilis; while 2 cases contracted gonorrhœa while still under treatment for syphilis.

Dr. Snodgrass reports that he treated 15 cases of syphilis in which the individuals had previously suffered from gonorrhœa or soft sore. He goes on to state that these figures bear no relationship to the question of repeated exposure to infection, which comprises undoubtedly a very high percentage. There is also the question of exposure to infection while the patient is under treatment and while he is a source of danger to others. Dr. Snodgrass is of opinion that patients as a whole are becoming better educated as to the danger of such action, but states that a certain low percentage, both male and female, appear to be incorrigible.

(f) *Neuro-Syphilis*.—The clinical officers were asked to make some reference to the incidence of neuro-syphilis, and, if possible, to refer to the question of treatment of syphilis in the early stages arresting the onset of the graver sequelæ. Dr. Snodgrass reports as follows:—

Cases of Clinical N.S. in 1925.	Cases with previous history of disease.			No previous history of disease.	Congenital.
	Adequately treated.	Inadequately treated.	No treatment.		
37	—	9	8	16	4

“In addition, four cases showed a positive Wassermann reaction of the cerebro-spinal fluid, but no clinical signs of disease. In two cases where disease was noted, the reaction of the cerebro-spinal fluid was negative before the commencement of treatment. The heading ‘adequately treated’ is a very broad one, and would have included any case which had received more than one ‘injection’? Such ‘injections’ might either have been of mercurial or salvarsan substitute. The majority of the cases giving a history of previous disease state that primary and secondary manifestations were slight.

“The question of arrest of the nervous condition under treatment is a very difficult one, and much time must elapse before the various methods employed may be suitably appraised. It might be said tentatively, that the most favourable results are achieved in connection with meningeal affections and tabes dorsalis, and that the earlier the patient is brought under treatment the better would one expect the results to be. Intensive methods of treatment, which necessitate in-patient treatment, are considered worthy of trial.”

Dr. M'Lachlan treated 10 cases of neuro-syphilis at Bella-houston Dispensary, and says:—

“Almost all the cases have been in the advanced stages of syphilitic nervous disease, in consequence of which the various treatments adopted have effected little or no improvement. Any

improvement noted has, I think, been due to the temporary clearance of neurasthenic symptoms, which occur frequently in syphilitic nervous cases. Without keeping these cases under observation for a period of several years, I feel it would be an error to state that the treatment has arrested any of the graver sequelæ. The number of years elapsing between the primary infection and the onset of the nervous symptoms was as follows:—

		YEARS.						
		4	6	10	15	20	21	30
No. of Cases,		1	16	3	2	1	1	1

Only one of these cases had received intravenous medication, consisting of one course of N.A.B. Two of the others had been given potassium iodide for some years, while one had received injections of mercury.”

“ At another centre I have employed a new drug, tryparsamide, in 24 cases of nerve-syphilis, cerebral and spinal. Most of these cases have had two full courses of the drug. In none of the cerebral cases have I noted any improvement; indeed, in several the treatment seemed to hasten the occurrence of acute symptoms. In two of the spinal cases there has been very marked improvement, but in the clinical signs and in the condition of the cerebro-spinal fluid the exhibition of this drug is not without certain ill-effects.”

Dr. Brown treated only 7 cases of cerebro-spinal syphilis, and is not prepared at this stage to advance any opinions.

Dr. Watson treated 16 cases at the Royal Infirmary, and gives details of 6. Four of these showed definite improvement under treatment, while 2 were transferred to Poor Law Institutions as requiring prolonged hospital treatment.

Dr. Elizabeth Smith had 3 such cases, who first came under treatment during the year. She reports that treatment is very unsatisfactory, and that, while the symptoms may be improved for a time, they recur, and the individual has to be removed to a suitable institution.

(g) *General*.—With regard to treatment of acute gonorrhœa, Dr. Watson uses mainly urethrovesical irrigation with 1-4,000 acriflavine in physiological saline; and regards his total incidence of 6 per cent. complications as excellent when compared with published statistics. He maintains that still further improvement may be achieved by a more rigid supervision of cases at treatment and by further insistence on the patient's regular attendance.

Dr. Snodgrass reports on the various drugs which he has used during the year:—

Arsenic.—He regards “606” (Hoechst) as a powerful one, but too provocative of toxic side effects for routine use in an out-patient department. Of the 914 preparations, a careful comparison was made between neokharsivan and N.A.B., and there would appear little to choose between these drugs.

Mercury.—Flumerin has been used by the intravenous route, and is powerful in its action, but requires care in administration owing to its toxicity.

Contraluesin has been used extensively, and is thought to be of service in the treatment of latent and neuro-syphilis.

Bismuth.—The various types of preparation have been used, but it is too early to differentiate between them and upon the general use of bismuth as a whole, although it has a marked effect upon the clinical lesions and the Wassermann reaction of the blood.

Iodides.—Potassium iodide is given either continuously or in alternate weeks throughout the first course of treatment by arsenicals, and sodium iodide is given intravenously during the treatment of latent and neuro-syphilis.

Dr. Snodgrass reports that the following experiments have been carried out at the Western Infirmary clinic in collaboration with the doctors named, and that the results will be published later:—

- (1) The penetration of iodine into the spinal fluid, and its possible therapeutic bearing—along with Dr David Campbell;
- (2) The permeability of uranin into the spinal fluid, and its possible aid in the diagnosis of neuro-syphilis—along with Dr Murdoch; and
- (3) The examination of sera by the Van den Bergh reaction as an aid in the early recognition of arsenical bismuth and mercurial toxicity—along with Dr A. A. Charteris.

Dr. Snodgrass again emphasises the importance of devising some method of inducing defaulters to return for further treatment.

He appreciates the appointment of the outdoor nurse to visit the female defaulters, and suggests that this service might be extended to the male side.

At this centre there is felt the need for a department which would undertake social service. Some of the female patients appear to contract disease through economic necessity, while others lose their occupation as the result of contracting disease.

Arrangements for temporary relief and for the finding of new positions would appear desirable. A number of young girl patients are of poor mentality and education, and the only satisfactory solution of their problem would appear to be compulsory detention in an institution, where they might be educated to some trade or occupation.

All of the clinical officers pay a high tribute to the nursing and clinical staffs, both male and female, attached to their respective centres.

REPORT BY VISITING NURSE.

The nurse commenced her duties on the 5th November, and her report is for the six months ending 5th May, 1926. It has been considered advisable to include it in this year's report, as many of the clinical officers have already expressed their satisfaction with the result of her work, and have asked for an extension to this branch of the scheme, with a view to improving the attendances at the centres.

“ I have visited all the venereal diseases centres at which women and children are treated, and have actively participated in nursing duties at Baird Street Centre and at one of the Child Welfare Centres during the V.D. session.

“ At the request of the various doctors, I have visited 237 patients whose attendances had lapsed, and have made 350 visits to those patients. I have to cover the whole City, and find on occasion that much time is lost between the cases. Thirty-seven patients were not known at the addresses which they had given at the Centres, and it was impossible to ascertain their domiciles; one patient had died when visited; and one was found to be suffering from pulmonary tuberculosis—leaving 200 patients with whom touch has been established. Every individual patient (with the exception of three) promised to resume attendance at the Centre at which treatment was being given, but in actual fact only 106 resumed their attendances. The three exceptions were:—

- (a) A girl who was found to be in a parish hospital, and whose mother expressed indignation at the doctor suggesting that her daughter could be suffering from such a trouble;
- (b) Mrs —, who stated that there was no such trouble wrong with her, and who was extremely annoyed at the doctor suggesting such a thing; and
- (c) Mrs —, who stated that she did not believe in injections, and would never go back again for treatment.

“No difficulty has been experienced in getting into touch with the defaulting female patients, and no annoyance has been expressed with the purpose of the visit. The chief cause of defaulting would appear to be indifference. The patients seem to feel quite fit, and do not consider that there is any necessity to attend for further treatment. Quite a number of the patients have no idea of what they are suffering from, and several resume regular attendance for a period when they realise the necessity for it, and then again cease attending for no apparent cause.

“In the case of married women, it was found that household duties prevented quite a number from attending the clinics, and several of them expressed the desire that their husbands should have treatment, as they considered it useless to go for treatment while their husbands refused to do the same.

“Endeavours have been made to assist patients in various ways, but it has been found exceedingly difficult to obtain situations for such girls as desired.

“Several women have expressed their aversion to attending Centres where they have to mix in the waiting-rooms with individuals whose conversations are objectionable.”

SECTION VII.

HOSPITALS.

In Appendix Table XX will be found the total hospital accommodation for infectious diseases. In the section on tuberculosis the accommodation for the treatment of the different types of this disease is shown in tabular form, arranged according to the purpose to which each institution or part of it is devoted. The cost of upkeep of the various hospitals for the financial year ending May, 1926, excluding interest and sinking fund charges, together with the average daily number of patients admitted and dismissed and the daily cost of treatment, are included in Table XXI of the Appendix.

The hospital accommodation for infectious diseases was taxed to its utmost towards the close of the year owing to the prevalence of scarlet fever, but more particularly on account of the high demand for the treatment of pneumonia, and latterly measles. This has now become an important feature of the work of these hospitals, and the demand on the accommodation, especially for the treatment of children, was so great that wards in Knightswood and Robroyston had to be cleared of their tuberculosis patients for this purpose. The volume of this demand for pneumonia is shown by the fact that 3,623 patients were treated in hospital throughout the year, comprising no less than 60 per cent. of the total notified cases. Further details are given in the section on pneumonia.

During the year the Committee approved of the appointment of two aural surgeons to undertake essentially preventive work in connection with ear affections which tend to complicate scarlet fever, diphtheria, measles, &c. One will supervise the patients at Ruchill and Knightswood Hospitals, and the other those at Belvidere and Shieldhall Hospitals; they will carry out such operative procedure as may be required to prevent the establishment of chronic otitis media. The surgeons appointed assumed duty at the beginning of 1926, and their work will be subsequently reported.

ANNUAL REPORTS OF HOSPITALS.

As was the case last year, the reports of the Superintendents of the various hospitals and sanatoria again form part of this report. They contain the essential hospital statistics. All the reports make reference to the new method of serum treatment of severe cases of scarlet fever. In Belvidere Hospital some 150 patients have been so treated with encouraging results. The treatment appears to lessen the severity of the attack, reduce the incidence of complications, and to shorten appreciably the duration of stay of the patients in hospital. A note on the experiments at Ruchill in the prevention of measles is contained in Dr. Elliott's report. Investigations into the Dick test for scarlet fever are being carried out at Knightswood and Shieldhall Hospitals. It was decided to discontinue the treatment of phthisis patients at the latter hospital, the ward formerly used for this purpose being devoted to the treatment of measles.

In his report on the work at Robroyston Hospital, Dr. Watson describes the varied assortment of patients which come under the category of non-pulmonary tuberculosis, and gives the results of the treatment of the various types of case. A special report on ultra-violet light treatment by Dr. Smith is also included. There are now four teachers provided by the Education Authority. This has enabled ward teaching to be undertaken, in addition to the ordinary school; a very valuable measure. The work of the trained masseuse, appointed during the year, has yielded very good results, and has had a beneficial effect on the patients treated. The report also deals with the work of the visiting surgeon and visiting dentist.

The following alterations and additions to the various institutions fall to be recorded:—

Ruchill Hospital.—Additional isolation ward accommodation at Ruchill Hospital has long been required, and the Committee authorised the conversion of Ward 35 for this purpose. Its function and construction are indicated in the following report:—

It is proposed to convert Ward 35, which is the most westerly of the three wooden pavilions at Ruchill Hospital, into an Observation Ward. The need for accommodation of this type at Ruchill Hospital has now become urgent, and it is proposed to utilise this ward for observation purposes by partitioning it off into cubicles, as shown in the plan. The partitions between the cubicles will be open at the top, as shown in Section A-B, and will be composed of glass screens

from a height of three feet. The wall of the cubicles facing the corridors will also have glass from a height of four feet. The three cubicles at either end will be completely closed in by an asbestos roof covering. Four wash-hand basins will be inserted in the corridor, as shown on the plan. At either end of the pavilion provision is made for a dirty linen cupboard. The ward is in quite good repair, and no alteration is proposed to be made in the ward annexe. The probable cost of these alterations is estimated to be £700.

6th July, 1925.

Belvidere Hospital.—As explained in Section VI, dealing with venereal diseases, the arrangement under which male patients were treated at the Royal Infirmary was terminated. Accommodation for this type of case was provided at Belvidere Hospital, where a wooden pavilion close to London Road, capable of easy access from the gate, and of isolation from the main hospital, was converted and adapted for the treatment of 22 male patients. The alterations were completed by the end of the year, and include the provision of a small operating theatre and other services.

Knightswood Hospital.—This hospital as at present extended and reconstructed (see description in Annual Reports of 1919 and 1922) now contains accommodation for 182 fever patients on an adult basis. Two of the 24 bed wards are devoted to the treatment of phthisis, but owing to the outbreak of pneumonia one of these had to be evacuated during the winter. During the year it was decided to demolish the remaining two wards of the old hospital, which are obsolete in design and beyond repair or reconstruction. These will be replaced by (a) an observation ward and (b) an ordinary fever ward. The details are given in the following report:—

PROPOSED NEW WARD AT KNIGHTSWOOD FEVER HOSPITAL.

The plans submitted herewith indicate the manner in which it is proposed to complete the reconstruction of Knightswood Hospital. The two old wards situated to the north and south of the Administrative Block, being out of date in design and in a dilapidated condition, will be demolished and replaced by more modern pavilions.

The plans show:—

- (a) Block plan showing the sites of the old wards, and the manner in which these sites will be utilised after the buildings are demolished.
- (b) Plan of Observation Ward, which it is proposed to erect on the southern site.
- (c) Plan of pavilion, which it is proposed to erect on the northern site.

As the accommodation for observation and isolation purposes is insufficient, it has been decided that one of the new wards should be designed for this purpose. The plan, accordingly, shows an Observation Ward, with 18 beds, arranged in series on either side of a Central Nurses' Room, ten of the beds being partitioned off into single cubicles, and the remainder divided into four-bed wards at either end of the block.

Each cubicle measures 9 feet by 15 feet 3 inches, and is 11 feet from floor to ceiling, giving a floor area of 137 square feet, and a cubic capacity of 1,507 cubic feet. Each is separated from its neighbour by a partition, part of which, from 3 feet to 7 feet high, will be of glass. On the corridor wall glass windows will be similarly placed at a height of from 4 feet to 7 feet. This should allow reasonable supervision.

The two four-bed wards are placed at either end, and are designed with 9-foot bed centres, and have 1,500 cubic feet of air-space per bed; opposite each it is proposed to have an uncovered granolithic verandah.

The plan shows the lavatory and service accommodation — the former arranged in two annexes at either end, containing bathroom, lavatory, sink room, water-closets, housemaids' sink, and chute for dirty linen under the floor of the connecting corridor. The kitchen, with larder and linen accommodation, is in the centre of the block. Four wash-hand basins have been introduced in the main corridor.

The design of the pavilion proposed for the northern site has been largely dictated by the nature of the ground and by the contiguous roadways. The pavilion is intended for 20 patients in two wards, of 8 and 12 beds respectively. In each ward the floor area per bed is 144 square feet, and the height 11 feet, giving a cubic space of 1,584 feet per bed. The 12-bed ward is 72 feet long by 24 feet wide, while the 8-bed ward is 48 feet long, with a similar width. At the end of the 12-bed ward an open covered verandah has been introduced, an arrangement of this kind having been found of great advantage in Ruchill Hospital for treating septic and other types of cases. Attached to each ward is shown its sanitary annexe, containing bathroom, lavatory, water-closets, sink room, housemaids' closet, and linen chute.

The kitchen annexe, with larder and linen accommodation, is centrally placed. This block contains the Sister's Room.

It is proposed to build the two new wards of terra cotta facing bricks, with slated roofs, similar to the new wards which have been erected at the hospital.

25th June, 1925.

Robroyston Hospital.—The erection of the block containing operating theatre, X-ray department, plaster room, and their annexes, as described in last year's Annual Report, was commenced during the year and is nearing completion. The

erection of the school block was also commenced and is nearing completion. This block will contain two open-air class rooms, with broad verandah in front, with appropriate lavatory accommodation, teachers' room, and central heating.

During the year a ward had to be evacuated to accommodate pneumonia patients during the winter prevalence.

Remuneration of Nurses.—During the year the Corporation approved of certain increases in the scale of wages of trained nurses employed in the hospitals.

Wireless Apparatus.—With the approval of the Committee, wireless installations were introduced into the several fever hospitals and sanatoria.

RECEPTION HOUSES.

A rearrangement of the accommodation has been made at Baird Street Reception House, which for a number of years has been utilised as an auxiliary hospital for special diseases. The transference of patients suffering from trachoma to a ward at Ruchill Hospital has enabled accommodation to be provided for 24 indoor cases of non-pulmonary tuberculosis, for the purpose of treatment by ultra-violet rays. One of the wards on the top flat of the building was fitted with a battery of 8 carbon arc lamps arranged in pairs, and a mercury vapour lamp was also installed.

BAIRD STREET RECEPTION HOUSE—UTILISATION OF ACCOMMODATION.

The Corporation, at its meeting on 9th July, approved of the suggestion of the Sub-Committee on Hospitals that the remit to the Medical Officer in connection with this subject-matter be continued to enable a report to be made on the utilisation of the available accommodation in the Reception House for cases requiring light treatment.

The available indoor accommodation at Baird Street consists of 36 beds—12 in each ward on the second floor and 6 in each ward on the third floor. The wards are separated from each other, and the sexes can be entirely separated. There is also accommodation for a further seven nurses and one maid, sufficient, along with the present staff, to equip the institution as one for the treatment of cases. There are only two baths for the use of patients, and the lavatory accommodation is situated on the ground floor, thus limiting the use to which the institution can be put.

There is a scarcity of beds in the City for the treatment of cases of surgical tuberculosis, and it is suggested that the available beds here might be used for the treatment of ambulant cases of minor surgical tuberculosis in boys and girls under 16 years, relieving to this extent Robroyston Hospital for more serious cases requiring surgical interference. The proposal is to admit such cases as would benefit by good feeding and artificial light treatment under medical supervision.

It is anticipated that the light treatment installation at present in use in Baird Street will be required constantly for the treatment of outdoor cases, and it is suggested that suitable lights be installed in the ward, which runs north and south, and is situated on the half-stair between the second and third floor, and immediately over the nurses' sleeping quarters. The type of lamp at present most in use is the 20-25-ampere carbon arc lamp, which can take tungston-cored carbons as required, but the question of installing at the same time the mercury vapour lamp, to be operated by a Medical Officer, should be considered.

21st July, 1925.

During the year 1925 no contacts were dealt with at Baird Street, and the following table shows those admitted to South York Street:—

CONTACTS, &C., ADMITTED TO RECEPTION HOUSE.

South York Street	1924		1925	
	Total	Adults	Children	Total.
Smallpox Contacts, ...	3	—	—	—
Typhus Fever (?) ,, ...	—	3	5	8
Enteric ,, ,, ...	—	2	2	4
Scarlet ,, ,, ...	—	1	6	7
Diphtheria, ,, ...	3	—	1	1
Whooping-Cough ,, ...	—	—	4	4
Measles ,, ...	—	—	1	1
Mumps,	2	4	3	7
Impetigo,	23	1	16	17
Verminous Persons treated,	212	156	39	195
Scabies,	29	2	14	16
For Observation before admission to Country Homes,	—	—	166	166
Total,	272	169	257	426

DISINFECTING STATIONS.

Sanitary Wash-houses.—The following tables summarise the washings and disinfections carried out at Ruchill and Belvidere Sanitary Wash-houses during the year 1925:—

	Belvidere	Ruchill	Total
Number of washings,	7,033	7,375	14,408
Average number per day,	23·2	23·9	47·1
Articles washed and disinfected, ...	239,318	291,459	530,777
Average number of articles per washing,	34·0	39·5	36·8
Fuel consumed, tons	546	578	1,124
Fuel used per article, lbs.	5·19	4·53	4·74
Soap and powder used per article, ... ozs.	·32	·32	·32
Disinfectant do. ozs.	·37	·61	·50

NUMBER OF WASHINGS, ARTICLES DISINFECTED, &C., FOR YEARS
1921-25 INCLUSIVE.

	Washings	Articles	Sprayings	Whitewashings
1921, ...	18,060	655,867	19,196	21
1922, ...	14,837	533,450	9,418	21
1923, ...	14,423	526,285	8,008	2
1924, ...	14,690	510,275	8,405	3
1925, ...	14,408	530,777	8,473	2

Books Disinfected, 1,265

SECTION VIII.

OFFENSIVE TRADES.

During the year 1925 several applications were made for the registration or renewal of registration of premises for the carrying on of offensive trades.

Horse Slaughterers and Knackers.—The annual renewal of licences, as required by statute, for the carrying on of the businesses of slaughterers of horses and knackers, were granted in respect of two establishments in the Northern District of the City.

Bone Boiler and Manure Manufacturer.—An application was received in February from a firm in the East-End to establish the business of bone boiler and manure manufacturer. The firm already carry on the business of tallow manufacturers in the premises, which are situated on the outskirts of the city. The premises are constructed of brick and corrugated iron, and the floors laid with concrete. The inside walls are cemented to a height of five feet. The plant used is of suitable type, and the materials dealt with—about ten tons weekly—consist of raw bones obtained from butchers, grocers, etc. The bones, after crushing, are placed in a boiler (Iwel pattern), and subjected to 80 lbs. steam pressure. Vapours and smells are carried into a condenser fitted with water sprays, and the liquid thereafter carried to a cesspool. The bones are dried and ground into poultry meal. Every precaution against nuisance is taken. A licence was granted.

Skinners and Hide Factors.—During the year it was discovered that a firm had been carrying on for some time, in the East End of the City, a business in which rabbit skins are collected, dried if necessary, and classified before export to their works in Belgium for the manufacture of velour hats. These skins are obtained from poulterers and dealers throughout the country, and from Ireland. Between 200,000 and 300,000 dozens are dealt with annually, together with 2,000 horse hides and 1,200 dozens of goat skins.

As most of the skins are practically dry when received, they are not kept on the premises for more than two or three days, so that there is little likelihood of nuisance arising. There are only 29 dwelling-houses situated within one hundred yards of the works. The number of staff employed consists of 4 men and 22 girls, in addition to office staff. The premises are suitable and kept clean. On certain minor alterations which were suggested being given effect to, a licence as hide and skin factors was issued.

SECTION IX.

GLASGOW PORT LOCAL AUTHORITY.

BOARDING STATION, GREENOCK.

At the Boarding Station at Greenock vessels are boarded by means of a motor launch, which is hired on a yearly contract.

SUMMARY OF WORK DURING THE YEAR 1925.

1,735 vessels, trading to foreign ports and bound for the Port of Glasgow, passed the Boarding Station during the year. Of this number, 462 had come from or called at ports infected under the meaning of the Cholera Order; 243 direct or with inward foreign cargo on board; and 219 light or with export cargo.

Tonnage.—Of the 1,735 vessels arriving from foreign ports, 1,728 were steamers or motor ships with a tonnage of 4,656,742, and seven sailing ships with a total tonnage of 1,917. In addition, there were 10,942 coastwise vessels, 8,871 being steamers or motor ships, with a tonnage of 3,437,238; 85 sailing vessels, tonnage 4,988; and 251 fishing steamers (including motors) of 10,208 tons.

Of the vessels arriving from foreign ports, 1,003 were boarded at Greenock.

NUMBER OF SHIPS ARRIVING FROM FOREIGN AND IRISH FREE STATE PORTS—YEAR 1925.

MONTH.	FROM INFECTED PORTS.						(C) From Non-Infected Ports, with or without Cargo.				Total from Foreign Ports.	Arrivals from Irish Free State.	
	(A) With Foreign Cargo.		(B) Light, or with Outward Cargo.		Ships. Crews. Pass.		Ships. Crews. Pass.		Ships. Crews. Pass.				
	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.		Pass.			
January,	21	1,399	...	15	1,000	...	99	4,043	403	135	6,442	403	56
February,	16	1,279	...	16	1,119	...	99	3,638	370	131	6,036	370	60
March,	30	1,813	...	24	1,652	...	97	3,954	797	151	7,419	797	63
April,	21	1,646	...	23	1,494	...	102	4,633	700	146	7,773	700	61
May,	19	1,570	...	14	1,284	...	107	5,301	2,200	140	8,155	2,200	69
June,	12	1,081	...	19	1,215	...	104	5,143	3,228	135	7,439	3,228	64
July,	25	1,765	...	20	1,120	...	111	5,757	2,002	156	8,642	2,002	63
August,	14	935	...	12	922	...	122	6,356	1,820	148	8,213	1,820	66
September,	17	1,303	...	25	1,701	...	105	5,534	1,416	147	8,538	1,416	62
October,	21	1,567	...	12	736	...	117	5,981	1,184	150	8,284	1,184	63
November,	23	1,482	...	20	1,077	...	114	6,027	1,379	157	8,586	1,379	52
December,	24	1,500	...	19	1,444	...	96	3,466	812	139	6,410	812	45
Totals,	243	17,340	...	219	14,764	...	1,273	59,833	16,311	1,735	91,937	16,311	724
1924,	255	19,604	4	216	13,003	...	1,311	59,460	20,437	1,782	92,067	20,441	770

The following table shows the number and nationality of the overseas vessels which arrived at the Port of Glasgow during 1925, as compared with the years 1923 and 1924:—

Nationality	Number of Vessels			Number of Crews		
	1923	1924	1925	1923	1924	1925
American, ...	62	56	55	2,450	2,267	2,271
British, ...	1,287	1,307	1,352	77,069	79,933	81,937
Danish, ...	27	19	27	553	295	506
Danziger, ...	—	—	1	—	—	19
Dutch, ...	14	14	9	294	244	164
Finnish, ...	5	1	1	105	24	22
French, ...	46	35	23	1,014	882	499
German, ...	42	52	37	786	1,091	523
Greek, ...	20	17	8	539	445	213
Italian, ...	21	7	10	727	228	278
Japanese, ...	13	14	14	962	1,021	1,026
Jugo-Slavian, ...	10	4	—	321	114	—
Latvian ...	—	—	2	—	—	41
Norwegian, ...	190	133	115	3,700	2,576	2,300
Peruvian, ...	—	—	1	—	—	32
Spanish, ...	138	110	69	3,352	2,693	1,895
Swedish, ...	13	10	11	262	179	211
Belgian, ...	—	2	—	—	29	—
Uruguayan, ...	—	1	—	—	46	—
Other Nationalities,	7	—	—	221	—	—
Total, ...	1,895	1,782	1,735	92,355	92,067	91,937

Ships arriving from ports in the Irish Free State are dealt with in a subsequent table.

IRISH FREE STATE SHIPPING.

All vessels from the Irish Free State are boarded for the examination of foodstuffs, under the Unsound Food Regulations, and as there are twelve ships arriving weekly, carrying annually about 900,000 of foodstuffs, difficulty is sometimes experienced in overtaking the work, as the vessels usually depart on the day of arrival or on the following day.

The arrivals each month are given in the table on page 165. The total for the year was 724, of which 415 were boarded at Greenock.

INFECTIOUS DISEASES.

The following table shows the number and nature of the cases of disease met with in the year 1925. The first column gives the total number of cases. Column 2 shows that 74 cases were dealt with at other ports during the voyage. Particulars of these are not always available, but, where necessary, disinfection was carried out on the arrival of the ship at Glasgow. The other columns show how the 108 cases found on arrival were dealt with. 47 cases were removed to hospital in Glasgow, and 61 cases were permitted to go home. Twelve deaths were recorded during the year.

TABLE SHOWING DISEASES AND NUMBER OF CASES
DURING THE YEAR 1925.

DISEASE.	Total Number of Cases during Voyage.	Cases Dealt with in other Ports.	Cases Found on Arrival.	Cases Sent to Hospital.	Cases Sent Home.	Deaths.
Smallpox, ...	6	6	—	—	—	—
Enteric Fever, ...	10	2	8	8	—	2
Scarlet Fever, ...	4	2	2	2	—	—
Diphtheria, ...	2	—	2	2	—	—
Measles, ...	28	24	4	3	1	—
Chickenpox, ...	10	8	2	1	1	—
Whooping-Cough, ...	5	4	1	—	1	—
Phthisis, ...	28	3	25	7	18	3
Venereal, ...	8	4	4	—	4	—
Mumps, ...	1	—	1	—	1	—
Malaria, ...	15	6	9	1	8	1
Pneumonia, ...	16	5	11	10	1	2
Erysipelas, ...	1	—	1	1	—	—
Dysentery, ...	4	3	1	1	—	—
Trachoma, ...	2	—	2	—	2	—
Influenza, ...	5	2	3	—	3	—
Tonsilitis, ...	5	—	5	2	3	—
Tuberculosis (Gen.),	2	—	2	1	1	—
Beri-Beri, ...	1	—	1	1	—	—
Other Illnesses, ...	29	5	24	7	17	4
	182	74	108	47	61	12

Phthisis.—Of 25 cases found on arrival, 10 were members of crews (8 natives of India and 2 Europeans), and the remaining 15 passengers (7 deported and 3 rejected by the U.S.A. or Canadian authorities). The body of one who died on arrival at Greenock was removed at Glasgow for burial.

Pneumonia.—All were members of crews, 5 being Asiatics. There were 2 deaths.

Malaria.—Of the 9 cases, all members of crews, 1 was treated in hospital. The others were allowed home. One death occurred.

Enteric.—Eight cases were found on arrival. All were members of crews, who were removed to hospital, where 2 died. Four cases were found on a Danish ship which had come from Montreal and Quebec with a general cargo and a large number of cattle. The first case sickened soon after the ship left Quebec, and the others during the voyage to the Clyde. On arrival here 2 were found to be gravely ill, and 2 showed marked symptoms of the disease. All were removed to hospital, where one died. The ship was only 24 hours in Glasgow, and sailed for Antwerp. Antwerp Port Authorities were informed of the occurrence by cable, and information was received later that 2 cases of enteric fever had been removed from the ship there.

Venerical Disease.—During the year 160 seamen attended the clinic. Of these, 99 suffered from gonorrhoea, 47 from syphilis, 3 from gonorrhoea and syphilis, 3 from balanitis, 1 from soft sore, 1 from stricture, and 6 had no apparent disease.

Anthrax.—Goat-skin thongs continue to be used as bindings for orange boxes from various ports in Spain. During the year samples have been examined by the Bacteriologist for the presence of the anthrax bacillus. One positive finding was obtained.

ALIENS ORDER.

During the year 1925, 99 alien-carrying passenger ships arrived at the Port of Glasgow, compared with 96 during 1924. Of these, 3 were from Saint John, N.B., 46 from New York, 41 from Montreal, 1 from Portland (Maine), 1 from Philadelphia, 1 from Huelva, 1 from New Zealand, and 5 from other ports.

All aliens who intend to remain in the country three months or more are subject to medical examination. During 1925, 408 such examinations were made, and 5 persons were rejected on medical grounds, this number being the same as in 1924.

Particulars of the 5 persons rejected on medical grounds are as follows:—

- U.S.A. citizen, male, 3rd-class passenger—general debility.
- U.S.A. citizen, male, 3rd-class passenger—total blindness.
- U.S.A. citizen, male, 2nd-class passenger—general paralysis.
- U.S.A. citizen, female, 2nd-class passenger—hemiplegia.
- U.S.A. citizen, female, 2nd-class passenger—chronic synovitis.

RETURN OF ALIEN PASSENGERS ARRIVING AT THE PORT OF GLASGOW
DURING 1925.

Nationality	Non-Transmigrants	Transmigrants	Total
Americans,	4,401	5	4,406
Europeans,	47	43	90
Asiatics,	8	1	9
Other Nationalities,	12	2	14
Total,	4,468	51	4,519
Do. 1924,	4,564	118	4,682

EMIGRANTS.

During 1925, 116 ships, carrying emigrants, left the Clyde. Of these, 45 sailed for America and 71 for Canada. During 1924 the numbers were 44 and 81 respectively. There were no sailings for Australia during 1925, and only 2 sailings during 1924.

The following is a return of emigrants, with ships, which left Glasgow during 1925:—

Country.	Ships.	British Subjects.	Other Nationalities.	Total.
1925.				
America,	45	12,245	2,877	15,122
Canada,	71	15,682	784	16,466
	116	27,927	3,661	31,588
1924,	127	31,956	5,219	37,175

RAT DESTRUCTION.

During the year, 48 vessels were fumigated with sulphur and 4 with hydro cyanide. All of the former were done by this department in accordance with the instructions issued by the Scottish Board of Health, while the latter were done by private firms. Of the 48 fumigated with sulphur, 22 were from infected ports, while only 1 of the 4 done by H.C.N. was from an infected port.

In almost all instances the fumigation is done at the request of shipping companies, in order to comply with the regulations

of the country to which the vessels are proceeding, usually in the United States, and it is seldom found that the vessels are badly infested with rats.

In 7 instances certificates of exemption from fumigation were granted, where the vessels were new or had been fumigated within six months, loaded at a distance of 8 feet from the wharf, and had taken all other precautions to prevent the ingress of rats.

After each fumigation a search was made for rats, and the following summarises the results:—

Infected Ports.				Non-Infected Ports.			
Ships.	Trapped.	Ships.	Destroyed by Fumigation.	Ships.	Trapped.	Ships.	Destroyed by Fumigation.
40	484	8	75 (SO ₂)	3	13	7	343 (SO ₂)
—	—	14	None (SO ₂)	—	—	19	None (SO ₂)
—	—	1	50 (HCN)	—	—	3	None (HCN)

Altogether 965 rats were trapped or destroyed by fumigation on board ships, 487 of which were black rats and 478 brown or grey. In addition, 121 brown rats were submitted for examination from warehouses, making a total of 1,086.

Almost all rats were found in the holds of vessels. Of the total rats, 965 were male and 121 female.

NUISANCES ON SHIPBOARD.

2,454 inspections and reinspections of vessels in harbour were made during the year. The visits to oversea steamers numbered 1,728, and the revisits 337. In oversea sailing vessels 7 inspections and 3 revisits were made, while 314 coasting steamers and 24 sailing craft were examined, revisits being paid to 35 of the former and 6 of the latter. 201 verbal warnings were given to masters where nuisances of a minor nature were found, and 63 intimations and 7 notices (under the Public Health Act) were served where defects existed. 557 verbal instructions were given, and 584 notices served on masters of vessels *re* locking up water-closet accommodation while vessels were in port.

The nuisances discovered numbered 1,520—in forecastles, rooms, &c., 542, and water-closets, wash-houses, &c., 314, while structural defects were found in 268 instances—226 within crews' quarters, and 42 in water-closet and lavatory compartments. General complaints were recorded in 396 instances.

Sanitary Defects and Nuisances.—The following table shows the nuisances found on board vessels arriving in the harbour:—

ARISING FROM STRUCTURAL DEFECTS.

Forecastles, Rooms, &c.—

	1923	1924	1925
Overhead decks leaking,	45	44	68
Ports defective,	83	100	113
Skylights out of repair,	2	—	—
Without scupper-pipe or same cemented, ...	2	—	—
Ventilators plugged, out of repair or unshipped,	6	—	—
Without bogies or funnels, or such out of repair,	21	13	8
Inadequately lighted or ventilated,	9	7	9
Radiators or steam-pipes defective,	11	18	15
Doors to forepeak and forecastle broken,	1	—	—
Ships' sides leaking,	3	—	5
Anchor chain exposed by sheathing being out of repair,	2	4	1
Doors of food lockers and seats out of repair, ...	2	—	—
Requiring wood-sheathing or cork-spraying for "sweat,"	4	2	3
Hawse-pipes defective,	2	—	—
Floors broken and out of repair,	3	2	3
Bulkhead between forecastle and w.c. compartment broken,	1	—	1
Scuppers required,	2	—	—
Waste pipe leaking,	2	—	—
	<u>201</u>	<u>190</u>	<u>226</u>

Water-closets, Urinals, Wash-houses, &c.—

	1923	1924	1925
Flushing apparatus, basins or discharge pipes defective,	1	3	12
New water-closet required,	6	4	2
Ports defective,	1	2	—
Floor and woodwork out of repair,	2	2	—
Doors broken and new locks required (w.c.'s must be locked while ship is in harbour),	12	3	14
Ventilators plugged,	2	—	—
Woodwork of w.c. basin broken,	13	1	12
Compartments defective in light and ventilation,	2	3	2
	<u>39</u>	<u>18</u>	<u>42</u>

NUISANCES FOUND WITHIN GLASGOW AREA DURING THE YEARS 1923-1925.

ARISING FROM MISUSE.	1923	1924	1925
<i>Forecastles, Rooms, &c.—</i>			
Alleyways and companionways dirty,	125	79	97
Floors, mat coverings, ceilings, woodwork, &c., dirty,	174	236	148
Interior of ships' sides or woodwork dirty (to be limewashed or repainted),	130	80	94
Galleys dirty,	9	4	16
Tables and benches dirty,	229	117	168
Scuppers choked (water lying stagnant),	21	8	19
Bunks dirty,	—	2	—
	<u>688</u>	<u>526</u>	<u>542</u>

<i>Water-closets, Wash-houses, &c.—</i>	1923	1924	1925
Floors, ceilings, and wood work dirty,	87	107	102
Basins, hoppers, or troughs fouled, corroded, or choked,	38	75	119
Scuppers choked,	31	9	28
Wash-house dirty,	6	—	—
Interior requiring limewashing or repainting, ...	48	32	64
Waste pipe defective,	—	—	1
	<u>270</u>	<u>223</u>	<u>314</u>

GENERAL NUISANCES.	1923	1924	1925
Food lockers dirty,	230	111	220
Bilges (hold) dirty,	32	18	32
Gear and food-stuffs stored in sleeping compartments,	11	1	4
Drinking-water tanks dirty and in need of re-cementing,	81	74	52
Do. out of repair or uncovered, ...	2	1	2
Accumulation of rubbish in fore-castle or on deck,	26	30	62
Fore-castle infested with vermin,	14	27	12
Bedding dirty or verminous,	9	—	10
Bilges ventilating into fore-castle,	—	—	2
	<u>405</u>	<u>262</u>	<u>396</u>

The following table shows the number of oversea and coast-wise ships inspected in the harbour during the years 1923-1925:—

	Inspections:			Re-inspections.		
	1923	1924	1925	1923	1924	1925
Oversea Steam,	1,885	1,773	1,728	360	353	337
„ Sail,	10	7	7	3	5	3
Coast Steam,	310	238	314	38	6	35
„ Sail,	12	7	24	2	1	6

	1923	1924	1925
Intimations,	56	105	63
Warnings,	188	246	201
Notices,	3	8	7
L.A.'s Letters,	12	8	14

Nuisances—

Functional,	1,211	873	1,099
Structural,	225	170	265
General,	172	162	153

Of the total arrivals, 1,354 were British and 381 vessels sailed under foreign flags, the latter including 15 different nationalities, Norwegians, Spaniards, Americans, Germans, French, and Danish predominating.

Pollution of River.—At the instance and after negotiation between this department and the Clyde Navigation Trustees, some considerable time ago, water-closet accommodation was provided ashore for seamen of all nationalities. As it is, therefore, inexpedient and undesirable that the various docks and harbours should continue to be polluted with faecal matter, it is necessary to intimate to masters that all conveniences aboard ship must be kept locked while ship is in port. Complaints are continually being received from Deputy Harbour Masters and others regarding this matter. While notices are issued to the masters asking them not to use lavatories aboard ship, there is no legal power to enforce this.

Rags, Hair, Hides, and Bones.—The following table shows the imports of rags, hair, hides, and bones, with the source of origin and number of shipments from each country:—

Source of Origin.	No. of Ships.	RAGS.	No. of Ships.	HAIR (Various.)	No. of Ships.	HIDES (Various.)	No. of Ships.	BONES
		Bdls.		Bdls.		Bdls.	Bags.	
Continental, - - -	86	3,150	23	391	22	6,378	...	...
Canadian, - - -	...	..	8	720	1	24	...	...
United States, - - -	5	16	46	8,244	16	41,268	...	...
South America, - - -	...	...	18	447	14	40,469	8	18,289
Australia & N. Zealand, ...	...	...	1	1	23	4,389	...	...
India, - - -	...	...	...	...	11	864	...	...
South Africa, - - -	...	...	1	4	2	89	...	...

In addition to the foregoing, there is a considerable quantity of rags imported from Irish Free State ports.

UN SOUND FOOD REGULATIONS.

The following table shows the character and quantity of the food-stuffs imported direct during 1925 (but does not include coastwise or transhipped cargoes), a percentage of which was examined by the Food Inspectors before removal:—

Article.	Weight.		Article.	Weight.	
	Tons.	Cwts.		Tons.	Cwts.
Apples,	44,338	13	<i>Brought Forward,</i>	438,363	3
Apricots,	242	14	Lemons,	4,096	8
Almonds,	896	11	Liquorice,	12	16
Bananas,	24	2	Meal (various), ...	1,962	—
Bacon,	1,834	9	Meats (canned, &c.),	3,322	—
Baking Powder, ...	116	7	Melons,	170	8
Barley,	42,788	12	Milk (canned), ...	3,105	3
Butter,	1,691	12	Milk (powder), ...	307	15
Cereals (Oats, Rye, &c.),	150,311	19	Molasses,	1,467	11
Cheese,	4,707	15	Macaroni,	402	10
Coffee,	—	18	Nuts (various), ...	2,203	12
Cocoa,	103	1	Oils (various), ...	7,286	13
Condiments,	45	4	Onions,	24,156	16
Confectionery, ...	1,042	19	Oranges,	30,113	8
Cream of Tartar, ...	399	12	Orange and Lemon Peel,	168	7
Eggs,	8,920	8	Peaches (canned), ...	685	13
Eggs (liquid),	2,828	14	Pears,	1,910	5
Eggs (albumen), ...	334	8	Pears (canned and dried)	1,731	12
Fish (canned, &c.), ...	495	8	Pineapples,	1,152	18
Fruit (canned),	2,430	6	Plums (canned and dried),	183	4
Fruit (dried),	6,310	4	Pomegranates,	455	17
Fruit (pulp),	587	—	Potatoes,	3,099	10
Flour (various),	136,527	12	Peas,	9,091	1
Farinaceous Foods, ...	2,153	—	Rice,	6,479	14
Glucose,	4,823	8	Sundries,	1,369	12
Grapes,	5,437	15	Sugar,	50,604	19
Grape-Fruit,	900	2	Syrup,	61	15
Ham,	15,111	19	Tomatoes,	15	6
Honey,	182	19	Tomatoes (canned),	703	7
Lard (pure),	2,665	9	Vegetables (canned),	868	6
Lard (compo.),	110	3	Wheat,	165,410	2
<i>Carry Forward,</i>	438,363	3	TOTAL,	760,961	11

The following food-stuffs were found unfit and disposed of to the satisfaction of the Medical Officer of Health:—

Article.	Weight.			Article.	Weight.		
	Cwts.	Qrs.	Lbs.		Cwts.	Qrs.	Lbs.
Apples, - - -	236	2	—	Meal, - - -	41	3	4
Blackberries, - -	84	—	—	Oranges, - - -	3,454	—	—
Biscuits, - - -	2	2	18	Peaches, - - -	9	—	—
Coffee, - - -	—	2	—	Pears, - - -	612	—	—
Currants, - - -	—	2	—	Plums (canned),	11	1	—
Flour, - - -	908	1	14	Periwinkles, -	1	2	—
Grapes, - - -	136	2	—	Potatoes, - - -	6	—	—
Jam, - - -	2	—	—	Pulp (canned), -	27	2	10
Lemons, - - -	168	—	—	Raisins, - - -	—	1	8
Maize, - - -	2,000	—	—	Sugar, - - -	10	—	—
Mandarines, - -	246	—	—	Tea, - - -	—	3	16
Meats (canned), -	3	—	—	Wheat, - - -	50	3	20
<i>Total weight,</i>							

8,013 cwts. 1 qrs. 6 lbs.

The above table shows the great variety of the food stuffs inspected and dealt with. The method of procedure in each case is the same. The suspected food stuffs are detained for further inspection, the consignee is communicated with, and a suitable time fixed for re-examination of the material in his presence. As a rule, the consignees, on being satisfied as to the unsoundness of the food, empower the Inspector to have the condemned food disposed of, thereby obviating the necessity for obtaining a warrant from the Sheriff or Magistrate.

A ship arrived at Prince's Dock from Baltimore on 10th October, with a general cargo, part of which consisted of 4,200 sacks of flour salvaged from a ship which had gone ashore on Belle Isle. The flour was detained for further examination, and six samples, with sacking, were taken on the 19th, and submitted to the City Analyst, who reported that the flour had been contaminated with sodium chloride. Subsequently the flour was sold by auction and released on condition that it be taken to storerooms named for reconditioning, with the following result:—

Sacks of flour good after reconditioning,	2,011
Sacks of flour condemned after reconditioning,	725
Sacks of flour consigned outwith the City,	1,464
	4,200
	4,200

Where the flour was consigned outwith the City the Local Authority of the area was advised. The condemned flour, weighing approximately 906 cwts., was used for pig-feeding and textile purposes where suitable.

The s.s. *Walter Holken*, from Hamburg, arrived at Prince's Dock on 28th November, with a general cargo, part of which contained 1,210 bags of potatoes. One hundred and eighty-four bags were, after examination, detained, and samples submitted to the City Analyst, who reported that:—

“Washing the potatoes removed the incrustation, which consisted of Glauber salts, amounting to 14·71 grains per lb., and on cutting the potatoes and extracting with hot water 25·2 grains per lb. were removed.”

The consignee was advised that the potatoes were unfit for human consumption. Neither consignor nor consignee would accept responsibility; the Sheriff ultimately granted a warrant for the disposal of the consignment.

Egg Yolks.—The s.s. *Meg Merrilees* arrived at Kingston Dock from Liverpool with a transhipped consignment of Chinese egg yolks, consigned to a store in the city.

Two samples submitted to the chemist were reported as containing more boric acid than 2 parts per million, and, on the importers being advised, they had two samples examined on their own behalf, which were reported as containing 1·5 and 1·6 parts per million. Ten more samples were taken from different barrels by the Inspectors, which were all reported as being within the standard, but in the meantime the agents had arranged for reshipping the consignment to the Continent.

Brownheart in Pears and Peaches.—A ship arrived at the port from Vancouver and San Francisco, via Panama Canal, London, and Liverpool, on 2nd November, with 579 boxes of fresh pears in cans (two cans to each case—weight of case, 48 lbs.), and 25 tins of fresh peaches in cylindrical cans, marked “S.S. & F.,” and consigned to Glasgow merchants. The pears and peaches were packed under the “Milani” system. Under this process the fruit is wrapped in paper and packed in 5-gallon tins, a perforated cardboard cover is placed over the pears and peaches, supported on two small pieces of wood. Thereafter a small quantity of alcohol is dropped on the covering, this is set on fire, and the lid of the tin is placed on the can while the alcohol is alight. The condition of the fruit was as follows:—

Pears.—On opening a smell of alcohol was observed. The fruit was firm, and did not show any visible signs from outside as to unfitness for human consumption, but when cut in section the pears showed brown patches radiating from the core outwards. The patches did not, as a rule, extend to the skin of the fruit. Apparently 90 per cent. of the pears were affected with “brownheart.”

Peaches.—Contained in 40-lb. cylindrical cans. On opening tin a distinct odour of alcohol was observed. Peaches showed dark patches on surface, and, on being cut into, showed discolouration of a dark-reddish nature, with juice exuding, and in some cases a definite smell of fermentation.

Most of the tins were found to have been pierced. It was stated that this had been done in dock before transshipment, as the tins were apparently "blown."

The City Analyst reported on 10th November as follows:—

"One drum contained peaches which, on examination, proved to be affected with 'brownheart.' The gas contained in the tin, which was unopened until the analysis was made, gave the following result:—

Carbon Dioxide,	...	...	...	32.68	per cent.
Oxygen,	...	...	...	7.56	"
Nitrogen (difference),	...	...	...	59.76	"
				<hr/>	
				100.00	"
				<hr/>	

The other drum examined had been pierced with a small hole some time prior to the sampling of the gases. This drum contained pears which were also affected with "brownheart" disease. The gases, on analysis, gave the following result:—

Carbon Dioxide,	...	...	...	20.66	per cent.
Oxygen,	...	...	...	7.42	"
Nitrogen (difference),	...	...	...	71.92	"
				<hr/>	
				100.00	"
				<hr/>	

The following is the report by Dr. Buchanan, City Bacteriologist:—

BROWNHEART IN PEARS.

Some specimens of pears, ex s.s. *London Merchant*, representing a consignment from Vancouver, and found to be affected with a brown discolouration of the pulp, were received for examination on 5th November.

Material taken from the brown discolouration, with strict precautions against contamination, gave a pure growth on agar of a fungus producing a deep brown discolouration of the medium. The fungus, once established, grew rapidly, and in a few days threw up a forest of aerial hyphæ, developing conidiophores and conidia of the botrytis form.

A cubical tin of five-gallons capacity, containing about 80 pears from the same consignment, was received on 6th November for more detailed examination. The tin had a circular press-in lid, and presented a small puncture in the side near the top. On removing the lid an alcoholic odour emanated from the tin, and each pear was seen to be wrapped in "caro" paper. This method of packing, called the Milani process, involves the removal of oxygen from the tin to prevent the ripening of the fruit while the tin remains sealed. This is aimed at by placing a perforated cardboard over the pears and

setting alcohol alight on the under surface of the lid just as it is pressed into position to close the tin, the idea being to burn out the oxygen.

The pears on being unwrapped appeared uniform in size, light green, under-ripe, and apparently sound. On section, however, a large number exhibited in varying degree a brownish discolouration of the pulp—a condition generally recognised as "Brownheart." The proportion thus affected was estimated by taking six series of six pears each from the tin and examining them forthwith in mesial and cross sections. In this way it was found that 53 per cent. showed involvement of the pulp in varying degree. A week after removal from the tin 11 in 27 had developed, around the eye, brown discolouration, with softening, and commencing shrinkage. This discolouration advanced rapidly to involve the whole pear in the course of another week, and in about four to six weeks, as the result of evaporation, mummification had taken place.

A sound pear placed in touch with this discoloured one developed the same condition by rapid spread from the point of contact.

The discoloured tissue characteristic of the disease was well defined from the normal tissue in pears in which it was advanced, while in others it was so slight that its presence was only vaguely indicated. The tissue was obviously, though not symmetrically, involved in this change from the core towards the surface, and appeared to be limited in its earlier spread by a narrow cortical zone of resistant normal tissue. The tissue in the diseased area was moist and slightly softer than the normal tissue, but only in the more advanced examples of the disease was the softening appreciable when the pears were handled. It may be mentioned that many of the pears showed on section an irregular cavity of varied size, presenting a rough, dry surface. In a number of the pears a surface depression was observed over these cavities, which are probably to be reckoned as developmental faults. It was frequently noted that the seeds had not developed, suggesting a want of cross fertilisation.

The mould already referred to was repeatedly obtained from the diseased tissue, and has been carried on in pure growth in sub-culture. By artificial inoculation of sound pears the disease has been reproduced with all its characteristic discolouration and softening of the pulp.

When the cut surface of an affected pear is placed upon a board the diseased area becomes quickly covered with a white felted mycelium. If it is then exposed to the air a copious growth of aerial hyphæ appears in a few days, bearing conidia of the botrytis form. After the lapse of some more days the whole cut surface becomes thickly and uniformly covered by this growth, which has now assumed a characteristic greyish or slightly greenish-brown appearance.

As already indicated, when this fungus is inoculated upon ordinary agar in a petri plate, a pure profuse growth quickly appears, staining the agar a deep brown, and throwing up a rich profusion of aerial hyphæ, bearing terminal conidiophores and conidia, the growth

suggesting a uniform miniature forest in appearance. After a time the growth of the conidiophores and conidia becomes nodal on the aerial hyphæ.

Inoculation of pears produces in three days an area of discolouration which appears moist and sunken, and thereafter the fungus becomes visible to the naked eye, with a beard of conidiophores projecting over the cut edge. Later the fungus spreads over the whole surface, completely covering the tissue in a dense mass of mycelium, with a uniform growth of fruiting hyphæ, on which tear-like drops of clear brown fluid collects. In the centre of this cut surface corresponding to the core of the pear, dense, hard, inky-black sclerotinia appeared. Tear-like drops also appeared on the agar cultures abundantly, and ultimately on some of the cultures numerous sclerotinia.

In none of the shrivelled pears have I seen the fungus spread on the external free surface, but on that portion of the surface resting on a table or board a close felted white growth developed co-extensive with the area of contact. In most of the pears this developed the botrytis conidia stage when exposed to the air, while in one instance it remained white and non-fruiting for over two months, and in cultures presented the appearance of *sclerotinia cinerea* (Schroet. forma mali). The fungus was isolated from the eye of a number of the pears from which it entered the pulp, and spread in the pulp under conditions of anærobiosis, its vegetative advance ceasing near the surface. Its ramifications within the pear produce the brown softening, followed as the result of evaporation by shrinkage and mummification. Microscopic sections from the diseased areas show a mycelium, septate, much branched, and light brown in colour.

Temperature has an important effect in promoting the development of the fungus, the most rapid and profuse growth both on pears and in artificial nutrient medium taking place at room temperature. When pears of different kinds are inoculated the same result is produced, and no difference has been noted in susceptibility of three kinds, including the pears in question.

I am of opinion, from the examination of this consignment of pears, that "Brownheart" is due to a living organism belonging to the sclerotinia. From the botrytis form of its conidiophores and conidia it conforms to the species *sclerotinia fuckeliana*. Its development appears to be the direct result of package in air-tight receptacles in which the oxygen is used up, and a condition of partial anærobiosis is induced.

The consignee was subsequently notified that the fruit was unsound and unfit for human consumption. The pears and peaches were released for pig-feeding purposes, and a certificate of condemnation granted the owner. The weight of condemned fruit was some 236 cwts., with approximate value of £600.

ARSENIC IN APPLES.

On 3rd November, 1925, the Board of Health reported that certain consignments of apples had been examined and found to contain arsenic in unusual amounts. The depressions at the calyx and stem of the apples were found to show invariably evidence of a bluish-green deposit resulting from the use of insecticide spray.

Of 18 samples of nine different varieties of apples, 7 were reported as containing no arsenic; 2 samples were reported as containing less than 1-1,000th grain of arsenious oxide per lb.; 5 as having less than 1-100th grain; and the others 1-100th, 1-75th, 1-45th, and 1-25th grain per lb. All were from North American ports.

It was not considered necessary to condemn any of the fruit, and no instance occurred in which sickness could be attributed to its consumption. The discovery of the presence of arsenic in these amounts, retained chiefly in the stem depressions of the apples after spraying with an insecticide, apparently in general use in the United States, was a disquieting experience, and representations were made to the leading fruit importers, who in turn communicated with the International Apple Shippers' Association. This body has the matter under consideration, in order that preventive measures may be taken before another season. The matter was fully reported to the Board of Health.

During the year food-stuffs were sampled and submitted to the City Analyst, who reported as follows:—

Article.	Sample Reported		Notes on Defective Samples.
	Fit for Human Consumption.	Unfit for Human Consumption, or not in conformity with Regulation.	
Almonds, ...	3	—	
Apples, ...	6	11	Contained Arsenic, varying from $\frac{1}{450}$ to $\frac{1}{25}$ of a grain per lb.
Apricot Pulp, ...	—	4	Blown and Burst—reconditioned in store. A contained 3.5% by volume of alcohol and 1.08 grains M.T. per lb. B contained 2.24% by volume of alcohol and 1.03 grains metallic tin per lb. 27½ cwts. condemned.

