Unable to display this page

CONTENTS.

DIAGRAMS AND ILLUSTRATIONS.

APPENDIX TABLES.

PREFACE

The Report for 1921 is the first which deals with the vital statistics of the Wards as reconstituted at November, 1920.

For such purposes the areas which are to be compared should present a certain homogeneity of condition, so that the resultant effect on its general welfare might be read directly from the contrasts which the healthy and unhealthy area present. None of the Wards quite fulfils these conditions. Most of them are of a composite social and sanitary character, and in many ways this has definite advantage, but it tends towards levelling of vital rates, in which the insanitary portion may have its record obscured by union with the more healthy portions of the Ward of which it forms part.

Some of the former Ward names have entirely disappeared. Broomielaw, for example, which had the highest death-rate (19·7) of all the Wards during the five years preceding their reconstitution, is now included in Blythswood, which was at one time among the healthiest districts of the City but now has the highest death-rate of all the Wards. It is closely approached by Cowcaddens, Mile-End, and Calton. Blackfriars, which formerly stood second with a death-rate of 18·9, is now divided between Exchange and Gorbals, whose death-rates are between 16 and 17 respectively.

There are similar changes in some of the densities. Cowcaddens, formerly easily first with a density of 244 persons per acre, has now only 91, due to the inclusion of many industrial portions; Exchange, formerly with 18, has now 73, due to the inclusion of part of Blackfriars; and Blythswood, with 36, has now also 73 from the inclusion of portions of Broomielaw and Cowcaddens.

While the average death-rate for the City is estimated at 14·5 per 1,000, Blythswood, Cowcaddens, Mile-End, and Calton all exceed 17, with Gorbals and Exchange over 16.

Among the Wards with low death-rates, ranging between 8 and 12 per 1,000, are Pollokshields (11·6), Langside, Whiteinch, Camphill, Kelvinside, and Cathcart (8·4).

BIRTH-RATE.

For the whole City this is estimated at 27·6 per 1,000, while that of Mile-End is 39, Dalmarnock 37, Calton 33, Shettleston and Tollcross 31·9, and Parkhead 31·8. Dennistoun is the only east-end Ward with a low rate (18·3). In Kelvinside it is 12, and in Pollokshields 10 per 1,000.

Illegitimate births formed 6·5 per cent. of the total births, but only 1·7 in Cathcart, compared with 13 per cent. in Blythswood, 12 per cent. in Exchange, 10 per cent. in Townhead, 9·5 in Pollokshields (partly owing to the presence of the Salvation Army Home for Mothers and Children), and 8 per cent. in Kelvinside.

Corresponding disparities to those described were present in many of the former Ward areas, but the detailed information of enumeration districts, which was abstracted locally from the Census returns, afforded the information necessary for intensive study of local conditions. For the recent Census this has not been done, for the following reasons:—

THE CENSUS POPULATION.

The decennial Census has hitherto afforded data on which estimates of the population for the intervening years could be calculated with some reasonable degree of accuracy. The custom was to take it in April, but for 1921 the enumeration was unavoidably postponed until June, when the holiday period had already begun in Glasgow. How far this may have affected the result is not yet clear, but there is some reason for thinking that it has been considerable.

In the first place, the re-occupancy of houses formerly unoccupied was beyond all precedent. In 1911 there were, according to the City Assessor's return, 24,206 empty houses; in 1921, only 143. The population inhabiting these reoccupied houses alone, on the assumption that the persons per house were 4·6 (Census, 1921), would reprssent an addition of over 100,000 persons.*

Further, in the 9 years 1913-21 the births exceeded the civilian deaths by over 90,000. The names on the Roll of Honour of Glasgow citizens who fell in the war number 17,531, and their inclusion would still leave a surplus of over 72,000 births.

Moreover, emigration was practically suspended during the war years, while it was only after the war had begun that the reoccupancy of the empty houses took place.

Yet the Census information suggests that the addition to the population between 1911 and 1921 was limited to 25,000, which represents a rate of increase of 2·5 per cent. Manchester is the only other large City with a similarly low rate of increase (2·3 per cent.). In Liverpool it was 6·5 per cent.; in Birmingham, 9·4 per cent.

On page 11 the subject is further referred to, and the contrast of the restricted increase in Glasgow is compared with the almost phenomenal growth of popular holiday resorts on the Clyde. In the towns there quoted the combined increase between 1911 and 1921 amounted to 45,914, which is 67 per cent. on the earlier Census; the increase in three of these being greater than their 1911 population.

A provisional estimate of population of 1,075,000 has for these reasons been adopted, and its effect on the birth and death-rates noted.

INADEQUATE SLEEPING ACCOMMODATION.

At the 1911 Census some useful information was extracted bearing on an aspect of overcrowding which has hitherto received little attention. It affects morals rather than health, directly, at least.

Over 60 per cent. of the population are housed in not more than two rooms, and this quite irrespective of the size of families. When these grow to adult years and continue to occupy the same room a condition results, which does not of necessity transgress legal standards of overcrowding, but constitutes overcrowding of the sexes in a form which cannot fail to influence social

* NOTE.—While this report is going through the press, the Census Report for Glasgow has been issued, and gives the "unoccupied" houses as numbering 11,539.

custom and to relax moral fibre to a degree which in the individual may lead directly to illegitimacy and so definitely affect the infant death-rate.

Some of the facts elicited at the 1911 Census were reviewed in the light of others ascertained by a direct record of conditions found during the night inspection of ticketed houses in 1921, and the results of the enquiry are given on page 109.

For the City as a whole, mixing of sexes, in the sense indicated above, occurred in the same room—sometimes in the same bed—to the extent of 2·68 per cent. of one-apartment houses and 2·72 per cent. of two-apartment houses.

No. of Houses Visited	Examples	Percentage
1 apartment, ...	328	2·68
2 apartments, ...	174	2·72
	502	

PUERPERAL FEVER.

Work specially directed towards a more complete understanding of the causes of infant deaths inevitably widens into a survey of the conditions affecting child-birth, and led during the year to an enquiry into those present when the mother was attacked by puerperal fever. These conditions in fully 60 per cent. of cases where death occurred are tabulated on page 57 in the section dealing with this disease.

Puerperal fever has no special association with unhealthy districts and cannot be said to have undergone any diminution within recent years. If we take its ratio to births for the last thirty years in Glasgow, we find that in place of rates averaging just over 3 per 1,000 births in the years 1891-95, since 1911 the rate has never been lower than 5 per 1,000 births, and in 1920 it was 9. Before this can be regarded as representing a definite increase, however, the case-mortality rate has to be considered, for while it had been 64 per cent. among the notified cases in the early 90's, it averaged 31 in the years 1916-20; and among those admitted to hospital it had fallen from 49 per cent. in the period 1901-6 to 28 in 1916-20, and was 20 in 1921. The increase in the ratio of notifications, therefore, may be partly the result of including within the term larger numbers of puerperal cases with some short-lived rise in temperature, although among the admissions to hospital there are now more cases of the type which could be definitely regarded as sapræmia.

Before the passing of the Midwives Act, which was so much later in Scotland that in England, there was relatively a greater prevalence of the disease among midwives' cases. During the year 1913, of slightly over 15,000 births attended by doctors the rate was fully 3 per 1,000 births, while among rather less than 15,000 births attended by midwives the rate was fully 6·5 