Baking Powder, ...	2	—	
Blackberries, ...	—	6	Contaminated by mineral and fish oils. 84 cwts. condemned
Butter, ...	48	—	
Buttermilk, ...	2	—	
Cereals (Grape Nuts, Force, &c.), ...	6	—	
Coffee Substitute, ...	1	—	
Cheese, ...	7	—	
Confectionery, ...	4	—	
Citric Acid, ...	1	—	
Cream of Tartar, ...	17	1	Deficient in Potassium Hydrogen Tartrate, to extent of 3.6 %.
Egg Yolk (liquid), ...	77	—	
Egg Yolk (dried), ...	2	—	
Egg Albumen, ...	4	—	
Egg Whole (liquid), ...	2	—	
Fats (various), ...	16	—	
Fish (canned, &c.), ...	13	—	
Flour (various), ...	—	6	Damaged by salt water—reconditioned in stores under supervision. 908½ cwts. condemned and released for feeding purposes.
Fruits (dried), ...	12	2	Damaged by smoke and water.
Fruits (canned), ...	96	6	Leaking and blown. Contained 10.3 % by volume of alcohol. Final examination showed 1872 tins unfit for human consumption.
Gelatine (edible), ...	1	—	
Glucose, ...	4	—	
Grain (Wheat, Maize, &c.), ...	—	2	100 tons salved maize declared unfit.
Honey, ...	3	—	
Jam, ...	1	1	Damaged by river water.
Lard, ...	18	—	
Lard compo, ...	1	—	
Macaroni, ...	1	—	
Margarine, ...	1	—	
Meats (canned, &c.), ...	63	2	Reconditioned in store. 336 lbs. condemned.
Milks (canned), ...	8	4	1 Deficient in fat solids—used for baking. Three samples not labelled in conformity with Milk Regulations—re-exported as ship's stores.
Milks (dried), ...	4	—	
Oatmeal, ...	—	2	Damaged by bilge-water.
Oils (various), ...	14	—	
Peaches, ...	—	1	} New process for conveying fruit consignments condemned owing to presence of Brown Heart.
Pears, ...	—	1	

Potatoes,	—	2	Contaminated with Glauber Salts to the extent of from 14·71 to 25·2 grains per lb. Warrant from Sheriff for destruction.
Pork and Beans, ...	16	—	
Sauces,	8	—	
Soups,	15	—	
Sugar,	2	1	Free and saline ammonia and chlorine present. 10 bags (10 cwt.) condemned.
Syrup,	2	—	
Tartaric Acid, ...	5	—	
Tea,	—	1	Salved cargo—condemned.
Tomatoes (canned),	23	2	Sample A contained 2·31 grains M.T. per lb., and 5 beads of solder weighing 3·4 grammes. Sample B contained 1·96 grains M.T. per lb., and 5 beads of solder weighing 2·3 grammes. Consignment condemned.
Vegetables (peas, &c.),	30	—	

FOREIGN MEAT REGULATIONS.

The following table gives the total quantity of food material landed in the Port of Glasgow during the year 1925, a percentage of which was examined under the Foreign Meat Regulations. The returns for 1923 and 1924 are given for comparison:—

		1923	1924	1925
BEEF.				
Quarters,		72,639	31,816	34,498
Bags,		169,019	208,444	174,492
Rumps (tierces),		2,965	1,904	1,419
Mess (barrels),		2,381	800	1,110
„ (boxes),	—	—	716	—
„ (crops),		—	—	371
Boneless (boxes),		35,981	52,572	69,773
Tierces,		—	601	691
Suet,		—	—	—
Fat,		736	413	489
Ox Livers,		316	—	—
„ Tongues,		—	—	54
VEAL.				
Carcases,		—	—	32,245
Sides,		—	277	204
Bags,		352	70	387
Boxes,		—	1,567	2,966
MUTTON.				
Carcases,		77,123	65,908	27,540
Cuts (bags),		143	—	13
Casings,		—	89	60

PORK.	1923	1924	1925
Carcases,	4,899	12,826	9,803
Mess (barrels),	—	610	523
„ (carcasses),	480	—	—
„ (boxes),	13,705	12,077	3,082
„ (tierces),	144	42	30
Tongues, &c. (bags or boxes),	353	—	655
Hearts,	619	—	—
Casings (barrels or tierces),	—	152	177
Ham (tierces),	5,789	288	379
„ (boxes),	—	—	12,946
Loins (boxes),	—	10,847	5,218
Offal (bags),	300	—	—
Raw Tripe (bags),	—	—	—
Cooked Tripe (boxes),	3,457	—	—
Bacon (bales),	—	—	555
Ox.			
Livers,	—	2,516	2,524
Kidneys,	118	419	—
Skirts,	455	—	1,046
Cheeks,	1,340	1,380	1,594
Sweetbreads,	55	179	550
Tripe (boxes)	—	8,284	1,864
Hearts, tails, &c.,	—	—	1,621
FISH, FOWLS, &c.			
Salmon,	—	152	—
Fowls,	8,001	512	1,770
Others,	—	335	—
Total Packages,	401,370	415,796	390,649

EXPENDITURE AND REVENUE FOR THE YEARS ENDING 31ST MAY.

	1924	1925	1926
<i>Expenditure.</i>	£	£	£
Boarding Station, Greenock, ...	1,300	1,338	1,446
Glasgow Harbour,	2,888	3,678	3,842
General and Administrative, ...	1,392	1,546	1,709
Medical Inspection under Aliens Order, ...	339	358	373
Total,	5,919	6,920	7,370
<i>Revenue.</i>			
From other Authorities, Government Grant, &c.,	3,469	3,508	4,222
Glasgow Expenditure,	2,450	3,412	3,148

SECTION X.

HOUSING.

In the report for last year it was estimated that, in order to replace houses which should be demolished to allow for deterioration of existing houses, and to provide new houses necessary for the natural increase of the population, the provision required would be in the region of 5,000 houses annually during each of the next twenty years. Table III in the Appendix, which gives the linings granted by the Dean of Guild Court, indicates that not more than one-third of this number is actually being provided. This, however, does not include building going on outwith the City boundaries.

Vital Statistics.—The vital statistics of the following areas have reference to the older parts of the City where the density is high, and where the prominent characteristics are a high proportion of deaths in childhood and of deaths from respiratory and infectious diseases. They represent areas which are being or are about to be dealt with under Slum Clearance Schemes:—

	A Rose Street Area.	B Richard Street Area.	C Water Street Area.	D Rumford Street Area.	City.
Acreage, ...	2·82	2·14	1·5	3·03	—
Population, ...	1,507	2,031	653	1,119	—
Density, ...	534	949	433	368	57
Death Rate, ...	33·8	24·8	25·7	23·4	14·8
Respiratory D/R, ...	8·9	6·6	5·2	5·0	2·7
Phthisis D/R, ...	3·3	2·2	1·8	—	1·0
Infant Mortality, ...	223·5	136·1	148	142·9	107

A feature of life under these conditions is the high death-rate from diseases which affects the lungs, especially among children under five years of age.* Factors which conduce to this result are the greater opportunities for infection in densely populated areas with houses overcrowded and badly arranged and designed for the purposes of ventilation. The important part which these affections play in causing the steep gradations in infant mortality as between different City areas is dealt with in Section III.

These facts are sufficient to indicate that the interests of children should be the primary consideration in housing reform, and that space in and around dwelling-houses, especially those of the tenement type, is an essential condition. A playground for younger children should be definitely set apart in association with each group of tenements.

* See "The House as a Contributory Factor in the Death Rate," by Dr. A. K. Chalmers. 1913.

History of Slum Clearance and Closure of Houses.—The City Improvement Act of 1866 resulted in a large number of houses—apparently about 10,000—being scheduled. Under the Glasgow Police (Amendment) Act, 1890, 916 houses were closed up to the end of 1909. From 1902 to 1910 the number closed under the Housing of Working Classes Act, 1890, was 1,539, while under the Housing and Town Planning Act, 1909, the number closed between 1910 and 1924 was 1,319—giving a total of 14,547 houses dealt with.

Slum Clearance Schemes and the Uninhabitable House.—Under the Glasgow (Cowcaddens, &c.) Improvement Scheme Confirmation Order, 1923, there were included 2,068 houses, of which 168 dropped out before or during the inquiry, leaving 1,860 houses in the scheme; of these, 58 were already unoccupied, the remaining 1,802 being inhabited by 1,845 families. By the end of the year under review there remained 888 families still to be provided for, 957 having been accommodated in the rehousing schemes at Hamiltonhill, Newbank, Yorkhill, Polmadie, and elsewhere. This is the first time that the demolition of insanitary houses has been definitely associated with rehousing of the displaced tenants. Reference is made later to the success of this experiment.

Additional notes on mode of occupancy, cleanliness, &c., will be found in the reports of the Divisional Inspectors. This scheme also marks a further stage in the elimination of the back land.

The following table gives the position as regards demolition and rehousing at the close of the year:—

GLASGOW (COWCADDENS, &c.) IMPROVEMENT SCHEME, 1923.—STATEMENT OF PROGRESS OF SCHEME AS AT 31ST DECEMBER, 1925.

	1	2	3	4	
	Apt.	Apts.	Apt.	Apts.	Tot.
<i>Total Houses included in Approved Scheme,</i>	983	832	43	—	1,858
Houses closed or unoccupied at commencement of Scheme,	40	16	—	—	56
Leaving Houses in occupation at commencement of Scheme,	943	816	43	—	1,802
<i>Houses in Occupation at Commencement of Scheme—</i>					
Number closed and demolished to 31st Dec., 1924, ...	102	90	—	—	192
„ closed prior to 31st Dec., 1924, and demolished during 1925.	167	236	11	—	414
„ closed during 1925, and demolished during 1925,	98	118	9	—	225
„ closed prior to 31st Dec., 1924, and not demolished at 31st December, 1925,	8	21	—	—	29
„ closed during 1925, and not demolished at 31st December, 1925,	34	57	1	—	92
„ still in occupation at 31st December, 1925,	534	294	22	—	850
	943	816	43	—	1,802

Houses Closed or Unoccupied at Commencement of Scheme—

Number demolished to 31st December, 1924,	5	—	—	—	5
„ „ from 1st January, 1925, to 31st December, 1925,	35	15	—	—	50
„ still to be demolished at 31st December, 1925,	—	1	—	—	1
	40	16	—	—	56

Number of Families—

Included in Scheme,	1,845
Transferred to New Housing Schemes during 1924,	559
“Substituted” and Transferred to New Housing Schemes during 1924,	8
Removed voluntarily or on account of non-payment of rent during 1924,	70
Still to be provided for as at 31st December, 1924,	1,208
Transferred to New Housing Schemes during 1925,	233
“Substituted” and Transferred to New Housing Schemes during 1925,	32
Removed voluntarily or on account of non-payment of rent during 1925,	55
Still to be provided for as at 31st December, 1925,	888

Report on Conditions in Rehousing Schemes.—Owing to the frequency with which statements have been made as to the overcrowding of houses in rehousing schemes, and complaints with reference to the keeping of lodgers, special inquiry was made, and the following report was prepared:—

REPORT ON CONDITIONS IN REHOUSING SCHEMES.

Since the date of occupation of the houses provided for families dispossessed under the Cowcaddens, etc., Order, 1923, observations have been made from time to time on their sanitary condition and mode of occupancy. This report is based on the facts thus ascertained, and also upon a more recent survey of 835 occupied houses in the four schemes at Hamiltonhill, Newbank, Polmadie, and Yorkhill.

Appended to the report is a table showing in detail the numbers occupying the two and three-apartment houses, of which these schemes are composed. Among the 703 two-apartment houses, 101 (14 per cent.) are occupied in excess of a standard of 3 persons per room; in 56 families the excess is one person above this standard; in 28 instances the excess is two persons, while in 17 instances the excess is three persons or over. Among the 132 houses of three rooms there are 17 houses (13 per cent.) with more than three persons per room, seven of which have one person in excess, five two in excess, and five more than two in excess. There are, however, differences of degree in overcrowding as between the several schemes, as the following summary shows:—

	Hamiltonhill.		Newbank.		Polmadie.		Yorkhill.	
	2 Apts.	3 Apts.	2 Apts.	3 Apts.	2 Apts.	3 Apts.	2 Apts.	3 Apts.
No. of houses,	301	47	244	57	86	16	72	12
No. containing over 3 persons per room, ...	65	4	14	8	18	5	4	—
Percentage, ...	21·6	8·5	5·7	14·0	20·9	31·2	5·6	—

Thus the houses in the Yorkhill and Newbank schemes are less overcrowded in this sense than those at Hamiltonhill and Polmadie.

The extent to which persons other than members of the occupying family reside in these houses is shown in the following table:—

TWO-APARTMENT HOUSES.

	Occupier and Lodger Unrelated.	Occupier and Lodger Related.	Together
More than 3 persons per room, ...	28	19	47
Not more than 3 persons per room, ...	37	33	70
	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
	65	52	117
	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>

It thus appears that in 47 instances the presence of another person or persons in the house causes the occupancy to exceed the standard of three persons per room. On the other hand, in 70 instances, even with these additions, this standard is not exceeded.

Taking the case of the 65 instances above where the added persons are unrelated and who may, therefore, be regarded as strictly lodgers, it is found that in 50 of these the lodgers consist of husbands and wives and families of one to six children. In the remaining 15 cases the additions include, in five instances, single individuals, in eight instances two individuals, in one instance three, and in another six individuals. Some of these may be regarded as family units, such as mother and daughter, or as in the last-mentioned instance, a mother and five sons.

The 52 instances where there is a relationship between the occupier and the lodgers are on a somewhat different footing. The tendency which prevails throughout the City among occupiers of houses to provide house-room for married sons and daughters is represented in this group. For instance, in 24 cases the added persons are family groups consisting of husband, wife, and children. In 20 of the houses there is a single additional occupant, such as a father, mother, brother, or other relative of the householder. This, however, seldom lowers the standard of occupancy. In the remaining seven houses, however, two, or in one case three, additional relatives were housed.

Of the three-apartment houses there were 19 where added persons were present:—

	Occupier and Lodger. Unrelated.	Occupier and Lodger. Related.	Together.
More than 3 persons per room, ...	4	1	5
Not more than 3 persons per room, ...	1	13	14
	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
	5	14	19
	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>	<hr style="width: 100%;"/>

Among the 14 cases where the occupier and lodgers are related, individual persons account for five, and related families for nine instances. A case may be quoted where an occupier of a three-apartment house, a single woman, has provided accommodation for her three brothers, a woman and three children, and a husband, wife, and two children.

This inquiry shows that there is growing up a tendency among the occupants of these houses to take in other members of the family as lodgers, and to sub-let a room to other families. In many cases this must involve a re-arrangement of sleeping accommodation, and in others it gives rise to actual overcrowding. As the aim of these schemes is to ensure healthy occupancy, the tenants should be subject to rules governing this, which might be drawn up so as not to operate harshly in individual cases.

The condition of the houses inspected has been carefully assessed on a fairly high standard, and the results indicate that a large percentage of them are well kept, and that the tenants are appreciative, have raised their own standards in proportion to the improvement in their housing conditions, or are showing a tendency to do so. There is, however, a residue, which varies in the different schemes, and which is estimated at 10 per cent. at Hamiltonhill, in regard to which the reports are decidedly adverse, the houses being dirty and badly kept in spite of warnings and the issue of notices under Section 9 of the Glasgow (Police) Order Confirmation Act, 1904. This residue may become a problem and require drastic measures.

The results of this inspection may be expressed statistically as follows :—

	Hamiltonhill.	Newbank.	Polmadie.	Yorkhill.	Totals.
Very good, ...	144	251	41	74	510
Intermediate, ...	170	50	54	7	281
Dirty, ...	34	—	7	3	44
	<u>348</u>	<u>301</u>	<u>102</u>	<u>84</u>	<u>835</u>

Thus, 61 per cent. belong to the "very good" category. With regard to the intermediate group, it is fair to say that, having regard to the high standard adopted, a considerable proportion approximate to the highest group, while others appear to oscillate between this and the third group. It cannot be expected that formed habits will immediately alter on transference to new surroundings, but these facts would appear to indicate that a certain amount of interested supervision would be beneficial, and that a caretaker should have this function definitely assigned to him or her.

A. S. M. MACGREGOR.

25th January, 1926.

TABLE SHOWING NUMBER OF HOUSES OCCUPIED BY VARIOUS FAMILY UNITS, AND THOSE OCCUPIED IN EXCESS OF THREE PERSONS PER ROOM, IN RE-HOUSING SCHEMES AS AT DECEMBER, 1925.

No. of Inmates.	Hamiltonhill		Newbank.		Polmadie.		Yorkhill.		Totals.	
	2 Apts.	3 Apts.	2 Apts.	3 Apts.	2 Apts.	3 Apts.	2 Apts.	3 Apts.	2 Apts.	3 Apts.
1	5	—	2	—	2	—	—	—	9	—
2	43	1	22	—	8	—	7	—	80	1
3	46	2	37	2	10	—	12	1	105	5
4	51	4	66	3	21	2	17	—	155	9
5	42	7	55	3	16	2	17	—	130	12
6	49	11	48	6	11	2	15	2	123	21
7	32	5	12	14	10	4	2	2	56	25
8	22	6	1	16	3	—	2	5	28	27
9	9	7	1	5	3	1	—	2	13	15
10	2	2	—	5	1	—	—	—	3	7
11	—	1	—	1	1	3	—	—	1	5
12	—	1	—	2	—	1	—	—	—	4
13	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—	—	—
15	—	—	—	—	—	1	—	—	—	1
Total Houses ...	301	47	244	57	86	16	72	12	703	132
No. occupied in excess of three persons per room, ...	65	4	14	8	18	5	4	—	101	17
% of Total, ...	21·6	8·5	5·7	14·0	20·9	31·2	5·6	—	14·4	12·9
Slum Clearance, 1924, ...	—	—	—	—	—	—	—	—	24·2	Not available.
City, 1921, ...	—	—	—	—	—	—	—	—	20·7	3·4

SLUM CLEARANCE AND REHOUSING SCHEME.

A second Slum Clearance and Rehousing Scheme, approved by the Corporation on 24th December, 1925, included 1,051 houses (490 of one apartment, 507 of two apartments, 51 of three apartments, 3 of four apartments), inhabited by 4,532 persons. The policy adopted in making these representations has been dictated by the circumstances of the moment. In overbuilt areas selection has been made of such properties as would most relieve the congestion. Otherwise, in the East End principally, tenements have been chosen from among those most affected by age and decay. One or two areas only are suitable for rehousing. Selection or "sniping" of this kind is not a very satisfactory procedure, but it is not possible at the moment to deal comprehensively with any but a few areas. Evisceration must, in the meantime, be a piecemeal procedure.

Back Lands.—The clearance of these is being gradually accomplished. Up to 1919 there had been demolished under the Housing Acts 143 back land tenements. There were then 501 still remaining. By last year the number had been reduced to 450, and of these 50 are included in the present clearance scheme. When completed these operations, along with those formerly undertaken, will have had the effect of removing the very worst of the back land properties.

Overcrowding.—The principal facts as regards relative sizes of house and manner of occupancy are contained in the following table, taken from the 1921 Census reports:—

Size of House.	No. of Houses.	Percentage.	Population.	Percentage.	No. of Persons living more than 3 per Room.	Percentage of Occupants of each size of House.
1 Room, ...	40,689	18·1	132,146	13·2	78,781	59·6
2 Rooms, ...	108,968	48·5	514,537	51·5	181,625	35·3
3 Rooms, ...	43,694	19·4	207,280	20·8	16,059	7·6
4 Rooms and up,	31,475	14·0	144,456	14·5	697	1·1
	<u>224,826</u>	<u>100·0</u>	<u>998,419</u>	<u>100·0</u>	<u>277,162</u>	<u>28</u>

It is clear from these figures that the types of house most immediately required are those of larger size, so as to relieve the overcrowding due to the growth of large families in small houses. The policy adopted of building no houses of less than three rooms under subsidy schemes is a wise one.

The One-Apartment House.—At the last Census there were 40,689 single-apartment houses, with 132,146 inhabitants, of whom 78,781, or 59 per cent., were living more than three persons per room. In order to obtain some idea of the present position, a survey of the one-apartment houses in the Central Division was recently made by the Divisional Inspector, with the following result, given in wards:—

	Number of Houses.								
	Ward 12	Ward 13	Ward 14	Ward 15	Ward 16	Ward 23	Ward 24	Ward 25	Total.
With 1 Inmate,	174	50	142	97	18	71	52	28	632
„ 2 Inmates,	382	65	260	148	16	129	130	75	1,205
„ 3 „	205	38	235	122	21	145	110	64	940
„ 4 „	129	33	182	122	12	125	96	73	772
„ 5 „	65	20	138	92	2	113	74	40	544
„ 6 „	37	9	66	47	4	58	51	46	318
„ 7 „	16	2	43	27	2	40	20	14	164
„ 8 „	9	—	14	16	1	21	11	10	82
„ 9 „	5	—	2	7	—	7	3	5	29
„ 10 „	—	—	1	1	—	5	2	1	10
„ 11 „	—	—	—	—	—	1	—	—	1
Totals, ...	<u>1,022</u>	<u>217</u>	<u>1,083</u>	<u>679</u>	<u>76</u>	<u>715</u>	<u>549</u>	<u>356</u>	<u>4,697</u>
No. Overcrowded,	261	64	446	312	21	370	257	189	1,920
Percentage Overcrowded, ...	26	29	41	46	28	52	47	53	41

The indication of this partial Census is that 41 per cent. of the houses contain more than three persons per room. In the Census of 1921 the figure for the whole City was 39 per cent. Contrasting the present partial Census with the former complete one, the figures for the Central Division show, as might be expected, a somewhat greater proportion of grossly overcrowded houses.

Overcrowding Due to Multiple Occupancy of Houses. — In addition to the growth of families in small houses, there has been a prevalent and inevitable tendency for two families to crowd into one house. In Appendix Table I of the Glasgow Volume of the Census of 1921 figures are given showing that 225,059 houses had 233,808 separate "occupiers," an excess of 8,749, or 3·9 per cent. This indicates roughly the degree to which houses were then being occupied by two or more families. Some information as to the present position may be gathered from two sources. (1) Among the occupants of 3,976 houses, mostly of one and two rooms, surveyed in 1924 for slum clearance purposes, 230, or 5·3 per cent., were occupied by two families. Many of these houses are of the ticketed class, and under supervision as regards overcrowding; otherwise this figure would no doubt have been higher. If, however, the two-apartment house is alone considered, it is found that in a recent census of 477 ticketed houses in the northern area of the City, 49, or 10·3 per cent., were housing two families. (2) Inquiries have recently been made by the Divisional Inspectors into the prevalence of "double occupancy" of houses occupied by the stratum of the population well above this group, i.e., the better-housed labouring and artisan classes. Streets were selected in various parts of the City, comprising mostly two-apartment houses, and the result, quoted below, shows that the proportion of houses occupied by two families in certain districts actually reached 10 per cent.

	South-Western		Northern Division.							
	Division.		Ward	Ward	Ward	Ward	Ward	Ward	Ward	Ward
	1922	1924	8	9	10	11	17	18	19	21
Number of Houses,	884	722	114	111	110	107	86	97	116	176
Number with two Families, ...	70	74	4	—	2	3	3	3	4	1
Percentage, ...	7·9	10·2	3·5	—	1·8	2·8	3·5	3·1	3·4	0·57

	Eastern Division.		South-Eastern Division.			
	Ward	Ward	Ward	Ward	Ward	Ward
	3	4	26	27	34	35
Number of Houses, ...	918	861	226	177	105	315
Number with two Families, ...	34	80	9	29	9	13
Percentage, ...	3·7	9·3	2·4	8·3	4·6	2·4

	Central Division.								
	Ward	Ward	Ward	Ward	Ward	Ward	Ward	Ward	Total.
	12	13	14	15	16	23	24	25	
No. of Houses,	102	113	180	111	98	121	122	131	5,811
No. with two Families, ...	1	10	3	5	3	13	6	12	371
Percentage, ...	1·0	8·8	1·7	4·5	3·1	10·7	4·9	9·2	6·4

This table shows considerable variation, from 1 to 10·7 per cent., of houses occupied by more than a single family, among the selected groups. The figure of 6·4 per cent. for the total (5,811) houses which were made the subject of inquiry cannot, of course, be applied generally to the small houses of the City, but it is sufficient to indicate the growth of one aspect of overcrowding among people whose requirements are being least catered for. This form of overcrowding mostly affects the two-roomed house, and is the result of the present social and economic causes, due partly to lack of available houses and partly to a desire on the part of the householder to add to his income. The data given, coupled with the figures for overcrowding generally in the smaller houses of the City, indicate that very little relief to this large group of the population has so far been afforded by such housing schemes as have been completed within the past few years. They also show that when a City largely composed of houses of one and two rooms is overtaken by a shortage of houses due to insufficient production, fettering free movement and choice of house, conditions of overcrowding prejudicial to health are quickly produced.

REHOUSING.

In the Slum Clearance Scheme of 1923 there were no areas suitable for rehousing purposes. In the present scheme a small proportion only of the dispossessed tenants can be rehoused on the cleared sites. It is unlikely, for some time to come, that this will exceed the meagre proportion of 10 or 20 per cent., having regard to the relief from congestion required by the other occupants of the area and to the number of new houses that the cleared site can properly hold. Most of the uninhabitable houses being dealt with are so situated that, for a large proportion of those affected by these schemes, removal to new houses at variable distances within the intermediate or outer ring of the City becomes essential. It is becoming far from easy to obtain sites even in the intermediate ring, and it may be necessary to push rehousing schemes farther out. This again raises the important question of proximity to place of employment. The difficulties urged under this heading are often based on abstract rather than real considerations, unless perhaps in the case of dock labourers.

The proposal is often made, and is finding some measure of favour in English cities, that to meet this difficulty rehousing should take the form of high tenement buildings, centrally situated. For instance, the Architect to the London County Council may be quoted as saying: "What has been done in America is a useful indication of what we may attempt in Central London. The American apartment houses have, in many

instances, been carried up to a much greater height than anything we have attempted in rehousing for the working class in London, and although the proportionate cost of the building increases as the height increases, I am of opinion, judging from my observations in America, that it is possible to evolve a scheme which would be satisfactory from an economic point of view." The choice is between a low density with access to open spaces, in the interests of children, and a higher density in the centre of the City with proximity to place of employment in the interests of the worker.

The former should be the primary consideration. In the special case of London, its immense size appears to impose incredible travelling hardships on workmen. An inquiry was made recently into the relationship between place of employment and dwelling-house in an area of Glasgow, and it was found that 55 per cent. of the workers lived within one mile of their work, 26 per cent. over one mile, while in 20 per cent. the nature of their work precluded any relationship between it and their residence.

The two main objections to the latter proposal are—(1) the high centrally situated tenement is not in the best interests of child life; (2) the obstruction to the access of sunlight which high buildings impose on one another in these latitudes has to be taken into consideration. This latter aspect of building was made the subject of a special investigation by the late Dr. Alexander Maclean, and as his results have an important bearing on the relationship of height of buildings to width of streets and orientation of dwelling-houses, the diagrams and tables prepared by him are included in this report. They show very clearly the effect on the access of sunshine which high and closely arranged buildings would have upon one another in Glasgow.

As compared with London, the shadows cast by buildings in Glasgow make it essential that the streets should be considerably wider or the buildings correspondingly low.

HEIGHT AND ORIENTATION OF BUILDINGS IN RELATION TO SUNSHINE,

BY

THE LATE DR. ALEXANDER MACLEAN.

Every dwelling-house should be so situated that the sun may strike some side of the exposure every day in the year. That this general principle may be given effect to three factors have to be taken into consideration—the width of the streets, their direction or orientation, and the height of the buildings bounding these streets.

I have prepared certain tables showing the distribution of sunlight at the various hours from sunrise to sunset during the equinoxes and the summer and winter solstices, in streets 40, 50, 60, 80, and 100 feet wide, bounded by buildings 40 feet high, and running (1) north and south, (2) east and west, and (3) north-east and south-west, or north-west and south-east. Selections from the tables have been represented diagrammatically. These diagrams demonstrate the distribution of sunlight and shadow in the various widths and directions of streets much more vividly than could be done by any series of figures.

Streets are usually orientated either squarely with the cardinal points of the compass, that is to say, they run north and south, and east and west, or diagonally running in a north-east and south-west, and north-west and south-east direction.

If houses were constructed in parallel rows, with breaks for the concomitant or perpendicular streets, and no houses were built on these streets, the maximum distribution of sunshine would be obtained by a North and South orientation of the rows of houses. But even with this, the most advantageous orientation, if the houses are built 40 feet high, so that the foot of these houses may receive even one hour's sunshine at the winter solstice, the distance between the parallel rows of houses, in this latitude of Glasgow, would require to be some 60 feet. If the interval between the rows were reduced to 30 feet, the houses must not exceed 20 feet in height, that is to say, two storeys. The concomitant streets to those running North and South must, of course, run East and West. In such streets the back of the buildings on the north side of the street and the front of the buildings on the south side are completely deprived of sunshine throughout the six months from 23rd September to 21st March,

the autumnal and vernal equinoxes, respectively. Moreover, in the latitude of Glasgow, in order that the foot of the buildings may have sunshine at the winter solstice, the distance between 40-foot buildings would require to be 210 feet. In the latitude of London, however, the distance for the same height of buildings is reduced to 150 feet. In town planning, consequently, dwelling-houses should never be placed on streets with this orientation. Two peculiar phenomena associated with streets running East and West are noticeable at the equinoxes, 21st March and 23rd September. In such a street, say 40 feet wide, and bounded by buildings 40 feet high, a reference to the tables will show that immediately after sunrise the buildings on the south side of the street cast a shadow, the extremity of which forms a line 27 feet from the top of the buildings on the north side. Throughout the twelve hours of the day at these two periods of the year, from sunrise to noon and from noon to sunset, there is no variation in the position of this line of shadow. Consequently, any given point on the front of the buildings on the north side of the street receives either 12 hours' sunshine or no sunshine. Moreover, if it receives 12 hours' sunshine, it has more at these two periods of the year, 21st March and 23rd September, than during the summer solstice, 21st June. The explanation of the former phenomenon is that at the equinoxes the sun is situated on the equator or the plane of the earth's rotation, and of the latter that the portion of the sun's apparent path between the East and West points is smaller at the summer solstice than at the equinoxes, and is consequently completed in a shorter time. Where, as in Glasgow, the houses are usually built in the form of rectangular street blocks, the most equable distribution of sunshine is obtained when the streets are orientated diagonally with the cardinal points, that is to say, when they run north-east and south-west, and north-west and south-east.

But even with this orientation, if the streets are bounded by buildings 40 feet in height, the diagrams and tables show that in order to have sunshine at the foot of the buildings during the winter solstice, the parallel rows must be distant from one another 90 feet, or if the buildings are only 20 feet in height, 45 feet. If even this latter width of street or rear space is impracticable, then the 20-foot dwelling-houses must be built, with interspaces, in the form of detached or semi-detached cottages, and the distance between the building lines diminished accordingly.

17th December, 1912.

TABLES SHOWING NUMBER OF HOURS OF SUNSHINE RECEIVED BY HOUSES
AT VARIOUS HEIGHTS IN BUILDINGS 40 FEET HIGH SITUATED IN STREETS
OF VARIOUS WIDTHS IN GLASGOW,

Direction of Street—North and South.

Width of Street feet	Storey	Houses on West Side of Street.			Houses on East Side of Street.		
		Summer Solstice (June 21)	Equinoxes (March 21 & Sept. 23)	Winter Solstice (Dec. 22)	Summer Solstice (June 21)	Equinoxes (March 21 & Sept. 23)	Winter Solstice (Dec. 22)
40	1st	3	2	1	3	2	1
	2nd	5	3	1	5	3	1
	3rd	6	4	2	6	4	2
	4th	9	6	3	9	6	3
50	1st	4	2	1	4	2	1
	2nd	5	3	1	5	3	1
	3rd	7	4	2	7	4	2
	4th	9	6	3	9	6	3
60	1st	5	3	1	5	3	1
	2nd	6	3	1	6	3	1
	3rd	7	4	2	7	4	2
	4th	9	6	3	9	6	3
80	1st	5	3	1	5	3	1
	2nd	6	4	2	6	4	2
	3rd	7	5	2	7	5	2
	4th	9	6	4	9	6	4
100	1st	6	4	1	6	4	1
	2nd	7	4	2	7	4	2
	3rd	8	5	2	8	5	2
	4th	9	6	3	9	6	3

Direction of Street—East and West.

Width of Street feet	Storey	Houses on South Side of Street.			Houses on North Side of Street.		
		Summer Solstice (June 21)	Equinoxes (March 21 & Sept. 23)	Winter Solstice (Dec. 22)	Summer Solstice (June 21)	Equinoxes (March 21 & Sept. 23)	Winter Solstice (Dec. 22)
40	1st	1	0	0	10	0	0
	2nd	1	0	0	10	12	0
	3rd	2	0	0	10	12	0
	4th	5	0	0	10	12	7
50	1st	1	0	0	10	12	0
	2nd	2	0	0	10	12	0
	3rd	2	0	0	10	12	0
	4th	5	0	0	10	12	7
60	1st	2	0	0	10	12	0
	2nd	2	0	0	10	12	0
	3rd	3	0	0	10	12	2
	4th	5	0	0	10	12	7
80	1st	2	0	0	10	12	0
	2nd	2	0	0	10	12	0
	3rd	3	0	0	10	12	4
	4th	5	0	0	10	12	7
100	1st	3	0	0	10	12	0
	2nd	3	0	0	10	12	0
	3rd	4	0	0	10	12	4
	4th	5	0	0	10	12	7

Direction of Street—North-East and South-West.

Width of Street feet	Storey	Houses on North-west side of Street.			Houses on South-east side of Street.		
		Summer Solstice (June 21)	Equinoxes (March 21 & Sept. 23)	Winter Solstice (Dec. 22)	Summer Solstice (June 21)	Equinoxes (March 21 & Sept. 23)	Winter Solstice (Dec. 22)
40	1st	6	2	0	3	1	0
	2nd	10	4	0	3	1	0
	3rd	10	6	3	4	2	0
	4th	11	8	7	7	3	0
50	1st	8	3	0	3	1	0
	2nd	10	5	1	4	1	0
	3rd	10	6	3	5	2	0
	4th	11	8	7	7	3	0
60	1st	10	4	0	3	1	0
	2nd	10	5	1	4	1	0
	3rd	10	7	4	5	2	0
	4th	11	8	7	7	3	0
80	1st	10	5	1	4	1	0
	2nd	10	6	3	4	2	0
	3rd	10	7	4	5	2	0
	4th	11	8	7	7	3	0
100	1st	10	6	2	4	1	0
	2nd	10	6	3	5	2	0
	3rd	10	7	5	5	2	0
	4th	11	8	7	7	3	0

TABLES SHOWING POSITIONS OF EXTREMITIES OF SHADOWS AT VARIOUS HOURS CAST BY BUILDINGS 40 FEET HIGH, SITUATED IN STREETS OF VARIOUS WIDTHS.

Direction of Street—North and South.

Width of Street. feet.	Summer Solstice (June 21).	Vernal and Autumnal Equinoxes (March 21 and Sept. 23).	Winter Solstice (Dec. 22).
40	4 a. m. 3.6 feet from top of buildings on West side of street.		
5 "	" 8.9 "		
6 "	" 14.3 "		
7 "	" 21.3 "	6.0 feet from top of buildings on West side of street.	
8 "	" 29.0 "	" 12.9 "	" 2.2 feet from top of buildings on West side of street.
9 "	" 37.4 " across street from buildings on East side of street.	" 22.5 "	" 10.2 "
10 "	" 23.9 "	" 39.9 "	" 28.3 "
11 "	" 11.5 "	" 19.1 " across street from buildings on East side of street.	" 10.2 "
12 noon.	No shadow cast on street.	No shadow cast on street.	No shadow cast on street.
1 p. m.	11.5 " across street from buildings on West side of street.	19.1 " across street from buildings on West.	28.3 " from buildings on East side of street.
2 "	" 23.9 "	" 39.9 " from top of buildings on East side of street.	10.2 " " " "
3 "	" 37.4 "	" 22.5 " " " "	2.2 " " " "
4 "	" 29.0 " from top of buildings on East side of street.	" 12.9 " " " "	" " " "
5 "	" 21.3 "	" 6.0 " " " "	" " " "
6 "	" 14.3 "		
7 "	" 8.9 "		
8 "	" 3.6 "		
50	4 a. m. 4.5 feet from top of buildings on West side of street.		
5 "	" 11.1 "		
6 "	" 17.9 "		
7 "	" 26.1 "	7.5 feet from top of buildings on West side of street.	
8 "	" 37.0 "	" 16.2 "	" 4.7 feet from top of buildings on West side of street.
9 "	" 37.4 " across street from buildings on East side of street.	" 28.1 " " " "	" 12.7 " " " "
10 "	" 23.9 "	" 40.1 " across street from buildings on East side of street.	" 35.4 " " " "
11 "	" 11.5 "	" 19.1 " " " "	" " " " "
12 noon.	No shadow cast on street.	No shadow cast on street.	No shadow cast on street.

1 p.m.	11.5	across street from buildings on West side of street.	19.1	across street from buildings on West side of street.	35.4	from top of buildings on East side of street.
2 "	23.9	" "	40.1	" "	12.7	" "
3 "	37.4	" "	28.1	from top of buildings on East side of street.	4.7	" "
4 "	37.0	from top of buildings on East side of street.	16.2	" "	" "	" "
5 "	26.1	" "	7.5	" "	" "	" "
6 "	17.9	" "	" "	" "	" "	" "
7 "	11.1	" "	" "	" "	" "	" "
8 "	4.5	" "	" "	" "	" "	" "
60 4 a.m.	5.4	feet from top of buildings on West side of street.				
5 "	13.3	" "				
6 "	21.6	" "				
7 "	31.3	" "	9.0	feet from top of buildings on West side of street.		
8 "	54.2	across street from buildings on East side of street.	19.4	" "		
9 "	37.4	" "	33.7	" "		
10 "	23.9	" "	40.1	across street from buildings on East side of street.	15.2	3.2 feet from top of buildings on West side of street.
11 "	11.5	" "	19.1	" "	56.7	across street from buildings on East side of street.
12 noon.		No shadow cast on street.				No shadow cast on street.
1 p.m.	11.5	across street from buildings on West side of street.	19.1	across street from buildings on West side of street.	56.7	across street from buildings on West side of street.
2 "	23.9	" "	40.1	" "	15.2	from top of buildings on East side of street.
3 "	37.4	" "	33.7	from top of buildings on East side of street.	3.2	" "
4 "	54.2	" "	19.4	" "	" "	" "
5 "	31.3	from top of buildings on East side of street.	9.0	" "	" "	" "
6 "	21.6	" "	" "	" "	" "	" "
7 "	13.3	" "	" "	" "	" "	" "
8 "	5.4	" "	" "	" "	" "	" "

Direction of Street—North and South (Continued).

Width of Street. feet.	Summer Solstice (June 21).	Vernal and Autumnal Equinoxes (March 21 and Sept. 23).	Winter Solstice (Dec. 22).
80	4 a. m. 7.2 feet from top of buildings on West side of street.	12.0 feet from top of buildings on West side of street.	4.4 feet from top of buildings on West side of street.
	5 " 17.8 " " "	25.8 " " " "	20.4 " " " "
	6 " 28.6 " " "	71.3 " across street from buildings on East side of street.	56.7 " across street from buildings on East side of street.
	7 " 76.6 " across street from buildings on East side of street.	40.1 " " " "	No shadow cast on street.
	8 " 54.2 " " " "	19.1 " " " "	No shadow cast on street.
	9 " 37.4 " " " "	19.1 " " " "	56.7 " across street from buildings on West side of street.
	10 " 23.9 " " " "	19.1 " " " "	20.4 " from top of buildings on East side of street.
	11 " 11.5 " " " "	19.1 " " " "	4.4 " " " "
100	4 a. m. 9 feet from top of buildings on West side of street.	15.0 feet from top of buildings on West side of street.	5.4 feet from top of buildings on West side of street.
	5 " 22.2 " " " "	32.4 " " " "	25.4 " " " "
	6 " 35.8 " " " "	71.3 " across street from buildings on East side of street.	56.7 " across street from buildings on East side of street.
	7 " 76.6 " across street from buildings on East side of street.	40.1 " " " "	No shadow cast on street.
	8 " 54.2 " " " "	19.1 " " " "	No shadow cast on street.
	9 " 37.4 " " " "	19.1 " " " "	No shadow cast on street.
	10 " 23.9 " " " "	19.1 " " " "	No shadow cast on street.
	11 " 11.5 " " " "	19.1 " " " "	No shadow cast on street.
	12 noon. No shadow cast on street.	19.1 " across street from buildings on West side of street.	No shadow cast on street.
	1 p. m. 11.5 " across street from buildings on West side of street.	40.1 " " " "	20.4 " from top of buildings on East side of street.
	2 " 23.9 " " " "	40.1 " " " "	4.4 " " " "
	3 " 37.4 " " " "	71.3 " from top of buildings on East side of street.	" " " " "
	4 " 54.2 " " " "	25.8 " " " "	" " " " "
	5 " 76.6 " from top of buildings on East side of street.	12.0 " " " "	" " " " "
	6 " 28.6 " " " "	12.0 " " " "	" " " " "
	7 " 17.8 " " " "	12.0 " " " "	" " " " "
	8 " 7.2 " " " "	12.0 " " " "	" " " " "
	9 feet from top of buildings on West side of street.	15.0 feet from top of buildings on West side of street.	5.4 feet from top of buildings on West side of street.
	10 " 22.2 " " " "	32.4 " " " "	25.4 " " " "
	11 " 35.8 " " " "	71.3 " across street from buildings on East side of street.	56.7 " across street from buildings on East side of street.
	12 noon. No shadow cast on street.	40.1 " " " "	No shadow cast on street.

1 p.m.	11.5 feet across street from buildings on West side of street.	19.1 feet across from buildings on West side of street.	56.7 feet across street from buildings on West side of street.
2 "	23.9 "	40.1 "	25.4 " from top of buildings on East side of street.
3 "	37.4 "	71.3 "	5.4 " "
4 "	54.2 "	32.4 "	" "
5 "	76.6 "	15.0 "	" "
6 "	35.8 " from top of buildings on East side of street.	" "	" "
7 "	22.2 "	" "	" "
8 "	9.0 "	" "	" "

Direction of Street—East and West.

40	4 a.m.	4.7 feet from top of buildings on South side of street.	27.1 feet from top of buildings on North side of street.	1.8 feet from top of buildings on North side of street.
5 "	5 "	18.6 "	27.1 "	5.3 "
6 "	6 "	27.1 " across street from buildings on North side of street.	27.1 "	7.9 "
7 "	7 "	2.2 " across street from buildings on South side of street.	27.1 "	7.5 "
8 "	8 "	10.6 "	27.1 "	7.9 "
9 "	9 "	18.1 "	27.1 "	5.3 "
10 "	10 "	23.3 "	27.1 "	1.8 "
11 "	11 "	24.7 "	27.1 "	" "
12 noon	12 noon	25.4 "	27.1 "	" "
1 p.m.	1 p.m.	24.7 "	27.1 "	" "
2 "	2 "	23.3 "	27.1 "	" "
3 "	3 "	18.1 "	27.1 "	" "
4 "	4 "	10.6 "	27.1 "	" "
5 "	5 "	2.2 "	27.1 "	" "
6 "	6 "	27.1 " across street from buildings on North side of street.	27.1 "	" "
7 "	7 "	18.6 " from top of buildings on South side of street.	" "	" "
8 "	8 "	4.7 "	" "	" "

Direction of Street—East and West (Continued).

Width of Street. Feet	Hour.	Summer Solstice (June 21).		Vernal and Autumnal Equinoxes (March 21 and Sept. 23).		Winter Solstice (Dec. 22).	
		5-9 feet from top of buildings on South side of street.	across street from buildings on North side of street.	33-9 feet from top of buildings on North side of street.	33-9 feet from top of buildings on North side of street.	2-3 feet from top of buildings on North side of street.	
50	4 a.m.	5-9 feet from top of buildings on South side of street.					
	5 "	23-3 "	" "				
	6 "	27-1 "	across street from buildings on North side of street.				
	7 "	2-2 "	across street from buildings on South side of street.	33-9 "	" "	2-3 feet from top of buildings on North side of street.	
	8 "	10-6 "	" "	33-9 "	" "	6-6 "	" "
	9 "	18-1 "	" "	33-9 "	" "	8-8 "	" "
	10 "	23-3 "	" "	33-9 "	" "	9-4 "	" "
	11 "	24-7 "	" "	33-9 "	" "	8-8 "	" "
	12 noon	25-4 "	" "	33-9 "	" "	6-6 "	" "
	1 p.m.	24-7 "	" "	33-9 "	" "	2-3 "	" "
	2 "	23-3 "	" "	33-9 "	" "		
	3 "	18-1 "	" "	33-9 "	" "		
	4 "	10-6 "	" "	33-9 "	" "		
	5 "	2-2 "	" "	33-9 "	" "		
	6 "	27-1 "	across street from buildings on North side of street.				
	7 "	23-3 "	from top of buildings on South side of street.				
	8 "	5-9 "	" "				
60	4 a.m.	7-1 feet from top of buildings on South side of street.					
	5 "	27-9 "	" "				
	6 "	27-1 "	across street from buildings on North side of street.				
	7 "	2-2 "	across street from buildings on South side of street.	59 feet across street from buildings on South side of street.			
	8 "	10-6 "	" "	59 "	" "	2-8 feet from top of buildings on North side of street.	
	9 "	18-1 "	" "	59 "	" "		
	10 "	23-3 "	" "	59 "	" "	7-9 "	" "
	11 "	24-7 "	" "	59 "	" "	10-5 "	" "

Direction of Street—East and West (Continued).

Width of Street. feet.	Summer Solstice (June 21).		Vernal and Autumnal Equinoxes (March 21 and Sept. 23).		Winter Solstice (Dec. 22).	
	Hour.	Direction of Street	Distance	Direction of Street	Distance	Direction of Street
	7 a. m.	2.2 feet across street from buildings on South side of street.	59.0 feet across street from buildings on South side of street.	59.0 feet from top of buildings on North side of street.		
	8 "	10.6 "	59.0 "	13.2 "		
	9 "	18.1 "	59.0 "	17.6 "		
	10 "	23.3 "	59.0 "	18.8 "		
	11 "	24.7 "	59.0 "	17.6 "		
	12 noon	25.4 "	59.0 "	13.2 "		
	1 p. m.	24.7 "	59.0 "	4.6 "		
	2 "	23.3 "	59.0 "			
	3 "	18.1 "	59.0 "			
	4 "	10.6 "	59.0 "			
	5 "	2.2 "	59.0 "			
	6 "	27.1 "	across street from buildings on North side of street.			
	7 "	86.0 "	"			
	8 "	11.8 "	from top of buildings on South side of street.			

Direction of Street—North-east and South east.

40	4 a. m.	21.2 feet from top of buildings on North-west side of street.	7.0 feet from top of buildings on North-west side of street.	1.4 feet from top of buildings on North-west side of street.
	5 "	23.8 "		
	6 "	26.9 "		
	7 "	28.7 "		
	8 "	34.9 "	12.4 "	4.9 "
	9 "	39.2 "	17.4 "	7.9 "
	10 "	33.4 "	22.6 "	10.7 "
	11 "	25.6 "	29.0 "	12.9 "
	12 noon	18.0 "	38.4 "	
	1 p. m.	9.3 "	28.2 "	

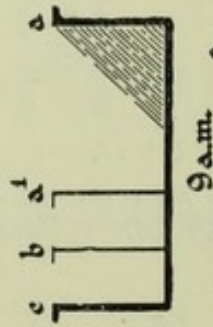
2	0.4	across street from buildings on North-west side of street.	12.6	"	"	15.6	"	"
3	13.7	"	8.7	across street from buildings on North-west side of street.	18.0	"	"	"
4	30.8	"	35.1	from top of buildings on South-east side of street.				"
5	30.5	from top of buildings on South-east side of street.	11.0	"	"	"	"	"
6	16.3	"		"	"	"	"	"
7	8.5	"		"	"	"	"	"
8	2.9	"		"	"	"	"	"
50	4 a.m.	26.5 feet from top of buildings on North-west side of street.						
5	29.8	"						
6	33.6	"						
7	35.9	"						
8	45.8	across street from buildings on South-east side of street.	15.5	9.0 feet from top of buildings on North-west side of street.				
9	39.2	"	21.8	"			1.8 feet from top of buildings on North-west side of street.	
10	33.4	"	28.3	"			6.1	"
11	25.6	"	36.0	"			9.9	"
12 noon	18.0	"	41.7	across street from buildings on South-east side of street.			13.4	"
1 p.m.	9.3	"	28.2	"			16.1	"
2	0.4	across street from buildings on North west side of street.	12.6	"			19.5	"
3	13.7	"	8.7	across street from buildings on North-west side of street.			23.0	"
4	30.8	"	45.5	"			"	"
5	38.1	from top of buildings on South-east side of street.	13.8	from top of buildings on South-east side of street.			"	"
6	20.4	"		"			"	"
7	10.6	"		"			"	"
8	3.6	"		"			"	"

Direction of Street—North-East and South-West (Continued).

Width of Street.	Summer Solstice (June 21).	Vernal and Autumnal Equinoxes (March 21 and Sept. 23).	Winter Solstice (Dec. 22).
60	4 a. m. 31.8 feet from top of buildings on North-west side of street.		
5 "	" 35.8 "		
6 "	" 59.6 " across street from buildings on South-east side of street.		
7 "	" 55.8 "	10.8 feet from top of buildings on North-west side of street.	
8 "	" 45.8 "	" "	2.2 feet from top of buildings on North-west side of street.
9 "	" 39.2 "	" "	" "
10 "	" 33.4 "	" "	7.3 "
11 "	" 25.6 "	" across street from buildings on South-east side of street.	11.9 "
12 noon	" 18.0 "	" "	16.1 "
1 p. m.	" 9.3 "	" "	19.3 "
2 "	" 0.4 " across street from buildings on North-west side of street.	" "	23.4 "
3 "	" 13.7 "	8.7 " across street from buildings on North-west side of street.	27.6 "
4 "	" 30.8 "	45.5 " from top of buildings on South-east side of street.	
5 "	" 52.6 "	16.6 "	
6 "	" 24.5 " from top of buildings on South-east side of street.		
7 "	" 13.7 "		
8 "	" 4.3 "		
80	4 a. m. 75.5 feet across street from buildings on South-east side of street.		
5 "	" 67.2 "		
6 "	" 59.6 "	14.0 feet from top of buildings on North-west side of street.	
7 "	" 55.8 "		
8 "	" 45.8 "	24.8 "	2.8 feet from top of buildings on North-west side of street.
9 "	" 39.2 "	34.8 "	" "

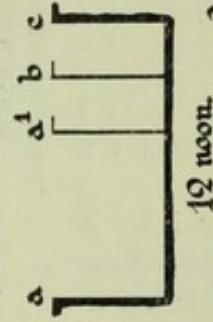
Sun Shadows in Glasgow Cast by Buildings 40 feet high
on Streets 60 (a.a'), 80 (a.b.), and 100 (a.c.) feet wide.

Summer Solstice.

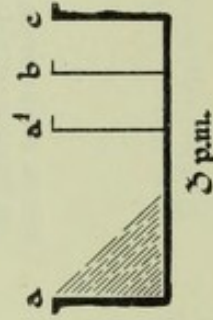


9 a.m.

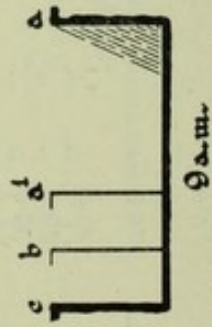
Street running North and South — View looking North.



12 noon.

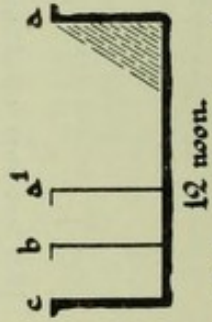


3 p.m.

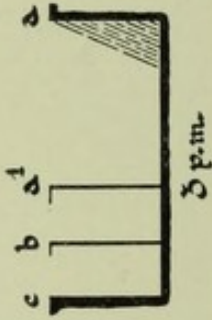


9 a.m.

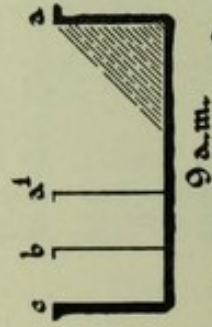
Street running East and West — View looking East.



12 noon.

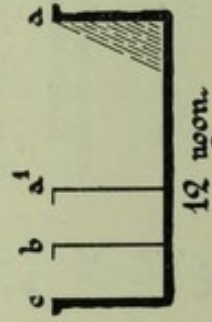


3 p.m.

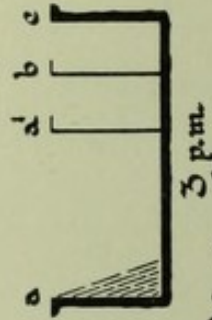


9 a.m.

Street running North — East and South — West — View looking North — East.



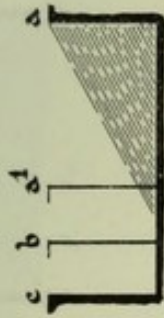
12 noon.



3 p.m.

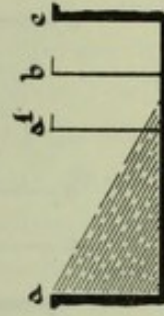
Sun Shadows in Glasgow Cast by Buildings 40 feet high
on Streets 60 (a.d.), 80 (a.b.), and 100 (a.c.) feet wide.

Equinoxes.

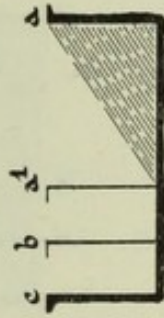


9 a.m.

Street running North and South — View looking North.

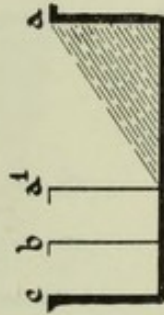


3 p.m.

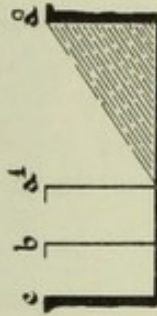


9 a.m.

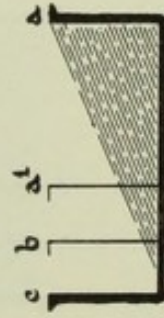
Street running East and West — View looking East.



12 noon.

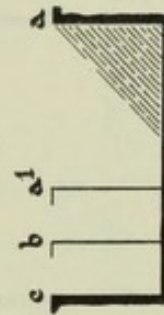


3 p.m.

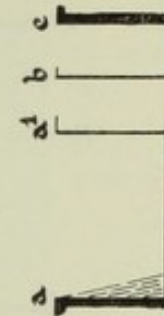


9 a.m.

Street running North-East and South-West — View looking North-East.



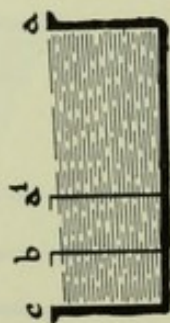
12 noon.



3 p.m.

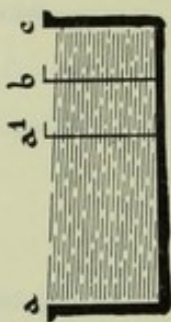
Sun Shadows in Glasgow Cast by Buildings 40 feet high
on Streets 60 (a.d.), 80 (a.b.), and 100 (a.c.) feet wide.

Winter Solstice.

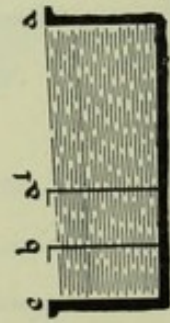


9 a.m.

Street running North and South — View looking North.

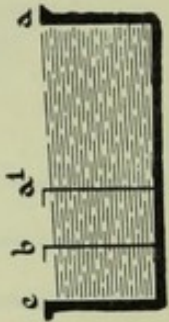


3 p.m.

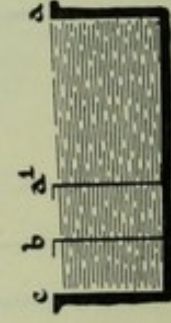


9 a.m.

Street running East and West — View looking East.

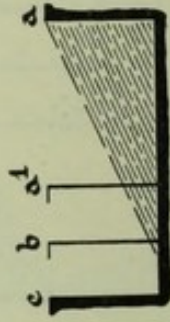


3 p.m.



9 a.m.

Street running North-East and South-West — View looking North-East.



3 p.m.

HOUSING, TOWN PLANNING, &c., ACTS, 1909-1925.

The inspection and issuing of notices for the repair of houses entails a large volume of work by the sanitary staff. While many factors look after their property in a satisfactory manner, there are others who pay little attention to their houses until compelled to do so. The following figures of defects dealt with do not reflect the whole of this work, as in a large number of instances minor defects and defects of a specific character are remedied under the nuisance clauses of the Public Health Act (see Sanitary Operations).

For the purpose of the above Acts 18,411 inspections were made during the year. The details as to inspections, notices issued, and defects found are as follows:—

Division	Inspections	Notices Issued	No. of Defects	No. of Houses Affected
Central, ...	3,133	192	756	386
Northern, ...	6,636	473	1,449	862
Eastern, ...	1,565	210	583	336
South-Eastern,	2,654	325	1,474	869
South-Western,	4,423	371	827	374
	<u>18,411</u>	<u>1,571</u>	<u>5,089</u>	<u>2,827</u>

Following on these inspections, 1,571 notices calling for repairs were issued in terms of Section 3 of the Housing (Scotland) Act, 1925, these notices covering 5,089 separate defects in 2,827 houses.

Failure to implement the statutory notices occurred in 134 instances, and in respect of these authority was obtained to remedy the defects complained of, and to charge the owner with the cost of repairs. The actual work of repair was carried out by the Master of Works on behalf of the department, and the following table summarises the cases dealt with according to divisions:—

SENT TO MASTER OF WORKS TO EXECUTE REPAIRS.

Division	Notices Issued	No. of Defects	No. of Houses Affected
Central, ...	37	141	68
Northern, ...	40	172	95
Eastern, ...	22	52	31
South-Eastern,	1	2	1
South-Western,	34	82	36
	<u>134</u>	<u>449</u>	<u>231</u>

Closing Orders.—Action under Section 17 of the Housing, Town Planning, &c., Act of 1909 had been practically suspended since about 1915, when the shortage of housing accommodation made it futile to represent houses when no alternative accommodation was available. Procedure for the closure of houses is limited to slum clearance schemes in respect of which alternative accommodation is provided by the Local Authority. Two instances fall to be recorded, however, in which dwelling-houses regarded as uninhabitable had become vacant, and in order to prevent re-occupancy representation was made to the Local Authority to have them closed for human habitation. The first of these representations was dated 23rd January, 1924, and had reference to a three-apartment dwelling-house at 32 Maxwell Street, Pollokshaws (front land, ground right). The second instance had reference to a three-apartment house associated with Lochburn Farm, Maryhill, previously occupied by a cotman. Representation of this house was made on 3rd August, 1925, in terms of Section 8 of the Act of 1925. Both these houses are now closed.

Following the issue of notices, in terms of Section 3 of the Act of 1925, the proprietors of a property at 17 West Greenhill Place gave notice, in terms of Section 25, of their intention to close the property, and following litigation, at the instance of the proprietors, to obtain the removal of the tenants, the Sheriff decided that a closing order was “decreed to have become operative” in respect of the property, which consisted of one-apartment and two-apartment houses.

RENT AND MORTGAGE INTEREST RESTRICTIONS ACTS, 1920 AND 1923.

Applications for Certificates by Tenants.—During the year 59 applications for certificates, in terms of Section 2 (2) of the principal Act, were received, compared with 173 for 1924. Of these, 16 were refused and 43 granted, 15 of the latter being in respect that the houses affected were not in all respects reasonably fit for human habitation, and 28 in respect that the houses were not in a reasonable state of repair.

The following summary shows the distribution of the applications throughout the several administrative divisions, and gives comparative figures for each year since the Act came into operation:—

Glasgow, 1925.—Applications for Certificates under Section 2 (2) of the Increase of Rent and Mortgage Interest (Restrictions) Act, 1920.

Division.	Refused.	Granted in respect that Houses were	
		(1) Not in all respects reasonably fit for human habitation.	(2) Not in a reasonable state of repair.
Central, ...	6	4	2
Northern, ...	2	—	9
Eastern, ...	4	8	8
South-Eastern, ...	2	2	5
South-Western, ...	2	1	4
City, ...	16	15	28
		43	
1920 (Oct.-Dec.),	147	263	459
1921	97	154	180
1922	10	2	8
1923	75	180	160
1924	21	83	69
1925	16	15	28

Applications for Reports by House Factors and Owners. — In Section 5 (2) of the 1923 Act it is provided that where a certificate has been issued by the Sanitary Authority in accordance with the provisions of Section 2 (2) of the principal Act of 1920, and the house factor or owner afterwards executes the repairs required to put the house into a reasonable state of repair, he shall be entitled to receive a report to that effect on making application to the Sanitary Authority, and on payment of a fee of one shilling.

Forty-one such applications have been received since July, 1923, and the following summary shows how they were dealt with:—

Glasgow, 1925.—Applications for Reports by House Factors or Owners under Section 5 (2) Rent and Mortgage Interest Restrictions Act, 1923.

Division.	Applications	
	Granted.	Refused.
Central, ...	2	—
South-Western,	3	—
	5	—
	5	
1924 ...	29	1
1923 ...	6	—

SECTION XI.

BACTERIOLOGICAL DEPARTMENT.

REPORT BY DR. R. M. BUCHANAN.

The demand for the services of the laboratories of the Bacteriological Department in the diagnosis and prevention of disease continues to increase year by year, and involves a wide range of technique, which is constantly undergoing development. The work is of very great variety in a year's time, and a comprehensive view of its nature is most easily obtained when it is regarded as falling under certain categories, namely, the early diagnosis of infectious disease, the elucidation of difficult and obscure cases, systematic examinations of water and milk, biological tests, miscellaneous investigations, and research. This classification may be more fully defined as follows:—

1. *The Early Diagnosis of Suspected Cases of Infectious Disease.* — These cases always provide the largest number of specimens for examination, and relate to such diseases as tuberculosis, diphtheria, ophthalmia neonatorum, and venereal diseases, enteric fever, paratyphoid fever, the dysenteries, infective jaundice, pneumonia, meningitis, anthrax, plague, malaria, and food poisoning. Additional material is frequently requested when the specimen submitted in the first instance has not been sufficient to complete the diagnostic investigation. Arising from cases of diphtheria and enteric fever, the examination of contacts also accounts for a large number of laboratory tests.

2. *The Elucidation of Difficult and Obscure Cases.*—It is a constant activity of members of the staff to co-operate with the Medical Officer of Health, medical practitioners, and consultants by making suggestions as to the application of laboratory methods in such cases. The bulk of the work of this nature does not lend itself to tabulation, but very fruitful results frequently follow from this co-operation. It is essential to have close contact with the clinical conditions in pursuing such investigations in order to make the analyses as helpful as possible.

3. *The Systematic Examinations* of the milk supply of the City and the municipal hospitals, the water supplies, and the water in the swimming ponds of the public baths are made at regular intervals as a test of purity.

4. *Biological Tests* are a necessary procedure (a) for the detection of the tubercle bacillus, mainly in milk, but also in sputum, urine, pleural and cerebro-spinal fluid; (b) for the diagnosis of anthrax, infective jaundice, and plague; and (c) for the virulence of organisms isolated in relation to diphtheria, puerperal fever, and food poisoning. These tests in the course of the year numbered 1,502.

5. *Miscellaneous Investigations* of constant occurrence are such as the examination of the characters of the blood for diagnostic purposes, stomach contents in cases of hypo-chlorhydria, tumours for malignancy, and hair and skin for parasites; the evaluation of the efficiency of disinfectants; and the recognition of insect and fungoid pests.

6. *Research*.—Investigations have been carried on in so far as the demands of routine work have permitted in anthrax, puerperal fever, food poisoning, air pollution, and diseases of imported fruits.

The number of specimens examined during the year was 27,617.

BIOLOGICAL LABORATORY.

The new biological laboratory, which was in course of construction at the date of last annual report, has now been opened, and completes the Bacteriological Department's new installation of laboratories in the Municipal Buildings extension.

TUBERCULOSIS—HUMAN.

1. *Practitioners' Specimens*.—The specimens from suspected cases of pulmonary tuberculosis numbered 2,926. *Bacillus tuberculosis* was found in 484, or 16 per cent. In the previous five years the number annually exceeded 3,000, and showed a falling percentage of positive results from 21 to 15.

2. *Dispensary Service*.—From six Tuberculosis Dispensaries in various parts of the City, 1,366 specimens of sputum were submitted, and 180, or 13 per cent., contained tubercle bacilli. Here also there has been a falling percentage of positive results.

TUBERCULOSIS—BOVINE.

1. *Milk from Town and Country Cows.*—There were 331 samples of milk submitted by the Veterinary Surgeon from cows with disease of the udder in 1925, and two duplicate specimens. These were examined both microscopically and by the biological test for bovine tuberculosis. The results were as follows:—

	Samples.	Tubercular.	Percentage Tubercular.	Streptococcus Mastitis.
Town Cows, ...	288	2	·6	—
Country Cows, ...	43	—	—	—
Duplicates, ...	2	—	—	—

(2) *City Milk Supply.*—Samples taken at railway stations and from road transport during the year numbered 204, as compared with 200 in 1924. These were all tested for bovine tuberculosis with negative results.

(3) *Hospital Milk Supplies.*—The hospital milk supplies continued to be systematically examined once fortnightly for evidence of bovine tuberculosis. In this way 156 samples from six supplies were received, each sample consisting of the mixed morning and evening milk as it arrived at the hospital. None of these mixed samples proved tubercular. The herds which supplied these hospital milks were examined as a routine precaution during the year, and in this way 611 samples from individual cows were tested. One of these proved tubercular.

SUMMARY OF MILK EXAMINATIONS FOR EVIDENCE OF TUBERCULOSIS.

Source.	Samples.	Tubercular.
Town Cows with Disease of the Udder, ...	288	2
Country Cows with Disease of the Udder, ...	43	—
City Milk Supply—		
From Railway Stations and Road Transport,	204	—
Hospital Milk Supply—		
(a) Samples taken at Hospitals consisting of mixed milk,	156	—
(b) Samples from individual cows,	611	1
	<hr/> 1,302	<hr/> 3

Other Local Authorities.—In addition to the above examinations, milk was biologically tested for two neighbouring Local Authorities, with results as follow:—

L.A. 1, 60 milks; three proved tubercular, representing a positive percentage of 5.

L.A. 2, 14 milks; all were negative.

ENTERICA DISEASES.

Certain specimens of blood submitted in capillary tubes for the Widal test for typhoid fever give an indefinite result. As it is the experience of the laboratory that this result is not infrequently due to paratyphoid fever, it is the practice in these cases to request larger quantities of blood for the purpose of dealing satisfactorily with this possibility. During 1925 the results reported as indefinite numbered 37, and accordingly further samples of these were requested. The resulting response to this request was that 20 specimens were returned for further investigation, while nothing further was heard of the remaining 17 cases. Of these 20 specimens, 8 gave a positive result, viz.:—3 typhoid, 1 paratyphoid A, and 4 paratyphoid B. The paratyphoids were, therefore, in the proportion of 25 per cent. of the “indefinites,” whose re-examination was proceeded with. When a sufficient quantity of blood is submitted in the first instance, examination for evidence of paratyphoid as well as typhoid infection is done as part of the routine practice of the laboratory, but in 1925 only four cases were found among these specimens. It is to be remembered that the paratyphoid appears somewhat later than the typhoid reaction, paratyphoid A usually considerably later, so that it may not be possible to fix all paratyphoid cases by means of a single serological test. It is suggested, however, by the large proportion of indefinite reactions, 17 out of 37 (46 per cent.), of which we have heard nothing further, that a few paratyphoids are likely to have been missed in this way. The cases of missed paratyphoids, then, fall into two classes—(1) those whose serum, submitted in capillary tubes for the microscopical reaction for typhoid fever, gives such a modified result in this test that the result is described as indefinite, and (2) those whose serum may not interfere at all with the giving of a perfectly definite negative report as regards typhoid fever. It is not improbable that the receipt of such a negative

report operates in many cases with the effect that the other enterica types are not investigated. It would seem highly improbable that of 291 specimens submitted in 1925 as possibly enteric fever, only 36, or 12 per cent., are actually of the enterica group. The determination of the actual incidence of paratyphoid fever by the serological test depends, therefore, on the extent to which resort is had to the submission of larger quantities of blood (2-3c.cs.) for a test that will cover all the members of this group.

In addition to the above cases of paratyphoid B fever, there were determined for the fever hospitals two cases of paratyphoid B, by the serological test, in one of which the organism was found in the fæces, and a third case in which the organism was cultivated from the blood.

DYSENTERY.

Dysentery continues to be uncommon, and there have been no outbreaks in the City during the year. Out of a considerable number of specimens submitted, four were cases of amœbic dysentery, a type which always necessitates several re-examinations after treatment. There was one case of the classical type of bacillary dysentery. Following an outbreak of diarrhœa in Ayrshire involving people resident near Glasgow, the result of the examinations made by Dr Wiseman was to show that the outbreak was caused by a variety of dysentery bacteria which is rare in this country so far as has yet been ascertained. A patient admitted several months later in the year to one of the Parish Council hospitals was found to be suffering from infection by an organism similar to the variety referred to. Dr Wiseman is at present engaged on a complete classification of the organisms in question.

DIPHTHERIA.

Bacterial Diagnosis.—Throat swabs to the number of 5,891 were submitted by the medical practitioners of the City from patients in whom it was necessary to determine the presence or absence of diphtheria, with a positive result in 12 per cent. The total number exceeds that of the previous year by 955.

Throat swabs were also received from the Health Department (185) and from Belvidere, Ruchill, Knightswood, and Shieldhall

Hospitals (19). The latter were of a routine character, to ensure the patients' freedom from the infection before dismissal.

Contacts.—The systematic examination of contacts instituted in 1906 has been carried on during the year. The examinations during 1925 (from 168 households, 5 schools, 4 hospitals, 1 reception house, 2 children's homes, 1 hostel, and 2 institutions) numbered 999, with positive results in 2·8 per cent. The positive percentage was 6 in 1923 and 4 in 1924, amongst contacts from similar sources.

Virulence Test.—The bacillus isolated from 34 diphtheria convalescents and contacts was tested as to the presence or absence of virulence. A positive result was determined in 14, or 41 per cent.

OPHTHALMIA NEONATORUM.

Microscopic examinations of the exudate from eyes of suspected cases were done to the number of 653.

Specimens from	Number.	Positive.	Percentage Positive.
Medical Practitioners, ...	16	3	18·8
Medical Officer of Health, ...	637	58	9·1

These numbers do not indicate the number of actual cases involved, as in a large number of the cases several examinations were made. The percentage positive figure, therefore, does not represent the actual positive percentage of the cases sent in for examination.

VENEREAL DISEASES.

Wassermann Test.—During the year 9,249 specimens of blood and 160 specimens of cerebro-spinal fluid, making 9,409 altogether, were examined by the Wassermann Test. Of the number, 2,698 were duplicates, that is, from patients under treatment. The total number comprised:—

1,837 from City Practitioners.

5,182 from City Institutions.

1,357 from Public Health Department.

1,033 from other Local Authorities under special agreement.

The percentage positive rate for specimens sent in for diagnosis averaged 22·4, while that for specimens sent from cases undergoing treatment was 51·8.

Gonococcal Infections, other than *Ophthalmia Neonatorum*.—During the year 1925, 772 specimens were examined for the presence or absence of the gonococcus. Of these, 135, or 17·5 per cent. were found positive.

Comparison is given in the following table with the numbers for 1924:—

	M.O.H.	Practitioners.	1925.		Total.
			Outside Authorities.	Institutions.	
Number,	284	472	11	5	772
Positive,	36	95	3	1	135
Percentage					
Positive,	12·7%	20·1%	27·2%	20%	17·4%
1924,	17·8%	18·4%	—	13%	19·2%

INFECTIVE JAUNDICE.

As rats, especially the common rat (*Mus decumanus*), act as intermediary hosts and as "reservoirs" of the virus of infective jaundice, the investigation instituted in 1924 has been carried on during the past year for its detection.

The investigation, carried out by microscopical and biological tests, covered all the rats brought to the laboratory in the ordinary course for examination in connection with plague. The animals thus served a double purpose in affording material for the detection of two distinct diseases. In this way 122 rats were examined (two having been inadvertently destroyed), and the causative organism, *Leptospira icterohæmorrhagiæ*, was not detected in any of them.

ANTHRAX.

During the year 101 samples of goatskin thongs, used in the binding of orange boxes, and also 12 shaving brushes were examined for the presence of the bacillus of anthrax. One positive result was recorded. It was given by a group of four of the thongs.

RATS AND PLAGUE.

While it is 15 years since there was a case of plague in Glasgow—a Lascar seaman who sickened on board ship in the harbour—a close scrutiny is kept year by year on the rats taken mainly from ships and docks, and also from the City, as possible carriers of the disease.

During last year 124 were examined with negative results. Comprising this number were *Mus decumanus* 54, *Mus rattus* 34, and *Mus alexandrinus* 36.

FOOD POISONING.

There was no outbreak of food poisoning in the City during 1925.

A considerable variety of food stuffs, such as canned fruits, meat, and fish, were, however, examined, to determine their soundness, or as having been alleged to have possibly caused illness. No specific food poisoning organism was found in any of these. In the case of a sample of steak pie of which a complaint was lodged, there was gross bacterial contamination, probably of intestinal origin. In two unconnected cases of illness an organism of the paratyphoid B—food poisoning—group was found in the intestinal specimens submitted from one of the fever hospitals.

MILK.—BACTERIAL CONTENT.

Designated Milks. — In accordance with the Milk (Special Designations) Order, made under the Milk and Dairies (Amendment) Act, 1922, 69 samples of milk of the various grades have been subjected to the process of examination prescribed for the estimation of the bacterial content. Particulars of these are given in Section XII, in the part dealing with operations under the Food and Drugs Acts.

Hospitals' Milk Supply.—The hospital milk supplies have been systematically examined every month as to bacterial count. The samples taken numbered 153. Three supplies may be reckoned as averaging Grade A milk, while three exceed that standard. It is notable that there is some relation, though not consistent, between bacterial content and sediment.

Hospital.	Agar Count per c.c.			Average Sediment per Litre. Centrifugn.	
	Highest.	Lowest.	Average for year.	Before.	After.
A	5,124,000 (Aug.)	8,000 (March)	633,153	·021	·015
B	12,720,000 (Aug.)	35,000 (March)	1,599,307	·051	·032
C	3,864,000 (Aug.)	8,000 (March)	423,846	·041	·03
D	1,328,000 (Aug.)	9,000 (April)	141,692	·023	·02
E	222,000 (Aug.)	24,000 (May)	63,384	·027	·017
F	1,725,000 (July)	15,000 (Sept.)	211,615	·033	·02

Vaccines.—A number of autogenous vaccines were prepared for the treatment of various infections—staphylococcal, streptococcal, and coliform.

SUMMARY OF EXAMINATIONS FOR YEAR 1925.

The examinations performed in the Bacteriological Laboratory during 1925 numbered 27,617. The sources of the materials submitted were as follows:—

	Medical Practitioners.	Health Department.
<i>Tuberculosis (Human)</i> —		
Sputum—		
Microscopical Examinations,	2,926	1,366
Biological Test,	3	—
Urine—		
Biological Test,	67	29
<i>Tuberculosis (Bovine)</i> —		
Milk—		
Microscopical Examinations,	—	1,302
Biological Test—		
Town Cows,	—	278
Country Cows,	—	32
Herds supplying Hospitals,	—	651
Duplicate Samples for Confirmation,	—	2
City Milk Supply—Station Samples,	—	204
Samples from Hospitals Milk Supplies,	—	153
<i>Enteric and Paratyphoid Fevers</i> —		
Blood (agglutinations),	422	32
Urine, fæces (cultures),	68	414
<i>Diphtheria</i> —		
Throat Swabs from suspected cases,	5,891	204
Throat Swabs from contacts,	—	999
Virulence Test,	13	21
<i>Vincent's Angina</i> —		
Throat Swabs,	32	—
<i>Pneumonia</i> —		
Sputum,	5	2
<i>Ophthalmia Neonatorum</i> ,	16	637
<i>Veneral Diseases</i> —		
Wassermann Test,	8,052*	1,357
Gonococcal Infections other than Ophthalmia		
Neonatorum,	490	285
<i>Spirochæta pallida</i> ,	10	—
<i>Infective Jaundice</i> —		
Material from Patients,	9	4
Examination of rats from various sources in the City,	3	222
<i>Anthrax</i> —		
Goatskin bindings, 101 ; brushes, 3,	2	102
<i>Plague</i> —		
Examination of rats from Ships, Docks, and City,	—	124
<i>Protozoal and Fungoid Diseases</i> —		
Malaria, 7 ; Dysentery, 85 ; Ringworm, 5,	43	54

	Medical Practitioners.	Health Department.
<i>Bacterial Diagnosis (Various Diseases)—</i>		
Urine, fæces, pus, sputum, Cerebro-spinal fluid, Glands, etc.,	245	167
<i>Food Poisoning and Examination of Food Stuffs—</i>		
Food Stuffs, 23; Fæces, 9; Stomach Contents, 2; Blood, 1,	7	28
<i>Milk (Bacterial Content)—</i>		
Under Milk (Special Designations) Order,	—	69
City Milk Supply (June-December),	—	120
Hospitals Milk Supply,	—	153
<i>Examination of Blood—</i>		
Anæmia,	10	3
Bacterial Content by Culture,	3	—
Typhus,	1	4
Cytology of Obscure Cases,	19	5
Leukæmia,	1	—
<i>Microscopical Examinations—</i>		
Tissues (Tumours, etc.),	54	23
Cerebro-spinal Fluid,	1	—
Urine,	3	1
<i>Chemical Examinations—</i>		
Urine,	—	43
<i>Examination of Sterilising Process upon Bales of Straw (3 Consignments).</i>		
	—	18
<i>Preparation of Vaccines,</i>	7	—
<i>Insects Pests from Dwelling-houses and Workshops,</i>	—	6
	18,403	9,014
	27,417	
<i>Water Department—</i>		
Tap Water,	27	
Reservoirs,	52	
	—	79
<i>Baths Department—</i>		
Water from Swimming Ponds,		121
	27,617	

*This number includes 7,019 from City Institutions and 1,033 from outside Authorities.

R. M. BUCHANAN.

SECTION XII.

PART 1.

FOOD POISONING.

Instances of food poisoning, brought to the notice of the department, continue to be inquired into, in accordance with Circular No. IV, 1924—Food Poisoning Outbreaks, but only in a small proportion of these is evidence of contamination found.

On 28th July, 1925, a doctor in the south-west district of the city reported that a few cases of diarrhœa had occurred in his household, which he attributed to the eating of steak pie on the two previous days. His household consisted of 5 adults, including his wife, a visitor, sister-in-law, and the maid, together with one child. With the exception of the visitor, all of them were more or less ill with diarrhœa, headache, colic pains, or vomiting; and a dog, which had also eaten pie, was also affected. Inquiry indicated that steak pie, one of a number supplied by a local butcher, was the cause of illness. The bacteriologist found the following organisms in a sample:—Streptococci, *B. faecalis alkaligenes*, *B. Proteus vulgaris*. No food poisoning organisms were found in the excreta of the patients.

OPERATIONS UNDER THE SALE OF FOOD AND
DRUGS ACTS, ETC.

The Sale of Food and Drugs Acts.—For the purposes of these Acts a total of 4,996 samples were examined, 3,620 being informal or test samples, and 1,376 official or statutory samples. Of the former 196, and of the latter 94, were deemed non-genuine, or a total of 290. Proceedings were initiated in respect of 47 of the official samples adversely reported upon. In addition, 8 contraventions of the margarine provisions were dealt with, and one milk dealer was prosecuted for failure to display his name and address on his milk-cart. The total fines and expenses imposed under these Acts were £228 6s.

The details of operations under these Acts are contained in the subjoined tables and the appendices.

Perhaps the most far-reaching change in food and drug legislation of recent times is the abolition of the warranty defence in relation to milk, which, in terms of the Milk and Dairies (Scotland) Act, 1914,

and the Commencement Order of 1925, became operative as from 1st September last. Its abuse, wittingly and unwittingly, has been not infrequently in evidence, and for this and other reasons proceedings against the warrantor were seldom justified. A dealer, of course, will still have his remedy at common law, as has always been the case under Section 28 of the 1875 Act.

As a logical sequence, the present presumptive limits for milk should be made obligatory, as recommended by the Inter-Departmental Committee, which reported in 1922, and thus ensure no invidious distinction between producer and trader in respect of their legal responsibilities.

A complaint in relation to the use of a fancy or descriptive name for margarine came under review by way of appeal to the High Court of Justiciary. A city firm of provision merchants were charged with having, in contravention of Section 8 of the Butter and Margarine Act, 1907, sold margarine enclosed in a wrapper, upon which it was described as "Charmo Margarine, containing a small quantity of Butter," the prefix "Charmo" alone having been approved by the Board of Agriculture. The sample, on analysis, was found to consist of genuine margarine, containing 1 per cent. of butter. The only relative decided cases citable were those of the Maypole Company, in which margarine described as "Mayco Margarine mixed with Maypole Butter" ("Mayco" being an approved prefix) was held by the High Court of Justiciary to be a contravention of the Act; and the later English case of *Hawes v. Stephen*, in which "Kernut Margarine churned with Milk" ("Kernut" being an approved prefix) was, on the contrary, deemed by the King's Bench Division to be admissible as a description term for margarine, on the ground that the additional words were descriptive without being a descriptive name. The Stipendiary Magistrate, after careful consideration of these cases and the arguments submitted in the "Charmo" case, preferred to follow the Maypole case and convicted, holding that the added words were part and parcel of the descriptive name.

The subsequent appeal was first heard before a Court of three judges, who, in view of its importance, remitted the case to a full bench of seven judges. By six to one the Court found for the appellants, the Lord Justice Clerk alone giving judgment for the respondent. Four of the judges held that the Maypole case had been wrongly decided, while two of the judges (who, along with the Lord Justice Clerk, had constituted the Court in the Maypole case) reversed their previous opinions.

From a consideration of the judgment as a whole, it would appear that the spirit of the Act has become submerged in the letter of the law, as the obvious intention of the Legislature was to keep the words "Butter" and "Margarine," so to speak, in water-tight compartments. It is now only necessary for a person dealing in margarine to exercise his ingenuity to circumvent the provisions of the section as now interpreted.

ABSTRACT OF TOTAL SAMPLES EXAMINED DURING 1925.

Article	Informal		Statutory		Percentage Adulterated		Percentage of Samples taken in each Group to Totals.	
	Taken	Non-Gen.	Taken	Non-Gen.	Inf.	Stat.	Inf.	Stat.
Milk and Cream, ...	2,276	134	906	59	5.9	6.5	62.9	65.8
Milk Products (Butter, Cheese, &c.), ...	639	36	143	10	5.6	7.0	17.7	10.4
Cereals, ...	14	—	27	—	—	—	.4	2.0
Spirituous Liquors, ...	152	13	86	10	8.6	11.6	4.2	6.2
Drugs, ...	259	4	38	3	1.5	7.9	7.2	2.8
Flavourings and Condiments, ...	79	1	52	1	1.3	1.9	2.2	3.8
Miscellaneous Foods, ...	201	8	124	11	4.0	8.9	5.6	9.0
Totals,	3,620	196	1,376	94	5.4	6.8	100.0	100.0

ABSTRACT OF INFORMAL AND STATUTORY SAMPLES OF SWEET MILK EXAMINED DURING 1925.

INFORMAL				MONTH	STATUTORY			
Number Taken	Number Presumed Non-Genuine	Average Percentage Composition			Number Taken	Number Presumed Non-Genuine	Average Percentage Composition	
		Fat	Non-Fat	Fat			Non-Fat	
182	18	3.39	8.85	January,	72	3	3.46	8.82
197	12	3.47	8.81	February,	84	6	3.42	8.77
215	10	3.47	8.76	March,	83	5	3.44	8.78
188	7	3.56	8.80	April,	83	11	3.45	8.74
212	18	3.36	8.74	May,	85	11	3.34	8.67
231	8	3.42	8.83	June,	80	1	3.42	8.79
175	16	3.40	8.74	July,	61	11	3.40	8.66
182	19	3.46	8.71	August,	82	8	3.53	8.71
157	8	3.57	8.80	September,	66	1	3.66	8.76
183	5	3.70	8.82	October,	69	1	3.72	8.81
156	7	3.59	8.79	November,	53	—	3.60	8.74
144	4	3.54	8.89	December,	73	—	3.60	8.83

Colouring Matter in Milk.—Thirteen samples of milk were reported to the Procurator-Fiscal as containing annatto. In 12 cases proceedings ensued, and in each a conviction was obtained—penalties, in all, of £27 being imposed. Curiously enough, this class of offence is mainly confined to the spring months, when milk is practically devoid of natural colour—hence, doubtless, the more prevalent use at that period of annatto to make amends for nature's deficiency, and to impart an appearance of richness to the milk.

Preservatives in Food.—Of the 3,130 milk samples examined, all were found free from preservatives. In 27 samples of cream examined, 4 contained boric acid, ranging from .074 to .46 per cent. 23 samples of bakers' sponge goods examined for the presence of boric acid were all found free. In 15 samples of meat preparations, 6 samples showed the presence of sulphites, the percentages expressed as sulphur dioxide ranging from .009 to .046.

The Report of the Departmental Committee on Preservatives has been followed by the issue of the Public Health (Preservatives, &c., in Food) Regulations (Scotland), 1925. They are to become operative as from 1st January next, with the following exceptions:—

- (1) In the case of butter or cream they shall not apply before 1st January, 1928.
- (2) Where a food contains a preservative due to the use of preserved bacon, ham, margarine, and butter, they shall not apply before 1st July, 1927, with the exception of the last, the use of which is extended to 1st July, 1928.

The Regulations practically eliminate the use of all chemical preservatives as an ingredient of any food or drink, with the exception of sulphur dioxide and benzoic acid. A schedule of articles in which these alone may be used, and their maximum proportions, is laid down, together with provision relating to declaration. A list of prescribed colouring matters is also scheduled. A considerable body of opposition to the Order has developed, particularly in regard to the prohibition of the use of boric acid. In relation to butter, cream, and liquid eggs, the ultimate functioning of the Order is likely to give rise to difficulties.

Condensed and Dried Milks.—In terms of the respective Regulations of 1923, 25 samples of condensed and 9 of dried milks were examined. One sample of the former was found to be .22 per cent. below fat limits, and one was slightly below the declared equivalent. In the case of the dried milks, one sample of partly skimmed (half-cream) milk was (approximately) one-quarter pint short of declared equivalent, and the manufacturer's attention drawn thereto.

Milk (Special Designations) Orders.—During 1925 23 new applications for licences were received, which, upon inquiry and report, were granted with one exception. In the latter case licence was sought to receive and pasteurise Grade "A" Milk, but, upon inspection of premises and methods, these were deemed incompatible with the general conditions to which such licences are subject, viz., that the milk shall be kept separate at all stages from other milk. The application was therefore refused. An appeal, in terms of the Order, was made to the Scottish Board of Health, who, after inquiry and inspection, sustained the Local Authority's decision.

The details of licences as at end of 1925, with comparative figures for 1924, are shown below:—

	1925	1924
<i>Certified—</i>		
Producers,	—	—
Dealers,	19	10
Total Average Daily Sales—(Gallons), ...	53	30
<i>Grade "A" (Tuberculin Tested)—</i>		
Producers,	—	—
Bottling Establishments,	2	1
Dealers,	10	9
Total Average Daily Sales—(Gallons), ...	207	175

	1925	1924
<i>Grade "A"—</i>		
Producers,	—	—
Bottling Establishments,	1	1
Dealers,	25	16
Total Average Daily Sales—(Gallons), ...	350*	200†
<i>Pasteurised—</i>		
Pasteurising Establishments,	3	2
Dealers,	9	9
Total Average Daily Sales—(Gallons), ...	620	500

* 340 Gallons are Pasteurised. † All pasteurised.

There has been a steady, though slow, increase in the daily sales of all grades. In the case of "Certified" milk supplies were not infrequently unequal to the demand—largely due to the disposal of the milk locally and more economically, with avoidance of carriage dues, which in the case of boxed, bottled milk are not inconsiderable.

With regard to sales of "Pasteurised" milk, the figures are solely those of milk produced and sold in terms of the Order, and in no way indicative of the quantity so treated. Practically all the large distributors have installed or are installing plant in lieu of that hitherto in use, whereby all their milk is pasteurised more or less approximately as laid down in the Order—in the case of one distributor to the extent of 6,000 gallons daily—but which is not sold under the statutory designation.

During the year a total of 69 samples of graded milks were procured and examined as to conformity with the Orders.

In respect of the unauthorised use of designations, or descriptions resembling same, one dealer was warned, and one, owing to persistent advertisement, was proceeded against, and fined £5. A tabular statement of results of examinations is appended.

RESULTS OF EXAMINATIONS OF DESIGNATED MILKS.

Designation and Requirements	Number examined	Number conform to count	Agar Count per C.C.			Average of Total Samples	Coliform Bacilli		Fat Minimum		Average Fat Content
			Number exceeding count	Lowest	Highest		—	+	Number above	Number below	
CERTIFIED—											
Bacteria not to exceed 30,000 ; Coliform absent in $\frac{1}{8}$ c.c. ; Fat not less than 3.5 per cent. }	23	22	1	900	58,700	8,913	22	1	22	1	3.97
GRADE "A" (Tuberculin Tested)—											
Bacteria not to exceed 200,000 ; Coliform absent in $\frac{1}{16}$ c.c. ; Fat not less than 3.5 per cent. }	14	14	—	1,900	163,400	49,032	10	4	12	2	4.02
GRADE "A"—											
Requirements are as for Grade "A" (Tuberculin Tested). }	6	6	—	9,350	98,100	36,950	4	2	4	2	3.53
GRADE "A" (Pasteurised)—											
Requirements are as for "Certified." }	13	10	3	900	47,800	13,111	13	—	13	—	3.6
PASTEURISED—											
Bacteria not to exceed 100,000 } (No Coliform test prescribed.) }	13	12	1	7,700	202,250	48,242	1	12	(None prescribed)		3.5

Tubercle, &c., in Milk.—A feature of great importance is the progressive decline in the number of samples found positive for tubercle bacilli during the period that has elapsed since the sampling of milk as consigned by farmers to city dairymen was recommenced on 15th May, 1923. Of the first 50 samples examined, no less than 6 were found to contain tubercle bacilli, equivalent to 12 per cent., the percentage of the total examined for the year being 7.9. For 1924 the percentage had declined to 3.3. During 1925 a total of 204 samples were examined, all of which were found negative.

These suggestive figures would appear to warrant the inference that persistent sampling has led to a greater activity on the part of Local Authorities of producing areas, as well as of farmers, in the oversight of their herds with regard to the elimination at least of affected cows clinically recognisable, which Authorities state are present in milking herds in the proportion of one per cent.

In view of the obligatory duties now laid alike upon Local Authorities and owners of herds in respect of the detection, notification, and slaughter of affected or suspected animals, in terms of the Milk and Dairies (Scotland) Act, 1914, and the Tuberculosis Order of 1925, the presence of tubercle in milk should become extremely remote.

With a view to the estimation of the bacteria—apart from tubercle—in farmers' supplies as received by dairymen and before treatment, 120 samples were examined, and the results in tabular form are appended:—

STATEMENT OF RESULTS OF EXAMINATION FOR BACTERIA OF FARMERS' SUPPLIES AS RECEIVED BY DAIRYMEN.

Number examined	Average Number of Bacteria per c.c.					Coliforms in $\frac{1}{10}$ c.c. (2 days)	
	Under 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	—	+
120	53	20	18	9	20	52	68

As regards bacteria count, it will be observed that 73, or over 60 per cent., reached the quality laid down for "Grade A" milk. Of those containing under 100,000 bacteria per c.c., 22 or over 41 per cent. were of "Certified" quality. Where the count was deemed excessive, the Medical Officer of Health of the area and the consignor were communicated with, and a repeat sample, taken some time after, invariably showed gratifying results. In one instance, where the count was much in excess of the million figure, the subsequent repeat sample showed only 12,400 bacteria per c.c.

Sale of Food Order, 1921.—Informations in 8 contraventions of the Order were submitted to the Procurator-Fiscal for his consideration, 6 being in relation to imported eggs ticketed "New Laid" or "Fresh," but without description including the word "Imported," and 2 to unlabelled imported meat.

In the latter the Fiscal did not deem proceedings warranted, and in the former a prosecution ensued in each case, and penalties, in all, of £11 15s. were imposed.

The Merchandise Marks Bill of 1924, which sought to mark imported dairy and other produce generally, has, as forecasted, been dropped, and a new measure, known as the Merchandise Marks (Imported Agricultural Produce) Bill, has been presented, and read a first time. This Bill in turn, owing to the exigencies of Parliamentary time, was withdrawn, with a view, it was stated, to a much wider and more comprehensive measure being introduced.

Butter and Margarine Acts.—In terms of these statutes, 5 applications for registration as wholesale dealers in margarine and 3 in respect of premises used as “butter factories” were received, and, upon inspection, recommended for certification. Routine inspection and sampling in the latter class of premises were maintained. In one sample, in which a marked excess of moisture was present, inquiry disclosed that the reworking was conducted in a power churn, with the addition of milk to facilitate softening, the resultant product being thus, in terms of the 1907 Act, “milk-blended butter,” and constituting an unwitting infringement of the statute. On the occupier’s attention being directed thereto, the practice was forthwith discontinued, and subsequent samples obtained were found satisfactory.

The nature and number of premises on Register at end of year were as undernoted:—

Manufactories of Margarine,	...	...	...	1
Butter Factories,	...	...	...	20
Wholesale Dealers in Margarine,	...	...	...	210

Fertilisers and Feeding Stuffs Act, 1906.—No request for official sampling was received during the year, and, so far as Glasgow is concerned meantime, the necessity for sampling would not appear to arise, owing to the almost invariable mutual arrangements between buyers and sellers for informal sampling and analysis. 18 samples of cattle and poultry foods were examined during the year, and with two exceptions were found to comply with the Act. The latter were compound feeding-stuffs, and the attention of the dealers was directed to the deficiencies in their declared constituents.

Food Inspection, &c.—During the year 13,218 inspections were made in markets, shops, and stores in connection with the detection of unsound or unwholesome food, and the conditions of storage. A total of 60 tons 14 cwts. 7 lbs. of various food-stuffs, exclusive of 500 eggs, were adjudged by the Inspectors to be unfit for human food, and were destroyed, or so dealt with as to preclude their use for human consumption.

In terms of the Public Health (Meat) Regulations (Scotland), 1924, 2 new applications for certification of storage accommodation and 7 in respect of renewal were received, all of which were granted—the total now on Register being 9. The conditions prevailing in these premises remain on the whole satisfactory, and the occupiers were found readily amenable to any suggestions of improvements that were made.

The general oversight of all food premises has also been maintained, and, with few exceptions, a fairly reasonable degree of cleanliness therein and of methods, having regard to the nature of the business carried on, was found to prevail. In the case of 5 butchers and 9 dealers in general food-stuffs, formal notices were served and duly complied with. With the exception of the meagre provision in local enactment, the Public General Statutes affecting Scotland do not contain any specific provision dealing with such premises in regard to a standard of cleanliness or of methods in handling and sale of food-stuffs.

The question was under consideration by the Committee on Health in the latter part of 1924, and early in 1925 a pamphlet embodying suggestions thereon was prepared and circulated amongst traders and the public generally, of which the following is a copy:—

PROTECTION OF FOOD-STUFFS FROM CONTAMINATION.

The Committee on Health of the Corporation of Glasgow invite the attention of traders and the consuming public to the following suggestions, which are intended to minimise the contamination of food-stuffs by dust and flies or through unclean hands:—

Milk.—Every change from one vessel to another is associated with a risk of adding contamination to milk. All milk vessels should be thoroughly scalded before use, and when not in use should be placed in an inverted position.

Vessels containing milk should be protected from contamination through dust or flies by means of dust-and-fly protecting covers.

Butter, Cheese, Cooked and Canned Meats, &c.—There is always the possibility of contamination of these articles of food when they are exposed for sale, and this may be reduced to a minimum by their retention in show cases with close-fitting doors. Such products should not be fingered, and the use of a butter spoon, fork, &c., is recommended.

Cakes, Smallbread, Confections, &c.—Unless these can be retained in glass cases, jars, &c., they should be protected from contamination by the use of clean dust-and-fly proof muslin. Fingering may be avoided during sale by the use of forks, scoops, tongs, &c. The practice of wetting the fingers and breathing into paper bags is highly reprehensible, and might be largely avoided by the more general use of cartons.

Fruits, Vegetables, &c., devoid of their natural protection, should be rinsed in water before use.

The hands of all persons engaged in the handling of food-stuffs in retail quantities should be kept thoroughly clean, and washed after every occasion on which there is a risk of them being soiled.

All premises used for the storage, distribution, or sale of food-stuffs should, as far as practicable, be made vermin proof.

All food-stuffs, but especially milk, when stored by consumers, should be protected from dust and the contamination inseparable from household sweepings.

A. K. CHALMERS,
Medical Officer of Health.

Sanitary Chambers,
Glasgow, 27th March, 1925.

Perhaps the most prolific cause for complaint arises through the operations of the itinerant fruit hawker, who haunts the auction sale rings intent on speculative ventures in lots, which, owing to adverse weather conditions or delays in transit, are of unknown or doubtful condition, and are "sold with all faults." This class of trader is invariably without suitable premises for the subsequent "waling" and storage of his wares, which leads to their retention in all manner of places, such as cellars, stables, and dwelling-houses. A draft Order dealing with this form of trading was issued by the Board some years ago, but did not materialise.

A comprehensive measure dealing with the storage and sale of food-stuffs generally (unless retained in air-tight receptacles) is desirable.

A matter of some concern came under notice during the year in the disclosure, in the course of examination, of particles of glass in certain meats sold in glass containers. In 8 samples in all silicious particles were found, varying from minute particles in most cases to, in one instance, a somewhat pronounced splinter. In the course of sterilisation these meats are submitted to high temperature conditions in retorts, and owing doubtless to unequal expansion and the use of inferior glass, or its imperfect annealing, spicules of glass are dislodged in the process. The manufacturer's attention was directed to the matter, with satisfactory results. It is obvious that only a toughened and high quality of glass should be used as food containers if this inherent risk is to be eliminated.

Dairies.—The Milk and Dairies (Scotland) Act, 1914, came into operation on 1st September, 1925. This statute, besides containing further provisions, consolidates the law hitherto contained in no less than five Acts and four Orders. Perhaps its most important feature is that it makes compulsory what has been largely left optional in the past. It represents a considerable advance in milk legislation, especially as regards producing areas. The significant scope of the Act and the measures adopted in the application to the milk supplies of the city will be dealt with in the Annual Report for next year.

In terms of the Act, a new Register of Dairies is being prepared, and is practically completed.

The number of dealers on the Register at the end of 1925 was 1,523, a decrease of 29. 21,700 inspections of premises were made, and 81 minor contraventions of the Orders and Regulations and of

structural defects were noted and dealt with. Proceedings were taken under the new Milk and Dairies Order, 1925, against a dairyman in respect of his permitting an employee to retain milk vessels in dwelling-house, and a penalty of £2 imposed.

Byres.—The number of byres for milch cows is now 45, a further decrease of 6 compared with 1924. These premises are licensed for a total of 858 cows, the average number kept being 576. 548 inspections of premises were made, and 14 minor breaches of the rules, &c., or defects of structure, noted and dealt with.

DETAILS OF CITY BYRES AS AT 31ST DECEMBER, 1925.

Cubic space per Cow	With Grazing Facilities			Wholly Stall-Fed		
	No. of Byres	No. of Cows Licensed for	Average No. kept	No. of Byres	No. of Cows Licensed for	Average No. kept
At 600 cubic ft.,	32	674	457	5	53	30
At 800 ,,	7	91	54	1	40	35
Totals,	39	765	511	6	93	65

Ice Cream Shops.—The number of dealers in ice cream on the Register at the end of 1925 was 692—a decrease of 31. 8,850 inspections of premises, &c., were made, and 51 minor contraventions of the Regulations, &c., were noted and dealt with. In 5 of these subsequent legal proceedings were deemed warranted, and penalties of £11 in all were imposed. The use of closed cartons or containers in the distribution and sale of this commodity was increasingly marked during 1925, and is to be commended, eliminating, as it does, many of the attendant risks associated with the production, storage, &c., of ice cream.

ALEXR. B. FINDLAY,
Senior Food Inspector.

31st March, 1926.

THE SALE OF FOOD AND DRUGS ACTS.

TABLE SHOWING NATURE AND NUMBER OF SAMPLES
PROCURED AND EXAMINED DURING 1925.

Nature of Sample	Informal		Statutory		Nature of Sample	Informal		Statutory	
	Number procured	Number non-genuine	Number procured	Number non-genuine		Number procured	Number non-genuine	Number procured	Number non-genuine
Acetic Acid, ...	1	—	—	—	Meats, glassed, ...	—	—	2	—
Almonds, ground,	7	1	4	1	Milk, evaporated,	4	1	—	—
Apricots, canned,	1	1	—	—	Milk, condensed,	21	—	—	—
Arrowroot, ...	1	—	2	—	Milk, dried, ..	9	1	—	—
Bacon,	—	—	2	—	Milk, skimmed, ...	5	—	12	1
Baking Powder, ...	2	—	—	—	Milk, sweet, ...	2222	132	891	58
Barley,	2	—	1	—	Milk, pudding, ...	2	2	—	—
Blanc Mange Mixture,	1	—	—	—	Mincemeat, ...	4	—	—	—
Borax, purified,	28	—	5	—	Mustard,	3	—	5	—
Brandy,	4	—	—	—	Oatmeal,	3	—	1	—
Butter,	616	35	138	10	Oil, almond, ...	4	—	1	—
Buttermilk, ...	1	—	—	—	Oil, camphorated,	31	—	5	1
Calcined Mag., ...	1	—	—	—	Oil, castor, ...	4	—	—	—
Cascara Sagrada,	6	1	2	1	Oil, cod liver, ...	1	—	—	—
Cheese (various),	13	—	5	—	Oil, eucalyptus, ...	8	—	2	—
Ciderette,	1	—	—	—	Oil, olive,	25	—	3	—
Cinnamon, ground,	24	1	13	1	Ointments (various),	8	—	—	—
Cocoa,	11	—	3	—	Ovaltine,	1	—	—	—
Coffee,	34	—	12	—	Paregoric,	11	—	—	—
„ Essence,	—	—	1	—	Pastes, meat and				
Confections, ...	4	—	—	—	fish,	3	—	—	—
Cream,	24	1	3	—	Peas, canned, ...	1	—	—	—
Cream of Tartar,	36	2	14	1	Pepper, black, ...	4	—	5	—
Custard,	2	1	4	4	Pepper, white, ...	20	—	16	—
„ Powder,	9	—	3	—	Preserves,	16	2	13	5
Dripping,	16	—	23	1	Rice, whole and				
Epsom Salts, ...	3	—	1	—	ground,	—	—	4	—
Flour,	1	—	6	—	Rum,	52	9	24	3
Flour, S.R., ...	7	—	10	—	Sauces (various),	3	—	2	—
Flowers of Sulphur,	12	—	2	—	Sausages,	6	—	—	—
Gin,	5	—	3	—	Seidlitz Powders,	4	—	—	—
Ginger, ground,	21	—	8	—	Sponge Cakes, etc.,	23	—	—	—
Glycerine,	1	—	—	—	Suet (and Allied				
Gravy Granules,	4	—	—	—	Preparations),	4	—	3	—
Gregory's Mixture,	28	—	—	—	Sugars (various),	6	1	—	—
Ham,	4	—	7	—	Syrup, golden, ...	3	—	—	—
Honey,	2	—	—	—	Table Jellies, ...	4	—	—	—
Ice-Cream... ..	—	—	1	—	Tapioca,	—	—	3	—
Lard,	18	—	28	—	Tartaric Acid, ...	28	—	2	—
„ Compound,	—	—	1	—	Tea,	—	—	1	—
Lemon Cheese (and					Tincture of Iodine,	6	1	—	—
Allied Preparations),	6	—	1	—	Treacle,	2	—	—	—
Lemonade Powder,	1	—	—	—	Vinegar,	4	—	3	—
Linseed, crushed,	7	—	1	—	Whisky,	91	4	59	7
Liquorice Powder,	6	—	—	—					
Margarine, ...	3	—	15	—					
					Totals, ...	3620	196	1376	94

THE SALE OF FOOD AND DRUGS ACTS.

DETAILS OF SAMPLES IN WHICH PROCEEDINGS WERE INITIATED
DURING YEAR 1925.

Number of Complaints	Nature of Sample and Alleged Offence	Number of Convictions	Amount of Fines imposed		Number Dismissed or found Not Proven	Number Deserted Simplifier	Number Withdrawn and Expenses Paid	Amount of Expenses Paid	
			£	s.				£	s.
17	Sweet Milk—Deficient in Milk-Fat, ...	15	83	0	2	—	—	0	0
5	Sweet Milk—Deficient in Milk solids other than Fat, ...	5	43	0	—	—	—	0	0
1	Sweet Milk—Deficient in Milk Fat and Milk solids other than Fat, ...	1	15	0	—	—	—	0	0
4	Butter—Contained Fat other than Milk-Fat, ...	4	25	0	—	—	—	0	0
2	Butter—Contained excess Water, ...	2	10	0	—	—	—	0	0
5	Margarine—Failing to label, ...	5	16	0	—	—	—	0	0
3	Margarine—Failing to use statutory wrapper, ...	3	6	0	—	—	—	0	0
5	Whisky—Contained excess Water, ...	4	9	0	—	1	—	0	0
1	Rum—Contained excess Water, ...	3	9	0	—	—	—	0	0
3	Black Currant Jam—Contained Apple Pulp, ...	—	0	0	—	3	—	0	0
2	Raspberry Jam—Contained Apple Pulp, ...	—	0	0	1	1	—	0	0
3	Custard—Contained no Egg substance, ...	—	0	0	—	—	3	6	6
1	Cascara Sagrada—Deficient in Alcohol, ...	1	3	0	—	—	—	0	0
1	Ground Almonds—Contained Ground Arachis Nuts, ...	1	2	0	—	—	—	0	0
1	Failing to have name and address of vendor on milk cart, ...	1	1	0	—	—	—	0	0
<u>56</u>		<u>45</u>	<u>222</u>	<u>0</u>	<u>3</u>	<u>5</u>	<u>3</u>	<u>6</u>	<u>6</u>

PART 2.

AIR PURIFICATION.—SMOKE ABATEMENT.

The solution of the smoke problem is mainly dependent on the following:—

- (1) Extended use of electricity for power purposes;
- (2) The use of mechanical stokers in steam boilers, burning coal at the rate of $2\frac{1}{2}$ cwts. per hour and over;
- (3a) The substitution of smokeless fuel in furnaces where mechanical stoking is not suitable, owing to the class of boiler or the lightness of the load; and
- (3b) The substitution of smokeless fuel for raw coal in household fires, in sectional water-heaters for central heating, and in steam waggon boilers.

The use of electricity has increased very greatly within the last decade, and many of the large industrial establishments in Glasgow have adopted that method of heat transmission, with the consequent elimination of the steam boilers formerly used for power production.

Mechanical stoking comes next to electrification as a means to smoke abatement, and considerable progress has been made along these lines, but care must be exercised in the choice of a stoker to avoid failure. Mechanical stokers of the coking class are those which give the greatest immunity from smoke production, and for steam boilers of the water-tube class there is nothing better than the chain grate stoker. For internal furnace boilers the under-feed and over-feed reciprocating firebar cokers are also very good, and leave little to be desired as regards smoke abatement, with moderately loaded boilers.

Under smokeless fuel is included gas and all solid fuel with less than 12 per cent. volatility.

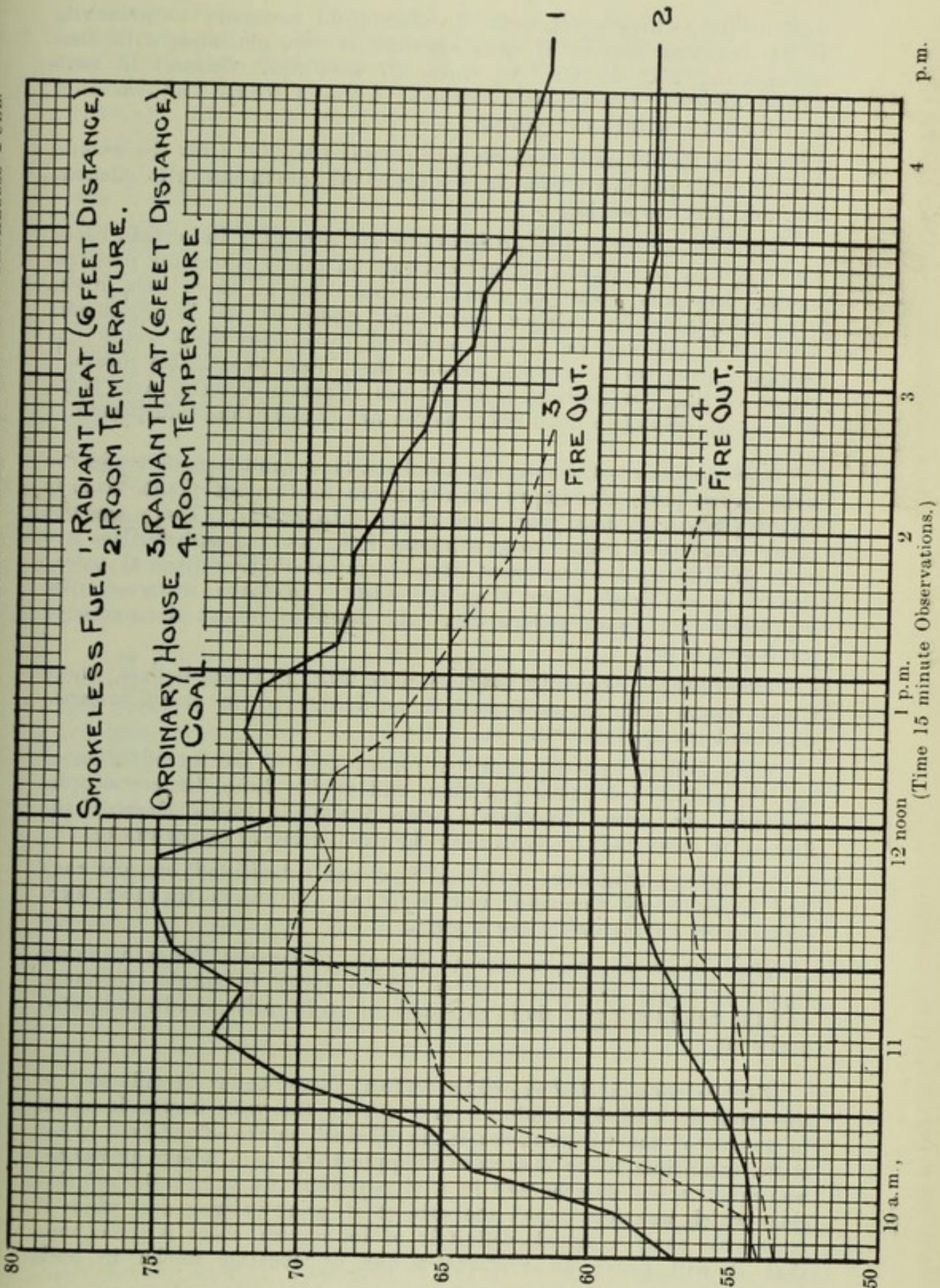
The year 1925 will stand out prominently as that in which the first practicable step was taken by the Corporation of Glasgow to produce a solid smokeless fuel suitable for domestic purposes, and it can be stated from tests made that the improved fuel, to which the name "Kincole" has been given, is a practicable substitute for raw coal in domestic grates. No difficulty need be experienced in kindling it with paper and dry wood, and here it may be mentioned that the use of highly impregnated hydro-carbon firelighters is largely responsible for the dull atmosphere with which our city is beset in the early mornings. The radiant heat effect of "Kincole" is greater than that of house coal, and weight for weight the former will outburn the latter, as shown by the results of tests referred to above, and carried out in the Sanitary Chambers some time ago. This is shown graphically on the chart on opposite page.

It is perhaps too early to say what reception the new fuel will meet with at the hands of domestic consumers of coal, but there is no valid reason why "Kincole" should not be substituted in all domestic fires, with the possible exception of the kitchen range when fitted with a hot-water boiler. Three things would result from its use in household fires. There would be an end to the domestic chimney on fire, and contingent on that there would be no need for the periodic sweeping of domestic vents. Most important of all, the atmosphere would be clarified of more than half of its suspended soot particles.

Domestic chimneys emit at least three-fifths of the smoke which passes into the atmosphere of the city, and because of the comparatively low temperature of the domestic fire, which distils but only partially consumes the tarry constituents of the coal used, the smoke escaping is of a more objectionable nature than that which comes from industrial furnaces.

Prosecutions.—Constant supervision is being maintained by the Smoke Inspectors over all chimneys other than household chimneys within the city. They made 29,221 observations, and served 455 intimations that smoke of unnecessary density had issued from the chimneys observed. 41 were new offenders, and warning notices were

GRAPH SHOWING RADIANT HEAT AND ROOM TEMPERATURE—BURNING ORDINARY COAL AND SMOKELESS FUEL.



sent to the owners concerned. It was found necessary to prosecute in 41 instances, and in 37 cases convictions were obtained, with fines aggregating £52 8s. 6d. Of these, 20 were first offences; 13 were second offences; 2 were third offences; 1 was a fourth; and another a fifth offence within five years.

For the first offences the average fine was 19s. 10d.; for the second, 30s. 5d.; for the third, 56s. 3d.; and for the fourth and fifth offences, 63s. and 80s. respectively.

While recognising that prosecutions are necessary in certain cases, we do not by any means depend entirely on prosecutions for progress made. In many instances sound advice, based on experience, meets with acceptance by furnace users, and many of the improvements made have followed on advice tendered; otherwise there would not be much progress to report, because the "best practicable means" clause of the 31st Section of the Police (Further Powers) Act, 1892, is in many respects a dead letter as the Act is meantime interpreted.

Improvements.—Considering the backward condition of trade for some years past, the improvements made to furnace plant towards smoke prevention last year were fairly satisfactory. There are not many overloaded steam boilers in use now, and as such boilers are most prolific smoke producers, it is essential that additional power should be obtained where they do exist. In three instances new supplementary steam boilers were laid down to relieve the necessity for forced firing.

Twenty-three mechanical stokers were fitted to steam boilers, where the furnaces had formerly been hand-fired, and in every instance improved results followed.

Three boilers were discarded in consequence of the introduction of electric motors for power purposes, and to five steam boilers supplementary air smoke preventers were installed, which enabled the firemen to meet their loads without the production of excess smoke.

In eighteen instances smokeless fuel was substituted for ordinary coal in as many furnaces, and in other nine cases furnaces were constructed for the use of town gas.

The remaining improvements include pneumatic forge hammers replacing steam hammers, the use of oil spray in special furnaces, and the heightening of short chimneys to avoid nuisances in congested positions.

Vertical Steam Boilers.—The vertical steam boiler is still well to the front as a smoke producer, and during the year it was involved in twelve of the prosecutions taken against smoke offenders. What seems meantime to be a successful application of a smoke preventer was made a few months ago in a city restaurant to a boiler of this class which was four times the subject of prosecutions; and while it is yet too early to speak definitely of its success, there is some hope that it will prove an effective means of abating smoke in such furnaces.

Steam Waggon.—The steam waggon still figures in the list of smoke prosecutions. Good work is being done by the police in passing on information regarding the issue of excessive smoke from these vehicles, and, in two out of the three convictions against steam waggon users, credit is due to them for the information given.

While it is admitted that there is, generally speaking, a better class of fuel being burnt in the boilers of steam waggons, and more care is being given to their management, enough smoke still issues from them to cause a nuisance in the streets. Until a lower volatile fuel than soft steam coal is used this nuisance will remain with us. There is no reason why low carbonisation coke should not be a suitable fuel for use in this type of boiler, and, given the will to earnestly try it, I am sanguine that it will succeed. The only doubtful point is that being bulkier it needs more bunker capacity to carry a day's burning than with coal, but, on the other hand, it is stated that the steam waggon was designed to burn good gas works' coke.

Tar Melters.—In two instances last year users of tar melters were convicted for second and third offences for issuing smoke in excessive quantities, and in each case the smoke was caused by the careless use of bituminous coal. Apart from the two firms involved, there is a general compliance with our request to use coke in these appliances. In the circular melter the practice of kindling the fires in the yards preparatory to bringing them on to the streets is still being adhered to.

Low Chimneys in Congested Areas.—Complaints of smoke from heating furnaces with low chimneys have been more numerous than in any previous year. This is not because there is more smoke issuing, but because people are becoming less tolerant of these chimneys in the vicinity of their dwellings. Generally speaking, remedies are found by the substitution of less smoky fuel, in the shape of anthracite or coke or a mixture of coke and coal. When users are left undisturbed they prefer to burn double nut coal.

Smoke Abatement Classes.—The Classes for Instruction of Steam Boiler Firemen and Others in the Principles of Coal Combustion and Furnace Management, held under the auspices of the Glasgow and West of Scotland Branch of the Smoke Abatement League of Great Britain, were continued during the session 1925-26. Two classes were carried on, at each of which twelve lectures were given. They met fortnightly in the City Chambers, on alternate weeks, to suit the men, many of whom work on the three-shift system.

Sixty-four men enrolled—51 in the ordinary class, and 13 in the advanced class—and the average attendance during the session was 87·1 per cent. in the former class, and 97·4 per cent. in the latter, while 37 men gave perfect attendance, and thereby qualified for full attendance certificates.

To the class examination, held at the close of the session, 23 men came forward to compete for the class prizes and to qualify for merit certificates, and of these only 2 failed to reach the 70 per cent. standard of marks required for the latter.

Each lecture given deals with a separate subject, so that by the end of the session the curriculum gone through is fairly extensive, and this fact helps to maintain the general interest. While the primary object of the classes is to impart information in methods of smoke prevention, a necessarily large amount of attention is given to furnace efficiency, so that the classes work out to the interest of the public and furnace users alike.

Soot Collecting Gauges.—The soot and dust fall from the atmosphere during 1925, as indicated by the nine gauges throughout the city, amounted to 271·61 tons per square mile, as against 282·60 tons for 1924. This year the average summer and winter deposit is practically equal, but there is a wide divergence between the deposits from the respective gauges. For instance, the gauges at Blythwood Square and Botanic Gardens give 10·38 and 10·52 tons per square kilometre per month respectively, while Ruchill Park gauge gives only 6·62 tons, and is less than either Queen's Park or Bellahouston, with 7·15 tons and 7·29 tons respectively. Further details are given in the accompanying table, which also gives the corresponding figures for the previous two years.

COLIN B. PARK,
Senior Smoke Inspector.

20th April, 1926.

AVERAGE MONTHLY DEPOSIT OF SOLIDS FROM THE ATMOSPHERE
IN METRIC TONS PER SQUARE KILOMETRE.

	1925	1924	1923
Alexandra Park,	8·41	7·67	8·77
Bellahouston Park,	7·29	8·05	9·48
Blythwood Square,	10·38	11·91	11·59
Botanic Gardens,	10·52	10·46	10·59
Queen's Park,	7·15	6·94	7·45
Richmond Park,	9·78	10·23	12·63
Ruchill Park,	6·82	7·28	8·11
Tollcross Park,	9·89	9·35	12·32
Victoria Park,	9·74	10·14	10·26
Average of City,	8·88	9·11	10·13

PART 3.

GENERAL SANITARY OPERATIONS.

The general sanitary operations carried out during the year are reported on by the Divisional Sanitary Inspector in each of the five districts into which the city is divided for administrative purposes. The following matters, however, are of general interest as applying to all or several of the divisions.

A review of the bakehouses in the city was commenced during the year, but as this is still continuing, it is held over till next year's report.

During the past four or five years complaints have been received regarding nuisances associated with ashpits in the area added to the city in 1912, especially in Partick area, and this matter is dealt with in the following report which was submitted to the Committee on Cleansing:—

ASHPITS IN AREAS ADDED TO THE CITY IN
NOVEMBER, 1912.

At the meeting of the Committee on Cleansing, of date 28th August last (Print No. 22, page 2144), it was remitted to us to report on the ashpit system in the areas of the City annexed under the Glasgow Boundaries Act, 1912.

Under Section 58 (1) of the Glasgow Building Regulations Act, 1900, a gradual transference of the ashpit system to the ashbin system has been effected throughout the city, as it existed before the Boundaries Act, until now only 3 per cent. of the original ashpits remain. This has been effected as the result of the powers conferred by this section, which enacts that the owners of any new or existing buildings may be required to remove existing ashpits and provide ashbins to the satisfaction of the Superintendent of Cleansing.

As regards the areas added in 1912, the Corporation have no such power, because Section 33 of the Boundaries Act, 1912, specifically debars the Corporation from applying the Building Regulations Act to existing buildings unless these are being added to or altered. Since annexation very little substitution of ashbins for ashpits has taken place. The ashpit system is still extensively used, and the Superintendent of Cleansing has no power to alter it where he regards the change from one system to the other to be desirable. It may be noted that a similar clause has been inserted in the Boundaries Bill now before Parliament. An inspection of the areas added to the city in 1912 has been made, with the following results:—

	Number of Tenements with Ashpits	Number of Tenements with Ashbins	Number of Ashpits
Partick,	1,175	784	992
Pollokshaws,	172	257	141
Govan,	1,700	100	1,414
	<u>3,047</u>	<u>1,141</u>	<u>2,547</u>

Of the foregoing there are in Partick district 197 ashpits serving 297 tenements; in Pollokshaws, 21 ashpits serving 38 tenements; and in Govan, 72 ashpits serving 79 tenements, all of which are in a very bad condition, and ought to be immediately reconstructed. In every case it might be desirable to convert the ashpits into covered receptacles with a concrete floor level with the court, and fitted with a flagstone in front, measuring, say, 2 feet 9 inches high.

An analysis of the foregoing table shows that in about 60 per cent. of the tenements in Partick, 33 per cent. of those in Pollokshaws, and the great majority of those in Govan the ashpit system is in operation. In the greater number of the self-contained houses in the three areas the ashbin system is in operation. For instance, in Pollokshaws there are 726 self-contained properties, 23 of which have 12 ashpits between them, while the housing schemes at Drumoyne, Greenhead, and Shieldhall are on the ashbin system also.

The only powers available for dealing with these ashpits are contained in Section 16 (2) of the Public Health (Scotland) Act, 1897, which enacts that any ashpit so foul, or in such a state or so situated as to be a nuisance or dangerous to health, is a statutory nuisance. This simply amounts to supervision and interference when a nuisance occurs.

On the other hand, control over the conservancy system under the Glasgow Building Regulations Act, 1900, Section 58, besides empowering the substitution of ashbins for ashpits, regulates the situation of ashpits or ashbins in relation to dwelling-houses, ensures the provision of water-tight covers for ashbin shelters, and empowers the Master of Works to deal with such ashpits as are dilapidated, or in a state of disrepair, wholly or partially underground, or unsuitably situated, by causing them to be repaired, removed, or rebuilt as the case may be.

As a general principle, it may be stated that the ashpit is more insanitary than the ashbin, which is admirably suited to most localities. Experience has shown that there are exceptions to this rule, an ashpit of modern construction being sometimes preferable to a bad ashbin system. There is no doubt, however, that in the majority of instances ashbins, with regular removal, are much more desirable than ashpits. It would be a distinct advantage if the same power existed to convert judiciously the one system for the other in areas added in 1912, where this has not already been effected, as at present obtains in the rest of the city under the Glasgow Building Regulations Act.

A. S. M. MACGREGOR,

Medical Officer of Health.

W. GREIG,

Superintendent of Cleansing.

9th November, 1925.

Classification of Nuisances.—The following statement shows the classification of nuisances, &c., adopted this year for the analysis of work of the Inspectors given in Appendix, Table XXIII :—

CLASSIFICATION OF NUISANCES, ETC.

No.	1924,	No.	1925.
1	Consisting of Accumulations of Garbage on Roofs, Courts, &c., or in Empty Houses or Cellars, or open wastage.	12	Accumulations of Garbage or Rubbish.
2	Apartment, Lobby, or W.C. with insufficient light or ventilation.	1	Apartments, Lobbies or W.C.'s, with insufficient light or ventilation or otherwise defective in construction.
3	Animals or Poultry kept, so as to cause a nuisance.	11	Animals or Poultry kept, so as to be a nuisance.
4	Bad Smells, or Diphtheria or Enteric Fever in Dwelling.	4	Offensive Smells from Drains or other reasonable grounds—Smoke Test.
5	Dwellings without Water Supply.	19	Water Supply Pipes defective—Tenants without Water.
6	Dead Animal Matter under Floor.	13	Smells from Decaying Animal Matter or other cause. See 3 below.
7	Defective Window in Dwelling.	18	Water Storage, Cisterns dirty, uncovered or unventilated.
8	Domestic Water Supply from Cistern in W.C. ; or Cistern in Attic, foul and uncovered.	5	Drains Conductors, Soil-pipes or Rhones, choked or defective.
9	Drains, Soil-pipes, Branches, &c., choked, defective or out of repair.	10	Walls of Closets, Staircases, Lobbies, W.C.'s and external Walls of Houses filthy (lime-washing).
10	External Walls of Dwellings, Stairs, Lobbies, or Closets filthy.	7	Dirty Houses and Bedding.
11	Internal Walls or Floors of House or W.C., or Lobbies, or Stairs filthy.	8	Dirty Closets, Stairs, &c. (daily, and bi-weekly cleansing). See 3 below.
12	House Damp, or otherwise rendered unfit for habitation.	6	Sanitary Fittings choked or defective.
13	Sink, or W.C., or Trap, choked or broken or out of repair.	20	Bakehouses—dirty.
14	Nuisances in Bakehouses.	21	—other nuisances. See 3 below.
15	Roofs, Walls, or Ceilings of Dwellings broken or out of repair.		Embodied in No. 5.
16	Rhones, Pipes, or Gutters broken or out of repair.	2	Defective Chimneys causing nuisance.
17	Smoky Vents, or Back Smoke, causing a nuisance.	16	Sink accommodation and Water Supply required.
18	Sink accommodation defective, or new required.	17	Water-Closet accommodation required. Embodied in No. 1.
19	Water Closet accommodation required.	25	Workshops—inadequate or defective W.C. or Sink accommodation.
20	Water-Closet defective in construction.	22	Workshops—dirty.
21	Water-Closet accommodation in Workshops defective.	23	—overcrowded.
22	Workshops filthy.	24	—defective in light or ventilation. Reports to Water Engineer.
23	Workshops overcrowded.		—Master of Works. Prosecutions—Sheriff Court.
24	Workshops defective in ventilation or light. Waste of Water reported to the Engineer and remedied. Complaints to Master of Works remedied. Reported to Procurator-Fiscal for prosecution before the Sheriff. Summoned before the Police Magistrates.		—Police Court.
		3	Disrepair or Dampness in Dwellinghouses.
		9	Houses overcrowded.
		14	Stagnant Water.
		15	Premises infested with Rats or other Vermin.
		26	Workshops—other nuisances.
		27	Piggeries—dirty.
		28	—other nuisances. Reports to Gas Manager. —Superintendent of Cleansing.

CENTRAL DIVISION.

During the year 159,763 visits of inspection were made for the discovery of nuisances, and 14,324 nuisances were dealt with, of which 13,912 had been remedied at the close of the year. On 26 occasions it was found necessary to take Court proceedings, convictions following in all instances, penalties ranging from 2s. 6d. to two guineas being imposed.

The nature of the nuisances shows little variation from year to year, but an endeavour is made to get at the cause of recurring nuisances in order to secure permanent improvement. As an illustration, reference might be made to the efforts directed towards a reduction in the number of nuisances arising through the throwing of refuse from windows. The issue of a leaflet on this subject has undoubtedly had a good effect, but constant watchfulness seems to be necessary. Choked drains, water-closets, soil-pipes, and waste water-pipes continue to form the bulk of the general nuisances. This condition of affairs is due, as repeatedly mentioned, to the multiplicity of traps in drains and to the existence of sanitary conveniences common to the use of two or more tenants, in many cases open to the public. In this division there are 1,031 water-closets serving two tenants; 1,459 serving three tenants; 1,291 serving four tenants; and 408 serving five or more tenants. It is nearly forty years since the old privies and privy middens were abolished in Glasgow, and water-closets substituted; and to-day the demand is for the abolition of common semi-public water-closets, and the provision of proper conveniences—water-closet, bath, and wash-hand basin—in each house. When this is accomplished the number of nuisances will be greatly reduced. There are still 94 privies and earth-closets, but these are almost all in outlying districts added to the city within recent years, and in properties almost ripe for demolition.

There are also 345 houses in the division without an inside water supply, but these are mostly houses represented as unfit for human habitation, or approaching that category. On the other hand, out of 48,000 dwelling-houses, 19,000 have already been provided with baths.

House-to-House Visitation.—18,469 houses were visited by the female Inspectors during the year, of which 415 were found dirty. Some attention has been devoted during the year to the problem of the dirty house.

The practice in former years when a house was found to be dirty was to proceed under Section 40 of the Public Health Act, 1897—a very unsatisfactory section, which has now been amended by Section 46 of the 1919 Housing Act. Formerly, if limewashing were required, the owner was the person called upon to do the work; in the case of general cleansing or cleansing of clothing, the occupier was held to be responsible. Under the Glasgow (Police) Order Confirmation Act, 1904, the onus of whitewashing, painting, and papering was transferred from the owner to the occupier. Under this Act the Inspector can only have the work carried out after a conviction has been obtained. In many cases, however, the occupants are

old and infirm, living alone, and unable to keep themselves or their houses clean, and may even fail to realise their condition. In such cases it would be an advantage if the Inspector had authority to carry out the work without first taking Court proceedings. Where two or more families live in one house cleansing facilities are restricted by difficulties with regard to water supplies and washing.

Where the mother of the family is dead and there is no one to take her place, there is often great difficulty in getting the house and clothing cleaned. An evening visit to secure an interview with the householder is sometimes made, and this may bring about a temporary improvement.

To a large extent the problem of the dirty house is a housing question. Where the houses are overcrowded, dark, and structurally defective—defective chimney, causing back smoke; damp walls; defective roofs; broken plaster; defective woodwork and worn floors; the absence of larder, press, and wardrobe accommodation, &c.—it is difficult to keep a clean house, even in the case of cleanly people, and with slothful, dirty people it is almost hopeless.

This point of view is demonstrated by our observations at the small rehousing scheme at Yorkhill. There are 84 houses at Yorkhill, occupied by people formerly living in Clyde Street and Piccadilly Street, Anderston. The predominant impression made on a visitor is that the tenants appreciate very much their improved housing conditions. These houses were first occupied over a year ago, and only in three cases could the house be said to be "dirty"; the occupants of these would be classed as slothful and careless. In seven of the houses the conditions were classed as "fair"; and these, in time, may either become "dirty" or "clean." On the tenants being advised of these facts and urged to live up to their improved conditions, they expressed a determination to do better in future.

A circumstance which tends to cleanliness is the absence of superfluous furniture. In the old houses, where there was overcrowding, congestion, want of light, lack of convenience, and accumulations of old furniture, it was almost impossible to keep a clean house.

At Yorkhill all this is changed, and, on the whole, the people are living up to their new conditions. With our experience at Yorkhill one or two suggestions regarding the rehousing of slum dwellers might not be out of place.

The provision of a floor covering would be advisable. It would protect the floor, and reduce the difficulty of cleansing.

Small rehousing schemes are preferable to large schemes, the tenants being more easily handled, advised, and raised to a higher level in their appreciation of cleanliness.

Rat Week.—In connection with Rat Week the Inspectors in each ward were asked to compile lists of (a) rat infested properties and (b) suspected properties, and a circular was sent to each occupier in the properties. All places suspected to be infested with rats were visited,

and advice offered, which in many cases was adopted. Occupiers, owners, and tradesmen were advised regarding means of rat-proofing, &c.

From reports received it seems that the observance of Rat Week varied. In many cases special action was taken—increased trapping, laying of poison, use of mongoose, employment of professional rat catchers, and destruction of rat runs—and resulted in the destruction of rats to a considerable extent. In numerous instances rat-proofing of buildings had been carried out subsequent to the Inspector's visits. One Inspector reports that occupiers, becoming aware of the fact that under the Rats and Mice Order they are held responsible for works necessary to rid the property of vermin, deny the existence of rats, and even endeavour to conceal evidence of vermin.

Regulated Houses.—On the Register there are 32 common lodging-houses, including 16 sailors' boarding-houses. 305 visits were paid to those during the day, and 104 during the night. On 10 occasions irregularities were discovered and intimated to the keepers. During the first week of April and the first week of October a letter was sent to each keeper, reminding him of the provisions of the statute requiring the limewashing of all common lodging-houses twice yearly, and the work was duly carried out.

There are 42 houses let-in-lodgings and 487 farmed-out houses on the Register. 2,012 visits were made during the day and 1,579 during the night. Strict supervision was thus kept over this class of house, and in no case was it found necessary to take Court proceedings.

In addition to common lodging-houses, farmed-out houses, and houses let-in-lodgings, there are 3,479 ticketed houses to be visited during the night, and in these the evils resulting from the shortage of houses are seen at their worst. 13,335 night visits were made during the year. 5,908 visits were made to one-apartment ticketed houses, and 825 cases of overcrowding were discovered; in 44 instances the overcrowding was caused by lodgers. The evils due to the keeping of lodgers in a single-apartment house cannot be described. In one case so great was the overcrowding that there were only 169 cubic feet of air space per person, instead of the legal minimum of 400 feet. The occupants of this house were man and wife, two boys (17 and 15 years), and four girls (from 11 years to 5 months), and they were all found sleeping in one bed.

In another case the cubic space was only 133 cubic feet per head. In this single apartment there were found a man, two boys (16 and 10 years), and four girls (of 14, 12, 8, and 6 years).

5,627 visits were made to two-apartment houses. 588 cases of overcrowding were found, and in 74 instances the overcrowding was caused by lodgers.

Housing.—The progress made with the building of houses is very slow. In this division, of the 702 houses included in the 1923 Slum Clearance Scheme, alternative accommodation has only so far been provided for the occupiers of 161, leaving 541 still to be provided for.

In the Slum Clearance Scheme now being dealt with an attempt has been made to deal comprehensively with the back lands in the division. When the report on back land was made in 1922 there were 798 occupied houses. In the 1923 Clearance Scheme 73 of these were dealt with; the Dean of Guild ordered the demolition of 12, as these were in a dangerous condition, and there have been included in the present scheme 161 from the most congested areas. This means that, even after the present scheme is completed, there will still be 552 back land houses, all of which, because of congestion, want of light and air, or worn out state of the structure, might be considered as unfit for human habitation.

Apart from these, there are in the Central Division well over 100 houses which might be described as illegally occupied, and could be dealt with in a summary manner and closed at once without the formality and expense of a slum clearance scheme, if there were houses into which the occupants could remove. Moreover, there are in existence, and situated in basements, many odd, dark, and damp houses which ought to be dealt with. Some of these basement houses were at one time attached to ground flat houses, and are totally unsuited for use as living and sleeping apartments. Many of these houses are worse in location and structure than some of those included in the slum clearances.

It is suggested and urged that, in future, a percentage of houses erected as alternative accommodation in connection with slum clearance schemes should be earmarked to replace houses which can be closed without the formality of a clearance scheme.

Structural defects are still dealt with under the Public Health Act. 1,336 cases of disrepair were thus dealt with during the year, but 3,133 visits of inspection were made under the Housing Acts, and 419 inspections in connection with our part of the slum clearance scheme. 386 houses were found in a defective condition internally, and 48 external defects were dealt with. In 11 cases the owners failed to carry out the necessary repairs, and the work was done under the authority of the committee.

Drainage.—Many large buildings in the commercial and business parts of the town have been erected or remodelled. A special feature has been the large number of extensive hair-dressing saloons. These are difficult premises to arrange in a satisfactory way, because of the number of fitments necessary. In many cases the tenants have been forced to become proprietors of their premises, and the work is rendered more difficult by the multiplicity of owners using the one drainage system. In this class of work the Inspectors report that they experience some difficulty when enforcing the bye-laws, as tradesmen have experience of lax methods of drainage construction permitted by the Board of Health in housing scheme work. The housing schemes at Yorkhill, Scotstoun, Kelvindale, Balshagray, and Knightswood have also required great attention from the Inspectors.

There are still a considerable number of the old "pan" water-closets in existence, and it is suggested that powers should now be

obtained to get rid of this obnoxious fitting. Attention is also directed to the fact that a whole range of tenements, erected somewhere about ten or fifteen years ago, have basin and bath discharging into one branch waste pipe without an anti-syphon pipe which leads to syphonage. With such a method of construction syphonage does not take place when the pipes are new and clean, but after use for a few years this action is set up, and when the bath is used it syphons the trap under the basin and leaves a free passage for drain air to enter the house. In future years this will create a good deal of trouble. Attention has been directed to the matter.

Rag Flock Act.—Twenty samples of rag flock were obtained during the year, and were submitted to the Analyst. In all cases they were certified to conform to standard.

Inspection of Factories and Workshops.—There are 1,726 workshops under supervision in this division, and 8,511 visits of inspection were made. In 450 instances irregularities of one kind and another—defects in light and ventilation, defects in water-closet accommodation, defects in structure, and want of cleanliness—were discovered, and at the close of the year 418 of these defects had been remedied.

In addition to workshops, there are 100 bakehouses, and 252 visits were made to these during the year. 94 notices were issued requiring cleansing, &c., to be carried out.

WILLIAM ROY,
Divisional Sanitary Inspector.

April, 1926.

NORTHERN DIVISION.

General Nuisances.—15,249 nuisances, full details of which are included in Appendix XXIII, were dealt with during the year. 1,691 complaints, which were received by letter or 'phone or from callers, were investigated, and suitable action taken where necessary. The following classification of these complaints indicates some of the directions in which the services of the department are in request:—

Cleansing of closes and stairs,	688 *
Sanitary fittings choked or defective,	373
Disrepair or dampness in dwelling-houses,	157
Drains, soil-pipes, &c., choked or defective,	110
Defective chimneys,	64
Houses overcrowded,	53
Premises infested by rats or other vermin,	50
Animals kept so as to be a nuisance,	46
Supply pipes defective and tenants without water,	30
Limewashing of staircases, &c., required,	23
Accumulations of refuse,	20
Offensive smells,	19
Miscellaneous,	12

Drainage.—The drainage and sanitary fittings of 159 tenement properties, with regard to which there were reasonable grounds for believing the drains, &c., to be defective, were smoke-tested, and in the case of 147 of these the owners were called upon to carry out alterations and repairs. Additional tests were necessary in 185 cases to ensure that the required alterations had been satisfactorily made. The drainage connected with new buildings was also supervised and tested.

Overcrowding.—The scarcity of houses is still the most serious problem with which we are confronted, and many families continue to live under grossly overcrowded conditions. The demolitions carried through in connection with the Cowcaddens, &c., Slum Clearance Scheme reduced the number of ticketed houses by over 300, and the number on the Register is now 5,963.

During the year 13,979 night inspections of these houses were made, and of those visited 14·5 per cent. were found to be overcrowded. This figure approximates closely with the percentages recorded in immediately preceding years, and indicates that there has been no decrease in overcrowding.

The information contained in the following tables has been abstracted from reports on 830 ticketed houses, which were surveyed in connection with slum clearance schemes. These houses are of the lowest class, and are all situated in slum areas.

TABLE I.

Three Persons per Room is, in this Table, taken as the Index of Overcrowding.

	1-Apartment	2 Apartments	Total
Number of Houses, ...	531	299	830
Number overcrowded, ...	129	52	181
Percentage of Houses overcrowded, ...	24·3	17·4	21·8
Number of Persons in excess, ...	369	145	514

TABLE II.

The Cubic Space Standard of 400 feet for an Adult and 200 feet for a Child, is here applied.

	1-Apartment		2-Apartments		Total				
Number of Houses, ...	531		299		830				
Number overcrowded, ...	110		61		171				
Percentage of Houses overcrowded, ...	20·7		20·4		20·6				
Number of Adults and Children in excess,	Adults	Ch.	Total	Adults	Ch.	Total	Adults	Ch.	Total
	87	172	259	66	94	160	153	266	419

Measured by either standard, roughly one-fifth of the houses are overcrowded. The "three persons per room" standard is the more

severe of the two, and gives a total excess of 514 persons as against 419 if cubic space is taken as the measure. It is of interest to observe that in the case of the two-apartment houses the cubic space standard brings out the greater number of overcrowded houses, and this is accounted for by the fact that many of these houses are so small that they may be overcrowded in a "cubic space" sense, although occupied by fewer than six persons.

Housing.—The operations carried through during the year in connection with the 1923 Slum Clearance Scheme resulted in the transference of 54 tenants to Hamiltonhill and Campbell Street. 302 houses were demolished, and there remained at the end of the year 126 houses and families still to be dealt with. In connection with the Parliamentary Road Reconstruction Scheme, 39 houses were closed; 33 of the tenants were rehoused in the Campbell Street Housing Scheme, and the occupants of the other six houses, consisting in each case of one or two persons only, were transferred with the consent of the factors concerned to houses which were overcrowded, the overcrowded families being rehoused in the Campbell Street Scheme.

A small house in connection with a farm was the subject of a Closing Order made in terms of Section 8 of the Housing Act of 1925, and notices were issued to owners regarding 862 houses, which were found on inspection to be in a poor state of repair.

REHOUSING AT HAMILTONHILL.

Sanitary Condition of the Houses.—347 houses provided at this site for tenants dispossessed through the operations of the Cowcaddens, &c., Slum Clearance Scheme, 1923, were in occupation by the end of the year.

Much has been said with regard to the slum dweller and his tendency to make a slum wherever he goes, and as Hamiltonhill affords a fair opportunity of ascertaining the degree of accuracy contained in the statements made, special detailed surveys of the whole of the houses were made with that end in view.

Three inspections were made during the year by different Inspectors working on an agreed-on standard, which, after repeated trial, it was found possible to establish. Preserving the same standard throughout, points were allocated to each house in accordance with the table given below.

The houses included in the smallest of the three groups shown, numbering 31 in all, or 9 per cent. of the whole, are those that, in our opinion, were unsatisfactory. Some of them, in addition to being dirty and ill-kept, being bug-infested. The occupiers of these houses have failed so far to rise to the level of their surroundings, and suggests that, if a probationary period could be arranged for tenants of this class before they are entrusted with new houses, it would serve a useful purpose.

Included in the other two groups are what may be described as first-class and second-class houses, and in the case of these the average

number of points allotted was 77. Above that line are 151 clean, well-kept houses—many of them models of cleanliness; while the remaining 165, although passably good, fall short of being considered first class. It is to be observed that around the points where the different groups meet there will be, from time to time, an upward or a downward swing from one group to another.

The table gives the average points allotted in each of the three groups referred to, and the data may be taken as representing the actual conditions as nearly as is possible by means of figures:—

REPORT CARD RE SANITARY CONDITION OF HOUSE.

Situated at.....
 Occupied by.....
 Size of House.....
 Number of Occupants.....

Condition of House, &c.	Points attainable	Average Points allotted.		
		Group 1 (151 Houses).	Group 2 (165 Houses).	Group (31 Houses).
Ventilation, Purity of Atmosphere, ...	20	17	15	13
Cleanliness of—				
Bedding, ...	15	12	11	8
Walls and Ceilings, ...	12	10	8	7
Floors, ...	10	8	7	6
Windows, ...	10	8	7	6
Bathroom Fittings, ...	10	8	7	5
Scullery Fittings, ...	10	8	7	5
Freedom from Avoidable Disrepair (Internal), ...	8	8	7	7
Cleanliness of Close or Common Stair, ...	5	3	3	3
Total Points, ...	100	82	72	60

Our observations show that, while it is true that a certain number of slum dwellers do create slum conditions although given every facility for keeping their houses in good order, it is also true that a much larger number appreciate their improved surroundings and maintain conditions that would be a credit to any locality. The frequent visitations made by our Inspectors no doubt had the effect of keeping the sanitary state of the houses at a higher level than otherwise might have been the case.

Overcrowding.—A disquieting feature in connection with the occupancy of the houses is the introduction of lodger families. In 32 of the two-apartment houses, one of the apartments was occupied by a lodger family. In 14 of these cases the lodgers were relations of the tenants, and in 20 instances the lodger families were the cause of overcrowding.

In the worst case of overcrowding one of the apartments was occupied by a family of four, while the other contained a lodger family numbering six persons—10 persons in all. In this case there was no relationship between the families.

As the keeping of lodger families reduces the houses to the level of single apartments and defeats one of the objects of the scheme, the practice is one that should be discouraged by every possible means.

Tents and Vans.—Vans connected with travelling shows, &c., were kept under supervision, and regulated according to the bye-laws. They remained for limited periods only, and were kept clean and in good order.

A new practice in connection with the occupancy of vans and similar structures has arisen in the St. Rollox district. Here the owner of a small plot of ground has collected a number of wooden huts or vans (10 in all), which he has furnished to some extent, and which he lets out at rents varying from 5s. to 8s. 6d. per week. These structures, which, for the most part, are wooden huts set on small wheels, and each with a floor area averaging about 60 square feet, have been occupied for three or four years, and may therefore now be regarded as permanent. They possess none of the conveniences of ordinary dwelling-houses, and it is something of an anomaly that it should be possible for anyone to establish what is in effect a small housing scheme, with practically no restrictions and without conforming to any of the regulations which must be observed in the case of new houses. Meantime they are regulated by the Bye-laws relating to Tents, Vans, &c., which are obviously, however, intended to apply to vans and similar structures which are moved from place to place at short intervals. The occupants are people who, from one cause or another, have removed from houses in various parts of the city.

Bakehouses.—A special survey of bakehouses was made with reference to the adequacy or otherwise of the dressing-room accommodation provided; the facilities for washing, &c.

Restaurant Kitchens, &c.—Included in the Register of Workplaces are 29 restaurant kitchens and 109 shop premises used for the preparation and sale of fish suppers. These businesses are in some cases carried on in premises that have been chosen without regard to their suitability for the purpose, and it is desirable that these and similar businesses concerned with the preparation of food should not be commenced until approved by the Local Authority as regards the suitability of the premises and equipment.

The storing and selling of groceries, confectionery, fruit, &c., in premises that are partly shops and partly dwelling-houses, or in sleeping apartments that are also used as shops (although the latter are not numerous), should also be subject to regulation. In this connection reference may also be made to the storing of fruit, &c., in sleeping apartments, instances of which are discovered from time

to time. In a recent case the Night Inspectors found in an overcrowded single-apartment house a basket of grapes and a barrel of apples stored in the apartment. There are meantime no direct means of dealing with this insanitary practice.

Sanitary Conveniences.—On the instruction of the Board of Health a statement was prepared showing the number of common water-closets in use, and particulars regarding the number serving 2, 3, 4, and 5 or more tenants respectively, together with information relative to dry closets, ashpits, &c. It was found that in the case of over 17,000 houses the water-closet accommodation is in the ratio of one water-closet to every three houses. 8,840 families share the accommodation in the ratio of one water-closet to every four, while in over 500 instances the accommodation is shared between five or more families.

The properties in which the water-closet accommodation is most grossly inadequate are for the most part situated in slum areas, and the installation of water-closets on a modern standard at the instigation of this department would probably adversely affect future action which it might be advisable to take under the Housing Acts in respect of these tenements.

There are in the division 30 dry closets used in common by occupiers of dwelling-houses. These are in properties where there is either drainage difficulty or contemplated action for the closing of the houses. In connection with one slum property, regarding which a Closing Order was made several years ago, but because of house scarcity, has not been made operative, there are three pan privies.

Connected with business premises, such as factories, stable yards, &c., there are 109 dry closets. Four pan privies were abolished during the year and water-closets substituted.

231 single-apartment houses, 67 of two apartments, and 4 of three or more apartments are without a water supply and sink accommodation inside the houses, the supply being obtained from taps on the stair landings, &c.

Rats and Mice Act.—Over 2,000 circulars containing information regarding methods to be employed for the destruction of rats were issued to property owners, and to occupiers of premises which from the nature of the businesses carried on are specially liable to be rat-infested. In premises where the stock consists of foodstuffs the occupiers are alive to the necessity for preventing the inroads of rats, and continuous effort is made to exterminate them. In several fish shops and butchers' shops rat-proofing of the premises has been carried out, and improvement is reported in the case of premises known to be infested, and in which trapping and poisoning were the methods employed.

“Rat Week” was held during the first week in April, and while it may have stimulated public interest in rat extermination, there is no evidence that special operations on a really large scale were undertaken during the period.

Regulated Houses.—Regular inspections of common lodging-houses, farmed-out houses, and houses let-in-lodgings were made, and no serious infringement of the bye-laws was discovered, the houses generally being well conducted.

Cleansing of Closets, &c.—1,739 notices requiring the limewashing of common staircases, lobbies, &c., were issued to owners of tenement property, and 1,690 cards for regulating the bi-weekly washing and the daily sweeping of closets, stairs, &c., by tenants were served.

Inspection of Children in Schools.—452 visits to schools were made, and of the 7,289 children submitted by the teachers for inspection, 3,695 were found in a more or less verminous condition, while 419 were dirty but not verminous. Notices or warnings issued to the parents and guardians had attention.

House-to-House Visitation.—Systematic house-to-house visitation was carried through in areas which, for various reasons, require special supervision. With regard to the householder who habitually keeps the house and furnishings in a dirty condition, and who is more or less a menace to his or her neighbours, a stiffening of statutory power is desirable. Court proceedings cannot at present be taken against tenants of this class until the preliminary of serving a notice has been gone through, and as the receipt of a notice usually induces an immediate, if temporary, improvement, it is difficult to prosecute offenders. The power to prosecute without serving a notice in cases where a preliminary warning has been given, and where the house, bedding, &c., are through carelessness or laziness persistently kept in a dirty condition, would afford a more effective means of dealing with this type of householder.

J. H. PATTERSON,

Divisional Sanitary Inspector.

April, 1926.

EASTERN DIVISION.

General Nuisances.—During the year 224,461 inspections were made for the discovery and removal of nuisances. The nuisances recorded numbered 15,568, being a slight reduction from last year's figure. Details of these nuisances, which were of the usual miscellaneous order, will be found in Appendix.

It was found necessary to take Court proceedings in two cases only, and in both instances the defaulters, on being summoned, had the nuisances complained of removed.

Special mention has to be made of a serious nuisance which was caused by very offensive smells arising from a large area of foul, stagnant water in a disused clay pit, situated on the north side of London Road in proximity to the Corporation's new housing scheme

at Newbank. Towards the end of 1924 numerous complaints were received concerning this nuisance. On investigation it was found that after the clay had been dug out and the pumping of the water had stopped, the pit had gradually filled up with water. The tenants had then opened the pit as a coup for refuse, and the materials deposited had apparently contaminated the water. Proceedings were eventually instituted against the tenants in the Sheriff Court, when, without prejudice, they agreed to pump out the water within a reasonable time, and to cover up the surface of the pit as it became exposed. At considerable expense they installed a motor pump with a drain connecting to the sewer in London Road, but after ten days' continuous pumping it was found that very little impression was being made on the volume of the water, and that further pumping might have the effect of causing the surrounding ground to subside. It was finally agreed to open the pit as a *free coup*. This was done, and the nuisance has now been removed.

Limewashing of Walls of Closets and Staircases.—As a result of several surveys of the division, during which 2,943 visits were made, it was found that in 1,292 properties the walls of the closes and staircases required limewashing. In one instance Court proceedings had to be taken.

Sweeping and Washing of Closets, Staircases, and Water-Closets.—A great deal of the Inspectors' time and attention is still required for the enforcement of the bye-laws relating to the sweeping and washing of closes, staircases, and water-closets. In connection with this work 8,229 special visits were made by the Inspectors; 1,631 rotation cards were served on tenants; and 2,943 tenants were verbally warned. In three instances fines, amounting to £1 5s., were imposed.

Piggeries.—These have been regularly inspected, no infringements of the bye-laws being noted. There are eight piggeries in the division licensed to accommodate 582 pigs.

Farmed-out Houses.—There are 201 farmed-out houses in the division, being 7 more than last year. They are all located in the Calton and Mile-End Wards. The average weekly rent charged for one and two-apartment houses is 10s. and 15s. respectively. The houses are closely supervised, and are all kept in a satisfactory condition. 2,431 day inspections and 632 night inspections were made during the year.

Common Lodging-Houses.—The number of common lodging-houses on the Register remains the same as last year, viz., 5 for females and 6 for males. In only one instance was it found necessary to intimate an irregularity to a keeper, and no overcrowding was observed in any of the houses. 609 inspections were made during the day and 67 during the night.

Factory and Workshop Act, 1901.—4,246 inspections of workshops were made during the year. 59 workshops were measured and registered. 32 workshops were found to be dirty; 6 had inadequate or defective water-closet accommodation; and in 9 workshops various other nuisances were discovered. In all these instances notices were served on the parties responsible, and were complied with.

Bakehouses.—There are 38 retail and 41 factory bakehouses on the Register, 5 of which are underground. 777 bakehouse inspections were made during the year. In 13 instances the limewashing of the walls and ceilings was found to be overdue, and in 11 other cases nuisances of a varied nature were found. These consisted of leaking roofs, broken glass of windows, plaster on walls scaling and blistered, dirty utensils, floors, &c. Notices were served, and in all instances the nuisances complained of were removed.

Outworkers.—These were regularly visited, and the home conditions were found to be satisfactory in all cases. This class of work seems to be falling off, fewer outworkers being employed. This may be accounted for by the general trade depression.

Repression of Flies.—The usual disinfections of stable dung-pits were carried out during the summer months with good results. 5,643 dung-pits were sprayed.

Drain Testing.—869 smoke tests were applied during the year. 262 of these were applied for the satisfaction of the Dean of Guild Court to new properties, or where alterations or additions to old properties had been made. The smoke test was also applied for the first time to 293 old tenements, and 248, or 84 per cent., were found defective. 286 smoke tests were applied in connection with the Corporation housing schemes at Sandyhills, Belvidere, and Springfield Road. In these schemes the one trap system has been adopted and the subsidiary traps eliminated, giving an uninterrupted flow of the sewage in the drain, and thereby reducing the risk of chokage. In some instances, however, the rain and sink conductors, which also act as ventilators to the drain, terminate at or near the windows of the living rooms and bedrooms, making it possible for drain air to enter these rooms. There is also the further danger of syphonage taking place in the traps under the baths and wash-hand basins, as both fittings are connected to one branch which is unventilated.

Offensive Trades.—Three additional licences were applied for during the year. Applications were made (1) to establish the businesses of bone boiling and manure manufacturing in the Shettleston and Tolleross Ward, in premises for which a licence for tallow melting had already been granted; and (2) to establish the business of hide and skin factor in the Mile-End Ward. In both cases the licences were granted.

There are now 42 offensive trades being carried on in the division, being 3 more than last year. Few complaints were received regarding any of them, and 1,094 inspections of offensive trades were made during the year.

Rats and Mice (Destruction) Act, 1919.—In anticipation of "Rat Week," 1,145 leaflets were sent to occupiers whose premises were known to be rat-infested, or to which rats were likely to be attracted by reason of the nature of the business carried on. These circulars enumerated the best methods of exterminating the vermin, and especially emphasised the importance of making all buildings rat-proof.

It is quite impossible, however, for the occupier to make his premises rat-proof without the permission and assistance of the owner, and unless he can secure this he can do little or nothing to exclude the vermin. This is especially the case where there is a large number of occupancies within one set of premises. The Act requires amending in this respect if it is to be of any real value. During "Rat Week" 181 rats were killed in stables, 17 in shops, and 412 in other premises—a total of 610 rats.

Rat extermination in the division is not, however, confined to one week in the year, but is carried on all the year round. During 1925 the owners of 33 properties, which were known to be rat-infested, were communicated with, and took steps to have the vermin exterminated, or at least to have their numbers greatly reduced.

Female Inspectors' Work.—The whole of the Nurse Inspectors' time is taken up (1) in visiting schools for the inspection of dirty and verminous children, and (2) in house-to-house inspections to ensure that a reasonable standard of cleanliness is being maintained.

Details of their work will be found in Appendix.

It may be observed that in some cases where houses are occupied by old, infirm, or mentally defective persons considerable trouble arises in getting the house, bed, and body clothing cleansed.

Rag Flock Act.—During the year 36 samples of rag flock were obtained. 2 of these samples failed to conform to the standard, and proceedings were accordingly instituted against the firms concerned. These firms, however, pleaded that they had a warranty from the wholesalers. The latter, on being communicated with, accepted full responsibility, and, when proceeded against, pled guilty, and were fined £1 ls. in each case.

Rent and Mortgage Interest (Restrictions) Acts, 1920 to 1923.—During the year 21 certificates were applied for under the Act. Certificates were granted for 13 houses as being "not in all respects reasonably fit for human habitation"; 4 houses were certified as being "not in a reasonable state of repair," and in 4 instances certificates were refused. After certificates had been granted, inquiry was made as to what steps had been taken by the persons receiving them to secure the benefits conferred by the Act. It was found that action had been taken in only 3 cases, and that in these instances the rents had been reduced to the pre-war standard. It should be mentioned, however, that in other 2 instances the houses were demolished and accommodation for the tenants found elsewhere.

Repairs in Houses.—During the year 314 notices were issued under the Town Planning Acts in connection with houses found to be "not in a reasonable state of repair," and in all cases the necessary work was carried out. In addition, 1,339 notices regarding repairs to houses were sent out under the Public Health Act, 1897, and were all complied with. 5,948 inspections were made in connection with the slum clearance scheme.

The Slum Clearance Scheme, 1923.—The operation of the Cowcaddens, &c., Improvement Scheme, 1923, as applied to the Marlborough Street Area in the Eastern Division, was continued throughout the year, during which 69 houses, containing 70 families, were closed and the occupants displaced. 49 of these families accepted houses provided for them by the Corporation at the Newbank Rehousing Scheme, while the remaining 21 families preferred to find accommodation elsewhere. There remained, therefore, at the end of the year one family to be provided for and one house to be closed.

During the year 96 houses were demolished, leaving 31 still awaiting demolition.

Of the 31 houses referred to, 6 are occupied temporarily by tenants who have been displaced from dangerous buildings in the division by order of the Dean of Guild Court. The sites of the demolished properties have been levelled and left vacant meantime.

Newbank Rehousing Scheme.—This rehousing scheme consists of 296 houses of two apartments, and 62 houses of three apartments. At 31st December, 1925, all the houses were occupied except three. During the year 4 tenants were ejected for non-payment of rent, or other causes, while 13 left voluntarily, their probable reason for removing being that they wanted accommodation at a smaller rental. 167 of the houses were occupied by tenants from the Eastern Division. Of these 167 houses, 95 were occupied by tenants who had been displaced in connection with the Marlborough Street Slum Clearance Scheme, 1923, while 191 houses were occupied by tenants from other divisions of the city. Of these 191 houses, 149 were occupied by tenants who had been displaced from the slum clearance schemes in other divisions.

It will be observed that in the 355 occupied houses at Newbank, at 31st December, 1925, 111 families were rehoused who were outwith any of the slum clearance schemes, having been accommodated at Newbank for other reasons, such as gross overcrowding, uninhabitability, or disrepair of their houses, &c., while in many instances the tenants in "represented" houses preferred to exchange with others who had no claim to a house in the rehousing scheme, but who were only too anxious to have the opportunity of removing to new houses and more healthful surroundings.

Reporting regarding the result of periodical inspections of the houses at Newbank, the Nurse Inspector observes:—

"The condition of these houses with regard to cleanliness may be approximately summarised as follows:—

Scrupulously clean,	30 per cent.
Fairly clean,	62 "
Dirty,	8 "

There is an all round attempt to keep the houses clean, and a noticeable absence of that characteristic smell found in the slums.

In many cases the furniture is very scanty, there being only a bed and table, but, with few exceptions, the floors are well scrubbed.

Ten houses have lodgers, but three of these instances are where a mother is keeping her married daughter, or vice versa.

There is no evidence of any wilful destruction either of wood-work or plaster.

At present the gardens are being delved, one party at least trying for a prize in 'Ryder's £1,000 Seed Competition.' This man grows successfully tomatoes, celery, and cucumbers.

In some cases the people are complaining of the rents being rather high, but there is an excuse for this, as almost 60 per cent. of the tenants are receiving parish relief or the 'dole.'

Parents seem pleased with the change to Newbank, especially for the children's sake, as the latter now romp and play in fresh air and sunlight."

Removal of an Old Parkhead Landmark.—Many an old Parkhead native will regret the removal of the old buildings which were situated on the south side of Great Eastern Road, and were known locally as "Shinty Ha'."

In all 30 houses were demolished, 22 being of one apartment, 6 of two apartments, 1 of six apartments, and 1 of seven apartments, with a population of 114, of whom 83 were adults and 31 were children. 19 of the tenants accepted houses in the Newbank Rehousing Scheme, while the remaining 11 preferred to go elsewhere, 4 of these going to properties belonging to the Corporation. The sites of the old properties have now been cleared and levelled, and the street has been widened.

Water-Closets used in Common.—A circular, dated 1st September, 1925, was received from the Scottish Board of Health, requesting that the following information should be included in the Annual Report for 1925, viz. :—

- (1) The number of common water-closets in use in the city, showing separately the number serving 2, 3, 4, and 5 or more tenants respectively ;
- (2) The number of houses without water supply and sink inside the house ;
- (3) The number of (a) dry-closets, (b) privy middens, and (c) ashpits, showing for each of these the number serving 2, 3, 4, and 5 or more tenants respectively.

A survey of the division was made, with the following results :—

A total number of 10,395 water-closets were found to be used in common by two or more tenants ; of this number, 1,427 served two tenants each, 6,390 served three tenants each, 2,220 served four tenants each, and 358 served five or more tenants each. (There are no dry-closets or privy middens used *in common* in connection with dwelling-houses.)

Water Supply.—510 dwelling-houses were found to be without water supply inside the house; of these houses, 307 were of one apartment, 180 of two apartments, and 23 of three apartments. 48 of these houses are included in the 1926 Slum Clearance Scheme, while the remainder will be dealt with in a similar manner at an early date, or as soon as houses can be provided for the tenants who would be displaced.

Ashpits.—Generally speaking, the ashpits in the division have been replaced by the bin system, there being only 185 ashpits serving tenants in common, 1 ashpit serving three tenants, 1 serving four tenants, and 183 serving five or more.

Privies.—There are 33 privies and 1 privy midden in the division. In 29 instances the privies are used in connection with (1) factories, (2) business premises situated at a considerable distance from dwelling-houses, and (3) in some cases the sites are outwith the prescribed statutory distance from the nearest public sewer.

Only 4 dwelling-houses have privy accommodation, and none of the privies are used *in common*. The houses are all so situated that there is a difficulty in getting a sewer connection.

During the period from 1st June, 1920, to 31st December, 1925, 7 privies were abolished and 16 water-closets substituted, 10 of the latter being in business premises and 6 in connection with tenement property.

During the year 1925, three privies were abolished and replaced by 3 water-closets, and water supply and sink accommodation were introduced into one house.

JOHN DONALDSON,
Divisional Sanitary Inspector.

23rd April, 1926.

SOUTH-EASTERN DIVISION.

Nuisances.—The nuisances dealt with numbered 10,969, and in one instance only was it necessary to institute Court proceedings. In this case offensive water oozing through the surface of a lane was discovered to be coming from an old field drain, and, upon further investigation, it was found that the drains of a dwelling-house some distance off were connected to the field drain. The owner of the dwelling-house declined to admit liability, or to take any action to remove the nuisance until the issue of a summons, when new drains with proper sewer connection were provided.

Complaints of dampness and of smells being experienced in the ground flat houses of a tenement led to the discovery of serious flooding in the basements of this and adjoining tenements. An

examination and testing of all water pipes, drains, and sewers in the vicinity failed to reveal any leakage that would account for the flooding. The result of an analysis of a sample of the water indicated slight sewage pollution, but this would appear to have been caused by absorption of organic matter from the soil through which the water passed. While investigations were proceeding an old well was discovered underneath a building which was being demolished some considerable distance away, and a sample of water taken from this source and submitted to analysis gave a somewhat similar result. The ground over a wide area in the vicinity would appear to be water-logged, and probably the movement of this subsoil water had been diverted by some unknown cause towards the flooded basements. The water from both sources has now been drained off to the sewer.

A long standing source of nuisance arising from the pollution of Jenny's Burn is now being dealt with, a new sewer being in course of construction in Polmadie Road, to which will be connected the existing sewers at Jessie Street and Calder Street which at present discharge directly into the burn. Steps have been taken to prevent the further pollution of the burn by the slag deposited in its vicinity.

Another outstanding cause of complaint—the flooding during wet weather of a large area of vacant ground at Albert Road and Walton Street, where, owing to the hard surface, the collected water did not readily soak away, and in time became polluted—has now been remedied, the ground having been drained and built upon.

A special survey has been made to ascertain the number of water-closets, dry-closets, privy middens, and ashpits used in common by two or more tenants, and also the number of houses into which sinks and water supplies have not been introduced.

There are 6,000 water-closets, or 17 per cent. of the total, used in common by two or more tenants, while 29,266 water-closets, or 83 per cent., have been provided for the separate use of one tenant.

Within the past two years 3 dry-closets attached to dwelling-houses have been removed as being no longer required, the tenants having been accommodated elsewhere to permit of the demolition of their houses and the extension of adjoining business premises. Two other dry-closets in connection with dwelling-houses have been converted to the water carriage system. There are 26 dry-closets still in existence, 7 of these being connected with small houses or cottages with gardens on the outskirts of the city, while the others are also in open situations where no proper sewer connection is available. A sewer extension at present being carried out in this area will permit of these dry-closets being dealt with shortly. In addition to the foregoing, 18 dry-closets connected with business premises have been removed and water-closets provided. There is only 1 privy midden within the division, and negotiations which are at present proceeding will result in its removal. Of the 174 ashpits which are still in existence, 145 are within the old Burgh of Pollokshaws. 201 houses are without sink and water supply inside. The tenants of these are served by 51 sinks, 42 of which are situated within the tenement

and only 9 outside. The following table shows the number of these conveniences serving 1, 2, 3, 4, and 5 or more tenants:—

Nature of Conveniences	Number serving				Five or more Tenants	Total Conveniences used in common	Number serving one Tenant only	Grand Total
	Two Tenants	Three Tenants	Four Tenants					
Water-closets, ...	1,065	3,210	1,345	380	6,000	29,266	35,266	
Dry-closets, ...	9	4	4	2	19	7	26	
Privy Middens, ...	—	—	1	—	1	—	1	
Ashpits, ...	6	2	7	158	173	1	174	
Sinks, ...	15	10	10	16	51	47,831	47,882	

Housing.—Further progress has been made during the year with the closing and demolition of properties included in the Glasgow (Cowcaddens, &c.) Slum Clearance Scheme, 1923. Of the houses closed but not demolished during the year 1924, 71 have now been demolished, leaving 7 still to be dealt with; while, in addition, 6 of the houses which were unoccupied at the commencement of the scheme have also now been demolished, leaving only one of these still standing. This latter house is in a tenement still partly occupied. A further 49 houses have been closed and demolished, and 12 have also been closed preparatory to demolition. Of the 284 occupied houses included in the scheme only 39 now remain occupied. 33 of the 100 families in occupation at the beginning of the year have been transferred to new housing schemes, and 28 have found accommodation outwith such schemes. Altogether 179 families have been transferred to new housing schemes since the commencement.

The Polmadie Rehousing Scheme is situated in this division, and with a view to ascertaining whether the tenants transferred there were appreciating and endeavouring to make the most of their improved surroundings, particular observations have from time to time been made. The houses number 102—86 of two apartments and 16 of three apartments. Of these, 41 are invariably found clean; 54 may be classed as "fair"; and the remaining 7 are often found to be dirty. Frequent visits are paid to all the houses, and an endeavour is being made to impress upon the tenants in the two latter categories the necessity for regular daily cleaning.

An objectionable feature which would appear to be steadily increasing is the keeping of lodgers by many of the tenants. Apart from a few instances where relatives, such as an aged father or mother, or a married son with his wife and family, have been accommodated, it has been found that in 25 of the two-apartment houses and in 5 of the three-apartment houses lodgers are being kept. These, too, are not single lodgers, but whole families. This practically reduces the houses to single apartments so far as the families occupying them are concerned, and thus defeats the principle that no family should be housed in a single apartment. The total rental of the two-apartment houses is only about 6s. 6d. per week, and the tenant charges the lodger family as much as 5s., and in some cases 6s. per week. In the three-apartment houses, the rentals of which are about 8s. 1d. per

week, the sums charged the lodger families vary from 4s. to as much as 10s. per week. In those houses in which lodger families are kept without overcrowding the problem is a difficult one to deal with. It is a condition of let that no lodgers are to be kept, but the enforcing of this would mean the ejection of the tenants and their return to their old housing conditions.

Notices were issued with reference to 1,474 defects found in 869 houses. 1,331 of these, affecting 821 houses, were remedied by the owners. In one case the owners having failed to carry out the necessary repairs, the work was done at the instance of the Local Authority. In the remaining cases the work is in course of being carried out.

A tenement of 20 houses at High Carteraigs, Pollokshaws, which was condemned as dangerous by the Master of Works, was demolished, 16 of the tenants being housed in temporary accommodation in an old mansion house, the others finding accommodation among friends.

Rents Restriction Acts.—9 applications from tenants for certificates that their houses were not in a reasonable state of repair were received; 4 of these were granted and 4 refused. In the remaining case the applicant removed before a certificate could be issued.

Drainage.—A considerable amount of building activity has been going on throughout the year, entailing a good deal of drainage inspection and testing. Most of this work was in connection with new houses of the villa and bungalow type, many of which have been, and are being, erected in the Newlands and Cathcart areas. Large extensions to the Victoria Infirmary and Samaritan Hospital are also being carried out, while the drainage and sanitary fittings of two schools have been renewed.

Altogether the smoke test was applied on 646 occasions.

Rats and Mice (Destruction) Act, 1919.—As in former years a continuous campaign against rats has been maintained, and in connection with 44 properties, which were found to be infested, the owners or factors, on being communicated with, took steps to have the vermin exterminated and the "runs" closed up. During "Rat Week," with a view to stimulating efforts to keep down the rat menace, 1,860 occupiers of stables, warehouses, and premises where foodstuffs are stored were supplied with a special card suitable for hanging up, giving instructions on rat destruction and the making of buildings rat-proof, while, in addition, 605 pamphlets were issued to householders and others.

Workshops.—96 workshops were measured and registered during the year, and there are now 682 workshops on the Register. To these 2,922 visits were paid, and the conditions generally were found to be satisfactory. In only 20 instances was it necessary to call for lime-washing and cleansing; while in 15, nuisances of a minor nature were dealt with.

Bakehouses.—575 visits were paid to bakehouses, of which there are now 106—47 being factories and 59 workshops—and 44 were dealt with for want of cleanliness and 26 with reference to other nuisances.

Outworkers.—The bi-annual returns of outworkers were duly received, and these show that there are now 134 outworkers in the division, 56 being contractors. 265 visits were paid, and the premises of all were found clean and free from irregularities.

Cleansing of Closets, Stairs, &c.—Ten prosecutions against tenants who failed to take their regular turn of cleansing were instituted in the Police Court. In 9 cases convictions were obtained, 8 being fined in sums amounting in all to £3 4s. 6d., and 1 being admonished. In the remaining case the charge was found not proven.

Dirty Houses, Bedding, &c.—A householder who persistently collects and stores rubbish in his house, which he allows to get into a filthy condition, an offence for which he has repeatedly been convicted, was again brought before the Court, and fined £1.

DUNCAN THOMSON,
Divisional Sanitary Inspector.

8th April, 1926.

SOUTH-WESTERN DIVISION.

Housing—New Houses.—There were erected within the division 1 house of three apartments in Ward 30 (Govan); 6 wooden houses of three apartments each at No. 1 Dock, Shieldhall, Ward 31 (Fairfield); 2 houses of three apartments each and 7 villas in Ward 32 (Pollokshields); and, in addition, the Corporation built at the Shieldhall and Langlands Housing Schemes (Fairfield) 152 and 30 houses respectively of three, four and five apartments; and at the Whitefield Rehousing Scheme in Ward 29 (Kinning Park) 36 houses of two and three apartments under the Slum Clearance Scheme.

The concrete block houses, referred to in last year's report as having been unable to withstand the rainstorms from the south-west experienced at the end of 1924 and the beginning of 1925, have been made waterproof.

Slum Clearance—Transfer and Removal of Families and Demolition of Houses.—In December there removed to Whitefield and Newbank (Parkhead) Rehousing Schemes 22 families from the back lands in Centre, Commerce, Crookston, and Nelson Streets (Ward 28—Kingston), and during the year 7 other families either left voluntarily or were evicted for non-payment of rent from these back lands. The total number of families displaced during the year was 29, as compared

with 11 in 1924. Of the 194 covered by the Slum Clearance Scheme of 1923, 40 have removed during the past two years (that is, since the scheme was authorised), and of these 18 have been rehoused in Whitefield and 12 in Newbank Rehousing Schemes.

No houses were demolished during the year; one back land of 8 houses was taken down and the site cleared in the previous year.

Slum Clearance—Rehousing (within this Division).—In addition to the 18 families from Kingston Ward, referred to in the preceding paragraph, 18 families from Langlands Terrace (Fairfield Ward) (which had not been included in the Slum Clearance Scheme, and which was demolished to make room for new houses at Langlands Housing Scheme) were provided with alternative accommodation at Whitefield. The total number of families in the Rehousing Scheme at the end of the year was 36. The houses are of two and three apartments, and are let at inclusive rents of 28s. and 35s. a month.

Slum Clearance—Projected Scheme.—Additional surveys were made, and, after careful revision, 184 houses, mostly in back lands, have been submitted for inclusion in the next Slum Clearance Scheme. They are situated in Kingston Ward. These are some of the worst houses in the division, and have been selected on the principle of the clearing away of the worst of the bad houses first. This by no means exhausts the houses whose standard of habitability is so low as to warrant their inclusion in a demolition list.

Unauthorised Houses.—The tenant of ground in Govan sub-let parcels of his land, during the past few years, for the erection thereon of a number of wooden structures, ostensibly as workshops or stables, but which ultimately came to be used as dwelling-houses. Being without a convenient water supply, drainage, sanitary conveniences, and refuse receptacles, and there being the probability of further similar conversions, and the place in consequence becoming a menace to the community, the tenant of the ground was called upon to put a stop to the nuisance, with the result that the families, with two exceptions, have removed to other quarters. The aggregation of more or less broken-down shanties, their unauthorised conversion into dwelling-houses, the utter disregard of the inmates to simple rules of cleanliness, and the lack of water and sanitary conveniences rendered proceedings against them necessary.

Obstructive Building.—A two-storey derelict bakehouse in a back court in a street-block was purchased and demolished by the owners of an adjacent tenement, with the express purpose of improving the lighting of some of their houses.

Repair of Houses.—4,425 visits were made under the Housing Acts, and 373 notices were issued regarding want of repair. Where the owners failed to do the necessary work, the repairs were carried out at their expense by the Master of Works.

Rent Restriction Acts.—7 applications for certificates were lodged by tenants, of which 5 were granted, and 2 reports that the repairs had been satisfactorily carried out were issued to owners. The experience here is that most of the applications are made by tenants who have been sued for arrears of rent.

Overcrowding.—The sub-letting of either apartment, though usually the room, of room-and-kitchen houses is fairly common in some localities, and serves as an additional source of income. The size of the family of the tenant sub-letting, it would seem, scarcely enters into consideration, and that of the sub-tenant is as rarely considered. This necessarily gives rise to much overcrowding, and it raises acutely the question as to whether all such houses should be registered as houses occupied by members of more than one family. Under normal housing conditions this, of course, is the usual way of dealing with it, but as things are, apart from seeing that a reasonable standard of cleanliness is maintained (which is attempted at present), the suppression of such overcrowding as exists is not at the moment practicable. In addition, there is that large body of people, deserving of much consideration, who have either a number of young children or children reaching adolescence, whose house-room has now become quite inadequate, and who, through the continued shortage of houses, find themselves without hope of improvement.

Water Supply.—The Water Department laid an additional water main to augment the supply to a number of houses in a Corporation Housing Scheme where there had been an insufficiency during the daytime.

Drainage.—House drainage is satisfactory. On very few occasions was it found necessary to call for the reconstruction of drainage systems.

The relaxation permitted in the construction of certain new houses creates difficulty in applying the drainage bye-laws. The relaxations under the Housing Act with respect to house drainage raises the question of the need for uniform application of the bye-laws. Sufficient time has now elapsed to enable some conclusion to be arrived at as to whether or not the modifications permitted are sound in principle. The bye-laws and the modifications allowed by Act of Parliament should be brought into line.

The sewers in some of the streets in a Corporation Housing Scheme having become surcharged during exceptionally heavy rainfall, and probably in part due to the resultant high level of the river Cart, an additional sewer was laid to prevent future flooding of the streets.

Nuisances.—The total number of nuisances recorded was 13,619, of which 4,166 occurred in Ward 28 (Kingston); 3,580 in Ward 29 (Kinning Park); 3,676 in Ward 30 (Govan); 1,423 in Ward 31 (Fairfield); and 774 in Ward 32 (Pollokshields). The nuisances were of the usual varied kind found in urban communities, and are set out in detail in the Appendix.

A large rubber waterproofing factory in a street-block is so close to the dwelling-houses that no back court is available for the use of the tenants, whose household refuse consequently is placed in ashbins stowed in a shelter in the back close. Recent extensive additions made at the factory complied with the law relating to free space in front of dwelling-house windows, and yet masked the windows of the back

houses, which serves as a reminder for the need for the amendment of the law in this respect. In the course of extending the factory exhaust or outer shafts placed in the newly erected walls nearest to the dwelling-houses, through which the vapours generated in the factory, and the warm air of some of the workrooms were discharged practically under the dwelling-house windows. The owners, on having their attention drawn to the material annoyance and discomfort suffered by the tenants from the fumes, at once undertook to remedy the complaint, and have placed contracts for the installation of powerful extraction fans and the erection of exhaust ducts by which the odours and warm air will be discharged into the external atmosphere at a level considerably higher than that of the top flat houses.

At a sewage pumping station an improvement was effected in the method of dealing with its sludge. During the spell of dry warm weather last summer complaint was made of offensive smells from a sewage purification plant just beyond the city boundary. The County Authority on being communicated with carried out some slight alterations. This complaint formed the subject of correspondence between the Board of Health, the County Council, and the Corporation, and, although the County Council submitted analysis showing the purity of the effluent, the smells persisted until the advent of cooler weather.

The pumping station and the sewage works, above referred to, will be ultimately absorbed in the new outfall drainage scheme, which the Corporation have undertaken to form in terms of the recent Boundaries Act.

Scavenging—Ashpits in Govan.—There are 1,460 ashpits serving about 1,700 tenements in the former burgh of Govan (Ward 30 and parts of Wards 29 and 31 of the existing city), and a report on these was submitted with a view to powers being sought to repeal the section in the Boundaries Act, 1912, exempting existing buildings in Govan from the provisions of the Building Regulation Act, 1900, and Acts amending the same or bye-laws made thereunder, which include power to require owners of any new or existing buildings to remove existing ashpits and provide portable ashbins to the satisfaction of the Superintendent of Cleansing.

When bins are introduced into Govan daily service of emptying at tenements is recommended. To abolish modern ashpits at tenements and introduce ashbins, which will be emptied twice a week only, is a doubtful advantage, and the experience of the ashbin system in Kingston Ward (throughout which the bin system is in operation, and which as regards population is comparable with Govan) is that in certain localities it is by no means a success, partly due to (*a*) the structure and situation of the ashbin shelters and the number and condition of the ashbins, (*b*) careless tenants, and (*c*) the twice-a-week system of removal. The ashbin system is admirably suited to most localities, but its shortcomings are readily apparent in certain classes of tenement property, and this should be borne in mind when any general extension of the bin system is contemplated.

It should be clearly understood that this is not to be read as an attempt to bolster up the tenement ashpit, because as between the ashbin and ashpit, under average conditions, there can be no choice, but in view of what happens every day in many localities it would be culpable to suggest that a series of ashbins without covers is to be preferred to a properly constructed ashpit.

Survey of Sanitary Conveniences, &c.—A survey was begun in the last quarter of the year, but the only figures available for inclusion in this report are those applicable to Ward 30 (Govan). This ward has been resurveyed, and the records show that it contains 681 tenements, comprising 7,406 houses, 494 shops, and 39 other premises; and 249 houses (other than tenement houses), consisting of self-contained, semi-detached, and terrace houses, and caretakers' and janitors' houses.

Water-Closets.—Of the 8,188 houses, &c., 3,553 have water-closets within the premises, 133 have one water-closet each outside the premises, 262 water-closets serve two tenants each, 680 three tenants each, 394 four tenants each, and 92 serve five or more tenants each. Water-closets serving one tenant each therefore number 3,686, and the number common to two or more tenants is 1,428.

Dry-Closets.—The dry-closets number 3, and are situated in buildings remote from tenements. During the year a private house on the conservancy system was converted to the water-carriage system.

Privy Middens.—Up till the early nineties of last century in this ward, like other industrial districts, there were a number of tenements at which the conveniences were combined privies and ashpits. The privies have long since been abolished.

Ashpits.—658 tenements are served by 544 ashpits, and there are 39 ashpits at the self-contained houses. At 23 tenements, comprising 215 houses and shops, and 191 self-contained, &c., houses, ashbin accommodation is provided. The ashpits at the tenements serve from half-a-dozen to thirty or more tenants, some being common to two or more tenements. As a rule tenement ashpits are emptied once a week. The introduction of ashbins into what was the Burgh of Govan (of which Ward 30 herein reported on formed a part) is, as above referred to, engaging the attention of the Corporation.

Water and Sinks.—Houses without water supply and sink inside the houses number 14. The owners of 10 of the houses have been (in 1926) called upon to introduce a water supply and fit up sinks inside the houses. The other 4 houses are in two back lands, which are uninhabitable, and are noted for inclusion in a future slum clearance scheme.

Back Lands.—The back lands number 5, and consist of 16 houses, of which 8 are of one apartment, 6 of two, 1 of three, and 1 of four apartments.

The following tables show the particulars set forth in the foregoing paragraphs, and, in addition, the number of tenement houses with baths, the number of back lands, &c. :—

WARD XXX—(GOVAN.)

Number of tenements,	681
Number of houses, etc., in tenements (houses 7,406, shops 494, other premises 39),	7,939
Number of houses other than in tenements (includes self-contained, semi-detached, and terrace houses, and caretakers' and janitors' houses),	249
Total number of houses, etc.,	<u>8,188</u>

(a)—Table showing the number of water-closets, dry-closets, privy middens and ashpits, and ashbins in use, and the number used in common by two or more tenants.

Conveniences serving—	Water-Closets	Dry-Closets	Privy Middens	Ashpits
1 tenant,	3,686	2	—	33
2 tenants,	262	1	—	6
3 ,,	680	—	—	—
4 ,,	394	—	—	—
5 ,, or more,	92	—	—	544
Total,	5,114	3	—	583
Conveniences common to 2 or more tenants,	1,428	1	—	550
		With Ashbins	With Ashpits	
Tenement houses, etc.,		215	7,724	
Self-contained, etc., houses,		191	45	
Houses,		<u>406</u>	<u>7,769</u>	8,175
Add 13 self-contained, etc., houses without ashbins or ashpits,				<u>13</u>
				<u>8,188</u>

(b)—Table showing the number of houses without water supply and sink inside the houses.

Houses of 1-apartment,	7
Houses of 2-apartments,	7
Total houses,	<u>14</u>

(c)—Number of Back Lands and the number and size of houses therein.

Back lands,	5
Houses of 1-apartment,	8
Houses of 2-apartments,	8
Total houses in Back lands, ...	<u>16</u>
Houses in Back lands unfit for human habitation,	16

(d) Number of houses in tenement properties with baths.

Houses of 2-apartments,	128
Houses of 3-apartments and upwards,	879
Total houses in tenements with baths, ...	<u>1,007</u>

(e)—Number of "scheduled" houses (that is houses included in the 13,195 within the City, reported by the Medical Officer of Health as being unfit for human habitation), 20

(f)—Number of houses included in Slum Clearance Schemes, 0

Factories and Workshops.—Factory bakehouses, workshops, and outworkers' premises have been regularly visited, and the action taken in connection therewith is noted in the Appendix.

A perennial source of complaint is the failure to clean bakehouse floors thoroughly. In the most recently erected factory bakehouse the floors are washed out with warm water and soda and thoroughly dried every afternoon after the baking operations have finished.

Workers' Welfare Schemes.—The testing of the sanitary fittings of the clubhouse and other buildings of the Workers' Welfare Scheme, inaugurated by one of the shipbuilding firms, was carried out to the satisfaction of the department.

Schools.—In a hall, used as a temporary school or annexe, in which 160 schoolboys are taught in the daytime, and which is used in the evenings as a club for men, the air was found to be foul and smelling strongly of stale tobacco smoke in the mornings immediately before the children are admitted. The hall was otherwise dirty and neglected. The Education Authority, whose attention was drawn to this objectionable state of affairs, are making arrangements to lease other premises for the accommodation of these school children.

During the summer vacation one of the schools was converted into a children's holiday home, under the auspices of the Education Authority. The children, who were well housed, and were tenderly cared for by the matron and staff, evidently enjoyed to the full the changed conditions under which they lived temporarily, and their outings to the country were much appreciated. This department kept

a nominal oversight on the premises, which were scrupulously clean and tidy. The holiday home, as conducted in this school, was a great success.

The drainage and sanitary fittings of a number of schools were reconstructed.

General.—There is no change to report in connection with common lodging-houses, farmed-out houses, houses let in lodgings, and ticketed houses.

Under the Police Act, 8 notices were issued on house factors regarding insufficiency of water-closet accommodation, 1 as to the want of water supply and a sink inside a house, and 1,289 with respect to closes and staircases in need of limewashing. Proceedings were instituted in the Police Court against a house factor before a notice calling for additional water-closet accommodation was complied with, and on three instances, where the same factor failed to carry out the specified limewashing operations, it was necessary to prosecute him in the Police Court before the work was done in full.

The bye-laws for the washing and sweeping of closes and stairs are regularly applied, and 7 offenders were proceeded against in the Police Court and convicted and fined. Appropriate action was taken with regard to cisterns from which the domestic water supply is drawn.

Routine inspection is carried out, including the adoption of measures to prevent the spread of infectious disease, house-to-house visitation, and examination by the lady inspectors of school children submitted by schoolmasters for inspection, inspection of theatres and other places of public amusement, particularly with regard to cleanliness and the provision and maintenance of sanitary conveniences (in this connection the Highland and Agricultural Society's Show, "The Cossacks," and a carnival in Govan received special attention), the spraying of stable dungpits, inspection of cemeteries, the enforcement of the Rag Flock and Rat and Mice Destruction Acts, none of which calls for comment. A detailed statement of the work done is appended to the report.

JAMES REID,

Divisional Sanitary Inspector.

15th March, 1926.

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APPENDIX.

TABLE I.—GLASGOW, 1925.—ESTIMATED POPULATION IN EACH MUNICIPAL WARD, ACREAGE, AND PERSONS PER ACRE.

MUNICIPAL WARDS.	POPULATION.				Acreage.	Persons per acre (including Institutions and Shipping.)
	Without Institutions and Shipping.	Institutions.	Shipping.	Total.		
1. Shettleston and Tollcross, - -	34,035	114	...	34,149	887	38
2. Parkhead, - -	37,319	1,321	...	38,640	883	44
3. Dalmarnock, - -	41,968	38	...	42,006	288	146
4. Calton, - -	36,453	2,351	...	38,804	333	117
5. Mile-end, - -	25,942	109	...	26,051	191	136
6. Whitevale, - -	24,770	533	...	25,303	176	144
7. Dennistoun, - -	22,791	278	...	23,069	280	82
8. Provan, - -	35,023	245	...	35,268	973	36
9. Cowlairs, - -	24,549	1,897	...	26,446	456	58
10. Springburn, - -	17,845	1,916	...	19,761	760	26
11. Townhead, - -	28,732	1,521	...	30,253	175	173
12. Exchange, - -	17,093	2,851	...	19,944	289	69
13. Blythswood, - -	14,032	2,429	75	16,536	242	68
14. Anderston, - -	29,027	1,093	1,851	31,971	422	76
15. Sandyford, - -	24,167	362	...	24,529	152	161
16. Park, - -	22,401	241	...	22,642	272	83
17. Cowcaddens, - -	40,826	750	9	41,585	488	85
18. Woodside, - -	36,928	949	...	37,877	170	223
19. Ruchill, - -	26,826	1,166	2	27,994	767	36
20. North Kelvin, - -	23,927	30	...	23,957	146	164
21. Maryhill, - -	25,090	1,640	...	26,730	915	29
22. Kelvinside, - -	21,565	857	...	22,422	1,127	20
23. Partick (East), - -	30,548	1,110	...	31,658	268	118
24. " (West), - -	27,245	82	152	27,479	357	77
25. Whiteinch, - -	29,106	730	3	29,839	1,266	24
26. Hutchesontown, - -	41,697	15	...	41,712	378	110
27. Gorbals, - -	51,716	770	...	52,486	252	208
28. Kingston, - -	34,423	273	172	34,868	285	122
29. Kinning Park, - -	37,392	525	491	38,408	379	101
30. Govan, - -	37,729	355	13	38,097	529	72
31. Fairfield, - -	31,836	1,928	14	33,778	1,205	28
32. Pollokshields, - -	25,597	453	...	26,050	1,673	16
33. Camphill, - -	20,737	72	...	20,809	366	57
34. Pollokshaws, - -	19,128	...	...	19,128	343	56
35. Govanhill, - -	31,868	164	...	32,032	290	110
36. Langside, - -	18,515	647	...	19,162	430	45
37. Cathcart, - -	16,398	...	...	16,398	770	21
CITY, - -	1,065,244	29,815	2,782	1,097,841	19,183	57

TABLE II.—GLASGOW, 1925.—INHABITED AND UNOCCUPIED HOUSES
IN EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES.*				Empty Houses.
	1925.	1924.	Decrease.	Increase.	
1. Shettleston and Tollcross, -	7,024	7,025	1	...	3
2. Parkhead, - - -	8,113	7,891	...	222	6
3. Dalrnarnock, - - -	9,134	9,137	3	...	7
4. Calton, - - -	8,366	8,381	15	...	37
5. Mile-end, - - -	5,706	5,818	112	...	20
6. Whitevale, - - -	5,565	5,563	...	2	3
7. Dennistoun, - - -	5,690	5,695	5	...	6
8. Provan, - - -	7,691	7,698	7	...	13
9. Cowlairs, - - -	5,653	5,654	1	...	1
10. Springburn, - - -	3,825	3,772	...	53	1
11. Townhead, - - -	6,517	6,516	...	1	1
12. Exchange, - - -	4,024	4,022	...	2	16
13. Blythswood, - - -	3,011	3,068	57	...	5
14. Anderston, - - -	6,463	6,450	...	13	7
15. Sandyford, - - -	5,323	5,334	11	...	12
16. Park, - - -	5,230	5,208	...	22	15
17. Cowcaddens, - - -	9,212	9,260	48	...	11
18. Woodside, - - -	8,490	8,544	54	...	12
19. Ruchill, - - -	6,003	5,821	...	182	1
20. North Kelvin, - - -	5,742	5,742	...	...	9
21. Maryhill, - - -	5,391	5,392	1	...	7
22. Kelvinside, - - -	5,380	5,295	...	85	69
23. Partick (East), - - -	6,925	6,922	...	3	6
24. „ (West), - - -	6,506	6,510	4	...	13
25. Whiteinch, - - -	6,392	6,325	...	67	13
26. Hutchesontown, - - -	9,461	9,462	1	...	6
27. Gorbals, - - -	11,048	11,141	93	...	19
28. Kingston, - - -	7,362	7,374	12	...	4
29. Kinning Park, - - -	8,294	8,291	...	3	7
30. Govan, - - -	7,777	7,767	...	10	5
31. Fairfield, - - -	6,957	6,928	...	29	4
32. Pollokshields, - - -	6,239	6,228	...	11	16
33. Camphill, - - -	5,499	5,489	...	10	3
34. Pollokshaws, - - -	4,531	4,534	3	...	1
35. Govanhill, - - -	7,498	7,431	...	67	...
36. Langside, - - -	4,748	4,736	...	12	3
37. Cathcart, - - -	3,982	3,859	...	123	4
CITY, - - -	240,772	240,283	...	489	366

* The number of houses has been adjusted to include Inhabitant Occupiers.

TABLE III.—GLASGOW.—LININGS GRANTED BY DEAN OF GUILD COURT
IN YEARS FROM 1915 TO 1925 IN RESPECT OF HOUSES.

Year ending 31st August.	No. of APARTMENTS.						TOTAL.
	1.	2.	3.	4.	5.	6.	
1915,	63	156	120	32	35	48	454
1916,	1	...	2	...	12	1	16
1917,
1918,	64	28	...	...	...	92
1919,	144	78	...	...	222
1920,	12	1,239	414	214	57	1,936
1921,	1,176	981	240	34	2,431
1922,	65	99	39	31	234
1923,	680	286	205	104	46	1,321
1924,	357	991	605	745	82	2,780
1925,	504	674	111	44	61	1,394

TABLE IV.—ABSTRACT OF METEOROLOGICAL OBSERVATIONS TAKEN AT
SPRINGBURN PUBLIC PARK.

MONTHS.	TEMPERATURE.			RAINFALL.	
	Highest Temperature in Shade.	Lowest Temperature in Shade.	Mean Temperature.	No. of Days it fell.	Amount Collected, in inches.
1925.					
January, ...	51	31	40.1	21	4.62
February, ...	50	27	38.6	24	2.98
March, ...	57	26	40.8	17	2.06
April, ...	61	27	43.2	20	4.37
May, ...	64	33	49.8	26	6.82
June, ...	83	42	58.1	8	0.64
July, ...	77	45	60.1	14	2.16
August, ...	74	44	58.4	19	3.79
September, ...	65	36	50.7	23	3.57
October, ...	66	26	48.7	16	3.16
November, ...	53	21	36.9	15	0.87
December, ...	50	18	35.0	19	3.20
1916,	79	28	47.7	234	44.22
1917,	74	20	46.7	194	36.67
1918,	78	10	47.5	237	41.36
1919,	75	12	46.2	186	30.93
1920,	75	26	48.1	230	43.88
1921,	82	22	48.5	249	43.23
1922,	79	31	46.8	228	32.87
1923,	83	20	46.4	260	44.64
1924,	74	18	46.1	256	39.72
1925,	83	18	46.7	222	38.24

The records for years previous to 1921 were taken at Glasgow Observatory.

TABLE V.—GLASGOW.—BIRTHS AND BIRTH-RATES *per Million* IN EACH WARD, EXCLUSIVE OF INSTITUTIONS AND HARBOUR, FOR THE YEAR 1925, AND NUMBER AND PERCENTAGE OF ILLEGITIMATE BIRTHS.

MUNICIPAL WARDS.	Births. 1925.	Illegitimate Births		Birth-rate 1925.	Birth-rate 1924.
		No.	% Total Births.		
1. Shettleston and Tollcross, ...	840	40	4·8	24,680	25,090
2. Parkhead, ...	911	43	4·7	24,411	24,491
3. Dalmarnock, ...	1,325	74	5·6	31,572	30,231
4. Calton, ...	1,112	87	7·8	30,505	29,877
5. Mile-end, ...	883	55	6·2	34,037	31,492
6. Whitevale, ...	674	27	4·0	27,210	26,536
7. Dennistoun, ...	355	20	5·6	15,576	15,432
8. Provan, ...	970	37	3·8	27,696	28,557
9. Cowlairs, ...	499	19	3·8	20,327	20,323
10. Springburn, ...	406	20	4·9	22,751	21,938
11. Townhead, ...	662	52	7·9	23,041	23,463
12. Exchange, ...	514	54	10·5	30,071	29,737
13. Blythswood, ...	322	39	12·1	22,948	24,549
14. Anderston, ...	792	47	5·9	27,285	28,861
15. Sandyford, ...	567	48	8·5	23,462	23,291
16. Park, ...	260	30	11·5	11,607	11,970
17. Cowcaddens, ...	1,252	94	7·5	30,667	28,462
18. Woodside, ...	962	58	6·0	26,051	27,047
19. Ruchill, ...	685	31	4·5	25,535	24,913
20. North Keivin, ...	447	20	4·5	18,682	18,850
21. Maryhill, ...	633	24	3·8	25,229	23,193
22. Kelvinside, ...	168	7	4·2	7,790	8,999
23. Partick (East), ...	654	36	5·5	21,409	21,027
24. „ (West), ...	548	19	3·5	20,114	21,131
25. Whiteinch, ...	531	22	4·1	18,244	18,405
26. Hutchesontown, ...	1,142	70	6·1	27,388	29,570
27. Gorbals, ...	1,439	116	8·1	27,825	28,134
28. Kingston, ...	1,008	60	6·0	29,283	27,119
29. Kinning Park, ...	1,012	64	6·3	27,065	25,686
30. Govan, ...	1,040	53	5·1	27,565	27,921
31. Fairfield, ...	735	29	3·9	23,087	22,586
32. Pollokshields, ...	393	14	3·6	15,353	17,770
33. Camphill, ...	272	9	3·3	13,117	12,368
34. Pollokshaws, ...	354	13	3·7	18,507	18,861
35. Govanhill, ...	586	13	2·2	18,388	18,049
36. Langside, ...	222	7	3·2	11,990	11,805
37. Cathcart, ...	162	11	6·8	9,879	12,585
Institutions, &c., ...	79	19	—	—	—
CITY, ...	25,416	1,481	5·8	23,151	23,112

TABLE VI.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* IN EACH MUNICIPAL WARD, FOR THE YEAR 1925, AND CORRESPONDING RATES FOR 1923 AND 1924.

MUNICIPAL WARDS.	Deaths. 1925.	Death-rates.		
		1925.	1924.	1923.
1. Shettleston and Tolleross, ...	394	11,576	13,279	10,978
2. Parkhead,	442	11,844	12,617	11,040
3. Dalmarnock,	608	14,487	17,152	16,147
4. Calton,	642	17,612	18,293	17,069
5. Mile-end,	460	17,732	19,016	16,949
6. Whitevale,	337	13,605	15,469	13,773
7. Dennistoun,	238	10,443	11,925	9,947
8. Provan,	404	11,535	14,835	12,233
9. Cowlairs,	251	10,224	10,915	10,057
10. Springburn,	197	11,040	12,617	9,568
11. Townhead,	391	13,609	14,867	14,176
12. Exchange,	288	16,849	17,971	15,899
13. Blythswood,	245	17,460	17,135	15,386
14. Anderston,	453	15,606	16,053	15,626
15. Sandyford,	372	15,393	16,064	15,895
16. Park,	278	12,410	14,032	11,734
17. Cowcaddens,	647	15,848	17,301	15,015
18. Woodside,	533	14,433	15,421	14,150
19. Ruchill,	286	10,661	12,841	11,402
20. North Kelvin,	241	10,072	12,455	10,410
21. Maryhill,	279	11,120	11,437	10,141
22. Kelvinside,	227	10,526	10,836	10,804
23. Partick (East),	422	13,814	14,935	12,911
24. „ (West),	311	11,415	10,602	9,836
25. Whiteinch,	290	9,964	10,244	11,321
26. Hutchesontown,	539	12,927	15,325	13,089
27. Gorbals,	805	15,566	17,778	14,718
28. Kingston,	580	16,849	18,447	14,299
29. Kinning Park,	503	13,452	16,080	13,431
30. Govan,	554	14,684	16,376	12,892
31. Fairfield,	359	11,277	11,987	9,670
32. Pollokshields,	263	10,275	10,137	12,364
33. Camphill,	207	9,982	11,257	10,006
34. Pollokshaws,	182	9,515	10,554	9,416
35. Govanhill,	318	9,979	10,386	10,236
36. Langside,	187	10,100	11,805	9,879
37. Cathcart,	153	9,330	9,187	8,910
Institutions, &c.,	664	—	—	—
CITY,	14,550	13,253	14,561	12,933
+ Inward Transfers,	15,336	13,969	15,391	13,659

TABLE VII.—GLASGOW.—NUMBER OF OUTWARD AND INWARD TRANSFER DEATHS FOR THE YEARS 1923-1925.

CAUSE OF DEATH.	OUTWARD TRANSFERS.			INWARD TRANSFERS.		
	1923.	1924.	1925.	1923.	1924.	1925.
1. Enteric Fever,	1	1	1	...	...	...
2. Typhus Fever, ... ..	...	...	...	...	...	...
3. Smallpox, ... ..	...	...	...	...	...	...
4. Measles,	2	4	...	...	...	...
5. Scarlet Fever, ... ..	...	2	1	...	1	...
6. Whooping-cough,	3	2	4	1	2	2
7. Diphtheria and M. Croup, ...	3	6	3	...	1	...
8. Croup, ... ..	...	...	...	...	...	...
9. Influenza,	1	...	...	1	9	...
10. Erysipelas,	6	7	8	3	1	3
11. Septicæmia,	15	15	16	...	3	1
11A Other Septic Diseases, ...	7	16	7	...	...	2
12. Pulmonary Tuberculosis, ...	24	23	17	139	150	110
13. Tuberculous Meningitis, ...	15	24	16	8	9	5
14. Abdominal Tuberculosis, ...	20	20	18	20	28	12
15. Other Tuberculous Diseases,	18	14	13	20	22	31
16. Cancer (Malignant Disease),	196	215	230	35	38	36
17. Rheumatic Fever,	4	3	3	1	3	1
18. Alcoholism, ... ..	...	...	1	...	...	...
19. Cerebro-Spinal Fever,	2	2	3	...	...	...
20. Meningitis (not Tuberculous),	11	11	8	3	3	3
21. Cerebral Hæmorrhage (Apopl.)	26	25	28	43	48	38
22. Other Nervous Diseases, ...	50	62	58	171	185	154
23. Organic Heart Diseases, ...	42	52	55	72	86	96
24. Other Circulatory Diseases,	39	42	46	27	41	37
25. Bronchitis,	16	24	14	21	23	14
26. Pneumonia (all forms),	62	66	61	39	55	60
27. Other Respiratory Diseases,	16	21	10	10	11	10
28. Diarrhœa and Enteritis,	24	43	24	9	23	7
29. Appendicitis and Typhlitis,	79	62	94	5	2	5
30. Cirrhosis of the Liver,	6	4	1	...	1	1
31. Other Digestive Diseases, ...	131	145	148	28	14	12
32. Nephritis and Bright's Disease,	42	53	46	12	14	10
33. Puerperal Fever,	4	14	9	...	...	1
34. Other Accidents and Diseases of Pregnancy and Parturition,	25	18	23	...	4	1
35. Congenital Debility and Mal- formation, including Prema- ture Birth,	43	63	47	3	5	1
36. Violence,	111	143	142	46	51	67
37. Unknown, ... ..	...	...	2	...	1	1
38. All other causes,	183	174	175	74	76	65
Totals,	1,227	1,376	1,332	791	910	786

TABLE VIII.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* FROM DIFFERENT CAUSES, FOR THE YEAR 1925, AND RATES FOR YEARS SINCE 1921.

CAUSE OF DEATH.	ANNUAL DEATH-RATE PER MILLION.					DEATHS.
	1921.	1922.	1923.	1924.	1925.	1925.
1. Enteric Fever,	16	11	13	5	13	14
2. Typhus Fever,	1	5	1	—	—	—
3. Smallpox,	7	—	—	—	—	—
4. Measles,	102	1,190	514	471	107	118
5. Scarlet Fever,	50	69	66	73	62	68
6. Whooping-cough,	642	185	342	593	537	589
7. Diphtheria & Mem. Croup,	120	128	133	126	103	113
8. Croup,	5	6	7	4	4	4
9. Influenza,	193	709	60	376	191	210
10. Erysipelas,	61	60	42	44	42	46
11. Septicæmia,	54	53	26	38	42	46
11A Other Septic Diseases, ...	47	37	39	36	47	52
12. Pulmonary Tuberculosis, ...	1,007	1,074	1,014	1,006	922	1,012
13. Tuberculous Meningitis, ...	150	147	189	180	147	161
14. Abdominal Tuberculosis, ...	97	109	117	99	97	106
15. Other Tuberculous Diseases, ...	143	118	116	116	118	129
16. Cancer (Malignant Disease), ...	1,175	1,191	1,187	1,161	1,261	1,384
17. Rheumatic Fever,	41	54	51	42	41	45
18. Alcoholism,	25	11	6	7	11	12
19. Cerebro-Spinal Fever,	49	52	51	38	38	42
20. Meningitis (not Tuberculous),	129	118	96	89	91	100
21. Cerebral Hæmorrhage (Apoplexy),	740	785	766	745	644	707
22. Other Nervous Diseases,	761	762	758	769	716	786
23. Organic Heart Diseases,	1,178	1,178	1,235	1,266	1,364	1,498
24. Other Circulatory Diseases, ...	492	549	542	630	659	723
25. Bronchitis,	828	1,102	693	973	804	883
26. Pneumonia (all forms),	1,372	2,129	1,285	2,006	1,517	1,665
27. Other Respiratory Diseases, ...	188	257	192	198	196	215
28. Diarrhœa and Enteritis,	662	357	337	396	385	423
29. Appendicitis and Typhlitis, ...	100	93	91	99	87	96
30. Cirrhosis of the Liver,	39	29	34	27	46	51
31. Other Digestive Diseases,	433	418	425	360	384	422
32. Nephritis and Bright's Disease,	390	369	351	382	350	384
33. Puerperal Fever,	68	87	66	56	62	68
34. Other Accidents and Diseases of Pregnancy and Parturition,	98	98	94	71	106	116
35. Congenital Debility and Malformation, including Premature Birth,	1,073	970	815	853	775	851
36. Violence,	531	511	469	520	563	618
37. Unknown,	22	14	9	8	12	13
38. All other Causes,	1,445	1,463	1,427	1,528	1,425	1,566
Total,	14,534	16,498	13,659	15,391	13,969	15,336

TABLE IX(A)—GLASGOW, 1925.—DEATHS FROM DIFFERENT DISEASES AMONG MALES AND AT SEVERAL AGE-PERIODS.

DISEASE.	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+	Total Males
1. Enteric Fever, ...	—	—	—	1	1	—	—	2	1	—	—	—	—	5
2. Typhus Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Smallpox, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Measles, ...	16	32	12	2	—	—	—	—	—	—	—	—	—	62
5. Scarlet Fever, ...	3	11	13	6	3	1	—	—	—	—	—	—	—	37
6. Whooping-cough, ...	135	92	39	2	—	—	—	—	—	—	—	—	—	268
7. Diphtheria and Membranous Croup, ...	5	12	20	13	1	—	—	—	—	—	—	—	—	51
8. Croup, ...	—	—	1	—	—	—	—	—	—	—	—	—	—	1
9. Influenza, ...	9	2	1	—	2	—	1	5	12	9	22	22	3	88
10. Erysipelas, ...	3	—	—	1	—	1	—	2	1	5	5	6	3	27
11. Septicaemia, ...	4	—	2	1	—	2	—	3	4	4	5	1	1	27
11A. Other Septic Diseases, ...	8	4	—	—	—	2	—	—	4	3	2	5	1	29
12. Pulmonary Tuberculosis, ...	3	3	9	4	8	40	66	92	106	100	55	14	2	502
13. Tuberculous Meningitis, ...	20	17	25	9	4	2	4	—	—	1	1	—	—	83
14. Abdominal Tuberculosis, ...	4	4	10	6	4	3	3	3	5	2	—	—	—	44
15. Other Tuberculous Diseases, ...	4	1	6	3	5	8	6	5	5	3	4	3	—	53
16. Cancer (Malignant Disease), ...	1	2	—	4	2	3	2	12	37	118	218	177	52	628
17. Rheumatic Fever, ...	—	—	—	—	3	2	1	1	4	3	—	1	—	15
18. Alcoholism, ...	—	—	—	—	—	2	—	1	4	2	1	—	—	10
19. Cerebro-Spinal Fever, ...	11	6	3	1	1	—	—	—	1	—	1	—	—	24
20. Meningitis (not Tubercular), ...	19	11	9	4	—	—	2	2	2	2	2	1	1	55
21. Cerebral Hæmorrhage (Apoplexy), ...	—	—	—	—	—	—	—	3	8	37	70	105	79	302
22. Other Nervous Diseases, ...	80	14	8	4	4	9	9	12	26	36	56	65	24	347
23. Organic Heart Disease, ...	—	—	—	6	6	5	12	13	40	64	165	228	99	638
24. Other Circulatory Diseases, ...	4	—	—	2	4	4	4	12	30	51	106	119	69	405
25. Bronchitis, ...	79	11	1	—	1	2	5	14	24	46	77	111	76	447
26. Pneumonia (all forms), ...	294	139	51	6	7	18	17	51	72	91	94	72	32	944
27. Other Respiratory Diseases, ...	15	9	2	3	1	2	3	1	10	18	17	24	11	116
28. Diarrhœa and Enteritis, ...	153	31	13	—	2	—	1	2	7	7	8	12	5	241
29. Appendicitis and Typhlitis, ...	—	—	4	7	6	3	8	4	2	6	7	1	—	48
30. Cirrhosis of the Liver, ...	—	—	—	—	1	—	1	—	2	11	15	2	2	34
31. Other Digestive Diseases, ...	37	8	4	5	6	7	5	9	25	21	31	31	18	207
32. Nephritis & Bright's Disease, ...	2	—	2	3	2	2	5	12	22	36	56	40	9	191
33. Puerperal Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34. Other Accidents and Diseases of Pregnancy and Parturition, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35. Congenital Debility, Malformation, Premature Birth, ...	517	—	2	1	—	—	1	—	1	—	—	—	—	522
36. Violence, ...	20	16	28	30	14	13	23	28	30	66	47	29	18	362
37. Unknown, ...	2	—	—	—	—	—	—	—	2	2	—	1	—	7
38. All others, ...	89	17	9	9	10	5	5	16	34	57	117	167	167	702
All Causes, ...	1,537	442	274	133	98	136	184	305	521	801	1,182	1,237	672	7,522
Inward Transfer Deaths, ...	14	6	5	6	12	10	25	44	53	63	75	72	38	423
TOTAL, ...	1,551	448	279	139	110	146	209	349	574	864	1,257	1,309	710	7,945

TABLE IX(B)—GLASGOW, 1925.—DEATHS FROM DIFFERENT DISEASES AMONG FEMALES AND AT SEVERAL AGE-PERIODS.

DISEASE.	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+	Total Females	BOTH SEXES
1. Enteric Fever, ...	—	—	—	2	—	1	1	3	1	1	—	—	—	9	14
2. Typhus Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Smallpox, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Measles, ...	17	26	11	2	—	—	—	—	—	—	—	—	—	56	118
5. Scarlet Fever, ...	—	5	11	10	2	2	—	1	—	—	—	—	—	31	68
6. Whooping-cough, ...	137	122	51	7	1	1	—	—	—	—	—	—	—	319	587
7. Diphtheria and Membranous Croup, ...	3	11	27	19	2	—	—	—	—	—	—	—	—	62	113
8. Croup, ...	1	2	—	—	—	—	—	—	—	—	—	—	—	3	4
9. Influenza, ...	4	8	3	—	3	5	—	5	8	11	21	30	24	122	210
10. Erysipelas, ...	2	—	—	—	1	1	—	—	2	2	4	4	—	16	43
11. Septicæmia, ...	1	—	1	1	3	2	1	5	—	2	—	1	1	18	45
11A. Other Septic Diseases, ...	2	2	—	—	—	—	1	3	3	—	4	2	4	21	50
12. Pulmonary Tuberculosis, ...	1	2	7	5	27	64	63	103	65	38	19	6	—	400	902
13. Tuberculous Meningitis, ...	11	11	23	12	7	3	3	1	1	—	1	—	—	73	156
14. Abdominal Tuberculosis, ...	2	8	9	5	8	6	3	6	2	—	—	1	—	50	94
15. Other Tuberculous Diseases, ...	2	2	4	7	2	8	6	4	5	2	2	1	—	45	98
16. Cancer (Malignant Disease), ...	—	—	—	—	1	1	2	19	64	147	215	177	94	720	1,348
17. Rheumatic Fever, ...	—	—	—	3	2	1	—	2	5	7	6	2	1	29	44
18. Alcoholism, ...	—	—	—	—	—	—	—	—	2	—	—	—	—	2	12
19. Cerebro-Spinal Fever, ...	10	4	1	3	—	—	—	—	—	—	—	—	—	18	42
20. Meningitis (not Tubercular), ...	16	7	7	4	2	1	1	2	2	—	—	—	—	42	97
21. Cerebral Hæmorrhage (Apoplexy), ...	—	—	—	—	—	1	1	3	8	53	93	117	91	367	669
22. Other Nervous Diseases, ...	40	5	9	6	5	2	11	15	21	29	50	53	39	285	632
23. Organic Heart Disease, ...	—	1	1	3	7	12	15	23	46	78	170	233	175	764	1,402
24. Other Circulatory Diseases, ...	4	1	2	—	7	3	6	14	13	40	48	76	67	281	686
25. Bronchitis, ...	44	17	3	2	—	2	2	2	17	25	76	122	110	422	869
26. Pneumonia (all forms), ...	194	119	54	7	4	7	17	26	40	49	40	66	38	661	1,605
27. Other Respiratory Diseases, ...	16	3	5	1	—	—	—	3	7	5	18	11	20	89	205
28. Diarrhœa and Enteritis, ...	111	20	4	3	1	—	—	2	3	7	5	9	10	175	416
29. Appendicitis and Typhlitis, ...	—	—	2	1	6	7	4	6	10	3	3	1	—	43	91
30. Cirrhosis of the Liver, ...	—	—	—	—	—	—	—	—	2	4	3	6	1	16	50
31. Other Digestive Diseases, ...	11	3	13	3	5	3	2	9	21	24	37	38	34	203	410
32. Nephritis & Bright's Disease, ...	3	—	2	2	2	3	4	14	18	33	52	36	14	183	374
33. Puerperal Fever, ...	—	—	—	—	—	1	12	37	17	—	—	—	—	67	67
34. Other Accidents and Diseases of Pregnancy and Parturition, ...	—	—	—	—	—	2	19	55	39	—	—	—	—	115	115
35. Congenital Debility, Malformation, Premature Birth, ...	322	2	3	—	—	—	1	—	—	—	—	—	—	328	850
36. Violence, ...	20	15	18	10	5	4	4	9	9	17	27	25	26	189	551
37. Unknown, ...	2	—	—	1	—	—	—	—	—	1	1	—	—	5	12
38. All others, ...	54	16	12	10	5	9	7	20	43	69	99	164	291	799	1,501
All Causes, ...	1,030	412	283	129	108	152	186	392	474	647	994	1,181	1,040	7,028	14,550
Inward Transfer Deaths, ...	10	10	10	11	13	12	27	34	33	28	67	53	55	363	786
TOTAL, ...	1,040	422	293	140	121	164	213	426	507	675	1,061	1,234	1,095	7,391	15,336

TABLE X.—GLASGOW, 1925.—DEATHS OCCURRING IN INSTITUTIONS FOR THE TREATMENT OF THE SICK AND INFIRM, NURSING HOMES, &c.

DISEASE.	No.
1. Enteric Fever,	13
2. Typhus Fever, ... ..	...
3. Smallpox, ... ..	...
4. Measles,	67
5. Scarlet Fever,	67
6. Whooping-cough,	355
7. Diphtheria and Membranous Croup,	102
8. Croup,	1
9. Influenza,	37
10. Erysipelas,	36
11. Septicæmia,	36
11A Other Septic Diseases,	36
12. Pulmonary Tuberculosis,	502
13. Tuberculous Meningitis,	109
14. Abdominal Tuberculosis,	38
15. Other Tuberculous Diseases,	55
16. Cancer (Malignant Disease),	519
17. Rheumatic Fever,	11
18. Alcoholism,	2
19. Cerebro-Spinal Fever,	35
20. Meningitis (not Tubercular),	41
21. Cerebral Hæmorrhage (Apoplexy),	193
22. Other Nervous Diseases,	297
23. Organic Heart Disease,	448
24. Other Circulatory Diseases,	292
25. Bronchitis,	215
26. Pneumonia (all forms),	910
27. Other Respiratory Diseases,	45
28. Diarrhœa and Enteritis,	169
29. Appendicitis and Typhlitis,	86
30. Cirrhosis of the Liver,	16
31. Other Digestive Diseases,	227
32. Nephritis and Bright's Disease,	166
33. Puerperal Fever,	60
34. Other Accidents and Diseases of Pregnancy and Parturition,	84
35. Congenital Debility, Malformation, including Premature Birth,	235
36. Violence,	298
37. Unknown,	2
38. All others,	511
All Causes,	6,316

TABLE XI.—GLASGOW, 1925.—DEATHS IN INSTITUTIONS (INTRA MURAL)
OF PERSONS BELONGING TO THE CITY BUT WITH NO HOME ADDRESS.

DISEASE.	Poor Law Institutions.	Model Lodging- houses.	General Hospitals.	Infectious Diseases Hospitals.	Homes for Old Men, Women, and Orphans, &c., Asylums, Prisons.	Total.
1. Enteric Fever, ... ..	...	...	...	...	2	2
2. Typhus Fever, ... ..	...	...	...	...	...	...
3. Smallpox, ... ..	...	...	...	...	...	...
4. Measles, ... ..	...	...	...	...	...	...
5. Scarlet Fever, ... ..	...	...	...	1	...	1
6. Whooping-cough,	2	1	...	...	...	3
7. Diphtheria and Membranous Croup, ... ..	...	...	...	1	...	1
8. Croup, ... ..	...	...	...	...	...	...
9. Influenza,	1	3	...	...	3	7
10. Erysipelas	1	2	...	...	2	5
11. Septicæmia,	1	1	1	...	...	3
11A Other Septic Diseases, ... ..	...	...	1	...	1	2
12. Pulmonary Tuberculosis,	3	47	...	...	5	55
13. Tuberculous Meningitis, ... ..	...	1	...	...	...	1
14. Abdominal Tuberculosis, ... ..	...	1	...	...	...	1
15. Other Tuberculous Diseases,	1	3	...	...	1	5
16. Cancer (Malignant Disease),	2	27	2	1	10	42
17. Rheumatic Fever, ... ..	...	...	...	...	...	...
18. Alcoholism, ... ..	...	2	...	...	...	2
19. Cerebro-spinal Fever, ... ..	...	...	...	...	...	...
20. Meningitis (not Tubercular). ... ..	...	1	...	...	...	1
21. Cerebral Hæmorrhage (Apopl.)	1	15	...	...	8	24
22. Other Nervous Diseases,	7	22	...	...	8	37
23. Organic Heart Disease,	7	53	2	...	16	78
24. Other Circulatory Diseases,	5	30	2	...	11	48
25. Bronchitis,	5	43	...	...	9	57
26. Pneumonia (all forms),	2	51	3	2	12	70
27. Other Respiratory Diseases, ... ..	...	4	...	...	1	5
28. Diarrhœa and Enteritis,	4	2	1	...	2	9
29. Appendicitis and Typhlitis, ... ..	...	...	1	...	...	1
30. Cirrhosis of the Liver, ... ..	...	1	...	...	1	2
31. Other Digestive Diseases, ... ..	...	5	2	...	1	8
32. Nephritis and Bright's Disease,	2	15	3	...	4	24
33. Puerperal Fever, ... ..	...	...	...	...	...	...
34. Other Accidents and Diseases of Pregnancy and Parturi- tion, ... ..	...	...	1	...	...	1
35. Cong. Debility, Malformation, including Premature Birth,	14	2	4	2	14	36
36. Violence,	2	19	2	...	15	38
37. Unknown, ... ..	...	1	...	...	...	1
38. All others,	6	58	4	2	24	94
All Causes,	66	410	29	9	150	664

TABLE XII.—GLASGOW.—DEATHS UNDER 1 YEAR, AND DEATH-RATES PER 1,000 BIRTHS IN EACH MUNICIPAL WARD, FOR THE YEAR 1925.

MUNICIPAL WARDS.	DEATHS - 1 YEAR.	Death-rate per 1,000 Births.	
	1925.	1925.	1924.
1. Shettleston and Tollcross,	95	113	124
2. Parkhead,	94	103	114
3. Dalmarnock,	158	119	142
4. Calton,	142	128	148
5. Mile-end,	121	137	162
6. Whitevale,	74	110	135
7. Dennistoun,	22	62	68
8. Provan,	91	94	125
9. Cowlairs,	46	92	80
10. Springburn,	35	86	122
11. Townhead,	73	110	114
12. Exchange,	57	111	136
13. Blythswood,	25	78	120
14. Anderston,	108	136	116
15. Sandyford,	66	116	110
16. Park,	19	73	60
17. Cowcaddens,	149	109	143
18. Woodside,	107	111	105
19. Ruchill,	58	85	113
20. North Kelvin,	31	69	113
21. Maryhill,	57	90	81
22. Kelvinside,	6	36	52
23. Partick East,	73	112	118
24. „ West,	50	91	94
25. Whiteinch,	50	94	60
26. Hutchesontown,	110	96	132
27. Gorbals,	147	102	139
28. Kingston,	108	107	126
29. Kinning Park,	85	84	139
30. Govan,	96	92	113
31. Fairfield,	52	71	80
32. Pollokshields,	16	41	48
33. Camphill,	12	44	66
34. Pollokshaws,	24	68	97
35. Govanhill,	41	70	72
36. Langside,	6	27	50
37. Cathcart,	5	31	80
Institutions, &c.,	58	...	...
CITY,	2,567	101	118
+ Inward Transfers,	2,591	102	119

TABLE XIII.—GLASGOW, 1925.—MALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.							Total -4 weeks.	AGE IN MONTHS.												Total -1 year.						
	AGE IN WEEKS.								-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12								
	-1	-2	-3	-4																							
I. IMMATURETY, ...	183	28	20	14	245	10	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	536	
(a) Premature Birth, ...	15	7	8	3	33	3	6	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	262	
(b) Congenital Malformations, ...	18	...	...	...	18	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55	
(c) Atelectasis, ...	71	21	11	10	113	32	20	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19	
(d) Atrophy and Debility, ...	2	12	12	13	39	32	40	43	43	28	25	35	25	32	24	22	...	...	...	...	...	...	...	...	...	200	
II. DISEASES OF RESPIRATORY SYSTEM, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	388
III. DISEASES OF DIGESTIVE SYSTEM, ...	1	1	5	10	17	19	13	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	190
(a) Diarrhoeal, ...	1	1	...	1	3	3	5	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	153
(b) Others, ...	11	4	5	1	21	8	13	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37
IV. DISEASES OF NERVOUS SYSTEM, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	99
V. TUBERCULOUS DISEASES, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31
(a) Abdominal Tuberculosis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
(b) Tubercular Meningitis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20
(c) Other Forms, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
VI. ACCIDENTS OF BIRTH, ...	18	1	...	...	19	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
(a) Injury, ...	4	...	...	...	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20
(b) Umbilical Hæmorrhage, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
VII. INFECTIOUS DISEASES, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	175
(a) Whooping-cough, ...	...	...	...	1	1	13	11	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	135
(b) Measles, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
(c) Scarlet Fever, ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
(d) Cerebro-Spinal Fever, ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
(e) Erysipelas, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
(f) Diphtheria and Mem. Croup, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
(g) Chicken-pox, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
VIII. SYPHILIS, ...	1	...	...	3	5	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
IX. SUFFOCATION, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
X. OTHER VIOLENCE, ...	4	1	...	1	6	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
XI. ALL OTHER CAUSES, ...	4	3	7	4	18	6	6	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	62
	333	79	70	63	545	136	122	119	95	79	84	68	84	78	84	68	84	68	84	95	79	84	68	84	78	59	1,537

TABLE XIV.—GLASGOW, 1925.—FEMALE INFANT DEATHS at GIVEN AGES and from SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.				Total -4 weeks.	AGE IN MONTHS.											Total -1 year.
	-1	-2	-3	-4		-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	
	I. IMMATURETY.																
(a) Premature Birth, ...	105	31	15	5	156	7	4	...	2	...	...	...	...	...	...	...	333
(b) Congenital Malformations, ...	17	5	3	1	26	6	4	2	2	1	...	...	...	...	...	...	169
(c) Atelectasis, ...	9	...	...	...	9	2	...	...	...	...	...	...	...	...	...	...	43
(d) Atrophy and Debility, ...	55	6	4	2	67	24	3	7	3	1	1	1	1	...	...	...	110
II. DISEASES OF RESPIRATORY SYSTEM,																	
...	4	2	11	7	24	27	25	26	16	22	19	15	20	23	18	19	254
III. DISEASES OF DIGESTIVE SYSTEM,																	
(a) Diarrhoeal, ...	3	1	1	...	5	10	21	15	4	9	5	12	11	8	6	5	122
(b) Others, ...	1	...	...	1	2	...	4	...	2	...	...	...	1	...	1	1	111
IV. DISEASES OF NERVOUS SYSTEM.																	
...	10	2	2	1	15	3	7	2	4	7	2	6	3	2	3	2	56
V. TUBERCULOUS DISEASES.																	
(a) Abdominal Tuberculosis, ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	16
(b) Tubercular Meningitis, ...	...	...	...	...	...	...	...	...	2	3	1	...	1	1	2	1	2
(c) Other Forms, ...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	3
VI. ACCIDENTS OF BIRTH.																	
(a) Injury, ...	11	1	1	...	13	...	...	...	...	...	...	...	...	...	...	...	17
(b) Umbilical Hæmorrhage, ...	2	1	1	...	4	...	...	...	...	...	...	...	...	...	...	...	13
VII. INFECTIOUS DISEASES.																	
(a) Whooping-cough, ...	...	...	1	...	1	6	4	13	7	12	13	17	13	17	16	18	170
(b) Measles, ...	...	...	...	...	...	1	...	...	...	...	2	1	2	6	5	5	137
(c) Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	17
(d) Cerebro Spinal Fever, ...	...	...	...	...	...	...	...	...	2	1	...	1	2	1	1	1	10
(e) Erysipelas, ...	...	...	...	...	...	1	...	...	1	1	...	...	...	1	...	...	2
(f) Diphtheria and Mem. Croup, ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3
(g) Chicken-pox, ...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
VIII. SYPHILIS, ...																	
...	...	...	...	2	2	3	1	2	...	...	...	...	1	...	...	...	9
IX. SUFFOCATION,																	
...	1	...	...	...	1	3	2	1	...	...	...	...	1	...	...	...	8
X. OTHER VIOLENCE, ...																	
...	3	...	...	...	3	2	1	1	2	1	1	...	...	...	...	1	12
XI. ALL OTHER CAUSES,																	
...	7	2	1	1	11	2	2	3	...	1	...	2	1	4	4	3	33
	228	51	40	20	339	97	78	72	48	60	45	57	58	50	50	50	1,000

TABLE XV.—GLASGOW, 1923-1925.—ABSTRACT OF NOTIFICATIONS UNDER NOTIFICATION OF BIRTHS ACT, 1907, AND RESULTS OF VISITS.

	1923	1924	1925
Total Number of Notifications,	28,032	26,623	26,654
Doctor at Home,	7,876	7,521	7,414
Doctor in Institution,	3,163	3,208	3,263
Maternity Hospital (Outdoor) Nurse,	3,635	3,614	3,840
Other Institutional Nurse,	566	602	149
Certified Midwife,	12,704	11,636	11,949
Others,	88	42	39
Total Cards issued,	20,156	19,102	19,240
Total Cards returned,	19,910	19,243	18,927
Full Information,	18,465	18,144	17,844
Doctor found in attendance,	66	42	43
Wrong Address—Not Traced,	6	1	—
Others,	1,373	1,056	1,040

TABLE XVI.—GLASGOW, 1923-1925.—BIRTHS NOTIFIED SHOWING MEDICALLY AND NOT MEDICALLY ATTENDED.

	1923	1924	1925
Notifications Received— <i>less Duplicates</i> —			
Total,	28,032	26,623	26,654
Live-births,	26,888	25,567	25,592
Still-births,	1,144	1,056	1,062
Per cent. Still-births to Total,	4.1	4.0	4.0
Medically attended—			
Total Births at Home,	7,876	7,521	7,414
In Institutions,	3,163	3,208	3,263
Total,	11,039	10,729	10,677
Per cent.,	39.4	40.3	40.1
Still-births at Home,	286	257	252
Still-births in Institutions,	340	353	349
Not Medically attended—			
Maternity Hospital, Outdoor Nurse,	3,635	3,614	3,840
Other Institutional Nurses,	566	602	149
Certified Midwives,	12,704	11,636	11,949
Others,	88	42	39
Total,	16,993	15,894	15,977
Per cent.,	60.6	59.7	59.9
Still-births,	518	446	461

TABLE XVII.—GLASGOW, 1923-1925.—CASES OF INFECTIOUS DISEASE
REGISTERED AND NUMBERS TREATED IN HOSPITAL.

	1923		1924		1925	
	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.
A.—Notifiable—						
Fevers—Typhus,	2	...	...	...	...	...
Enteric,	114	12	77	5	42	2
Continued and Undefined,	22	...	19	...	8	1
Puerperal,	255	23	227	12	284	16
Smallpox, ... ..	...	...	2	...	...	...
Scarlet Fever,	3,351	217	3,019	165	3,650	162
Diphtheria and Membranous Croup,	1,699	68	1,822	77	1,678	58
Erysipelas,	495	529	419	439	486	516
Cholera, ... ..	...	...	...	...	...	...
Cerebro-Spinal Fever,	61	3	61	5	54	8
Ophthalmia Neonatorum,	48	573	62	530	54	561
Trachoma,	11	31	8	37	10	31
Acute Encephalitis Lethargica,	68	42	305	86	47	26
Acute Polio-Encephalitis, ... ..	...	1	2	1	1	1
Acute Poliomyelitis,	3	1	7	2	5	3
Acute Primary Pneumonia,	2,576	1,770	3,687	3,059	3,446	2,356
Acute Influenzal Pneumonia,	80	39	268	258	177	126
Malaria,	6	19	6	19	2	17
Dysentery,	2	4	4	10	10	2
Trench Fever, ... ..	...	...	...	...	...	...
Pulmonary Tuberculosis,	287	1,438	963	866	742	858
Other Forms of Tuberculosis,	304	930	415	806	315	800
B.—Not Notifiable—						
Measles,	1,324	8,981	1,029	7,287	633	5,874
German Measles,	26	240	48	459	50	200
Whooping-cough,	503	4,439	917	9,131	878	11,316
Chickenpox,	243	5,655	224	4,852	199	6,958
Influenza, ... ..	...	...	2	...	...	...
Others,	11 ^a	...	3 ^b	...	2 ^c	...
Totals,	11,491	25,015	13,596	28,106	12,773	29,892

(a) Vincent's Angina, 4; Adenitis, 1; Enteritis, 6; (b) Enteritis, 3;
(c) Anthrax, 1; Beri-beri, 1.

TABLE XVIII.—GLASGOW, 1921-1925.—CASE-RATES *per Million*
FOR INFECTIOUS DISEASES.

	CASE-RATES PER MILLION.				
	1921	1922	1923	1924	1925
A.—Notifiable—					
Fevers—Typhus,	6	18	2	...	...
Enteric,	100	79	116	75	40
Continued and Undefined,	7	6	20	17	8
Puerperal,	299	272	255	216	273
Smallpox,	19	...	...	2	...
Scarlet Fever,	3,272	3,212	3,277	2,905	3,472
Diphtheria and Membranous Croup,	1,727	1,561	1,623	1,733	1,581
Erysipelas,	934	1,041	940	783	913
Cholera, ... ..	...	...	...	...	...
Cerebro-Spinal Fever,	59	62	59	60	56
Ophthalmia Neonatorum,	859	708	570	540	560
Trachoma,	63	46	38	41	37
Acute Encephalitis Lethargica,	25	18	101	357	66
Acute Polio-Encephalitis,	2	2	1	3	2
Acute Poliomyelitis,	12	8	4	8	7
Acute Primary Pneumonia,	3,087	5,516	3,991	6,155	5,285
Acute Influenzal Pneumonia,	255	559	109	480	276
Malaria,	61	16	23	23	17
Dysentery,	43	13	6	13	11
Trench Fever, ... ..	...	...	...	...	...
Pulmonary Tuberculosis,	1,902	1,806	1,584	1,669	1,457
Other Forms of Tuberculosis,	1,061	970	1,133	1,114	1,016
B.—Not Notifiable—					
Measles,	2,837	17,440	9,462	7,588	5,927
German Measles,	456	119	244	463	228
Whooping-cough,	9,997	2,634	4,538	9,168	11,109
Chickenpox,	5,250	3,279	5,416	4,632	6,519
Influenza,	40	10	...	2	...
Mumps,	6	...	...	...	...
Cancrum Oris, ... ..	...	1	...	...	...
Others,	35	9	10	3	2
Totals,	32,414	39,405	33,522	38,050	38,862

TABLE XIX

CASES OF INFECTIOUS DISEASE REGISTERED IN EACH MONTH—SHOWING NUMB

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889																							
FEVERS						4		5		6		7		8		9		10		11		12	
1		2		3		Smallpox		Scarlet Fever		Diphtheria and Mem- branous Croup		Erysipelas		Cerebro-Spinal Fever		Ophthalmia Neonatorum		Trachoma		Acute Encephalitis Lethargica		Acute Encephalitis Polio-Encephalitis	
Enteric, including Paratyphoid	Continued and Undefined	Puerperal	Hosp.	Home	Hosp.																		
Jan.	1	...	...	35	2	...	...	349	14	138	3	30	35	5	1	4	42	2	7	6	6
Feb.	3	...	1	17	3	...	...	271	11	137	3	37	40	...	1	3	46	1	5	9	2
Mar.	2	...	...	29	1	...	...	360	17	141	9	40	61	6	2	10	50	...	2	9	2
April	6	...	2	21	1	...	...	277	15	140	11	31	39	4	...	8	53	...	4	5	2
May	1	...	1	15	1	...	...	288	12	134	4	43	42	7	...	4	59	...	2	8	5
June	4	...	1	19	4	...	...	242	12	153	10	43	33	3	...	5	50	3	4	5	1
July	3	1	2	13	1	...	...	172	3	95	1	26	22	6	...	4	42	...	...	1	1
Aug.	10	1	...	21	...	...	...	265	6	121	1	31	29	3	1	4	32	1	...	1	3
Sept.	5	...	1	1	25	1	...	330	9	151	3	30	50	2	...	1	45	...	1	1	2		
Oct.	5	...	...	31	1	...	...	442	21	154	5	56	57	7	2	5	51	3	2	4	2
Nov.	1	...	...	26	1	...	...	350	27	157	6	66	56	5	...	3	36	...	1	3	...
Dec.	1	...	...	32	...	...	...	304	15	157	2	53	52	6	1	3	55	...	3	1	4
	42	2	8	1	284	16	...	3650	162	1678	58	486	516	54	8	54	561	10	31	53	30		

GLASGOW.

TREATED IN HOSPITALS AND UNDER SUPERVISION AT HOME DURING 1925.

INFECTIOUS DISEASES REGULATIONS, 1919				TUBERCULOSIS REGULATIONS, 1914				OTHER INFECTIOUS DISEASES																
14		15		16		17		18		19		20		21		22		23		All Causes				
Acute Primary Pneumonia		Acute Influenzal Pneumonia		Malaria		Dysentery		Pulmonary		Other Forms		Measles		German Measles		Whooping- cough		Chicken- pox						
Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home	Hosp.	Home			
310	248	22	31	1	2	1	...	73	88	27	69	3	37	2	13	138	1924	11	679	1158	3201			
228	152	28	18	...	...	1	1	72	56	24	71	10	50	2	6	90	1555	19	608	953	2628	
265	169	20	9	...	...	1	...	90	86	34	78	9	94	3	15	117	1718	27	805	1163	3118	
269	144	16	7	...	1	1	...	75	62	34	80	15	74	8	21	106	1594	17	718	1035	2826			
232	137	8	2	...	2	...	...	83	67	37	78	17	144	6	45	94	1422	18	972	996	2994	
220	102	13	5	...	1	1	...	66	78	28	72	23	161	5	24	97	996	24	701	955	2254			
65	98	8	6	...	2	...	...	46	64	17	42	23	31	4	2	63	372	11	52	664	740	
66	57	6	4	...	3	1	1	54	58	27	54	32	77	3	...	61	649	18	220	825	1196			
35	89	11	1	1	2	1	...	53	54	22	52	35	186	4	9	30	255	11	341	949	1101			
87	341	20	7	...	...	...	...	49	77	27	67	71	886	5	17	32	297	12	672	1410	2505
96	387	16	17	...	2	...	...	39	71	27	61	184	1769	4	22	22	298	21	677	1420	3431	
73	432	9	19	...	2	3	...	42	97	11	76	206	2365	4	26	28	236	10	513	1243	3898			
46	2356	177	126	2	17	10	2	742	858	315	800	633	5874	50	200	878	11316	199	6958	12,771	29,892			
																			Add others—Anthrax, 1 ; Beri-beri, 1,		2		...	
																					12,773		29,892	

TABLE XX.—HOSPITAL BED ACCOMMODATION FOR INFECTIOUS DISEASES
IN GLASGOW SINCE 1865 (EXCLUDING TUBERCULOSIS).

YEAR.	PARISH.			Glasgow Royal Infirmary.	LOCAL AUTHORITY.						Total Beds.	Population in Thousands.	Beds per Thousand.
	City.	Barony.	Govan.		Parliamen- tary Road.	Belvidere Fever.	Belvidere Smallpox.	Ruchill.	Shieldhall.	Knights- wood.			
1865	100	120	54	200	136	...	...	...	...	...	610	428	1.4
1866	100	120	54	175	136	...	...	...	...	...	585	438	1.3
1867	...	120	54	100	136	...	...	...	...	...	410	446	0.9
1869	...	120	54	135	136	...	...	...	...	...	445	464	1.0
1870	...	120	54	100	250	250	...	...	...	...	774	471	1.7
1872	...	120	...	100	250	250	...	...	...	...	720	495	1.4
1875	100	250	250	...	...	...	...	600	500	1.2
1876	250	250	...	...	...	...	500	502	1.0
1878	120	250	150	...	...	...	520	507	1.0
1880	120	250	150	...	...	...	520	510	1.0
1881	120	370	150	...	...	...	640	512	1.2
1882	120	220	150	...	...	...	490	518	1.0
1887	120	390	150	...	...	...	660	545	1.2
1893	200	390	150	...	...	...	740	678	1.1
1900	200	390	150	440	...	...	1180	744	1.6
1901	200	390	220	440	...	...	1250	764	1.6
1906	390	220	440	...	...	1050	836	1.3
1910	390	220	542	...	...	1152	884	1.3
1913	390	220	542	100	81	1333	1032	1.3
1915	390	220	542	100	10	1262	1035	1.2
1923	390	220	542	100	114	1366	1089	1.3
1925	390	220	542	100	134	1386	1096	1.3
1926	610	...	542 ¹	120	134 ²	1406	1098	1.3

¹ Also 272 beds for Tuberculosis.

² „ 88 „ „

The City has also a part interest in Lightburn Hospital—about 7.8 beds.

„ „ „ Darnley „ „ 20 „

TABLE XX.—(Continued).

Institutional Accommodation for Patients suffering from Tuberculosis:—

	Males.	Females.	Total.
(1) SANATORIA—			
Local Authority, Bellefield, ...	—	45	45
Ochil Hills,	41	9	50*
Bridge of Weir,	27	43	70*
Dunblane,	8	4	12
Darnley,	10	—	10
Seaforth,	7	7	14
Hairmyres,	3	—	3*
Others,	1	—	1
Total Beds in Sanatoria,	97	108	205
	Males.	Females.	Total.
(2) HOSPITALS—			
Local Authority, Ruchill, ...	136	136	272
„ Knightswood, ...	88	—	88
„ Robroyston, ...	224	224	448
„ Auxiliary, ...	34	66	100
Lanfine Home,	15	10	25*
Strathblane Hospital,	5	5	10
Total Beds in Hospitals,	502	442	943
(3) POOR LAW INSTITUTIONS,	128	90	218*
Total Institutional accommodation, ...	727	639	1,366

* The number is not fixed; these figures are based on an average experience of 12 months.

TABLE

SHOWING NUMBER, AVERAGE RESIDENCE, AND

ORDINARY NETT EXPENDITURE (as per Treasurer's Statement), excluding Interest and Sinking Fund Charges, and Cost of treating Patients from Rutherglen :—

Infectious Diseases Hospital, Belvidere, ...	£61,935 9 6	
Infectious Diseases Hospital, Ruchill, ...	93,448 7 10	
Infectious Diseases Hospital, Shieldhall, ...	13,364 8 7	
Infectious Diseases Hospital, Knightswood, ...	24,427 19 4	
Sanatorium and Auxiliary Hospital, Robroy- ston,	55,689 15 3	
	£248,866 0 6	

Average Daily Number of Patients in Infectious Diseases Hospital, Belvidere, ...	570
Average Daily Number of Patients in Infectious Diseases Hospital, Ruchill, ...	789
Average Daily Number of Patients in Infectious Diseases Hospital, Shieldhall, ...	114
Average Daily Number of Patients in Infectious Diseases Hospital, Knightswood, ...	226
Average Daily Number of Patients in Robroyston Sanatorium and Auxiliary Hospital,	539
Average Daily Number of Patients in Hospitals,	2,238

	BELVIDERE HOSPITAL.	RUCHILL HOSPITAL.	SHIELDHALL HOSPITAL.	KNIGHTS- WOOD HOSPITAL.	ROBROYSTON HOSPITAL.	TOTAL.
Patients remaining at 31st May, 1925,	519	779	105	241	544	2,188
Patients admitted during 1925-1926,	5,644	6,000	1,218	1,587	803	15,252
Total under Treatment, 1925-1926,	6,163	6,779	1,323	1,828	1,347	17,440
Patients dismissed during 1925-1926,	5,642	6,073	1,229	1,646	805	15,395
Patients remaining at 31st May, 1926,	521	706	94	182	542	2,045

Average Residence of Patients dismissed, 1925-1926, ... 52.73 days.

XXI.

COST OF TREATMENT OF PATIENTS, 1925-1926.

Average Daily Expenditure,	£681 16 6
Average Daily Cost per Patient,	0 6 1
Average Cost of Treatment per Patient,	16 0 5
Average Cost of Bed per Year,	111 0 5

STATEMENT SHOWING PATIENTS CLASSIFIED AS TO DISEASE, AVERAGE RESIDENCE OF PATIENTS DISMISSED, AND AVERAGE COST AT THE DAILY RATE GIVEN ABOVE.

DISEASE.	NUMBER DISMISSED.	AVERAGE RESIDENCE.	AVERAGE COST.
Typhus,	—	—	—
Smallpox,	—	—	—
Enteric,	59	58·00 days	£17 13 5
Anthrax,	1	48·00 "	14 12 6
Puerperal,	255	27·24 "	8 6 0
Scarlet,	3,433	50·45 "	15 7 5
Diphtheria,	1,790	44·85 "	13 13 3
Encephalitis Lethargica,	27	75·11 "	22 17 8
Polio-encephalitis,	1	33·00 "	10 1 1
Trachoma,	39	61·16 "	18 12 8
Acute Primary Pneumonia and Influenzal Pneumonia,	3,491	27·80 "	8 9 5
Tropical Diseases,	13	25·85 "	7 17 6
Measles and German Measles,	2,207	26·22 "	7 19 9
Whooping-Cough,	801	56·19 "	17 2 5
Phthisis,	1,215	141·88 "	43 4 6
Surgical Tuberculosis,	338	385·46 "	117 8 9
Other Infectious Diseases,	779	28·67 "	8 14 8
All other Diseases,	946	19·77 "	6 3 3
	<u>15,395</u>		

* Includes Erysipelas, Cerebro-spinal Fever, Chickenpox, and Influenza.

† Includes persons sent in by mistaken diagnosis.

TABLE XXII.—GLASGOW.—STATUTORY DECLARATIONS OF CONSCIENTIOUS
OBJECTION TO VACCINATION IN EACH WARD DURING 1925.

MUNICIPAL WARDS.	Conscientious Objections Lodged.	Percentage of Births Registered.
1. Shettleston and Tollcross,	170	20
2. Parkhead,	153	17
3. Dalmarnock,	219	17
4. Calton,	202	18
5. Mile-end,	170	19
6. Whitevale,	122	18
7. Dennistoun,	66	19
8. Provan,	173	18
9. Cowlairs,	151	30
10. Springburn,	123	30
11. Townhead,	145	22
12. Exchange,	110	21
13. Blythswood,	55	17
14. Anderston,	135	17
15. Sandyford,	78	14
16. Park,	40	15
17. Cowcaddens,	180	14
18. Woodside,	134	14
19. Ruchill,	160	23
20. North Kelvin,	96	21
21. Maryhill,	96	15
22. Kelvinside,	16	9
23. Partick (East),	128	20
24. „ (West),	94	17
25. Whiteinch,	156	29
26. Hutchesontown,	308	27
27. Gorbals,	248	17
28. Kingston,	245	24
29. Kinning Park,	280	28
30. Govan,	325	31
31. Fairfield,	304	41
32. Pollokshields,	58	15
33. Camphill,	48	18
34. Pollokshaws,	141	40
35. Govanhill,	123	21
36. Langside,	37	17
37. Cathcart,	47	29
Institutions, &c.,	9	...
City,	5,345	21

TABLE XXIII.—GENERAL SANITARY OPERATIONS.—(a) FOOD AND DRUGS, &c.

	Year.	1925.	1924.	1923.
I. Milk Purveyors.				
Registered during year,		174	287	285
Removed from Register,		203	252	258
On Register at 31st Dec.,		1,523	1,552	1,517
Number of Inspections,		21,700	22,564	21,490
Contraventions of Orders or Regulations,		38	30	36
Prosecutions for same,		1	1	7
Repairs or Improvements effected,		43	54	62
II. Dealers in Ice Cream.				
Registered during the year		64	110	116
Removed from Register,		95	108	86
On Register at 31st Dec.,		692	723	721
Number of Inspections,		8,850	9,374	8,866
Contraventions of Orders or Regulations,		33	25	33
Prosecutions for same,		5	4	5
Repairs or Improvements effected,		18	26	17
III. Byres for Mileh Cows.				
Number of Dairy Byres as at 31st Dec.,		45	51	52
„ Cows licensed for,		858	984	974
Average number kept,		576	639	679
Number of Inspections,		548	325	426
Contraventions of Rules or Regulations,		14	17	22
Prosecutions for same,
Repairs or Improvements effected,	1	3
IV. Unwholesome Food.				
Number of Inspections,		11,769	12,233	11,230
„ Lots dealt with,		26	35	39
Nature of Food destroyed at Inspector's instance with Owner's consent—				
Eggs,		500	390	56
Canned Food (various), (lbs.)		725	235	5,499
Biscuits,		10	...	...
Flour,	2,850
Fruit (Dried and Soft),		42,838	134,151	27,446
Margarine,	21
Pork (Fresh and Cured),		101	47	320
Vegetables,		3,486	114,328	32,840
Meat Paste,		30	...	...
Beef Fat,	1,200	...
Butter,		56	...	...
Sausage Casings,		336	...	...
Nature of Food seized by Inspectors—				
Peas, (lbs.)		...	65	...
Prosecutions,	1	...
Non-convictions,	1	...

TABLE XXIII. (Continued).

Year.	1925.	1924.	1923.
V. Food and Drugs and Margarine Acts.			
Informal Samples analysed,	3,620	4,063	3,725
Statutory Samples analysed,	1,376	1,450	1,385
Statutory Samples found Non-genuine,	94	146	118
Proceedings instituted,	47	51	51
Number of Convictions,	36	46	45
Amount of Fines imposed,	£199	£266 16/	£297 1/
Number dismissed or found "not proven,"	3	...	3
Number deserted simpliciter,	5	3	1
Number withdrawn and expenses paid,	3	2	2
Amount of expenses paid,	£5 6/	£5 5/	£4 4/
Prosecutions for Margarine Offences,	8	6	9
Fines and Expenses imposed,	£22	£19 1/	£12
Non-convictions, ... ..	...	...	...
Obstruction, ... ..	...	...	1
Fines imposed, ... ..	...	...	£5
Vending Milk without name and address being on vessel,	1	4	1
Number of Convictions,	1	4	1
Amount of Fines,	£1	£6 1/	£2
Refusal to Sell, ... ..	...	1	...
Number of Convictions, ... ..	...	1	...
Amount of Fines, ... ..	...	£2	...
VI. The Sale of Horse-Flesh Regulation Act, 1889.			
Number of premises in which Horse-flesh is sold, ... ..	...	...	...
Prosecutions for contravention of Act, ... ..	...	...	...
Fines imposed, ... ..	...	...	...
VII. Fish and Game Inspection.			
Under the Glasgow Police Amendment Act, 1890.			
Number of Packages of Fish, Game, Poultry, and Rabbits passed through Fish Market,	1,773,220	1,698,697	1,518,667
Number of Inspections of Fish Shops, Restaurants, and Hawkers' Barrows and Carts,	1,449	1,386	1,209
Number of Nuisances discovered therein, ... ..	...	...	...
Fish and Game destroyed with consent—			
Fresh Fish, (lbs.)	62,674	170,644	143,403
Cured Fish,	18,172	34,121	23,623
Shell Fish,	1,964	3,646	600
Crabs and Lobsters,	112	605	576
Venison,	168	86	142
Rabbits,	4,233	5,245	4,075
Poultry and Game,	1,063	1,422	696
Eggs,	60	3,900	...

TABLE XXIII—(Continued).

(b) AIR PURIFICATION.

Year.	1925.	1924.	1923.
Smoke Prevention.			
Glasgow Police (Further Powers) Act, 1892, Sec. 31.			
Number of Inspections of Boiler and other Furnaces, ...	1,721	1,656	1,860
" Observations of Chimneys, ...	29,221	28,962	30,264
" Intimations of Excess Smoke given, ...	455	516	538
" Warning Notices to those contravening the Act, ...	41	49	59
" Prosecutions in Police Courts, ...	41	61	66
" Convictions, ...	37	61	62
Amount of Fines imposed, ...	£52 8/6	£113 12/	£85 15/6
Number of Prosecutions withheld on receiving a promise from Offenders to improve the Furnace Plant, ...	4	3	6
" Prosecutions withheld on account of accidents to Furnace Plant, or, regular Fireman temporarily off duty, ...	...	...	5
" New Steam Boilers installed to give increased power, ...	3	5	5
" Mechanical Stokers fitted to Steam Boiler Furnaces, ...	23	8	7
" Steam Boiler Furnaces fitted with Smoke-preventing Appliances, ...	5	1	1
" Furnaces in which Anthracite, Coke, or other non-bituminous Fuel has been substituted for ordinary Coal, ...	18	10	19
" Furnaces adapted for Smokeless Combustion of Oil Fuel, ...	2	3	...
" Steam Boilers replaced by Electric Motors (using Corporation power), ...	3	5	9
" Furnaces formerly Coal-fired, reconstructed for use of Corporation gas, ...	9	1	...
" New Chimneys erected or existing Chimneys heightened to give increased draught and carry gases higher, ...	1	8	10
" Improvements to Furnaces not coming under any of the above headings, ...	6	1	2
Spraying Dungsteads, Ashpits and Privies.			
Total number of Dungsteads Sprayed from 5th May, till 27th September, ...	19,467	19,306	20,558
Total Outlay for Wages, Plant, and Material, ...	£489	£480	£504
Interments.			
For year ending 31st May.	1926.	1925.	1924.
Total number of Applications granted for Interment of Unclaimed and other Bodies, ...	447	492	748
Total Expenditure, ...	£1,027 4/4	£1,098 19/3	£1,550 13/6
Payment of Costs recovered, ...	£326 6/2	£272 15/9	£330 16/2

TABLE XXIII.—(c) SUMMARY OF OPERATIONS OF SANITARY SECTION

District.	EASTERN.							
	1	2	3	4	5	6	7	8
Ward.								
I. Nuisances.								
TOTAL INSPECTIONS made for discovery of Nuisances,	33303	30351	38132	48514	41204	16976	15981	22613
Nuisances discovered and recorded, ...	2038	1834	3110	4047	2583	1137	819	1862
„ removed or remedied,	1875	1790	3064	3983	2536	1106	828	1659
Consisting of:—								
Apartments, Lobbies, or W.C.'s, with insufficient light or ventilation, or otherwise defective in construction, ...	...	...	2	2	1	...	...	...
Defective Chimneys causing nuisance, ...	10	6	30	40	14	12	1	8
Disrepair or dampness in Dwelling-houses, ...	134	91	253	574	161	57	36	27
Offensive smells from Drains, or other reasonable grounds—smoke test, ...	31	34	57	54	44	31	17	12
Drains, Conductors, Soil-pipes, or Rhones choked or defective,	973	856	1184	1263	864	547	367	704
Sanitary Fittings choked or defective, ...	195	138	276	374	357	76	39	174
Dirty Houses and Bedding,	60	120	248	471	320	92	27	213
Dirty Closets, Stairs, etc. (daily and bi-weekly cleansing),	58	160	338	234	220	40	44	31
Houses overcrowded, ... ..	...	5	...	...	...	1	...	1
Walls of Closets, Staircases, Lobbies, W.C.'s, and external walls of houses filthy (limewashing),	155	174	173	276	237	147	130	239
Animals or Poultry kept so as to be a nuisance, ... ..	...	1	...	1	1	...	...	...
Accumulations of Garbage or Rubbish, ...	14	13	93	183	29	28	4	13
Smells from Decaying Animal Matter or other cause,	8	2	14	14	...	7	12	2
Stagnant Water,	3	9	42	39	7	3	2	1
Premises infested with Rats or other vermin, ... ..	...	1	4	20	4	6	1	5
Sink accommodation and Water Supply required, ... ..	...	...	7	...	...	...	1	...
Water-Closet accommodation required, ...	...	3	1	4	2	...	1	...
Water Storage Cisterns dirty, uncovered, or unventilated, ... ..	...	...	...	...	1	...	...	...
Water Supply Pipes defective—tenants without water,	30	37	78	85	67	26	10	20
Bakehouses—Dirty,	3	...	2	7	...	...	...	1
„ —Other nuisances, ... ..	...	...	...	8	...	1	...	...
Workshops—Dirty,	2	5	10	10	...	4	...	3
„ —Overcrowded, ... ..	...	...	...	...	...	...	...	...
„ —Defective in light or ventilation, ...	...	...	...	1	...	...	...	...
„ —Inadequate or defective W.C. or sink accommodation, ...	...	1	...	2	...	1	...	...
„ —Other nuisances, ... ..	...	...	1	3	3	1	...	...
Piggeries—Dirty, ... ..	...	...	...	...	...	...	...	...
„ —Other nuisances, ... ..	...	...	...	...	...	...	...	1
Reports to Gas Manager, ... ..	...	...	1	1	...	...	...	...
„ Master of Works,	48	43	162	200	122	17	107	108
„ Superintendent of Cleansing, ...	4	...	12	27	10	...	6	2
Water Engineer,	147	91	76	90	70	9	23	94
Prosecutions—Sheriff Court, ... ..	...	1	...	1	...	...	...	...
„ —Police Court,	1	...	1	1	7	...	...	...
Number of Rotation Cards for Cleansing of Common Stairs, Lobbies, and Water-Closets served on Tenants,	195	216	191	491	362	64	112	83
Number of Piggeries on Register,	1	5	...	...	...	2	...	6
Number of Inspections,	4	38	...	...	...	19	...	18

FOR THE YEAR 1925—Continued.

NORTHERN.

9	10	11	17	18	19	20	21
14455	12782	18936	30523	27537	9696	14202	11771
1289	1328	1491	3110	2464	1251	1376	1078
1066	1240	1340	2767	2244	1082	1200	947
...	...	...	1	...	...	...	...
3	24	18	12	20	26	10	2
25	89	33	58	66	18	29	20
31	16	17	30	23	12	10	14
419	499	463	1027	820	454	518	432
60	193	140	438	289	101	135	89
28	62	147	149	211	118	19	90
36	22	56	154	131	37	29	45
...	...	...	1	...	...	1	1
197	99	187	354	261	118	187	96
...	...	...	...	4	...	...	1
20	58	49	183	72	14	80	17
1	2	4	8	22	1	3	2
8	1	2	8	14	10	23	...
...	2	8	2	13	5	3	1
...	...	...	...	...	...	1	...
...	...	...	...	...	...	1	...
149	65	1	...	...	87	9	27
7	12	14	52	12	13	7	3
1	...	9	10	4	4	...	...
2	...	...	3	5	2	...	...
1	4	16	7	9	8	3	...
...
...	...	...	...	2	...	...	...
...	...	...	...	1	...	...	3
...	...	...	2	8	1	1	3
...	6	...	...	...	1	...	1
...	...	...	...	...	...	...	1
1	...	3	...	1	...	2	1
45	44	101	94	122	8	63	38
2	...	7	5	...	1	1	1
30	42	65	169	134	43	65	59
...
...	2	1	9	2	...	...	...
19	84	166	959	279	2	98	...
2	4	...	2	...	3	...	8
10	20	...	17	...	6	...	38

TABLE XXIII.—(c) SUMMARY OF

CENTRAL.

12	13	14	15	16	22	23	24
17540	14246	24542	17931	17512	15725	15758	17193
1920	1509	2297	1882	801	601	2282	1535
1947	1477	2405	1878	733	476	2229	1451
4	2	3	...	...	...	5	...
31	19	38	35	7	1	31	18
243	105	191	126	31	43	266	136
15	12	34	27	24	7	17	22
558	377	726	616	289	229	623	453
244	177	340	258	44	19	314	166
163	29	74	27	1	...	202	58
67	48	70	87	24	61	188	131
1	...	...	..	...	...	...	...
80	108	320	271	169	14	154	148
1	...	...	...	...	...	...	...
147	230	188	152	50	26	97	31
5	5	9	2	11	2	16	2
21	8	23	4	2	4	21	37
...	2	2	...	...	...	...	2
2	...	...	...	...	...	2	...
4	1	2	...	...	...	3	...
...	...	71	...	1	...	16	16
41	12	24	24	2	...	16	9
18	11	8	24	4	3	11	3
4	12	2	4	3	1	5	2
32	77	11	31	11	4	2	1
...	1	...	...	...	...	...	...
1	7	...	...	2	...	...	...
2	6	4	1	2	3	...	...
111	46	17	19	7	3	11	2
...
...	...	...	5	...	1	6	1
72	93	77	73	15	16	66	100
...	2	1	2	...	10	5	9
80	87	170	90	34	29	152	104
...
7	4	5	6	...	...	4	...
...
212	202	238	385	129	82	417	118
...	...	...	...	...	5	...	...
...	...	...	...	...	7	...	...

OPERATIONS OF SANITARY SECTION FOR THE YEAR 1925.—Continued.

25	SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1924.
	26	27	33	34	35	36	37	28	29	30	31	32		
19316	45993	57733	20000	16326	13713	21839	17786	43595	36861	30605	18333	10460	879985	901796
1497	2631	5485	833	860	924	600	787	4166	3580	3676	1423	774	70880	75230
1316	2552	5089	776	802	867	561	640	4393	3619	3860	1693	733	68226	72794
2	...	2	2	...	...	1	...	47	35	25	8	2	144	
6	20	32	1	7	3	5	1	28	24	47	9	3	602	
106	147	628	27	69	58	30	42	319	189	332	114	67	4940	
24	20	19	2	1	15	3	2	40	18	11	9	6	761	
613	1229	1610	352	480	440	268	306	1828	1559	1427	828	256	26457	
85	147	796	26	100	58	22	31	580	494	792	162	80	8009	
35	88	299	1	10	8	2	1	71	8	12	3	20	3487	
12	116	342	57	10	72	33	51	320	113	305	83	56	3881	
...	2	1	...	3	...	...	...	...	2	3	...	...	21	
191	238	293	207	70	105	110	128	297	338	285	290	79	6925	
...	...	3	...	1	1	...	...	4	...	2	1	...	21	
29	73	207	19	14	6	9	16	192	66	60	12	19	2513	
4	...	9	1	...	1	1	...	7	1	...	7	11	196	
8	84	35	1	6	...	6	20	...	2	...	...	3	457	
2	6	35	1	1	2	1	1	11	5	2	3	3	154	
...	...	...	...	...	...	...	...	...	...	...	...	1	14	
...	...	1	...	...	...	...	...	1	6	1	...	...	31	
...	...	...	4	...	...	7	2	...	1	5	...	31	493	
2	50	83	2	1	11	3	2	63	36	51	11	1	917	
3	11	11	5	2	2	3	3	3	5	5	...	...	176	
1	5	5	3	1	...	6	...	6	2	7	4	2	96	
...	2	8	2	3	2	1	...	26	11	26	3	4	339	
...	...	...	...	...	...	...	...	...	...	...	...	...	1	
...	...	...	...	...	...	...	...	...	...	...	...	...	13	
...	...	...	1	...	1	...	...	...	...	...	...	...	30	
4	4	5	1	...	3	...	...	4	8	14	7	8	297	
...	...	...	...	...	...	...	...	...	...	...	...	...	8	
2	...	...	...	...	...	...	...	...	...	...	...	...	2	
74	175	309	32	17	28	6	6	148	290	163	54	34	25	
7	5	30	...	...	...	...	...	65	11	26	...	4	3170	
106	130	326	29	6	51	44	28	333	395	259	85	45	255	
...	...	...	1	...	...	...	...	...	...	...	...	...	3790	
...	...	7	2	2	...	...	...	5	3	3	...	...	3	3
...	...	...	...	...	...	...	...	...	...	...	...	...	72	57
16	31	520	216	63	93	79	38	690	422	437	117	241	8067	9258
5	...	...	...	1	...	2	1	...	...	4	1	...	52	*
2	...	...	...	5	...	7	4	...	...	12	2	...	209	*

Classification Altered at 1st January, 1926.

* Included for first time.

TABLE XXIII.—(c) SUMMARY OF OPERATIONS OF SANITARY SECTION

District. Ward.	EASTERN.							
	1	2	3	4	5	6	7	8
II. Drain Testing.								
Total number of Applications of the test at different times,	234	186	109	106	108	78	48	34
Number of new Applications for satisfaction of Dean of Guild Court,	160	73	3	10	13	...	3	7
Number of old Tenements or Systems to which they were applied for the first time,	30	42	56	47	54	39	25	14
Number of these found all right on first application of Test,	7	9	4	7	3	6	9	2
Number found more or less defective on first application,	23	33	52	40	51	33	16	12
III. Houses Let in Lodgings and Farmed-out Houses.								
Number Inspected, Measured, and Registered, ... ..	...	...	...	5	4	1	...	...
Number now on Register, { Houses Let in Lodgings, ... ..	...	...	5	3	5	2	...	...
{ Farmed-out Houses, ... ..	...	...	...	151	50	...	...	...
Number of Re-inspections by Day, ... ..	...	...	20	1762	677	2	...	...
Do. do. by Night, ... ..	...	...	16	477	178	...	6	...
Do. of Keepers Summoned for Contravening Regulations, ... ..	...	...	...	...	...	...	...	...
Do. do. Fined for same, ... ..	...	...	...	...	...	...	...	...
Amount of Fines, .. ..	...	...	...	...	...	...	...	...
IV. Visits by Female Inspectors.								
Number of Houses visited, first time,	622	1856	1716	3111	2871	1282	267	2673
Number of Houses in which Lodgers were found,	31	85	89	150	138	65	12	90
Number of Houses and Bedding found Dirty, dealt with by statutory notice,	70	111	208	366	262	100	25	223
Number of Houses revisited,	61	101	182	385	259	122	37	350
Number of Houses found improved,	61	85	167	355	266	120	37	234
Number of Nuisances reported by Female Inspectors, ... ..	...	...	1	1	8	...	...	7
Number of Infectious Disease Cases reported, ... ..	...	...	1	...	...	...	...	...
Under the Glasgow Corporation (Police) Order, 1904, dealing with Filthy Houses and Dirty or Verminous Children:—								
Number of Visits to Schools,	89	71	101	104	101	28	49	45
Number of Children submitted for inspection,	2275	2725	2018	2183	2573	894	802	1158
Number of Children found Verminous,	642	527	491	420	838	258	302	696
Number of Children found Dirty,	65	150	288	274	42	20	9	85
Number of Homes inspected,	339	298	354	270	462	310	77	309
Number of Homes Re-inspected,	1	11	29	26	2	8	1	21
Number of Dirty Houses,	2	5	12	10	1	3	...	8

FOR THE YEAR 1925—Continued.

NORTHERN.

9	10	11	17	18	19	20	21
72	69	66	71	57	154	36	76
3	27	3	7	2	103	2	16
29	18	30	32	28	15	18	27
1	3	...	3	3	1	5	2
28	15	30	29	25	14	13	25
...	...	2	...	...	...	...	...
3	1	3	4	5	...	...	...
...	...	10	24	...	...	...	...
7	...	155	259	22	...	...	...
2	6	26	6	...	...	...	...
...
...
...
368	908	1481	1417	2133	2501	469	1431
17	49	92	145	67	96	13	42
27	64	163	94	182	128	19	70
52	96	271	309	280	262	39	138
36	65	162	103	204	142	26	93
...	...	2	...	20	19	9	37
...	...	...	...	2	...	...	...
20	50	69	106	93	14	...	55
253	623	734	1942	1639	54	...	876
119	366	441	1124	554	35	...	360
13	44	31	38	118	6	...	84
144	177	248	982	642	125	135	265
20	11	17	48	35	8	4	22
2	6	6	6	18	4	2	8

TABLE XXIII.—(c) SUMMARY OF

CENTRAL.

12	13	14	15	16	22	23	24
53	61	95	80	73	327	41	45
8	17	4	6	8	180	3	9
16	14	30	34	28	18	16	21
2	2	2	3	5	8	2	11
14	12	28	31	23	10	14	10
...	...	1	1	...	...	2	...
13	9	2	7	...	...	4	1
394	11	53	...	...	...	29	...
1308	167	365	10	...	...	158	...
1248	45	147	22	..	...	99	3
...
...
...
5164	3193	1689	1337	54	35	4388	1980
177	168	37	21	...	3	362	130
43	27	25	30	...	..	189	63
87	48	14	15	...	...	315	82
49	25	24	25	...	...	194	60
...
...
64	...	71	65	19	...	...	9
903	...	1346	749	279	..	...	65
37	...	50	21	1	...	...	...
3	...	8	13	...	...	...	...
138	291	580	428	62	...	2	24
...	...	2	3	...	...	...	...
...	...	6	3	...	...	...	...

OPERATIONS OF SANITARY SECTION FOR THE YEAR 1925—*Continued.*

25	SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1924.
	26	27	33	34	35	36	37	28	29	30	31	32		
552	47	55	91	40	51	21	341	51	83	34	203	101	3952	2728
300	3	9	35	28	9	4	163	4	14	9	61	39	1345	638
27	16	21	5	2	11	4	6	33	20	9	10	11	856	854
4	2	...	...	1	...	3	...	4	3	1	...	...	118	109
23	14	21	5	1	11	1	6	29	17	8	10	10	737	745
1	...	...	...	...	...	...	...	...	...	...	...	...	17	28
6	...	19	...	...	...	...	...	17	1	5	...	...	115	114
...	...	135	...	...	...	...	...	12	...	...	...	...	869	862
4	...	1583	...	...	...	...	...	456	3	40	...	...	6998	6271
15	...	561	...	...	...	...	...	6	...	...	...	...	2863	3341
...
...
...
629	2042	5697	2	154	207	3	2	3219	1346	3296	89	274	59906	57614
90	187	1274	...	19	9	...	...	196	86	384	24	9	4357	3042
38	78	281	1	5	7	2	1	82	10	7	...	12	3013	3404
59	148	391	3	5	16	4	3	140	25	43	...	12	4354	4941
35	76	299	2	4	7	2	1	81	9	8	...	12	3069	3386
...	...	4	...	...	...	...	...	20	11	16	...	1	156	101
...	...	...	...	...	...	...	...	2	...	...	...	...	5	...
16	114	175	1	53	85	...	3	79	108	107	33	28	2025	1855
195	1886	2567	1	663	1187	...	9	1406	2578	1677	320	409	36989	31805
7	278	478	...	101	185	...	4	134	147	110	4	4	8734	7758
...	23	127	...	7	9	...	...	62	31	1	...	...	1551	1487
60	244	440	2	93	71	...	1	498	379	467	63	56	9036	8335
12	6	5	...	1	2	...	...	9	7	6	...	1	322	223
6	7	9	...	1	2	...	1	4	4	4	...	1	141	148

TABLE XXIII.—(c) SUMMARY OF OPERATIONS OF SANITARY SECTION

District. Ward.	EASTERN.							8
	1	2	3	4	5	6	7	
IV. Visits by Female Inspectors— <i>Continued.</i>								
Number of Dirty Bedding, ... ..	...	1	4	2	...	1	...	7
Number of Notices served,	16	36	73	60	29	27	10	54
Number of Houses Cleaned in consequence,	2	5	11	10	1	3	...	7
Number of Bedding Cleaned in consequence, ... ..	...	1	4	2	...	1	...	5
Number of Bedding Cleaned at Sanitary Wash-house, ... ..	...	...	...	...	...	...	...	...
Number of Children Cleaned by Guardians,	707	677	779	694	880	278	311	696
Number of Children Cleaned by Officers, ... ..	...	...	...	...	...	...	...	11
Number of Applicants supplied with Insecticide, ... ..	...	...	...	1936	...	...	...	...
V. Factories, Workshops, and Home-workers' Dwellings.								
Total number of Workshops on the Registers at 31st December,	98	106	112	276	133	115	84	31
Measured and Registered during the Year, ... ..	...	1	12	27	18	...	1	1
Total Inspections made,	763	271	267	1371	492	780	302	169
Number of Workshops found dirty,	3	4	10	11	...	4	...	3
Number found Overcrowded, ... ..	...	...	...	...	...	...	...	1
Number found defective in Light or Ventilation, ... ..	...	...	...	...	...	...	...	...
Number found with inadequate or defective W.C. or Sink Accommodation, ... ..	...	...	...	2	2	1	...	...
Number of other Nuisances found, ... ..	...	...	1	4	3	1	...	...
Number who carried out Improvements suggested by Inspector,	2	6	12	17	5	6	...	3
Prosecutions, ... ..	...	...	...	...	...	...	...	...
Convictions, ... ..	...	...	...	...	...	...	...	...
Number of Visits made under the Home-work Order,	18	11	96	54	109	16	25	11
Number of Premises found dirty and Intimations issued, ... ..	...	...	...	...	...	...	...	...
VI. Bakehouses.								
Number of Inspections for Cleanliness, &c.,	88	68	66	187	203	93	72	19
Number of Warnings issued for neglect of Cleanliness,	2	3	1	7	...	...	...	1
Number of other Nuisances found, ... ..	...	...	...	8	2	1	...	...
VII. Rag Flock Act, 1911.								
Samples submitted for Analysis, ... ..	...	10	3	4	8	8	3	...
Certified not to conform to Standard, ... ..	...	...	...	1	1	...	...	...
Proceedings instituted, ... ..	...	...	...	1	1	...	...	...
Convictions, ... ..	...	...	...	1	1	...	...	...

OPERATIONS OF SANITARY SECTION FOR THE YEAR 1925—Continued.

25	SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1924.
	26	27	33	34	35	36	37	28	29	30	31	32		
...	3	9	...	1	...	...	...	3	3	4	...	1	142	131
...	311	511	...	110	196	...	5	203	171	115	4	5	2430	2590
...	5	7	...	...	1	...	...	5	5	2	...	...	126	120
...	3	7	...	...	...	...	...	3	3	4	...	1	121	113
...	...	...	...	...	...	...	...	1	...	1	...	...	2	1
5	207	553	...	96	145	...	4	157	135	57	...	6	9521	4962
...	...	...	...	...	...	...	...	...	...	...	...	...	11	8
...	...	...	...	881	...	...	...	...	...	3258	...	...	8991	8391
73	73	300	94	61	77	41	36	255	136	113	58	93	4643	5535
16	8	31	13	19	7	8	10	9	7	...	...	44	411	500
138	289	1375	366	217	359	151	165	630	411	344	138	212	19425	17574
1	3	9	2	3	2	1	...	30	9	21	1	5	361	343
...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
...	...	...	...	...	...	...	...	...	...	...	...	...	12	16
...	...	...	1	...	1	...	...	...	...	...	...	...	38	12
4	4	5	1	...	3	...	...	4	8	14	7	8	309	247
4	6	13	4	3	6	1	...	...	...	...	...	...	571	474
...
...
17	16	58	7	3	55	110	16	15	18	1	1	5	1028	990
...	...	...	...	...	...	...	...	...	...	...	...	...	2	6
15	93	184	91	65	65	41	36	45	22	54	29	9	2509	2155
3	11	11	8	2	5	3	4	3	5	5	...	...	205	166
2	7	5	5	1	2	6	...	6	2	7	4	2	113	*
2	...	...	...	...	...	...	...	2	2	...	...	...	67	56
...	...	...	...	...	...	...	...	2	2	...	...	...	6	4
...	...	...	...	...	...	...	...	...	...	...	...	...	2	1
...	...	...	...	...	...	...	...	...	...	...	...	...	2	1

* Included for first time.

TABLE XXIII.—(c) SUMMARY OF OPERATIONS OF SANITARY SECTION

District. Ward.	EASTERN.							8
	1	2	3	4	5	6	7	
VIII. Common Lodging-houses and Boarding-houses for Emigrants and Seamen.								
Common Lodging-houses Inspected, Measured, and Registered, ... ..	...	...	...	...	...	...	...	...
Number of Re-inspections by Day, ...	8	...	...	601	...	...	...	...
Do. do. by Night, ...	3	...	...	64	...	...	...	...
Do. Structural Defects found and remedied, ... ..	...	...	...	...	...	...	...	...
Do. Intimations of Irregularities to Keepers, ... ..	...	...	...	1	...	...	...	...
Do. Keepers summoned for contravening Regulations, ...	...	...	...	...	...	...	...	...
Do. Keepers fined for contravening Regulations, .. ...	...	...	...	...	...	...	...	...
Do. Removed from the Register, ...	...	...	...	...	...	...	...	...
Total Number of Common Lodging-houses now on Register,	1	...	...	10	...	...	...	...
With Accommodation for	396½	...	...	2261½	...	...	...	...
Boarding-houses Measured and Registered, ... ..	...	...	...	...	...	...	...	...
Total Number of Boarding-houses, ... ..	...	...	...	...	...	...	...	...
With Cubic Capacity for ... ..	...	...	...	...	...	...	...	...
Number of Re-inspections, ... ..	...	...	...	...	...	...	...	...
Do. Intimations of Irregularities to Keepers, ... ..	...	...	...	...	...	...	...	...
IX. Night Inspections								
(Of HOUSES TICKETED under GLASGOW POLICE ACTS, 1866 to 1890.)								
Total Number of Houses ticketed for first time during year, ... ..	...	...	...	...	...	...	...	...
Total Number of Ticketed Houses, now on the Registers,	291	518	1239	1605	1210	393	67	1386
Total Number of Inspections for Detection of Overcrowding,	887	1644	3533	4256	4122	1481	268	3259
Total Number of Cases of Overcrowding,	102	212	435	475	561	152	28	571
Total Number warned by Inspectors, ...	102	212	435	475	561	152	28	571
Total Number admonished by Magistrates in Police Courts, ... ..	...	...	...	...	...	...	...	...
Total Number fined by Magistrates in Police Courts, ... ..	...	...	...	...	...	...	...	...
Cubic feet of space in worst cases of Overcrowding, instead of 400, only	174	153	147	142	160	184	199	...
Number of Cases of Overcrowding in houses under 900 cubic feet of space,	4	2	16	39	21	...	...	25

TABLE XXIII.—(c) SUMMARY OF:

CENTRAL.

12	13	14	15	16	22	23	24
...
71	152	32	28	...	...	17	...
18	60	17	3	...	...	3	...
...
7	3	...	...	...	...	...	...
...
...
7	5	1	1	...	...	1	...
827	963	302	343	...	...	312	...
...
...	13	3	...	...	...	...	...
...	380	143	...	...	...	...	...
...	6	43	...	...	...	...	...
...
17	...	...	...	...	...	...	...
298	530	1365	847	...	...	402	37
906	1607	4605	3202	...	...	1221	111
71	135	574	483	...	...	139	17
71	135	574	483	...	...	139	17
...
...
133	170	166	166	...	...	200	230
17	17	13	43	...	...	...	...

OPERATIONS OF SANITARY SECTION FOR THE YEAR, 1925—Continued.

25	SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1924.	
	26	27	33	34	35	36	37	28	29	30	31	32			
...
5	...	13	...	...	...	...	...	24	40	85	...	...	1168	1249
3	...	4	...	...	...	...	...	4	...	3	...	...	206	264
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	1	...	...	...	...	...	...	7	18	...	...	40	72
...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1	...	2	...	...	...	...	...	1	2	1	...	...	41	41
364	...	861½	...	...	...	...	...	450	947	407	...	...	10624½	10624½
...	
...	...	...	...	...	...	...	...	...	...	1	...	...	17	17
...	...	...	...	...	...	...	...	...	...	53	...	...	576	576
...	...	...	...	...	...	...	...	...	...	12	...	...	61	93
...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	17	...
...	317	1619	...	...	...	...	...	849	78	578	...	108	18314	18830
...	1071	4634	...	...	...	...	...	2672	390	1122	...	324	52035	60607
...	62	299	...	...	...	...	...	348	54	103	...	34	6341	7074
...	62	299	...	...	...	...	...	348	54	103	...	34	6341	7074
...	
...	
...	190	120	...	...	...	...	...	160	200	215	...	142	120	114
...	...	12	...	...	...	...	...	9	...	...	...	...	276	298

TABLE XXIV.—GLASGOW.—POPULATION; BIRTHS AND DEATHS; BIRTH-RATES AND DEATH RATES PER 1,000; ALSO DEATHS UNDER 1 YEAR, AND DEATH-RATES PER 1,000 BIRTHS SINCE 1860.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year.	
						Number.	Rate per 1,000 Births.
1860†	389,843	15,943	12,436	40·8	31·9	2,905	182
1861	397,673	16,537	10,936	41·6	27·5	2,544	154
1862	405,789	16,400	11,565	40·4	28·5	2,562	156
1863	413,944	16,986	13,329	41·0	32·2	2,774	163
1864	420,738	17,411	13,674	41·4	32·5	3,051	175
1865	428,123	17,956	13,914	41·9	32·5	3,097	173
1866	437,850	18,288	12,829	41·8	29·3	2,905	159
1867	446,028	18,347	12,578	41·1	28·2	2,895	158
1868	455,000	18,607	13,832	40·9	30·4	3,127	168
1869	464,332	18,495	15,648	39·8	33·7	3,411	184
1870	471,453	19,355	13,955	41·1	29·6	2,991	155
1871	491,900	18,867	15,790	38·4	32·1	3,608	191
1872	494,824	20,158	14,053	40·7	28·4	3,198	159
1873	494,847	19,487	14,499	39·4	29·3	3,255	167
1874	498,270	20,039	15,845	40·2	31·8	3,240	162
1875	499,480	20,825	15,384	41·7	30·8	3,388	163
1876	502,299	20,981	13,763	41·7	27·4	3,166	151
1877	504,487	21,124	13,823	41·9	27·4	3,106	147
1878	507,420	20,622	14,157	40·6	27·9	3,285	159
1879	508,048	19,751	12,498	38·8	24·6	2,504	127
1880	509,732	18,912	13,304	37·1	26·1	2,842	150
1881	512,034	19,106	12,916	37·3	25·2	2,745	144
1882	517,904	19,735	13,046	38·1	25·2	2,959	150
1883	523,154	19,911	14,577	38·1	27·9	3,091	155
1884	528,459	20,557	13,942	38·9	26·4	3,094	151
1885	533,817	19,861	13,492	37·2	25·3	3,100	156
1886	539,231	19,862	13,104	36·8	24·3	2,786	140
1887	544,700	19,328	12,135	35·5	22·3	2,676	138
1888	550,226	19,309	11,681	35·1	21·2	2,560	133
1889	555,808	19,503	13,139	35·1	23·6	3,008	154
1890	561,447	19,279	13,374	34·3	23·8	2,880	149
1891	567,143	19,857	14,324	35·0	25·3	2,946	148
1892	669,059*	22,815	15,218	34·1	22·7	3,168	139
1893	677,883	23,173	15,798	34·2	23·3	3,649	157
1894	686,820	22,644	13,673	34·0	19·9	2,937	130
1895	695,876	22,803	16,344	32·8	23·5	3,538	155
1896	705,052	24,029	14,385	34·1	20·4	3,278	136
1897	714,919	23,880	15,727	33·4	22·0	3,826	160
1898	724,349	24,262	15,333	33·5	21·2	3,792	156
1899	733,903	24,249	15,828	33·0	21·6	3,696	152
1900	743,969	24,362	16,393	32·7	22·0	3,778	153
1901	761,925	24,206	16,197	31·8	21·2	3,607	149
1902	762,789	24,722	15,532	32·4	20·4	3,206	129

* Extended City.

† For earlier years, see Report for 1910, Table liii.

TABLE XXIV—Continued.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year.	
						Number.	Rate per 1,000 Births.
1903	763,654	25,135	15,073	32·9	19·7	3,663	146
1904	764,521	24,754	15,414	32·4	20·2	3,606	146
1905	765,389	24,316	14,460	31·8	18·9	3,195	131
1906	780,192*	24,560	14,889	31·5	19·1	3,223	131
1907	781,080	24,006	15,659	30·7	20·0	3,116	130
1908	781,969	23,915	15,265	30·6	19·5	3,284	137
1909	782,860	23,140	15,242	29·6	19·5	3,073	133
1910	783,785	22,222	13,395	28·4	17·1	2,694	121
1911	784,680	21,755	13,899	27·7	17·7	3,016	139
1912	785,600	22,044	13,797	28·1	17·6	2,740	124
1913 [‡]	1,021,789*	28,688	17,693	28·1	17·3	3,706	129
1914	1,028,440	29,462	17,522	28·6	17·0	3,913	133
1915	1,035,091	27,943	20,159	27·0	19·5	4,007	143
1916	1,041,742	27,094	16,601	26·0	15·9	2,996	111
1917	1,048,393	24,030	16,691	22·9	15·9	3,089	129
1918	1,055,044	23,524	18,362	22·3	17·4	2,660	113
1919	1,061,695	25,835	18,237	24·3	17·2	2,937	114
1920	1,068,346	32,626	16,765	31·5	15·7	3,477	107
1921	1,075,000	29,712	15,625	27·6	14·5	3,138	106
1922	1,081,933	28,298	17,850	26·2	16·5	3,401	120
1923	1,088,987	26,710	14,875	24·5	13·7	2,388	89
1924	1,095,969	25,330	16,868	23·1	15·4	3,005	119
1925	1,097,841	25,416	15,336	23·2	14·0	2,591	102

* Extended City.

‡ Births and Deaths from 1913 are corrected for transfers.

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4	Chapter 3	104	Chapter 13	104	Chapter 14	104	Chapter 15
5	Chapter 4	105	Chapter 14	105	Chapter 15	105	Chapter 16
6	Chapter 5	106	Chapter 15	106	Chapter 16	106	Chapter 17
7	Chapter 6	107	Chapter 16	107	Chapter 17	107	Chapter 18
8	Chapter 7	108	Chapter 17	108	Chapter 18	108	Chapter 19
9	Chapter 8	109	Chapter 18	109	Chapter 19	109	Chapter 20
10	Chapter 9	110	Chapter 19	110	Chapter 20	110	Chapter 21
11	Chapter 10	111	Chapter 20	111	Chapter 21	111	Chapter 22
12	Chapter 11	112	Chapter 21	112	Chapter 22	112	Chapter 23
13	Chapter 12	113	Chapter 22	113	Chapter 23	113	Chapter 24
14	Chapter 13	114	Chapter 23	114	Chapter 24	114	Chapter 25
15	Chapter 14	115	Chapter 24	115	Chapter 25	115	Chapter 26
16	Chapter 15	116	Chapter 25	116	Chapter 26	116	Chapter 27
17	Chapter 16	117	Chapter 26	117	Chapter 27	117	Chapter 28
18	Chapter 17	118	Chapter 27	118	Chapter 28	118	Chapter 29
19	Chapter 18	119	Chapter 28	119	Chapter 29	119	Chapter 30
20	Chapter 19	120	Chapter 29	120	Chapter 30	120	Chapter 31
21	Chapter 20	121	Chapter 30	121	Chapter 31	121	Chapter 32
22	Chapter 21	122	Chapter 31	122	Chapter 32	122	Chapter 33
23	Chapter 22	123	Chapter 32	123	Chapter 33	123	Chapter 34
24	Chapter 23	124	Chapter 33	124	Chapter 34	124	Chapter 35
25	Chapter 24	125	Chapter 34	125	Chapter 35	125	Chapter 36
26	Chapter 25	126	Chapter 35	126	Chapter 36	126	Chapter 37
27	Chapter 26	127	Chapter 36	127	Chapter 37	127	Chapter 38
28	Chapter 27	128	Chapter 37	128	Chapter 38	128	Chapter 39
29	Chapter 28	129	Chapter 38	129	Chapter 39	129	Chapter 40
30	Chapter 29	130	Chapter 39	130	Chapter 40	130	Chapter 41
31	Chapter 30	131	Chapter 40	131	Chapter 41	131	Chapter 42
32	Chapter 31	132	Chapter 41	132	Chapter 42	132	Chapter 43
33	Chapter 32	133	Chapter 42	133	Chapter 43	133	Chapter 44
34	Chapter 33	134	Chapter 43	134	Chapter 44	134	Chapter 45
35	Chapter 34	135	Chapter 44	135	Chapter 45	135	Chapter 46
36	Chapter 35	136	Chapter 45	136	Chapter 46	136	Chapter 47
37	Chapter 36	137	Chapter 46	137	Chapter 47	137	Chapter 48
38	Chapter 37	138	Chapter 47	138	Chapter 48	138	Chapter 49
39	Chapter 38	139	Chapter 48	139	Chapter 49	139	Chapter 50
40	Chapter 39	140	Chapter 49	140	Chapter 50	140	Chapter 51
41	Chapter 40	141	Chapter 50	141	Chapter 51	141	Chapter 52
42	Chapter 41	142	Chapter 51	142	Chapter 52	142	Chapter 53
43	Chapter 42	143	Chapter 52	143	Chapter 53	143	Chapter 54
44	Chapter 43	144	Chapter 53	144	Chapter 54	144	Chapter 55
45	Chapter 44	145	Chapter 54	145	Chapter 55	145	Chapter 56
46	Chapter 45	146	Chapter 55	146	Chapter 56	146	Chapter 57
47	Chapter 46	147	Chapter 56	147	Chapter 57	147	Chapter 58
48	Chapter 47	148	Chapter 57	148	Chapter 58	148	Chapter 59
49	Chapter 48	149	Chapter 58	149	Chapter 59	149	Chapter 60
50	Chapter 49	150	Chapter 59	150	Chapter 60	150	Chapter 61
51	Chapter 50	151	Chapter 60	151	Chapter 61	151	Chapter 62
52	Chapter 51	152	Chapter 61	152	Chapter 62	152	Chapter 63
53	Chapter 52	153	Chapter 62	153	Chapter 63	153	Chapter 64
54	Chapter 53	154	Chapter 63	154	Chapter 64	154	Chapter 65
55	Chapter 54	155	Chapter 64	155	Chapter 65	155	Chapter 66
56	Chapter 55	156	Chapter 65	156	Chapter 66	156	Chapter 67
57	Chapter 56	157	Chapter 66	157	Chapter 67	157	Chapter 68
58	Chapter 57	158	Chapter 67	158	Chapter 68	158	Chapter 69
59	Chapter 58	159	Chapter 68	159	Chapter 69	159	Chapter 70
60	Chapter 59	160	Chapter 69	160	Chapter 70	160	Chapter 71
61	Chapter 60	161	Chapter 70	161	Chapter 71	161	Chapter 72
62	Chapter 61	162	Chapter 71	162	Chapter 72	162	Chapter 73
63	Chapter 62	163	Chapter 72	163	Chapter 73	163	Chapter 74
64	Chapter 63	164	Chapter 73	164	Chapter 74	164	Chapter 75
65	Chapter 64	165	Chapter 74	165	Chapter 75	165	Chapter 76
66	Chapter 65	166	Chapter 75	166	Chapter 76	166	Chapter 77
67	Chapter 66	167	Chapter 76	167	Chapter 77	167	Chapter 78
68	Chapter 67	168	Chapter 77	168	Chapter 78	168	Chapter 79
69	Chapter 68	169	Chapter 78	169	Chapter 79	169	Chapter 80
70	Chapter 69	170	Chapter 79	170	Chapter 80	170	Chapter 81
71	Chapter 70	171	Chapter 80	171	Chapter 81	171	Chapter 82
72	Chapter 71	172	Chapter 81	172	Chapter 82	172	Chapter 83
73	Chapter 72	173	Chapter 82	173	Chapter 83	173	Chapter 84
74	Chapter 73	174	Chapter 83	174	Chapter 84	174	Chapter 85
75	Chapter 74	175	Chapter 84	175	Chapter 85	175	Chapter 86
76	Chapter 75	176	Chapter 85	176	Chapter 86	176	Chapter 87
77	Chapter 76	177	Chapter 86	177	Chapter 87	177	Chapter 88
78	Chapter 77	178	Chapter 87	178	Chapter 88	178	Chapter 89
79	Chapter 78	179	Chapter 88	179	Chapter 89	179	Chapter 90
80	Chapter 79	180	Chapter 89	180	Chapter 90	180	Chapter 91
81	Chapter 80	181	Chapter 90	181	Chapter 91	181	Chapter 92
82	Chapter 81	182	Chapter 91	182	Chapter 92	182	Chapter 93
83	Chapter 82	183	Chapter 92	183	Chapter 93	183	Chapter 94
84	Chapter 83	184	Chapter 93	184	Chapter 94	184	Chapter 95
85	Chapter 84	185	Chapter 94	185	Chapter 95	185	Chapter 96
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87	Chapter 86	187	Chapter 96	187	Chapter 97	187	Chapter 98
88	Chapter 87	188	Chapter 97	188	Chapter 98	188	Chapter 99
89	Chapter 88	189	Chapter 98	189	Chapter 99	189	Chapter 100
90	Chapter 89	190	Chapter 99	190	Chapter 100	190	Chapter 101
91	Chapter 90	191	Chapter 100	191	Chapter 101	191	Chapter 102
92	Chapter 91	192	Chapter 101	192	Chapter 102	192	Chapter 103
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PART II.

ANNUAL REPORTS

OF

FEVER AND TUBERCULOSIS
HOSPITALS AND SANATORIA

FOR THE YEAR

1925

BELVIDERE FEVER HOSPITAL.

Admissions to hospital during the year 1925 numbered 5,378, a figure which, although slightly less than that for 1924, is well above the average of recent years. The average duration of residence of patients who were discharged well was 43 days. Among fatal cases the average period of residence was 13·8 days.

The admissions to hospital are not always a true index of the incidence of the various diseases in the City, as, for economic reasons, it may be convenient to deal with one disease chiefly in one hospital, but no epidemic of unusual magnitude or importance falls to be recorded. In striking contrast to the previous year, cases of encephalitis lethargica numbered only 5, none of these being very severe examples of the condition.

Scarlet Fever.—Scarlet fever was responsible for 1,491 admissions. 239 patients remained in hospital from the previous year; 1,375 were discharged well, and 23 deaths occurred, giving a mortality rate of 1·6 per cent. In 98 certifications of scarlet fever the diagnosis was revised to some other condition. True toxic cases were rare; the septic type of the disease accounted for all but a few of the deaths. Early in the year, through the courtesy of Messrs. Burroughs, Wellcome, & Co., and Messrs. Parke, Davis, & Co., the new scarlatinal antitoxin was made available for a limited number of cases. The patients so treated all suffered from severe types of the disease, and the results obtained were very encouraging. The pyrexia was directly reduced and the local symptoms mitigated. Rashes faded rapidly, and the period of general constitutional disturbance was curtailed. Moreover, complications rarely occurred among the serum-treated patients. When given within about thirty hours of the appearance of the rash, if the latter were not intense, the serum seemed to prevent the occurrence of desquamation. When given later it undoubtedly in some cases delayed desquamation, an important point to bear in mind when considering the earlier discharge from hospital of scarlet fever patients. Towards the end of the year the sera of both firms became available commercially, and were used a little more freely, but still restricted to the severer forms of the disease. The serum as yet is costly, and its routine employment would represent an additional expenditure of about £1,200 a year. In the great majority of cases of the milder forms of the disease recovery takes place

without distressing symptoms, and without complications even when no serum is employed, so that routine use of the serum is scarcely justifiable unless it can be proved to reduce the period of necessary detention in hospital. If this can be reduced by three days, the cost of the serum will be counter-balanced, and any further reduction will represent a net saving, besides rendering more beds available for the many other diseases which continue to make an increasing demand on hospital accommodation.

The Dick test for susceptibility to scarlet fever has been offered to the junior nursing staff, some of whom have been tested, and the susceptibles are now in process of immunisation.

The following notes by Dr. Miller, who has had charge of most of the serum-treated cases, may be of interest:—

“In the treatment of scarlet fever with antistreptococcus scarlatinal serum the cases chosen were all of severe type. In spite of this selection only two deaths have been recorded. In each of these the patient was admitted to hospital in a late stage of the disease. One was a very severe toxic case, and the other a child suffering coincidentally from measles. Many of them, especially the children, had profuse purulent nasal discharge, which invariably dried up within 48 hours of administration of the serum.

Complications in the serum-treated cases were, with one or two exceptions, all present before the serum was given, and it is further worthy of mention that their progress was in all instances arrested, and in many definitely improved at an early period. This effect on rhinitis and otorrhœa would appear to suggest an antibacterial action on the part of the serum, as well as an antitoxic one.

The earliest sign of improvement was a fall in pulse rate, which was usually noted during the second twelve hours. The effect on delirium was marked; this symptom was lessened and the patients became clear-headed in about 12 hours.

If complications are to be avoided, the serum must be given early in the course of the disease. It will prevent toxin damage, but can do nothing to repair it, thus being comparable to antidiphtheritic serum.

The administration of scarlatinal antitoxin in the majority of those treated has delayed desquamation, sometimes for as long as three weeks. In a few no desquamation has been found. This appears to suggest that a slightly larger dose would positively prevent desquamation, which may now be regarded as a direct measure of the damage done to the skin by the scarlet fever toxin, and also as a measure of the damage done elsewhere in the body.

The Schultz-Charlton blanching reaction has been investigated with a view to determining its usefulness in diagnosing indefinite rashes.

It proved to be reliable if used within 48 hours of the appearance of the rash. After this time the rash became more fixed, and no blanching was obtained even with rashes which were known to be definitely scarlatinal in nature. The reaction has been particularly useful in the differential diagnosis between German measles, when the rash is in its confluent stage, and scarlet fever, this previously being a matter of considerable difficulty. It was noted that the skin at the site of a Schultz-Charlton test remained definitely smoother than that of the surrounding area after the rash had faded, and, further, showed little tendency to desquamate.

In the use of the Dick test some difficulty was experienced at the beginning in deciding on a suitable strength of toxin, and the earlier results had to be discarded. A suitable toxin dilution is now available, and a small series of individuals has been tested. Of these, roughly, 40 per cent. have proved positive, and one of this positive group has since passed through a typical attack of scarlet fever.

The Dick test can also be an aid to diagnosis, as manifestly a person two or three days ill and definitely Dick negative cannot be suffering from scarlet fever. This latter point, however, requires further investigation in relation to the time at which a Dick positive reacter becomes Dick negative."

Diphtheria.—765 cases of verified diphtheria were treated, and 99 remained in hospital from the previous year. There were 48 deaths, giving a mortality rate of 6.3 per cent. Apart from a few isolated hæmorrhagic and specially severe cases, the bulk of the admissions were of a fairly mild nature, and it is satisfactory to record that the patients are being sent to hospital earlier than they used to be. In addition to the verified cases, 58 certifications were dealt with in which the diagnoses were revised. The bulk of these cases proved to be diseases of the respiratory system.

Cerebro-Spinal Fever.—In all 22 cases of this disease were admitted during 1925, showing that it continues to occur sporadically in the City. Only 9 of these patients were over 5 years of age, and the mortality rate was again high, being approximately 60 per cent.

Pneumonia.—Pneumonia, either of the acute primary or influenzal type, was responsible for 1,283 admissions. 145 cases remained in hospital from the previous year, and the deaths numbered 225. This disease, which prior to 1918 was not treated in the infectious diseases hospitals, is now the most important dealt with. 440 of the patients were under 2 years of age, and

101 were over 45 years of age. Among the young infants enteritis frequently complicated the disease on admission, and added greatly to the difficulties of nursing, especially as the wards have not the modern equipment desirable for dealing with this class of case. The mortality rate over all was 21·4 per cent.

In children under 5 years of age the disease was practically always of the bronchial type, whereas in older patients the lobar type prevailed. There was no appreciable difference in the physique of the children admitted, and it is regrettable to again record that most of the children were in a dirty condition, and many of them were verminous or suffered from superficial septic sores.

Measles.—Very few cases of measles were dealt with; in all 194. These were of a relatively mild type.

Whooping-Cough. — Whooping-cough was prevalent. 691 cases were admitted during the year, and 100 remained in hospital from the preceding year. The majority of these patients suffered from definite lung complications on admission, and many also had enteritis. 354 were babies under 2 years, and among these the mortality was very heavy. Many of the children were ill-nourished, or showed evidence of rickets, and dirt, sores, head or body vermin frequently added to their discomfort.

Puerperal Fever. — The admissions for puerperal fever continue to increase, but the mortality rate has diminished. This diminution is, however, to some extent accounted for by the increasing tendency to send to hospital the milder forms of sepsis which used to be treated at home. Among the true septicæmias there is, unfortunately, no appreciable diminution in the number of deaths. 253 cases were admitted during the year, and the mortality rate was 17 per cent.

THOMAS ARCHIBALD,
Physician Superintendent.

5th March, 1926.

BELVIDERE HOSPITAL—STATEMENT OF CASES TREATED ACCORDING TO SEX.
DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1925.

Disease.	In Hosp. 1st Jan.		Admitted.		Died.		Dismissed.		Remaining in Hospital, 31st Dec.		Mortality per cent.		Average Residence.		Deaths.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Typhus,
Enteric,	3	7	9	17	1	4	10	20	1	...	9.1	16.7	49	66	58	10	
Continued and Undefined, Puerperal, . . . . .	...	17	...	253	...	42	...	205	...	23	...	17.0	...	31	...	10
Smallpox,
Scarlet Fever,	102	137	634	857	15	8	622	853	99	133	2.4	.9	54	55	8	18	
Diphtheria and Memb. Croop, Erysipelas,	43	56	329	426	22	26	309	402	51	54	6.6	6.1	42	41	8	9	
Cholera, . . . . .	...	...	1	3	...	...	1	3	...	...	...	...	30	25	...	...
Cerebro-spinal Fever, Ophthalmia Neonatorum, . . . . .	...	2	13	9	7	7	5	4	1	...	58.3	63.6	79	75	18	12
Trachoma, Lethargica Encephalitis, . . . . .	...	2	5	...	...	...	5	2	...	...	...	...	46	51	...	...
Acute Poliioencephalitis, Acute Poliomyelitis, . . . . .	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia, Acute Influenzal Pneumonia,	79	56	709	487	162	90	556	390	70	63	22.6	18.9	36	33	10	12	
Malaria,	7	3	63	24	2	1	61	25	7	1	3.2	3.8	35	34	4	3	
Dysentery, . . . . .	...	...	2	...	...	...	2	...	...	...	...	...	20	...	...	...
Relapsing Fever, Trench Fever, . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis, Other forms of Tuberculosis, Measles, . . . . .	...	1	4	3	3	2	1	2	...	...	75.0	50.0	25	32	6	14
German Measles, Whooping Cough, . . . . .	...	...	10	4	9	4	...	71	1	...	100.0	100.0	29	28	7	8
Chickenpox, Other Affections, <i>e.g.</i> , Mumps, Vincent's Angina, . . . . .	...	...	94	100	10	5	63	23	21	24	13.7	6.6	29	28	9	9
	44	56	309	382	117	116	212	286	24	36	35.6	28.9	59	60	21	17	
	22	29	113	119	...	...	121	137	14	11	...	...	40	40	...	...
	12	10	186	151	14	17	169	135	15	9	7.7	11.2	21	17	22	11	
Total,	312	376	2,518	2,860	362	322	2,162	2,558	306	356	14.3	11.2	42	44	14	13	

BELVIDERE HOSPITAL.—STATEMENT SHOWING AGE AND SEX DISTRIBUTION OF
CASES DISMISSED, AND DEATHS DURING THE YEAR 1925.

	Age.	Typhus.	Enteric.	Puerperal	Ophthalmia Neonatorum	Scarlet Fever.	Diph. and Mem. Croup.	Erysipelas.	Cerebro-spinal Fever.	Lethargica Ence- phalitis.	Acute Poliomyelitis.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Malaria.	Dysentery.	Pulmonary Tuberculosis.	Other forms of T. B.	Measles.	German Measles.	Whooping Cough.	Chickenpox.	Other Affections.	Total.
Cases (including Deaths).																							
Male.	- 1	...	...	...	1	4	17	...	2	...	1	126	3	...	...	1	10	2	88	11	55	321
	- 2	...	...	...	...	23	34	...	3	...	...	108	5	...	...	1	26	...	79	23	22	324
	- 3	...	...	...	...	42	32	...	2	...	...	55	2	...	...	...	...	...	62	14	13	230
	- 4	...	...	...	...	50	41	...	...	...	...	45	1	...	...	2	7	3	44	19	7	219
	- 5	67	25	26	2	8	5	23	19	5	180
	- 10	...	1	260	106	...	3	1	...	89	5	1	1	13	9	33	28	12	562
	- 15	...	2	115	37	...	2	44	8	2	...	2	3	10	225
	- 25	...	2	55	20	1	...	3	...	87	12	2	1	1	1	24	209
	- 35	...	2	14	12	1	...	39	9	...	2	1	...	1	3	14	98
	- 45	...	4	3	4	42	4	1	1	7	66
+ 45	...	...	...	...	4	3	...	...	...	...	57	12	...	...	...	...	...	...	...	...	14	90
Total,	...	11	...	1	637	331	1	12	5	1	718	63	...	2	4	9	73	23	329	121	183	2,524	
Female.	- 1	...	...	...	...	3	8	...	4	...	...	92	1	...	...	1	4	...	98	19	49	279
	- 2	...	...	...	...	16	25	...	...	...	...	103	2	...	...	...	17	...	89	23	10	285
	- 3	...	...	...	...	30	24	...	...	...	...	57	1	...	...	...	8	...	65	19	9	213
	- 4	...	...	...	...	63	49	...	...	...	...	34	2	...	...	...	14	...	64	22	8	256
	- 5	...	...	...	...	66	37	...	3	...	...	22	1	...	...	...	6	2	36	17	8	198
	- 10	...	4	...	...	321	111	1	3	1	...	44	1	...	...	...	21	16	47	34	21	625
	- 15	...	1	...	...	205	70	...	...	...	...	21	3	...	...	1	1	4	3	2	7	318
	- 25	...	8	72	...	115	62	...	1	30	2	3	1	4	1	...	1	17	317
	- 35	...	8	119	...	33	28	1	...	31	4	1	1	14	240
	- 45	...	3	56	...	6	12	1	18	5	1	2	104
+ 45	...	...	...	...	3	2	1	...	...	...	28	4	...	...	...	...	...	...	...	...	7	45
Total,	...	24	247	...	861	428	3	11	2	...	480	26	...	...	4	4	76	23	402	137	152	2,880
Deaths.																							
Male.	- 1	...	...	...	...	2	5	...	2	...	...	43	...	...	...	1	2	...	60	...	7	122
	- 2	...	...	...	...	3	6	...	2	...	...	36	...	...	...	1	6	...	31	...	4	89
	- 3	...	...	...	...	1	2	...	1	...	...	15	...	...	...	1	1	...	18	...	...	39
	- 4	...	...	...	...	4	1	...	...	...	...	2	...	...	...	2	1	...	3	...	...	13
	- 5	...	...	...	...	2	3	...	...	...	...	5	...	...	...	...	...	...	2	...	...	12
	- 10	...	1	...	...	2	5	...	2	...	...	3	...	...	1	1	...	...	3	...	1	19
	- 15	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	3
	- 25	11	2	1	1	15
	- 35	6	1	1	8
	- 45	17	17
+ 45	...	...	...	...	...	...	...	...	...	...	24	1	...	...	...	...	...	...	...	...	...	25
Total,	...	1	...	...	15	22	...	7	...	...	162	2	...	...	3	9	10	...	117	...	14	362
Female.	- 1	...	...	...	...	1	4	...	...	...	...	23	...	...	...	1	1	...	53	...	7	90
	- 2	...	...	...	...	3	5	...	...	...	...	31	...	...	...	2	...	32	...	2	...	75
	- 3	...	...	...	...	1	...	...	...	...	...	7	...	...	...	1	...	14	...	...	...	23
	- 4	...	...	...	...	2	7	...	...	...	...	2	...	...	...	...	1	...	10	...	...	22
	- 5	...	...	...	...	2	6	...	1	...	...	1	...	...	...	...	...	...	4	...	1	15
	- 10	...	1	...	...	1	5	...	2	...	...	1	...	...	...	...	...	...	2	...	1	13
	- 15	...	...	...	...	1	...	...	...	...	...	1	...	...	...	1	...	...	1	...	2	6
	- 25	...	1	12	...	...	...	...	...	...	...	4	...	...	1	1	...	...	...	...	2	21
	- 35	...	2	19	...	...	...	...	...	...	...	2	1	...	...	1	...	...	...	...	...	25
	- 45	...	...	11	...	...	...	...	...	...	...	7	...	...	1	...	...	...	...	...	...	19
+ 45	...	...	...	...	...	...	...	...	...	...	11	...	...	...	...	...	...	...	...	...	2	13
Total,	...	4	42	...	8	26	...	7	...	...	90	1	...	...	2	4	5	...	116	...	17	322

BELVIDERE HOSPITAL.—TABLE SHOWING ALTERATIONS IN DIAGNOSIS
OF CASES DISMISSED AND DEATHS DURING 1925.

ORIGINALLY CERTIFIED AS

Diagnosis Altered to	Typhus Fever	Enteric Fever	Continued and Undefined Fever	Puerperal Fever	Scarlet Fever	Scarlet Fever and Other Diseases	Diphtheria	Diphtheria and Other Diseases	Cerebro-spinal Fever	Encephalitis Lethargica	Pneumonia	Dysentery	Measles	Measles and Other Diseases	Roseola	Whooping-Cough	Whooping-Cough and Other Diseases	Chickenpox	Malaria	Tuberculosis
Typhus Fever,
Enteric-Fever,	4	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Continued and Undefined Fever,
Puerperal Fever,
Scarlet Fever,	2	...	...	2	12	...	...	...	...	...	...	1	...	...	...	...	...	...
Scarlet Fever and Other Diseases,	1	...	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria,	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Other Diseases,	23	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Fever,	1	...	...	...	...	...	...	...	...	...	1
Lethargica Encephalitis,	1	...	...	...	...	...	...	...	...	...	...	...
Anterior Poliomyelitis,
Pneumonia,	1	7	2	...	3	...	6	5	9	...	...	...	...	1	...	5	...	...	...	...
Pneumonia and Other Diseases,	51	...	...	...	...	...	...	...	...	...	...
Erysipelas,	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis (All Forms),	1	1	...	...	...	...	...	10	3	...	...	...	...	...	...	...	...	...	...
Measles,	2	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...
Measles and Other Diseases,	1	...	...	...	...	...	...	...
Roseola,	37	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...
Whooping-Cough,	1	...	...	...	...	...	...	...	...	...	...	...	...	2
Whooping-Cough and Other Diseases,	4	...	...	...	...
Chickenpox,	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza,	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of the Nervous System,	1	...	...	...	...	...	...	10	3	1	...	...	...	...	...	...	...	...	...
Other Diseases of the Respiratory System,	3	...	...	9	1	32	...	2	...	25	...	...	...	...	26	...	...	...	...
Diseases of the Circulatory System,	3	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
Diseases of the Digestive System,	7	1	...	5	...	1	1	3	2	2	3	...	...	...	1	...	2	...	...
Other Accidents and Diseases of Pregnancy and Parturition,	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Skin and of the Cellular Tissue,	2	2	...	19	...	2	...	...	...	1	...	...	...	1	...	...	1	...	...
No apparent Disease,	2	...	...	15	...	2	...	1	...	3	...	1	...	...	9	1	1	1	...
All Other Diseases,	1	...	...	1	...	...	...	2	...	1	...	...	...	...	3	...	...	1	...

RUCHILL FEVER AND TUBERCULOSIS HOSPITAL.

The total number of patients treated in the hospital during the year ending December 31st, 1925, shows a slight decrease over the previous year, and the mortality percentage is also somewhat less.

Owing to the reorganisation of the arrangements in the reception houses, cases of trachoma were sent in to hospital, and a ward was set aside for their reception and treatment.

Enteric fever cases remained very few, though 7 deaths occurred from this disease. Paratyphoid infections were few, and practically the same as the previous year.

Diphtheria admissions showed a decrease, the type not differing from the previous year.

Scarlet fever patients showed a substantial increase over last year's figures, but a distinct drop in the mortality rate is recorded. In connection with the treatment of this disease a very important advance has to be noted in the introduction of an anti-scarlatinal serum. This serum exerts undoubtedly very beneficial effects on cases of scarlet fever. It has been fairly extensively used in the hospital in cases where the attack was particularly severe, and in practically every case very striking improvement has immediately taken place. The temperature has usually fallen to normal within 24 hours of administration of the serum, and the severe symptoms associated with the throat inflammation and toxæmia have subsided very quickly. A further advantage of this form of treatment appears to be the lessening of the likelihood of septic complications, such as discharging ears and noses.

Measles cases in the year under review were very few, and the mortality rate was also reduced.

A recently introduced method for protection against measles has been used in the hospital in wards which had become crossed with the disease. The method consists in the injection into the contacts of a dose of serum obtained from the blood of an individual who has recently become convalescent from the disease. The employment of this serum has been attended with considerable success, and to illustrate this the following instances may be quoted. A pneumonia ward, containing 20 susceptibles, most of them children or young infants, was crossed with measles,

and as at the time no serum was available they all remained unprotected, with the result that at least 10 of them developed measles; others were lost trace of by being dismissed before the end of the incubation period. Another pneumonia ward containing a similar group of patients, consisting of 17 susceptibles, was also crossed with measles, and each of the susceptibles was given 2 c.c.'s of the serum. In this instance not one patient developed the disease. Further experience was not so uniformly successful, but taken all over the incidence of measles in protected susceptibles worked out at 18 per cent., which compares very favourably with 50 per cent. incidence in the unprotected susceptibles noted above.

Another very distinct advantage gained by the use of the serum was observed, namely, that even though the inoculation was not successful in preventing the development of the disease, it nevertheless modified the attack very markedly. Protected patients were always only very mildly ill, and in no instance did any complication arise.

The immunity to the disease conferred by the inoculation of the serum does not last very long, and this was well illustrated in the following result.

A ward became crossed with measles, and 5 children, who, according to their past history had had the disease, were not given any serum after the first case, but subsequently 4 of them developed measles, showing that the histories were probably inaccurate. This caused a second infection of the ward about a fortnight after the primary one. After the first infection 6 susceptibles were given a protective dose of serum, and none of them took measles, but after the second exposure 5 of them developed the disease in a very mild form.

In whooping-cough, erysipelas, and cerebro-spinal fever the numbers treated and mortality rates have been practically the same as last year.

Cases of encephalitis lethargica have been much fewer, but the mortality rate was very distinctly higher. This is accounted for by the disappearance of the very mild cases such as were so prevalent in the spring of last year, and also the admission of cases in the more advanced stages, whose history in many instances indicated that they were not recent infections but dated back to the previous year or longer.

Pneumonia continues to supply a large proportion, actually a quarter, of the total admissions to hospital. The mortality rate in this disease shows a slight diminution, and compares favourably with that usually experienced.

The number of cases treated in the tuberculosis section of the hospital has been slightly less this year than last. The results of treatment have not shown any alteration.

During the year a number of cases of pulmonary tuberculosis have been treated with injections of ethyl morrhuate, but without any beneficial result. This may be due to the fact that the cases were all of a more or less advanced type, a class of case not likely to benefit, according to Sir Leonard Rogers, the originator of the treatment.

A number of cases of abdominal tuberculosis have been treated by the introduction of oxygen into the peritoneal cavity, and in many cases some measure of improvement has been noted.

The cases treated may be grouped into three classes:—

1. Tubercular peritonitis with ascites.
2. Tubercular peritonitis of the plastic variety.
3. Intestinal ulceration occurring in advanced pulmonary tuberculosis.

In the first group a very definite improvement has been noted following the treatment.

In the second group little or no effect appeared to be produced.

In the third group again improvement was noted, the patient becoming more comfortable, the abdominal symptoms disappearing to a considerable extent.

W. M. ELLIOTT,
Physician Superintendent.

May, 1926.

RUCHILL HOSPITAL.—STATEMENT SHOWING AGE AND SEX DISTRIBUTION
OF CASES DISMISSED, AND DEATHS DURING THE YEAR 1925.

		Age.	Paratyphoid B.	Continued and Un- defined Fever.	Enteric.	Trachoma.	Smallpox.	Scarlet Fever	Diph. and Memb. Croup.	Erysipelas.	Cerebro-spinal Fever.	Lethargica Encephalitis.	Acute Poliomyelitis.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Malaria	Dysentery.	Pulmonary Tuberculosis.	Other Forms of T.B.	Measles.	German Measles.	Whooping-Cough.	Chickenpox.	Other Affections.	Total	
Cases (including Deaths).																										
Male.	- 1	...	...	...	...	...	...	4	7	4	3	...	1	120	...	...	...	...	...	11	2	35	...	44	231
	- 2	...	...	...	...	...	...	23	15	...	1	...	...	105	...	...	...	1	...	22	2	39	2	40	250
	- 3	...	...	...	...	...	...	32	30	1	1	...	...	36	...	...	...	2	2	18	7	19	1	17	166
	- 4	...	...	...	...	...	...	55	28	1	...	...	...	32	...	...	...	1	1	19	2	13	...	19	171
	- 5	...	...	...	...	...	...	58	29	3	...	1	...	23	...	...	...	1	1	19	2	13	...	19	171
	- 10	...	...	2	2	...	...	232	112	4	1	4	...	85	...	...	...	1	1	10	3	15	...	16	160
	- 15	...	...	4	1	...	...	98	35	14	1	4	...	42	...	...	...	1	3	29	12	15	1	42	545
	- 25	...	...	6	7	...	...	43	17	35	...	12	...	113	2	1	...	...	3	...	6	...	...	26	234
	- 35	1	1	3	4	7	5	32	...	1	...	55	1	1	3	2	2	5	1	...	36	282
	- 45	1	...	1	1	...	...	5	1	42	1	4	...	55	4	...	...	2	...	...	...	...	...	22	136
+ 45	...	...	...	...	...	...	3	2	97	1	1	...	79	...	...	...	4	...	...	...	...	...	35	222	
Total,		2	1	16	15	...	560	281	233	9	27	1	745	7	2	3	12	12	111	39	137	4	310	2,527		
Female.	- 1	...	...	...	...	...	...	6	6	3	3	...	...	71	...	...	...	...	5	2	32	1	29	158	
	- 2	...	...	...	...	...	...	25	12	3	1	...	...	95	...	...	...	4	29	4	33	...	24	230	
	- 3	...	...	...	...	...	...	33	18	...	...	...	...	40	...	...	...	3	2	13	6	35	...	19	169
	- 4	...	...	1	...	...	...	52	24	...	...	...	...	27	...	...	...	3	18	4	23	...	15	167	
	- 5	...	...	...	...	...	...	59	38	1	...	1	...	16	...	...	...	...	1	14	1	20	...	7	158
	- 10	...	...	5	...	...	...	290	118	3	1	...	...	45	...	...	...	2	3	23	11	20	1	34	556
	- 15	...	...	2	2	...	...	186	47	10	...	1	...	31	...	...	...	...	1	5	4	...	...	32	321
	- 25	1	1	4	4	...	...	96	61	40	...	9	...	35	...	...	...	1	3	19	4	1	...	65	344
	- 35	1	...	1	2	...	...	19	21	26	...	6	...	29	3	...	...	3	...	2	3	...	...	26	142
	- 45	...	...	2	1	...	...	8	3	40	...	1	...	29	2	...	...	...	...	1	...	...	...	24	111
+ 45	...	...	...	...	...	...	2	3	70	...	1	...	23	4	...	...	1	...	...	...	...	...	35	139	
Total,		2	1	15	9	...	776	351	196	5	19	...	441	9	...	...	10	17	129	39	164	2	310	2,495	
Deaths																										
Male.	- 1	...	...	...	...	...	...	1	1	3	...	...	...	36	...	...	...	...	4	...	14	...	5	64	
	- 2	...	...	...	...	...	...	4	2	...	1	...	...	27	...	...	...	...	6	...	8	...	4	52	
	- 3	...	...	...	...	...	...	1	4	...	...	...	...	5	...	...	...	1	2	1	...	4	...	1	19
	- 4	...	...	...	...	...	...	2	1	...	...	...	...	3	...	...	...	1	...	...	1	...	...	...	8
	- 5	...	...	...	...	...	...	1	3	...	...	...	...	2	...	...	...	...	1	1	...	...	...	1	9
	- 10	...	...	...	...	...	...	1	6	...	1	...	...	2	...	...	...	1	2	...	...	...	...	1	14
	- 15	...	...	1	...	...	...	1	...	...	1	...	...	4	...	...	...	1	...	...	...	...	...	...	8
	- 25	...	...	1	...	...	...	1	...	2	...	2	...	15	1	...	...	...	1	...	...	...	...	2	25
	- 35	...	...	...	...	...	...	...	...	2	...	...	...	12	1	...	1	...	...	...	...	...	...	2	18
	- 45	...	...	1	...	...	...	1	...	1	1	1	...	12	3	...	...	1	...	...	...	...	...	5	26
+ 45	...	...	...	...	...	...	...	...	18	1	1	...	44	...	...	...	4	...	...	...	...	...	7	75	
Total,		...	3	...	...	12	17	24	8	4	...	162	5	...	1	7	8	12	...	27	...	28	318		
Female.	- 1	...	...	...	...	...	...	1	2	1	...	...	...	19	...	...	...	...	1	...	16	...	4	44	
	- 2	...	...	...	...	...	...	1	3	...	1	...	...	12	...	...	...	3	2	...	11	...	1	34	
	- 3	...	...	...	...	...	...	3	3	...	...	...	...	3	...	...	...	3	2	1	...	3	...	1	19
	- 4	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	3	1	...	...	...	...	6
	- 5	...	...	...	...	...	...	1	3	...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	7
	- 10	...	...	1	...	...	...	3	10	...	1	...	...	1	...	...	...	1	3	...	...	1	...	2	23
	- 15	...	...	...	...	...	...	1	3	1	...	...	...	2	...	...	...	...	1	...	...	...	...	1	9
	- 25	...	...	1	...	...	...	1	...	2	...	3	...	7	...	...	...	1	3	...	...	...	...	4	22
	- 35	...	...	1	...	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...	...	...	...	3	10
	- 45	...	...	1	...	...	...	...	...	2	...	1	...	14	...	...	...	...	...	...	...	...	...	2	20
+ 45	...	...	...	...	...	...	...	12	...	1	...	...	8	...	...	...	...	...	...	...	...	...	7	28	
Total,		...	4	...	...	11	23	19	3	8	...	71	...	...	...	...	5	16	6	...	31	...	25	222	

RUCHILL HOSPITAL.—TABLE SHOWING ALTERATIONS IN DIAGNOSIS
OF CASES DISMISSED AND DEATHS DURING 1925.

ORIGINALLY CERTIFIED AS

Diagnosis Altered to	Enteric Fever	Continued and Unde- fined fever	Scarlet Fever	Diphtheria	Erysipelas	Cerebro-spinal Fever	Lethargica Encephalitis	Acute Primary Pneu- monia	Acute Influenzal Pneu- monia	Dysentery	Measles	Roseola	Whooping Cough	Other Affections
Enteric Fever, - - -	4	1	...	...	...	1	7	...	...	...	...	...	...	...
Paratyphoid Fever, - - -	3	...	...	...	...	...	2	...	...	...	...	...	...	...
Puerperal Fever, - - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever, - - -	...	...	...	15	...	1	5	...	...	2	3	...	1	...
Diphtheria, - - -	...	...	6	...	1	...	2	...	...	...	...	...	...	...
Cerebro-spinal Fever, - - -	...	...	...	...	...	1	2	...	...	...	...	...	...	...
Lethargica Encephalitis, - - -	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Acute Primary Pneumonia, - - -	4	...	11	9	...	4	3	...	52	...	1	...	2	3
Tuberculosis (all forms), - - -	3	...	1	1	...	9	11	22	...	...	1	...	...	3
Measles, - - -	...	...	13	2	...	...	...	5	...	...	...	1	...	...
Roseola, - - -	...	...	31	...	...	...	...	...	...	...	37	...	...	...
Whooping Cough, - - -	...	...	1	1	...	...	...	12	...	...	...	...	...	...
Chickenpox, - - -	...	...	2	...	1	1	...	...	...	...	...	...	...	...
Influenza and Influenza assoc- iated with other Diseases,	1	...	1	...	...	4	1	31	3	...	...	...	...	1
Other Diseases of the Nervous System, - - -	1	...	...	...	2	13	20	3	1	...	...	...	...	1
Other Diseases of the Respira- tory System, - - -	...	...	5	18	1	1	1	147	5	...	4	...	7	...
Diseases of the Circulatory System, - - -	...	1	...	...	1	1	2	3	1	...	...	...	...	...
Diseases of the Digestive System,	3	...	52	92	3	11	15	13	...	8	2	1	...	2
Diseases of the Skin and of the Cellular Tissue, - - -	1	...	17	1	76	...	...	1	...	...	4	...	...	2
No Apparent Disease, - - -	...	...	2	9	...	2	15	2	...	1	...	...	...	4
All other Diseases, - - -	4	...	7	4	12	...	3	6	1	...	1	...	...	6

RUCHILL HOSPITAL.—TUBERCULOSIS, TABLE SHOWING CASES DISMISSED AND DEATHS DURING THE YEAR 1925,
AND THE AVERAGE RESIDENCE.

Disease.	Number of Cases Dismissed.	Number of Deaths.	Average Residence.							Average days.
			- 30	- 50	- 100	- 150 Days.	- 200	- 300	+ 300	
Pulmonary Tuberculosis—										
Early, - - - - -	29	...	1	2	6	8	3	2	7	219
Intermediate, - - - - -	117	6	9	12	36	26	14	15	11	157
Advanced, - - - - -	175	183	95	51	80	46	30	34	22	118
Doubtful Cases, - - - - -	23	...	7	2	7	2	1	3	1	118
Diagnosis not Confirmed, - - - - -	51	12	9	7	10	8	10	10	9	169
Other Forms of Tuberculosis—										
Glands, - - - - -	3	1	1	...	...	2	...	...	1	226
Spine, - - - - -	...	1	1	...	...	...	...	...	...	4
Bones other than Spine, - - - - -	...	...	...	...	...	...	...	...	...	...
Hip Joint, - - - - -	...	...	...	...	...	...	...	...	...	...
Joints other than Hip, - - - - -	...	...	...	...	...	...	...	...	...	...
Abdomen, - - - - -	24	6	3	2	4	2	1	7	11	252
Multiple, - - - - -	3	3	2	...	1	...	1	...	2	190
Genito-Urinary, - - - - -	2	...	...	1	...	1	...	...	...	85
Miscellaneous, - - - - -	2	2	2	...	...	...	...	...	2	300
Diagnosis not confirmed, - - - - -	20	3	4	1	8	2	4	3	1	123
Total.	449	217	134	78	152	97	64	74	67	142

RUCHILL HOSPITAL—PULMONARY TUBERCULOSIS.—SHOWING STAGE OF DISEASE, AGE, RESULT OF TREATMENT, &C., OF PATIENTS DISMISSED DURING 1925.

Ages.	Result of Treatment.												Complications.						Condition on or Reason for Dismissal.												Result of Sputum Examination.												
	Not Classified Further.				Improved.				Not Improved.				Died.				Total.		Tubercular.		Other.		Fit for Work or School.		Unfit.		Left Own Accord or Removed by Parents.				Other Reasons.		Transferred to Other Institutions.		+Admitted, +Dismitted.		-Admitted, -Dismitted.		No Sputum.		+Admitted, +Dismitted.		-Admitted, -Dismitted.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
Early Cases—																																											
- 5,	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 10,	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 15,	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 25,	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 35,	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 45,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
+ 45,	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Total,	16	16	13	13	16	13	2	2	1	2	1	2	1	2	1	2	3	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Intermediate Cases—																																											
- 5,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 10,	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 15,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 25,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 35,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 45,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
+ 45,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total,	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Advanced Cases—																																											
- 5,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 10,	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 15,	6	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 25,	14	12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
- 35,	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- 45,	8	5	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
+ 45,	32	53	23	37	7	10	24	41	27	66	80	103	138	220	33	31	16	15	8	16	15	38	15	55	16	3	4	5	11	5	15	17	1	3	1	7	9	9	19	4			
Total,	32	53	23	37	7	10	24	41	27	66	80	103	138	220	33	31	16	15	8	16	15	38	15	55	16	3	4	5	11	5	15	17	1	3	1	7	9	9	19	4			

SHIELDHALL FEVER HOSPITAL.

The principal occurrence of the year 1925 was the closure of the phthisis pavilion (Ward 7) in June, when the tuberculous patients were transferred to Ruchill and Knightswood. In November the ward was reopened for measles cases, and has proved very satisfactory for this purpose. Ward 3 has also been in use throughout the year, first for whooping-cough cases, and latterly for cases of measles. The general condition of this ward is not very good; and in April it was found necessary to supply additional supports for the central partition. The remaining wards are all in a good state of repair.

As regards the administrative block, a shortage of accommodation for the nursing staff has made itself felt with the reopening of all the wards. There is work for about six additional nurses, but at present rooms for them are not available.

Four cases of infectious disease occurred among members of the staff, 1 nurse contracting paratyphoid fever and 3 scarlatina. All made a good recovery.

The total number of patients dealt with (1,046) differs very little from that of the previous year. The general death-rate is slightly higher—11·0 per cent., as compared with 9·9 per cent. Nearly all of the cases fall into one of the following classes:—

I. *Scarlatina*.—317 cases. Of these 94, or nearly 30 per cent., developed complications, the chief of which are as follows:—

Otitis media,	...	...	...	...	in 31 cases.
Albuminuria,	...	...	...	...	in 24 „
Cervical adenitis,	...	...	...	...	in 23 „
Rhinitis,	...	...	...	...	in 15 „
Rheumatism,	...	...	...	...	in 10 „
Bronchitis and pneumonia,	...	...	...	...	in 3 „

There were 6 deaths, 2 of the fatal cases being of the toxic type.

As regards treatment, a start has been made with the inoculation of selected patients with the new streptococcus antitoxin. The results are promising, but the cases so treated are at present too few for accurate deductions to be drawn. A number of Dick tests have also been carried out.

II. *Pneumonia*.—281 cases. These cases are fairly equally divided between lobar pneumonia and broncho-pneumonia. The latter group, as is to be expected, is made up almost entirely of children under 5 years of age.

Both groups show a high mortality rate, the total number of deaths being 45, or 16 per cent. Especially fatal were the cases of empyema, 9 in number. The other complications were abscess of the lung (1 case), pneumococcal meningitis (2 cases), and pulmonary tuberculosis (1 case).

III. *Diphtheria*.—145 cases. These may be classified as follows:—Faucial cases, 113; nasal cases, 5; laryngeal cases, 22; and cases whose diagnosis rested solely on the result of culture, 5. Complications were few, serious paralyses occurring in only 5 patients. A serum rash was noticed in 16. Four of the laryngeal cases required tracheotomy. There were 7 deaths, as follows:—Faucial type, 5; nasal, 1; and laryngeal (after tracheotomy), 1.

IV. *Measles*.—106 cases. Nearly all of the cases of measles were admitted to hospital in the last quarter of the year. While most of the patients exhibited a mild type of the disease, the mortality rate (18 per cent.) is considerable. This must be attributed to the frequency with which broncho-pneumonia follows measles in young children. Many of them are not sent to hospital until the pneumonia is well established. When enteritis is also present, as is often the case, the disease is particularly fatal. The incidence of these and other complications is as follows:—Pneumonia, 22 cases; enteritis, 13 cases; otitis media, 9; laryngitis, 6; corneal ulceration 1; meningitis, 1.

In wards exposed to measles, patients have been effectively protected from the disease by the injection of the serum of convalescents.

V. *Whooping-Cough*.—79 cases. Here again there is a high mortality rate (over 21 per cent.), with pneumonia playing the same part as in measles. It occurred in 25 patients. The only other important complication, convulsions, was uncommon, appearing in only 2 cases. At the end of the year there were no cases of whooping-cough in the hospital.

Cross-Infections.—15 cases of infectious disease occurred among patients in the hospital, as compared with 34 cases in the previous year. The number of cases in whom the original diagnosis was altered was 69.

WILLIAM NAPIER,
Physician Superintendent.

12th March, 1926.

SHIELDHALL HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX.
DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1925.

Disease.	In Hospital 1st Jan.		Admitted.		Died.		Dismissed.		Remaining in Hospital at 31st Dec.		Mortality Per Cent.		Average Residence. Dismissals.		Deaths.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Typhus, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	32	..	..
Continued and Undefined, Puerperal, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smallpox, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever,	24	14	150	173	3	3	149	162	22	22	2.0	1.8	55	51	10	11
Diphtheria and Memb. Croup, Erysipelas,	9	16	57	89	2	5	55	83	9	17	3.5	5.7	56	52	12	5
Cholera, . . . . .	..	..	..	1	..	..	..	1	..	..	..	..	..	14	..	..
Cerebro spinal Fever, . . . . .	..	..	..	..	..	..	..	..	..	..	50.0	100.0	45	..	7	11
Ophthalmia Neonatorum, Trachoma, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lethargic Encephalitis, Acute Poliomyelitis,	2	..	..	1	..	..	2	1	..	..	..	..	91	17	..	..
Acute Poliomyelitis, Acute Lobar Pneumonia, Acute Broncho Pneumonia,	17	15	177	82	15	5	88	26	4	2	14.6	16.1	27	28	6	10
Malaria, . . . . .	..	..	..	..	12	13	73	49	2	2	14.1	21.0	32	26	16	8
Dysentery, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing Fever, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Trach Fever, . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Non-Pulmonary Tuberculosis, Measles, . . . . .	..	..	2	3	2	3	..	..	..	..	100.0	100.0	..	..	20	15
German Measles, Whooping Cough, . . . . .	..	..	67	71	9	10	38	49	20	12	19.1	16.9	21	20	15	11
Chickenpox, . . . . .	..	..	3	36	7	10	30	32	..	..	..	..	12	..	7	16
Other Affections— <i>e.g.</i> , Mumps, Vincent's Angina, . . . . .	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..
	3	31	31	36	3	2	27	37	1	1	10.0	5.1	24	21	16	1
Total,	53	51	526	498	54	53	466	441	59	55	10.4	10.7	41.2	42.8	11.0	10.4

SHIELDHALL HOSPITAL.—STATEMENT SHOWING AGE AND SEX DISTRIBUTION OF CASES DISMISSED, AND DEATHS DURING THE YEAR 1925.

	Age.	Paratyphoid B.	Typhus.	Enteric.	Puerperal.	Smallpox.	Scarlet Fever.	Diph. and Memb. Group	Erysipelas	Cerebro-spinal Fever.	Lethargica Encephalitis.	Acute Polio-Encephalitis.	Acute Lobar Pneumonia.	Acute Broncho-Pneumonia.	Malaria.	Dysentery.	Non-Pulmonary Tuberculosis.	Measles.	German Measles.	Whooping Cough.	Chickenpox.	Other Affections.	Total
Cases (including Deaths).																							
Male.	- 1	2	3	...	1	27	1	3	...	13	...	7	57
	- 2	7	4	2	22	8	...	5	...	5	53
	- 3	8	3	1	14	1	10	...	8	...	1	46
	- 4	14	6	...	1	2	5	...	6	34
	- 5	17	4	4	5	...	1	31
	- 10	68	23	1	...	16	10	12	1	4	...	5	140
	- 15	26	7	11	4	2	2	52
	- 25	9	5	1	...	35	3	4	57
	- 35	1	2	7	1	11
	- 45	10	2	12
+ 45	...	...	...	...	...	...	...	...	...	...	...	21	2	...	...	...	...	...	...	...	4	27
Total,	...	...	...	...	...	152	57	...	2	2	...	103	85	...	...	2	47	3	37	...	30	520
Female.	- 1	...	...	...	...	...	1	...	1	...	...	...	13	...	...	2	4	...	12	...	8	41
	- 2	...	...	...	...	...	1	5	...	...	...	2	18	...	...	10	...	4	...	2	...	42
	- 3	5	5	3	7	7	...	7	...	7	...	1	35
	- 4	9	14	7	9	...	7	...	7	...	1	47
	- 5	19	5	1	4	6	...	7	...	7	42
	- 10	64	24	...	1	1	...	4	6	...	1	16	...	5	...	6	...	128
	- 15	39	9	2	3	2	55
	- 25	22	16	6	4	4	8	60
	- 35	...	1	3	8	5	3	5	25
	- 45	3	3	5	11
+ 45	...	...	...	...	...	1	1	...	...	...	...	5	...	...	...	...	...	...	...	...	1	8
Total,	...	...	1	...	...	165	88	1	2	1	...	31	62	...	...	3	59	...	42	...	39	494
Deaths.																							
Male.	- 1	...	...	...	...	...	...	...	1	...	...	...	9	...	...	1	2	...	4	...	1	18
	- 2	...	...	...	...	...	1	...	...	...	...	1	1	...	...	5	...	2	...	...	...	10
	- 3	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	2	...	...	...	...	5
	- 4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
	- 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	- 10	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	3
	- 15	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	- 25	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	- 35	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
	- 45	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
+ 45	...	...	...	...	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	1	10
Total,	...	...	...	...	...	3	2	...	1	...	...	15	12	...	...	2	9	...	7	...	3	54
Female.	- 1	...	...	...	...	...	...	...	1	...	...	...	5	...	...	2	2	...	7	...	1	18
	- 2	...	...	...	...	...	1	...	...	...	...	...	5	...	...	5	...	1	...	...	...	12
	- 3	...	...	...	...	...	3	...	...	...	...	...	1	...	...	2	...	1	...	...	...	7
	- 4	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	2
	- 5	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	2
	- 10	...	...	...	...	...	2	1	...	1	...	...	...	...	...	1	...	...	...	...	1	6
	- 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	- 25	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	- 35	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	- 45	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
+ 45	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3	
Total,	...	...	...	...	...	3	5	...	2	...	...	5	13	...	...	3	10	...	10	...	2	53

SHIELDHALL HOSPITAL—TABLE SHOWING ALTERATIONS IN DIAGNOSIS OF CASES DISMISSED AND DEATHS
DURING THE YEAR 1925.

Diagnosis Altered to	ORIGINALLY CERTIFIED AS							
	Diphtheria.	Scarlatina.	Measles.	German Measles.	Whooping Cough.	Cerebro-spinal Fever.	Enteric Dysentery.	Malaria.
Diphtheria, -	...	1	...	...	...	2	...	...
Scarlatina, -	1	...	...	...	...	2	...	...
Measles, -	...	3	...	1	...	8	...	...
German Measles, -	...	1	1	...	...	...	...	...
Whooping-Cough, -	...	...	...	...	...	1	...	...
Pneumonia, -	...	1	...	...	...	...	1	...
Pleurisy, -	...	...	...	...	...	1	...	...
Bronchitis, -	1	...	...	...	6	...	...	...
Cerebro-spinal Fever, -	...	...	...	...	...	1	...	...
Tuberculous Meningitis, -	...	...	...	...	...	3	1	...
Enteritis, -	1	3	...	...	...	1	1	1
Tonsillitis, -	13	1	...	...	...	...	...	...
Vincent's Angina, -	1	...	...	...	...	...	...	...
Stomatitis, -	1	...	...	...	...	...	...	...
Suppurative Adenitis, -	1	...	...	...	...	...	...	...
Febricula, -	...	1	...	...	...	1	...	...
Diabetes Mellitus, -	...	...	...	...	...	...	1	...
Tetany, -	...	...	...	...	...	...	1	...
No apparent Disease, -	...	2	...	...	1	1	...	...

SHIELDHALL FEVER HOSPITAL.—TABLE SHOWING CASES DISMISSED AND DEATHS DURING THE YEAR 1925,
AND THE AVERAGE RESIDENCE.

Disease.	Number of Cases Dismissed.	Number of Deaths.	Average Residence.				Average.				
			Days. - 30	- 50	- 100	- 150		- 200	- 300	+ 300	
Pulmonary Tuberculosis—											
Early, - - -	...	...	...	...	...	...	...	...	...	...	...
Intermediate, - - -	...	...	...	...	...	...	...	...	...	...	...
Advanced, - - -	24	8	3	4	6	7	4	...	8	...	178
Diagnosis not confirmed,	...	...	...	...	...	...	...	...	...	...	...
Total, - - -	24	8	3	4	6	7	4	...	8	...	178

SHIELDHALL HOSPITAL.—PULMONARY TUBERCULOSIS.—TABLE SHOWING STAGE OF DISEASE, AGE, RESULT OF TREATMENT, &c., OF PATIENTS DISMISSED DURING 1925.

Ages.	Not Classified Further.		Result of Treatment.			Complications.			Condition on or Reason for Dismissal.					Result of Sputum Examination.								
	Less than 4 Weeks Residence.	Deaths among these.	Much Improved.	Improved.	Not Improved.	Died.	Total.	Tubercular.	Other.	Fit for Work or School.	Unfit.	Let Own Accord or Removed by Parents.	Other Reasons.	Transferred to other Institutions.	+ Admitted.	+ Admitted.	+ Admitted.	+ Admitted.	- Admitted.	- Admitted.	No Sputum.	
Early Cases.	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
- 5,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 10,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 15,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 25,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 35,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 45,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
+ 45,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Intermediate Cases—	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
- 5,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 10,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 15,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 25,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 35,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 45,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
+ 45,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Advanced Cases—	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
- 5,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 10,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 15,	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
- 25,	1	..	3	..	2	3	8	2	..	2	1	..	..	2	..	3	..	..	..	2	..	..
- 35,	1	1	4	..	1	1	6	1	..	3	1	..	..	1	..	2	..	..	3	..	..	..
- 45,	..	..	2	..	3	1	6	..	..	1	..	..	..	..	1	..	..	..	3	..	..	1
+ 45,	1	1	8	..	1	1	9	..	..	3	3	..	..	2	..	4	..	..	4	..	..	..
Total,	3	2	17	..	6	6	29	2	1	8	6	3	1	5	10	12	..	..	12	..	..	1

KNIGHTSWOOD HOSPITAL.

The number of patients dismissed, including deaths, for the year 1925, was 1,390 as against 1,182 for the previous year.

During the year all the wards were used for the treatment of fevers, except two pavilions admitting 80 patients, in which more or less the same number of cases of phthisis as formerly were treated.

The number of fever patients discharged from hospital was 972, and 121 died, making a total of 1,093 patients.

The gross mortality among these patients was 11·06 per cent., as against 18·6 per cent. for the previous year. This mortality rate, although very much less than in the year 1924, was chiefly due to the fact that almost half of the total number of cases dismissed, including deaths, were cases of acute primary pneumonia and whooping-cough, the mortality among which was 25·8 and 18·6 per cent. respectively.

Scarlet Fever.—The number of patients treated during the year was very much greater than that of the previous year, the number being 474 as against 272. The mortality was 2·3 per cent. as against 1·5 per cent. in the preceding year. Practically all the deaths occurred in septic or toxic forms of the disease. One patient, aged 8 years, who was found, the day after admission, to be suffering also from diphtheria, had 8,000 units antitoxic serum injected subcutaneously, but unfortunately death occurred about half an hour later from anaphylactic shock, although this patient had never had an injection of serum on any previous occasion. An accident of this nature, with fatal result, has never occurred previously in any of the Glasgow Fever Hospitals, and only a very few cases of a similar kind have been recorded in medical literature.

With regard to the Dick reaction, 217 tests were carried out on 180 patients.

A positive Dick reaction was often obtained in scarlet fever during the early period of the rash, but a positive reaction was also frequently obtained from the tenth day onwards until the fourth or fifth week of convalescence. Until a standardised toxin of a certain dilution is obtained that will give a positive reaction during the early period of the rash, and a negative reaction

from the tenth day onwards, it appears useless to continue experimenting with this test. A wide field is here offered for further research work. Towards the end of the year a true antitoxic serum for scarlet fever was issued by Parke, Davis, & Co., and patients are now beginning to be treated with this serum with encouraging results, which will be reported in the course of another year. None of the nurses in these wards became infected with scarlet fever.

Diphtheria.—A ward was opened in February of this year for the admission of cases of diphtheria. The cases were of a mild nature, the mortality being 2 per cent. of 100 cases treated. The nurses have not as yet been subjected to the Schick test, but no member of the staff contracted the disease.

Pneumonia.—The number of patients treated totalled 213, and of these 130 were cases of broncho-pneumonia, 55 were cases of lobar pneumonia, and 28 were found to be suffering only from bronchitis. This was the disease which was the most fatal of the infections. The mortality rate for the whole group was 25·5 per cent., but the death-rate for the cases of broncho-pneumonia was 30·2 per cent., and in a little more than half of the latter percentage of cases enteritis was a serious complication. In this latter complication the stools are grass-green in colour, toxæmia is profound, and when it occurred during convalescence a fatal termination was very common, especially in children under 1 year. It is responsible every year for a large share of the death-rate in babies during convalescence from pneumonia, whooping-cough, and measles. The treatment of the condition is exceedingly difficult, and it is just possible that if Light treatment by the arc or mercury vapour lamps was adopted some improvement might be obtained.

Whooping-Cough. — Whooping-cough was the other disease which through its complications was one of the most fatal of the infections. The number of cases treated was 230. The fatality rate—18·6 per cent.—was, for the most part, due to pneumonia either alone or combined with gastro-enteritis.

Measles.—The number of patients discharged from hospital was 43, and 10 died, making a total of 53 patients. Nearly all of these patients were admitted during the last six weeks of the year. The illness appeared to be of a mild type, and the general condition of the children was good.

During the past year 209 phthisis patients were discharged from hospital, and 88 died, making a total of 297 patients. The hospital was mainly used for the treatment and isolation of the more advanced types of cases. As an illustration of this, no less than 74 per cent. of these cases were in an advanced stage of the disease on admission to hospital.

The following table shows the medical classification into which these patients were grouped when admitted:—

STAGE OF DISEASE.	Number of Cases.	Number of Deaths in each group.
Early, ...	20	—
Intermediate, ...	55	4
Advanced, ...	222	84
Total, ...	297	88

Details of each of these groups are shown in the appended table, the salient points of which may be summarised as follows:—

Stage of Disease.	Result of Treatment.				Died.	Total.
	Arrested.	Much Improved.	Improved.	Not Improved.		
Early Cases, ...	—	—	10	8	—	18
Intermediate Cases,	—	—	39	10	4	53
Advanced Cases, ...	—	1	92	42	84	219
Total, ...	—	1	141	60	88	290

NOTE.—The above table excludes 7 patients whose duration of stay was less than four weeks.

As regards age, it will be noted that all the patients were over 15 years.

A small number of the patients were treated with injections of sodium morrhuate, but the results were not beneficial, and appeared rather to be somewhat harmful in character.

The health of the hospital staff has been good, no illness of a serious nature having occurred.

WILLIAM DOW,
Physician Superintendent.

31st March, 1926.

KNIGHTSWOOD HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX.
DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1925.

Disease.	In Hospital 1st Jan.		Admitted.		Dismissed.		Died.		Remaining in Hospital, 31st Dec.		Mortality per cent		Average Residence					
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Dismissals.		Deaths.			
														M.	F.	M.	F.	
Typhus, -
Enteric, -
Continued and Undefined,
Puerperal,
Smallpox,
Scarlet Fever, -	20	24	217	283	205	258	5	6	27	43	2.4	2.3	44	44	20	25	25	24
Diphtheria and Memb. Croup,	59	58	47	51	1	1	11	6	2.1	2	40	41	30	24	..	..
Erysipelas,
Cholera, -
Cerebro-spinal Fever,
Ophthalmia Neonatorum,
Trachoma,
Acute Encephalitis,
Acute Polioencephalitis,
Acute Poliomyelitis,
Acute Primary Pneumonia,	122	75	95	63	33	22	15	15	26	26	46	45	21	23	..	..
Acute Influenzal Pneumonia,	21	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malaria, -
Dysentery, -
Relapsing Fever,
Trench Fever,
Measles, -	87	59	24	19	5	5	58	35	17.2	20.8	24	26	20	20	..	..
German Measles,
Whooping-Cough,	80	97	98	89	22	21	..	1	18.3	19.1	30	32	21	24	..	..
Chickenpox, -
Others, -	3	22	2	21	..	..	1	1	..	..	22	21	..	..	..	..
Totals,	81	63	568	594	471	501	66	55	112	101	12.3	9.9	..	..	..	..	..	..

KNIGHTSWOOD HOSPITAL.—STATEMENT SHOWING AGE AND SEX DISTRIBUTION
OF CASES DISMISSED, AND DEATHS DURING THE YEAR 1925.

		Age.	Paratyphoid B.	Typhus.	Enteric.	Puerperal.	Smallpox.	Scarlet Fever.	Diph. and Memb. Croup.	Erysipelas.	Cerebro-spinal Fever.	Lethargica Encephalitis.	Acute Poliomyelitis.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Malaria.	Dysentery.	Pulmonary Tuberculosis.	Other Forms of Tub.	Measles.	German Measles.	Whooping Cough.	Chickenpox.	Other Affections.	Total	
Cases (including Deaths).																										
Male.	- 1	...	...	...	...	...	...	3	2	...	...	...	...	35	...	...	...	...	...	1	...	24	...	...	65
	- 2	...	...	...	...	...	...	9	5	...	...	...	...	26	...	...	...	...	...	5	...	31	...	...	76
	- 3	...	...	...	...	...	...	14	1	...	...	...	...	12	...	...	...	...	...	8	...	21	...	1	57
	- 4	...	...	...	...	...	...	15	5	...	...	...	...	10	...	...	...	...	...	4	...	16	...	...	50
	- 5	...	...	...	...	...	...	25	2	...	...	...	...	10	...	...	...	...	...	6	...	9	...	...	52
	- 10	...	...	...	...	...	...	85	21	...	...	...	...	9	...	...	...	...	...	5	...	18	...	1	139
	- 15	...	...	...	...	...	...	38	7	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	48
	- 25	18	2	11	31
	- 35	2	2	6	10
	- 45	1	1	1	3
+ 45	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	6
Total,		...	...	...	...	...	...	210	48	...	...	...	128	...	...	...	...	...	...	29	...	120	...	2	537
Female.	- 1	...	...	...	...	...	...	1	...	...	...	...	...	28	...	...	...	...	...	2	...	26	...	1	58
	- 2	...	...	...	...	...	...	7	3	...	...	...	...	19	...	...	...	...	...	3	...	26	...	...	58
	- 3	...	...	...	...	...	...	10	1	...	...	...	...	14	...	...	...	...	...	5	...	22	...	...	52
	- 4	...	...	...	...	...	...	10	1	...	...	...	...	2	...	...	...	...	...	2	...	17	...	1	33
	- 5	...	...	...	...	...	...	29	2	...	...	...	...	2	...	...	...	...	...	4	...	8	...	1	46
	- 10	...	...	...	...	...	...	109	13	...	...	...	...	10	...	...	...	...	...	4	...	10	...	4	150
	- 15	...	...	...	...	...	...	64	10	...	...	...	...	1	...	...	...	...	...	3	...	1	...	1	80
	- 25	...	...	...	...	...	...	22	14	...	...	...	...	3	...	...	...	...	...	1	...	...	...	10	50
	- 35	...	...	...	...	...	...	4	6	...	...	...	...	2	...	...	...	...	...	...	...	...	...	3	15
	- 45	6	3	9
+ 45	...	...	...	...	...	...	2	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	5
Total,		...	...	...	...	...	...	264	52	...	...	...	85	...	...	...	...	...	...	24	...	110	...	21	556
Deaths.																										
Male.	- 1	...	...	...	...	...	...	...	...	...	...	...	...	16	...	...	...	...	...	...	...	8	...	...	24
	- 2	...	...	...	...	...	...	2	...	...	...	...	...	8	...	...	...	...	...	2	...	11	...	...	23
	- 3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	3
	- 4	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	4
	- 5	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	3
	- 10	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	- 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	- 25	2	2
	- 35	2	2
	- 45	3
+ 45	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3
Total,		...	...	...	...	...	...	5	1	...	...	...	33	...	...	...	...	...	...	5	...	22	...	...	66
Female.	- 1	...	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...	...	...	1	...	10	...	...	19
	- 2	...	...	...	...	...	...	2	...	...	...	...	...	9	...	...	...	...	...	1	...	9	...	...	21
	- 3	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	1	...	1	...	...	6
	- 4	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2
	- 5	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
	- 10	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	4
	- 15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	- 25
	- 35
	- 45	1	1
+ 45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total,		...	...	...	...	...	...	6	1	...	...	...	22	...	...	...	...	...	...	5	...	21	...	...	55

KNIGHTSWOOD HOSPITAL.—PULMONARY TUBERCULOSIS.—TABLE SHOWING CASES DISMISSED AND DEATHS DURING THE YEAR 1925, AND THE AVERAGE RESIDENCE.

	Number of Cases Dismissed.	Number of Deaths.	Average Residence.							
			- 30	- 50	- 100	- 150	- 200	- 300	+ 300	
			days.							
Pulmonary Cases—										
Early,	20	...	...	2	16	1	1	1	...	...
Intermediate,	51	4	4	9	18	10	12	1	1	1
Advanced,	138	84	14	40	60	40	40	21	7	7
Total,	209	88	18	51	94	51	53	22	8	8

ROBROYSTON HOSPITAL.

The usual tables which show the volume of work carried out in the hospital, and which enable year-to-year comparisons to be made, are given as Appendices.

Surgical Cases.

GLANDS.

Surgical Table No. 1.—Once more the same classification of gland cases has been used. The percentage of late cases is again very high. In 1923 late cases made up only 44·8 per cent. This increased in 1924 to 81·2 per cent., while in the year under review the percentage was 79·6. It is worthy of note that this table indicates clearly the age incidence of glandular tuberculosis. 70 per cent. of the cases fall between the years five and twenty.

SPINE.

Surgical Table No. 2.—The total number of spine cases dismissed continues to show uniformity from year to year. The percentage dismissed as fit in 1925 was 52·6, which is slightly lower than last year, when the percentage was 54·5. In 1922-23 it only amounted to 34·6 per cent. The number of arrested cases of tuberculosis of the spine seems unduly low. It is to be accounted for by the relatively large numbers admitted with sinus formation and consequent secondary pyogenic infection, some in an advanced state of amyloid degeneration. Once a psoas abscess has broken down or has been opened, the outlook in our experience is practically hopeless. In this connection it is interesting to note that 11 spinal cases are recorded as having died, and 10 as having been admitted with sinuses. It is of such grave moment to preserve the skin intact over psoas abscesses that all patients with these complications should be admitted to hospital as quickly as possible. Sixteen cases are included occurring over the age of twenty years. Caries of the spine of adult life differs in its pathological characters and in prognosis from the disease of childhood. The site of the lesion in children is in the body of the vertebra, giving rise, after destruction of the part, to collapse of adjacent vertebræ, and consequent deformity, whereas in the adult it is subperiosteal, along the anterior surface of the body of the vertebra. There is, therefore,

less tendency to marked deformity, and diagnosis is difficult on this account, and also because of the greater obscurity of the radiological picture. There are many cases that are treated for lumbago, by massage and movements, thereby aggravating the disease. Girdle pains are of common occurrence. The hope of ultimate recovery is not nearly so good as in childhood, and the course of treatment longer.

The average duration of stay in hospital of patients with tuberculosis of the spine is still more than one and a-half years. This period is not likely to be materially lessened by any therapeutic procedure, for even were it possible to arrest the progress of the disease at once, it would still require long recumbency to permit of consolidation and healing of bone.

BONES OTHER THAN SPINAL.

Surgical Table No. 3.—The cases included in this table are mainly examples of diaphyseal tuberculosis, which in our experience is commoner than the text books would lead one to expect. Practically all on admission are complicated by abscess or sinus formation, from which tubercle bacilli can be isolated. The Wassermann reaction should nearly always be done to exclude the possibility of a specific taint.

HIP JOINT.

Surgical Table No. 4.—The total number of hip cases dismissed shows a decrease. It is interesting to note, however, that whereas up till 1924 the results of treatment were very uniform, this year 60·6 per cent. were discharged as fit, in comparison with 53·3 per cent. in 1924. It is impossible to indicate by a table the full extent of the improvement in our results. Ankylosis is not such a common feature as it was. More patients are now discharged with partial or complete restoration of function of the joint than there were formerly. This is doubtless due to the greater facilities for treatment. During the earlier years of the hospital's career there were a vast number of long standing cases of disease awaiting admission, and all that could be aimed at was the arrest of the activity of the disease. The duration of residence of patients suffering from tuberculosis of the hip joint has not materially altered, and it is unlikely that it will show any dramatic change, for the same reasons as are explained in connection with the spinal table.

JOINTS OTHER THAN HIP.

Surgical Table No. 5.—This table is made up chiefly from knee, ankle, elbow, and wrist tuberculosis. Mobility and return of function are undoubtedly more frequently achieved than they were. Fewer cases having had extensive surgical intervention are now encountered. However, the proportion allowed to break down and discharge through sinuses is still very high.

ABDOMINAL TUBERCULOSIS.

Surgical Table No. 6.—The difficulty in classifying these cases for statistical purposes still remains practically insurmountable. The usual simple classification has again been adopted. 59·3 per cent. were dismissed fit, compared with 45·4 per cent. in the previous year.

Treatment has been carried out according to the principles fully explained in the 1924 Report. Where radiological examination indicated relative delay and kinking at any point, particularly at the ileo-caecal region or the pelvic colon, operation was performed, consisting of a careful division of the bands, freeing the bowel and allowing the fixed loop to be straightened out, followed by accurate suturing of the peritoneum over the raw surfaces.

Five or six cases of acute intestinal obstruction resulting from tuberculosis have been encountered. In the majority of these a fatal termination could not be avoided, for operation is very difficult because of the extensive adhesions to the anterior abdominal wall, and the extreme friability of the intestine. Faecal fistula sometimes occurs after laparotomy.

The remaining surgical tables call for very little comment.

TREATMENT.

Treatment has followed the usual conservative lines used since the hospital opened. More use has been made of artificial sunbaths than previously. The light-room has several new features, in addition to the two 75-ampere and three 20-ampere direct current lamps described in the last report. A mercury vapour lamp has been installed, and has been used for special cases. Two radiators have been fitted to a movable stand. These are used for throwing a concentrated beam of infra-red rays on

to the diseased joint, either during or after the ultra-violet irradiation. It is anticipated that this combined method will prove more efficacious in treating certain sinuses than ultra-violet rays alone.

A portable set of four lamps, taking about 16 amperes and a voltage of 200, has been fitted out. These are alternating current lamps, and are of use for treating spinal cases in the wards. Therapeutically they are not so efficient as corresponding direct current lamps would be.

The following special report by Dr. Alexander Smith, Senior Resident Physician, describing the results obtained from the application of artificial light treatment to patients was prepared at the request of the Medical Officer of Health:—

REPORT BY DR. SMITH ON ARTIFICIAL SUNLIGHT THERAPY AT ROBROYSTON SANATORIUM.

It has come to be generally recognised now that the treatment of tuberculosis, even when the local lesion is situated in glands or bones and joints, must be general and not focal in nature; and the results obtained by heliotherapy, or natural sunlight treatment, are far in advance of anything that can be achieved by the older surgical methods. In Northern countries, heliotherapy is difficult to carry out, because of the fitful appearance of the sun and the relatively weak actinic value of its rays. Even in the warmest and brightest summer days, it is possible for us at Robroyston to give exposures at least three times as long as Rollier employs in Switzerland, without obtaining the same results.

Thus it became apparent that, if light treatment were to be of any avail, some form of artificial sunlight must be sought. Finsen, and later Reyn, at the Institute, Copenhagen, elaborated a method whereby results equal at least to those of Rollier might be obtained. An apparatus was installed at Robroyston Hospital at the end of 1924, and was in working order in January, 1925, and since then daily treatment has been carried out.

Description of Apparatus.—The installation consists of two 75-ampere lamps and three 20-ampere lamps, running at 70 volts. In order that the lamps may burn smoothly, continuous current is essential. Robroyston Hospital is supplied with alternating current from the Clyde Valley Electrical Company, and a motor

generator had to be installed to give the appropriate continuous current. The 75-ampere lamps are run only with pure carbon terminals. The 20-ampere lamps are sometimes used to burn pure carbon, or tungsten-cored carbon, as required.

At one time it is possible to treat eight sitting patients round the two 75-ampere lamps, while two recumbent or from four to six sitting patients can be irradiated by the three 20-ampere lamps. Each of the large lamps is controlled by a separate switch, but the three small lamps are controlled by a single switch.

We also make use, to a limited extent, of a small alternating-current hand-fed arc lamp, suitable for burning carbon or impregnated carbon terminals, and fitted with an electric radiator for resistance, so that the patient is not allowed to feel the cold.

A mercury vapour lamp is being installed.

A comparison of the spectrum of the sun and the carbon arc shows very slight differences. The tungsten arc is richer in ultra-violet light, but particularly in shorter wave-length rays. The mercury vapour spectrum consists of several broad lines, some of which occur beyond the end of the sun's spectrum. It is still a point of considerable doubt whether these short wave lengths are therapeutically efficient, especially in dealing with intractable tuberculous lesions of bones and joints.

Method of Exposure.—What follows applies particularly to the pure carbon arc. Treatment consists of a general irradiation, the patients being entirely naked save for very short pants. They sit at a distance of about one metre on either side of the lamps, which are uncovered by glass, because glass does not permit of the passage of ultra-violet radiations. The times of irradiation are carefully graduated. In most cases the initial exposure is one of twenty minutes, the patients being instructed to turn every five minutes, so that back and front are alternately exposed. Every fourth day an additional exposure of five minutes is given, until a maximum of two or two and a half hours is reached.

Patients must be considered individually, and any increase in the time of exposure must be carefully done until the response of the patient is estimated. In some cases twenty minutes of an initial bath would be far too long, and exhaustion, elevation of temperature and the other phenomena of toxæmia would result. Generally speaking, in afebrile patients of fair general condition a steady increase in the duration of the bath is possible.

Hydrotherapy.—All ambulant patients, save where there are special contra-indications, receive a tepid to cold spray on emerging from the light room. Bed patients are sponged down by the nurse. This, apart from its tonic effects, prevents the patients from catching cold.

It is essential that the eyes should be protected from the rays or an intense conjunctivitis will develop, sometimes eight hours afterwards. Each patient is given glasses or a dark cloth eyeshade to wear.

Numbers and Types of Cases Treated.—In all we have treated 102 patients, falling into the following groups:—

Lupus Vulgaris,	...	...	...	...	...	13
Glands,	...	...	...	...	...	23
Joints,	...	...	...	...	...	30
Bones,	...	...	...	...	...	8
Mutiple,	...	...	...	...	...	6
Genito-Urinary,	...	...	...	...	...	3
Bowel,	...	...	...	...	...	1
Lungs,	...	...	...	...	...	10
Lungs and Larynx,	...	...	...	...	...	2
Miscellaneous (including short tonic exposures before and after operations),	...	...	...	...	...	6

At least 75 per cent. of these cases suffered from lesions of long duration, and many had defied years of treatment.

General Muscle Tone and Body Weight.—One of the most striking features of the treatment is the rapid improvement in general health experienced by the patients. Flabby muscles soon gain in tone, and the muscular atrophy which is such a common feature round tuberculous joints is not nearly so noticeable as in patients who receive the ordinary treatment without generalised light baths. Only in two or three cases did they not show a steady gain in body weight.

Pigmentation.—In from four to six hours after exposure an erythema of the skin results. This, provided that the exposures are properly timed, gradually gives way to a deepening pigmentation, resembling very closely the browning due to the sun, provided carbon arcs are used. The Mercury Vapour lamp pigments more quickly, but the pigmentation is tinged with a yellowish green, and a patient treated by the Mercury Vapour

lamp could usually be distinguished from a patient treated by natural sunlight, whereas this would hardly be possible in the case of the carbon-arc lamp. Tungsten gives a pigmentation somewhere between the two.

As with natural heliotherapy all patients do not pigment equally. They may be roughly classified as (1) the pale "cachectic" type, showing practically no change in colour, and only a faint erythema with a tendency to fine desquamation; (2) the ruddy type, showing an intense erythema, but not browning readily; and (3) those who become progressively browner and browner. Usually the pigmentation is uniform, but occasionally it suggests a marled appearance.

It is held by some authorities, including Rollier and Gauvain, that the benefit derived is roughly in proportion to the pigmentation, while others hold that pigmentation is of no value in prognosis, and that it is actually to be avoided, if possible, because it hinders the absorption of the rays.

At Robroyston we are of opinion that pigmentation merely protects the delicate blood vessels and scarcely influences the therapeutic value of the light baths at all. The majority of our patients do pigment, but all the "pigmenters" do not show the best results. Two of our most successful cases of bone and joint tuberculosis, where rapid and complete healing of the sinuses took place, and movable joints were eventually obtained, were pale "non-pigmenters," while the most intractable case of lupus occurred in a child who showed deep brown pigmentation. Of course, patients who pigment are more easy to expose because burning and blistering do not occur in them.

Lupus.—Thirteen cases have been treated, most of them of an extensive nature, and of long duration up to sixteen years. Carbon dioxide snow, sulphanilic picric acid, X-rays, &c., had been used without avail. All but three have shown very remarkable improvement, and six have been dismissed as fit. The most rapid response is met with in the catarrhal type, where the secondary infection soon clears up. The response in three cases might be described as dramatic. Two of these suffered from long standing lupus of the face, invading the buccal and nasal mucous membranes, and the third was a case of lupus of the foot and leg.

Fibroid lupus shows great reluctance to be influenced by any form of treatment, and it is in this kind of skin tuberculosis that Artificial Light Bath Therapy is disappointing. The reason seems to be that the patches have a poor blood supply, and most of the therapeutic value of radiation is due to the reactions it produces in the blood. Healing by light gives rise to a much more elastic scar with less contraction of tissue than can be obtained by any other method.

It has been suggested that repeated light baths may be dangerous in giving rise to malignant changes, such as resulted frequently in the days when X-rays were used extensively to treat tuberculosis of the skin. At the Finsen Institute large numbers of cases have now been treated, some of them many years ago, and malignant disease has not been a sequela.

Glands.—Twenty-three cases of glandular tuberculosis, mostly cervical, have been treated. Of these, eighteen had sinuses and surrounding scrofulous ulcers; two were complicated by abscess formation, and two, though extensive, had not broken down. In all improvement has resulted. In the sinus cases healing has been rapid, the scars firm and elastic, and puckering and contraction of tissue have been less noticeable than when ordinary routine measures were adopted.

Joints.—Thirty patients with tuberculous disease of joints have had treatment by artificial sunlight. They may be grouped as follows:—

	Complications.		
	With Abscesses.	With Sinus.	No Abscess nor Sinus.
Hip Joint,	—	2	1
Knee Joint,	1	3	6
Ankle Joint,	—	6	—
Elbow Joint,	—	8	—
Wrist Joint,	1	2	—

Excellent results have been obtained particularly with elbow, ankle, and wrist disease. In four of the elbow and two of the wrist cases not only have very chronic sinuses healed up firmly, but there has been practically complete restoration of function and mobility in the joint. Ankle joint disease has usually proved very intractable, and deformity and fixation have been common. We have had three successes where function was preserved. In one of them there was such a profuse and long-continued discharge that amputation was at one time considered.

Treatment has not been completed in most of the knee and hip cases, but the results are promising in some, and one case of hip disease with sinus formation has been discharged with the sinus firmly healed and the joint movable.

More time is yet necessary before the total benefit in joint tuberculosis can be estimated. We are of opinion that hope of complete restoration of function is greater if light baths be given. It must be emphasised that fixation apparatus cannot be dispensed with, and patience over a long period, perhaps one or two years, is essential.

Bone.—Eight cases with bone lesions, all but one complicated by sinus formation, have been treated, and good results have been obtained, the response being quicker where the joint surface was not invaded.

Multiple.—Six cases of multiple disease have been tried, and though improvement has been noticed, a longer period will be necessary before the effect can be adequately judged.

Genito-Urinary.—One case of tuberculous epididymitis with sinus has been arrested; one case of tuberculosis of the bladder and kidney benefited greatly, while the other, a post operation case, did not remain in hospital long enough.

Lungs.—Ten cases with pulmonary tuberculosis are undergoing treatment, and two patients with pulmonary and laryngeal tuberculosis have been treated. Great care in the selection of suitable cases and in regulating dosage is necessary with visceral disease, and the treatment must be of long duration. Our cases are gaining in weight, and improving in general condition, but it is not possible yet to foretell the ultimate results. Early pulmonary disease should be tried; but advanced febrile patients are more likely to derive harm from increasing toxæmia, than benefit. Laryngeal tuberculosis is said to be amenable to general light bath therapy; even when the lesions are advanced, pain and difficulty in swallowing are said to be relieved. We have not had long enough experience to express an authoritative opinion on this aspect of the problem.

In conclusion it may be said that in the so-called surgical manifestations of tuberculosis artificial sunlight therapy is, undoubtedly, of great value, but it is by no means infallible. In the treatment of pulmonary disease its value has yet to be proved.

If used as a tonic and prophylactic measure for debilitated children, particularly those exposed to grave risks of tuberculosis from infected relatives, it would be almost invaluable.

(Sgd.) A. SMITH.

9th January, 1926.

Aspirations and Injections.—As in previous years, abscesses have been for the most part treated by aspiration of the fluid products of tissue destruction. Into many abscesses modifying fluids have been injected. Sinuses, where no complication such as albuminuria or amyloid disease existed, have been treated by injection of pastes. During the year 2330 aspirations were performed, while 505 fluid and 425 paste injections were given.

Operations.—Operations have been necessary in many cases of cervical adenitis, in some cases of abdominal tuberculosis, and in diseases of bones and joints where there was gross secondary infection and deformity. Many of the minor operations consisted of tenotomy and manipulation in tuberculosis of the hip and knee where the deformity could not be corrected by appliances. The number of operations carried out during the year under review was 125, the total including 55 major and 70 minor operations.

Appliances.—In the early active stages spinal cases are immobilised on spinal trays after the pattern of the Berck carriage. Several Carshalton orthopædic carriages are also in use. Hips are immobilised by means of an extension apparatus with an adjustable arm, which enables gradual abduction to be attained.

Increasing use has been made of certalmid splints, and celluloid has been practically superseded. The method of construction of certalmid appliances was described in the 1924 Report. Certalmid has proved more durable than celluloid, and is slightly less costly.

In 1925 250 plaster and 108 certalmid splints were constructed.

Out-Patient Clinic.—After-care to ensure permanency of arrest is an important factor. Mr. Taylor conducts once weekly, at Granville Street Dispensary, an out-patient clinic, where patients report at regular intervals or are instructed to attend

by the dispensary physicians. In this way he is able to keep patients, more particularly those with spinal or joint disease, under observation, and to instruct them when it is advisable to discard certain splints or jackets.

Radiology.—The X-ray department has been as extensively used as in previous years. 994 skiagrams have been taken. Radiological examination is mainly used in the diagnosis of surgical tuberculosis, and as a guide to treatment.

Laboratory.—Routine laboratory examinations have been carried out as follows:—

Sputum for tubercle bacillus,	677
Diphtheria Cultures,	330
Urines (Microscopical Investigations, Cultures, &c.),	56
Cultures from Sinuses, &c.,	125
Fractional Gastric Analysis after Test Meal, ...	30

PULMONARY CASES.

The great predominance of advanced cases admitted renders any attempt at treatment abortive. Most of them are admitted in the terminal phase of the condition, and palliative measures are all that are possible.

Artificial pneumothorax has been attempted in six cases. Two have been discontinued, but the others are progressing favourably. Since in only from 2 per cent. to 5 per cent. of all pulmonary tuberculosis cases is artificial pneumothorax indicated, and since we are dealing here mainly with the advanced type, it is not likely that we shall ever have large numbers of suitable patients in hospital in one year.

Paget's Insufflation Tuberculin Method.—Twenty cases have been treated by this method described by Paget, of Perth, Western Australia. It depends on the belief that the epithelial cells of the nose and nasal sinuses are capable of antibody production. Besredka has made some similar observations, showing that toxins and soluble poisons are rapidly absorbed by the epithelium lining the trachea, and that by vaccination, set up by injecting toxins into the trachea, local resistance is greatly increased.

The 20 cases treated all had advanced physical signs in the lungs, but were afebrile, and had not many manifestations of toxæmia when at rest. In only one of the 20 cases did the lesion

become quiescent, and she had shown considerable improvement with ordinary hygienic measures. On dismissal she was sent to Bellefield Sanatorium, where tuberculin was not administered, and the improvement continued.

Four cases showed improvement. These were patients with extensive lesions of long duration, but with considerable evidence of fibrosis. They may be classified with that type of patient who, though remaining a semi-invalid for many years, is yet able to do a little work at intervals, returning to hospital for periodic rests. It seems certain that their improvement is attributable to rest rather than to tuberculin.

Eleven patients showed no improvement at all. One of these developed tuberculosis of the cervical spine and tuberculous dactylitis; 3 of them eventually had gross lesions of the larynx, and 3 intestinal ulceration with intractable diarrhœa.

There were 4 deaths in hospital, 1 from a profuse hæmoptysis about twelve hours after insufflation treatment. Of the 11 cases classified as not improved, 4 have subsequently died at home.

The dosage employed varied from 1/6,000mgm. to 1/40 mgm, of tuberculin B.E., according to the indications described by Paget. Very occasionally slight elevations of temperature and increase in pulse rate followed the dose, but in the majority no reaction was noticed. At first the patients felt benefited, probably due to the psychological influence of a new form of treatment.

It will be observed that 8 out of a total 20 patients have died. It seems that tuberculin given by the insufflation method exercises no influence of importance in the progress of the disease, and therefore it has been discarded.

DENTAL TREATMENT.

During the year Dr. Hugh MacKay, L.D.S., made in all 43 visits, and the dental work carried out is as follows:—

Fillings,	{ Amalgam,	...	...	...	...	124
	{ Cement,	...	...	...	...	15
Extractions under Chloroform,	...	...	...	...	...	82
Extractions with Local Anæsthesia,	...	...	...	...	...	520
Scaling,	...	...	...	...	...	100
Pulpitis Cases,	...	...	...	...	...	2
Electric Treatment of Gums,	...	...	...	...	...	2
Consultations,	...	...	...	...	...	250 (Appro.)

EDUCATION.

The Educational Authority of Glasgow appointed two additional teachers in August for ward work. Some 80 children now receive bedside tuition. While the majority of these children are of an intelligence equal to that of the normal child, the instruction has to be modified to suit the ages of the children, and also their physical disabilities. It includes a proportion of handwork. Apart from the mere attainment of knowledge, such tuition is beneficial to the physical condition of the child, for, when left to their own devices, the children either become dull and apathetic or develop mischievous habits. The tuition of ambulant patients in the schoolroom was carried on along the usual lines.

TRAINING OF NURSES.

This hospital is not recognised by the General Nursing Council of Scotland as a training school for nurses, since tuberculosis is the only disease treated here. This has made the problem of obtaining the proper type of probationer increasingly difficult. Since no registrable certificate can be granted, there is no inducement for the probationer to make herself efficient, and none for her to stay long in hospital, so that nurses are found leaving the service on the slightest pretext. It is imperative that a probationer nurse should have a certain standard of general education; this cannot be insisted on owing to lack of applicants. No matter how long a probationer remains here she can never be given the responsibilities of a staff nurse. This blind alley arrangement is not good for the girls themselves, nor it is good for the patients, and it is eminently unsatisfactory for the staff.

Some scheme of affiliation for the purposes of training could be evolved which would be recognised by the Nursing Council. If possible, an arrangement with one of the general hospitals would be preferable, whereby the preliminary tuition could be given here. The second and third years could be spent at the general hospital, and in the final year a proportion would return to us and take up staff duties. If this scheme were impracticable, perhaps one of a similar nature might be carried out in conjunction with a fever hospital. This would involve difficulties of organisation, but would be a way out of the impasse.

JOHN WATSON,

Physician-Superintendent.

28th May, 1926.

Table A.—During the year 23 non-tuberculous patients were treated, and the subjoined statement indicates the nature of their disease:—

Disease.	Number of Cases.
Lymphadenoma,	1
Sarcoma of Ilium,	2
Lympho-sarcoma of Neck,	1
Lympho-sarcoma of Mediastinum,	1
Carcinoma of Bowel,	1
Valvular Disease of Heart,	1
Congenital Disease of Heart,	1
Bronchitis,	3
Syphilis,	1
Rickets,	2
Rheumatoid Arthritis,	1
Genu Valgum,	1
Double Coxa Vara,	1
No Abnormality Found (under observation for tuberculous disease of hip joint),	1
No Abnormality Found (under observation for tuberculous disease of knee joint),	1
Foreign Body in Lung,	1
Malnutrition,	3
	23

ROBROYSTON HOSPITAL—THE FOLLOWING TABLE INDICATES THE STATE OF NUTRITION OF THE VARIOUS GROUPS OF TUBERCULAR PATIENTS ON ADMISSION.

Disease.	Good.	Fair.	Poor.	Total.
Pulmonary Tuberculosis—				
Early, - - - - -	3	11	6	20
Intermediate, - - - - -	5	19	20	44
Advanced, - - - - -	4	47	113	164
Non-Tuberculous, - - - - -	2	12	9	23
Other Forms of Tuberculosis—				
Spine, - - - - -	10	28	19	57
Glands, - - - - -	16	22	16	54
Bones other than spine, - - - - -	5	13	8	26
Hip Joint, - - - - -	5	18	10	33
Joints other than hip. - - - - -	11	25	9	45
Abdomen, - - - - -	4	20	35	59
Multiple, - - - - -	5	19	25	49
Genito-Urinary and Miscellaneous, - - - - -	3	5	4	12
Totals, - - - - -	73	239	274	586

Vermin were found on the head or body or both in 35% of admissions during the year.

ROEROYSTON HOSPITAL—TABLE SHOWING CASES DISMISSED AND DEATHS DURING THE YEAR 1925,
AND THE AVERAGE RESIDENCE.

Disease.	Number of Cases Dismissed.	Number of Deaths.	Average Residence.						Average.	
			-30	-50	-100	-150	-200	-300		+300
			Days.							
Pulmonary Tuberculosis—										
Early, - - -	20	...	1	...	4	4	4	6	1	174
Intermediate, - - -	42	2	5	4	5	6	3	8	13	228
Advanced, - - -	115	49	21	16	41	19	19	16	32	192
Diagnosis not Confirmed, - - -	6	1	3	...	2	1	...	1	...	72
Other Forms of Tuberculosis—										
Glands, - - -	54	...	4	1	12	12	11	10	4	156
Spine, - - -	46	11	5	...	2	2	2	3	43	636
Bones other than spine, - - -	24	2	1	3	1	5	4	4	8	244
Hip Joint, - - -	29	4	1	...	...	3	1	1	27	588
Joints other than hip, - - -	42	3	4	4	2	1	5	3	26	434
Abdomen, - - -	53	6	9	4	7	13	5	14	7	155
Multiple, - - -	38	11	5	1	6	5	4	6	22	339
Genito Urinary, - - -	6	1	...	1	...	2	1	1	2	269
Miscellaneous, - - -	5	...	...	...	...	1	...	2	2	383
Diagnosis not confirmed, - - -	14	2	5	4	3	2	...	1	1	83
Total, - - -	494	92	64	38	85	76	59	76	188	284

SURGICAL CASES: TABLE No. 1. GLANDS.

Age Groups	CONDITION ON ADMISSION			TREATMENT				CONDITION ON DISMISSAL				DISMISSED				COMPLICATIONS							
	Early	Intermediate	Late	Total	Operation	Aspiration	Tuberculin	Other	Total	Well	Improved	Healed	Discharging	Total	Fit	Unfit	At own or Parents' request	For Other Reasons	Died	Total	Tubercular	Other	
																							...
- 1
- 2	4	4	...	2	...	2	...	1	1	1	1	4	2	...	2	...	...	...	4	1	...
- 3	...	1	1	2	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	2	...
- 5	4	4	3	1	...	...	...	3	...	1	...	4	4	...	...	...	...	...	4	...	1
- 10	...	3	9	12	2	4	...	6	...	8	1	3	...	12	12	...	...	...	...	12	2	...	...
- 15	1	3	9	13	...	5	...	8	...	9	...	4	...	13	13	...	...	...	...	13	...	3	...
- 20	...	3	6	9	2	2	...	5	...	6	...	2	1	9	8	...	...	1	...	...	9	...	2
- 25	3	3	1	2	...	...	...	2	1	...	...	3	2	...	1	...	...	3	...	1	...
- 35	4	4	1	1	...	2	...	1	3	...	...	4	3	...	...	1	...	4	...	...	...
- 45	2	2	1	1	...	...	...	1	...	1	...	2	2	...	...	...	...	2	...	1	...
45+	1	1	...	...	1	...	...	...	...	1	1	1	...	1	...	...	...	1	1	...	...
Total	1	10	43	54	12	18	..	24	54	32	6	13	3	54	48	1	3	2	...	54	6	8	...

SURGICAL CASES: TABLE NO. 2. SPINE.

Age Groups	CONDITION ON ADMISSION					TREATMENT					Total	CONDITION ON DISMISSAL				Total	DISMISSED				COMPLICATIONS				
	Abscess	Sinus	Abscess and Sinus	No Abscess or Sinus	Total	Deformity on Admission	Operation	Aspiration	Aspiration and Infection	Appliances		Other	Total	Healed, including Arrested	Improved		Not Improved	Fit	Unfit	At Own or Parents' Request	For other Reasons	Died	Total	Tubercular	Other
- 2	...	...	...	1	1	1	...	...	1	1	...	1	1	...	...	1	...	...	...	...	1	...	...
- 3	2	...	...	3	5	4	...	1	1	2	1	5	4	...	...	3	...	...	1	1	5	...	2
- 4	2	...	1	3	6	5	...	1	1	3	1	6	3	...	1	...	...	...	1	2	6	4	1
- 5	1	...	...	4	5	5	...	...	1	4	...	5	4	...	2	2	...	...	1	...	5	1	3
-10	4	1	...	4	9	8	...	1	4	4	...	9	8	2	...	8	...	...	1	...	9	1	2
-15	1	3	1	...	5	4	...	2	...	1	2	5	4	...	...	2	...	...	...	3	5	2	...
-20	4	1	...	5	10	8	...	1	2	5	2	10	8	...	3	6	...	3	...	1	10	3	1		
-25	1	1	...	2	4	4	...	1	...	2	1	4	3	...	...	2	...	...	...	2	4	1	...
-35	2	2	...	3	7	6	1	2	1	1	2	7	6	3	3	3	...	2	1	1	7	4	...		
-45	1	1	1	...	3	1	...	1	...	...	2	3	1	...	3	...	...	3	...	...	3	2	1
45+	...	1	...	1	2	1	...	...	...	2	2	2	1	1	...	1	1	...	...	1	2	...	1
Total	18	10	3	26	57	47	1	10	10	23	13	57	43	2	12	46	1	9	6	11	57	18	11		

SURGICAL CASES: TABLE No. 3. BONES other than Spinal.

Age Groups	CONDITION ON ADMISSION					TREATMENT					CONDITION ON DISMISSAL				DISMISSED					COMPLICATIONS						
	Abscess	Sinus	Ulceration	No Abscess, Sinus or Ulceration	Total	Deformity on Admission	Operation	Aspiration	Aspiration and Infection	Appliances	Other	Total	Deformity on Dismissal	Healed, including Arrested	Improved	Not Improved	Total	Fit	Unit	At Own or Parents' request	For other Reasons	Died	Total	Tubercular	Other	
- 1	...	1	...	...	1	...	1	...	...	...	...	1	...	...	1	...	1	...	...	...	1	...	1	...	1
- 2	2	2	...	...	4	2	...	2	...	2	4	2	1	1	2	...	4	1	...	1	2	...	4	...	1
- 3	1	2	...	...	3	3	...	3	...	...	3	2	1	1	...	...	3	2	...	1	...	3	1	2	2
- 4	...	2	...	...	2	1	...	...	...	2	2	2	2	2	...	...	2	2	...	...	...	2	2	1	1
- 5	1	...	...	...	1	1	...	1	...	...	1	...	1	...	...	...	1	1	...	...	...	1	...	...	...
- 10	2	1	...	...	3	2	...	1	...	1	3	2	2	...	...	...	2	2	...	...	...	3	2	1	1
- 15	...	5	...	1	6	2	...	...	...	5	6	1	6	...	...	...	6	6	...	...	...	6	1	2	2
- 20	...	1	...	...	1	1	...	...	...	1	1	...	...	...	1	...	1	1	...	...	...	1	1	...	...
- 25	1	1	...	...	2	2	1	...	...	...	2	1	1	...	...	...	1	1	...	...	...	2	...	1	1
- 35	...	2	...	...	2	1	...	1	1	...	2	1	...	...	2	...	2	...	2	2	...	2	...	...	...
- 45
45+	...	1	...	...	1	...	...	...	...	1	1	...	...	...	1	...	1	...	...	1	...	1	...	...	...
Total	7	18	...	1	26	15	2	7	4	1	12	26	7	15	7	2	24	16	...	5	3	2	26	7	9	

SURGICAL CASES : TABLE No. 4. HIP JOINT.

Age Groups	CONDITION ON ADMISSION				TREATMENT					DEFORMITY ON DISMISSAL		CONDITION ON DISMISSAL			DISMISSED					COMPLICATIONS					
	Abscess	Sinus	No Abscess or Sinus	Total	Operation	Aspiration	Injection	Appliances	Other	Total	Improved	Not Improved	Healed, including Arrested	Improved	Not Improved	Total	Fit	Unfit	At Own or Parents Request	For other Reasons	Died	Total	Tubercular	Other	
																									Total
- 2	1	...	...	1	1	...	...	...	...	1	1	...	...	1	...	1	...	...	...	1	...	1	...	1
- 3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
- 4	1	...	3	4	...	...	4	...	...	4	4	...	3	1	...	4	2	...	...	2	...	4	...	2
- 5	...	...	1	1	...	...	...	...	1	1	...	1	...	...	1	1	...	1	...	...	...	1	...	...
- 10	2	2	3	7	2	...	1	3	1	7	4	2	4	1	1	6	5	...	...	1	1	7	4	...
- 15	1	1	11	13	2	1	10	...	...	13	12	...	11	...	2	13	11	...	1	1	...	13	1	...
- 20	...	2	2	4	2	...	1	1	1	4	2	2	2	...	...	2	2	...	...	...	2	4	2	...
- 25
- 35
- 45	...	3	...	3	1	...	1	...	1	3	...	2	...	2	2	...	...	1	...	1	3	...	...	...
45+
Total	5	8	20	33	7	2	2	18	4	33	23	7	20	3	6	29	20	2	1	6	4	33	8	3	

SURGICAL CASES: TABLE No. 5. JOINTS other than Hip.

Age Groups	CONDITION ON ADMISSION				TREATMENT					DEFORMITY ON DISMISSAL				CONDITION ON DISMISSAL				DISMISSED					COMPLI- CATIONS			
	Abscess	Sinus	No Abscess or Sinus	Total	Deformity on Admission	Operation	Aspiration	Infection	Appliances	Other	Total	Improved	Not Improved	Healed, includ- ing Arrested	Improved	Not Improved	Total	Fit	Unfit	At Own or Pa- rents' request	For other Reasons	Died	Total	Tubercular	Other	
																										Fit	Unfit	At Own or Pa- rents' request	For other Reasons	Died	Total	Tubercular	Other
- 1
- 2	...	...	3	3	3	...	1	2	...	...	3	3	...	1	2	...	...	2	...	1	...	...	3	...	...
- 3	...	...	2	2	1	...	...	2	...	...	2	1	...	1	1	...	...	...	...	...	2	...	2	...	2
- 4	...	1	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
- 5	1	...	2	3	2	...	1	1	...	1	3	1	1	2	...	1	3	1	...	...	2	...	3	...	2
- 10	3	3	6	12	11	2	2	1	5	2	12	10	1	11	1	...	12	9	...	1	2	...	12	...	3	
- 15	1	4	3	8	5	1	1	...	3	3	8	3	2	6	1	1	8	6	...	1	1	...	8	4	...	
- 20	3	3	1	7	6	1	2	...	2	2	7	5	1	2	2	2	6	3	...	2	1	1	7	3	...	
- 25	1	2	1	4	2	1	1	...	1	1	4	1	1	3	...	...	3	3	...	...	...	1	4	...	...
- 35	1	...	1	2	...	...	1	...	...	1	2	...	...	1	1	...	2	...	...	1	1	...	2	2	...
35+	...	2	1	3	2	...	1	1	1	1	3	2	...	2	1	...	3	1	1	...	1	...	3	2	1	
Total	10	15	20	45	33	5	9	2	17	12	45	26	6	29	9	4	42	25	1	6	10	3	45	11	9	

SURGICAL CASES: TABLE No. 6. ABDOMINAL TUBERCULOSIS.

Age Groups	NATURE OF DISEASE			CONDITION ON ADMISSION						TREATMENT		CONDITION ON DISMISSAL					DISMISSED					COMPLICATIONS										
	Acute	Sub-acute	Chronic	Distension	Gland Masses	Dispension and Glands	Dispension and Fluid	Diarrhoea	Obstruction	Other	Total	Operation	General, including Heliotherapy	Total	Arrested	Much Improved	Improved	Not Improved	Total	Fit	Unfit	At Own or Parents' request	For Other Reasons	Died	Total	Tubercular	Other					
																												5	21	33	59	21
- 1	1	...	1	1	1	...	...	...	...	...	2	2	2	2	...	...	...	1	1	1	...	1	1	1	2	1	...	...		
- 2	...	4	6	10	7	...	3	...	...	...	10	9	10	1	1	3	4	1	9	5	...	2	1	10	1	1	3	...			
- 3	1	3	1	5	3	1	1	...	...	...	5	5	5	1	1	...	3	4	1	...	...	3	1	5	1	2	1	2	...		
- 4	...	1	3	4	2	...	1	...	1	1	4	4	4	1	1	...	1	3	2	...	...	1	1	4	...	...	2	...	...	
- 5	...	2	3	5	...	1	2	...	...	...	5	4	5	1	2	1	...	4	4	...	...	...	1	5	...	...	...	...	...
- 10	1	4	9	14	5	3	2	3	...	1	14	9	14	3	9	1	...	13	9	...	...	3	1	14	1	3	...	...	...	...
- 15	1	4	5	10	1	1	1	4	1	2	10	6	10	3	5	1	1	1	10	8	...	2	...	10	3	...	...	...	...	...
- 20	1	1	1	3	...	1	1	1	...	...	3	2	3	...	3	...	...	3	3	...	...	...	...	3	...	...	...	...	...	...
- 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
- 35	...	1	4	5	1	...	...	...	4	5	1	4	5	1	1	3	...	5	3	...	1	1	...	5	...	...	...	...	...	...	...
- 45	...	1	...	1	1	...	...	...	...	1	1	1	1	...	1	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...
45+
Total	5	21	33	59	21	8	7	14	1	8	59	14	45	59	11	25	10	7	53	35	...	14	4	6	59	7	10

MULTIPLE LESIONS.

SURGICAL CASES: TABLE No. 7.

Age Groups	SITE OF PRINCIPAL LESION						CONDITION ON ADMISSION					TREATMENT				CONDITION ON DISMISSAL			DISMISSED.					COMPLI-CATIONS							
	Glands	Spine	Other Bones	Hip Joints	Other Joints	Abdomen	Total	Sinus	Abscess	Sinus and Abscess	Ulceration	No Sinus, Abscess or Ulcer	Total	Operation	Aspiration and Injection	Appliances	Other	Total	Healed, including Arrested	Improved	Not Improved	Total	Fit	Unit	At Own or Parents' request	For Other Reasons	Died	Total	Tubercular	Other	
- 1	...	...	1	...	...	1	2	...	1	1	...	2	...	1	...	1	1	2	...	...	...	2	...	...	...	...	2	2	1	...
- 2	...	...	5	...	...	1	6	3	1	...	2	6	...	2	...	4	4	6	2	1	2	5	2	..	1	2	1	6	6	2
- 3	...	...	2	...	...	...	2	...	1	...	...	2	2	2	2	...	...	2	1	1	1	2	...	...	1	1	...	2	2	1
- 4	...	1	2	...	2	1	6	2	...	...	2	6	2	2	...	1	3	6	1	2	1	4	2	...	1	1	2	6	4	2
- 5	...	...	...	...	2	...	2	1	...	...	...	2	2	1	1	...	...	2	1	1	...	2	1	...	...	1	2	2	2	1
- 10	1	3	5	...	2	1	12	8	1	...	1	12	2	2	...	8	8	12	6	2	2	10	8	...	2	...	2	12	10	...	
- 15	2	2	2	...	3	...	9	5	...	1	3	9	1	...	1	7	9	4	3	...	...	7	4	...	2	1	2	9	7	1
- 20	1	2	...	1	1	...	5	4	...	1	...	5	1	2	1	1	5	1	1	2	4	4	2	...	2	...	1	5	3	1	
- 25	...	...	1	1	2	...	4	2	...	1	1	4	...	1	...	3	4	4	2	1	1	3	2	...	1	...	1	4	2	1
- 35	...	...	...	...	1	...	1	...	1	...	...	1	1	...	...	1	...	1	...	1	...	1	...	...	...	1	...	1	...	...
- 45
45+
Total	4	8	18	2	13	4	49	25	3	10	2	9	49	7	11	4	27	49	17	12	9	38	21	...	10	7	11	49	37	9	

SURGICAL CASES: TABLE No. 8. GENITO-URINARY and MISCELLANEOUS.

Age Groups	LOCALISATION OF DISEASE			Total	TREATMENT			Total	CONDITION ON DISMISSAL			Total	DISMISSED					COMPLICATIONS				
	Genito-Urinary	Skin	Ear		Operation	Tuberculin	General		Total	Arrested	Improved		Not Improved	Total	Fit	Unfit	At Own or Parents' request	For other Reasons	Died	Total	Tubercular	Other
- 1		
- 2		
- 3		
- 4		
- 5		
-10	...	1	...	1	...	1	1	1	1		
-15	...	1	...	1	...	1	1	1	1		
-20	...	3	...	7	2	5	1	1	4	1	6	1	3		
-25		
-35	1	1	...	1	1	1	1		
-45	...	2	...	2	2	2	...	2	1	1		
45+		
Total	7	5	..	12	5	7	12	4	6	1	11	5	...	3	3	1	12	6		

STATEMENT OF CASES (PNEUMONIA) TREATED IN ROBROYSTON HOSPITAL ACCORDING TO SEX.

DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1925.

Disease.	Admitted.		Died.		Dismissed.		Mortality per cent.		Average Residence Days.			
	M.	F.	M.	F.	M.	F.	M.	F.	Dismissals.	Deaths.	F.	
Acute Primary Pneumonia,	40	52	5	12	28	29	12.5	23.0	34	37	13	16
Acute Influenzal Pneumonia,	13	4	2	—	5	—	15.4	—	36	—	3	—

In six cases the diagnosis was changed, four to Pulmonary Tuberculosis; one to Rheumatic Fever; and one to Cardiac Disease. These are not included in above table.

BELLEFIELD SANATORIUM.

I beg to submit to you the following report, with tables, regarding the work carried out at the above-named sanatorium during the past year.

During the year 1925 no difficulty was experienced in procuring cases to occupy, and so make use of, all the available accommodation. The milder months of the year, April to September, inclusive, make possible the use of the chalets, so that during that period 10 additional beds came into use, making a total of 58 beds against 48 available during the winter.

The type of case received for treatment cannot be said to have been altogether satisfactory. Too large a proportion, though classified as being intermediate on admission, showed too definite and too wide an involvement of lungs with tuberculosis to ever make it possible for them to acquire any permanent benefit from sanatorium treatment.

No doubt many showed a capacity to develop some degree of resistance to the established condition, but the expectation can only be that, returning as they needs must do in most cases to quite unsuitable home conditions, the degree of resistance acquired must soon break down.

126 cases in all passed through the sanatorium during the year. Two of these cases, one a gland case, the other a healed joint case, have been included in the general tables, since the subsequent manifestation of a pulmonary condition is to be expected.

Three deaths took place. One child under ten died of meningitis (tuberculous), and two adults, aged 21 and 22 respectively, who on admission showed the disease to be in an advanced state.

No positive system of graduated work has yet been instituted, it being thought that the big majority of patients, showing as they do a very definite degree of toxicity on admission, require rest over a protracted period, in order to prove a capacity to develop some degree of resistance to the established disease.

Participation in very light duties associated with the running of the wards has, however, been demanded of those patients thought to have had the necessary degree of fitness.

The system of treatment continued to be along general lines, and no difficulty was experienced in procuring the carrying out of the rules laid down.

The poultry farm maintained the necessary supply of fresh eggs throughout the year, and a fair supply of fresh vegetables was always available from the garden and farm.

No illness of a serious nature was recorded among the staff; a high standard of health was maintained.

A. YOUNG,
Physician-Superintendent.

30th April, 1926.

BELLEFIELD SANATORIUM.—PULMONARY TUBERCULOSIS.—TABLE
SHOWING CASES DISMISSED AND DIED DURING YEAR 1925 WITH
THE AVERAGE RESIDENCE.

Class.	Number Dismissed.	Number of Deaths.	Average Residence—Days.						
			-30	-50	-100	-150	-200	-300	+300
Early,	42	1	3	1	9	19	4	3	3
Intermediate,	67	—	3	2	10	28	9	8	7
Advanced,	17	2	2	2	4	2	2	2	3
Totals,	126	3	8	5	23	49	15	13	13

TABLE SHOWING INCIDENCE IN AGE PERIODS.

Age Group.	Early.	Intermediate.	Advanced.	Totals.
-10	11	—	—	11
-15	14	7	1	22
-20	3	10	3	16
-25	7	19	8	34
-35	7	12	4	23
-45	—	9	1	10
-55	—	9	—	9
-65	—	1	—	1
Totals,	42	67	17	126

BELLEFIELD SANATORIUM.—TUBERCULOSIS.—TABLE SHOWING STAGE OF DISEASE, &c., OF PATIENTS DISMISSED DURING 1925.

Age Group	Result of Treatment						Work or School		Reasons for Dismissal			Result of Sputum Examination			Complications	
	Arrested	Much Improved	Improved	Not Improved	Died	Less than 4 weeks	Fit	Unfit	Left of own accord or removed by Parents	Other reasons	Transferred to other Institutions	Result of Sputum Examination			Tubercular.	Other
												+	-	No Sputum or not Examined		
Early Cases—																
- 5
- 10	...	5	3	1	1	1	9	1	9	...	1	...	1	9	4	1
- 15	...	11	3	...	...	...	14	...	13	1	...	...	4	10	8	...
- 20	...	1	1	1	...	...	2	1	1	1	1	1	...	2	1	2
- 25	...	3	4	...	...	...	7	...	4	3	...	...	1	6	2	...
- 35	...	7	...	...	...	...	7	...	5	2	...	...	3	4	...	1
- 45
- 55
- 65
+ 65
Totals,†	...	27	11	2	1	1	39	2	32	7	2	1	9	31	15	4
Intermediate Cases—																
- 5
- 10
- 15	...	3	4	...	...	...	7	...	5	2	...	3	...	4	...	...
- 20	...	2	2	5	...	1	5	4	5	1	3	1	5	3	1	...
- 25	...	9	9	2	...	...	16	4	13	5	2	8	7	5	1	...
- 35	...	2	9	1	...	...	10	2	6	5	1	5	5	2	...	...
- 45	...	5	2	3	...	...	7	3	4	3	3	2	5	3	...	...
- 55	...	3	2	3	...	1	6	2	4	3	1	3	3	2	...	...
- 65	...	1	...	...	...	...	1	...	1	...	...	...	1	...	...	...
+ 65
Totals,	...	25	28	14	...	2	52	15	38	19	10	22	26	19	2	...
Advanced Cases—																
- 5
- 10
- 15	1	...	...	1	1	...	...	1	...	...	...	...	...
- 20	1	...	2	3	1	...	2	2	...	1	...	...	...
- 25	1	5	2	...	6	3	...	3	6	...	...	...	...	...
- 35	1	1	...	2	4	3	...	1	4	...	...	...	...	...
- 45	1	...	...	1	...	...	1	...	1	...	...	...	...
- 55
- 65
+ 65
Totals,	2	9	2	4	15	8	...	7	13	1	1	...	...	...

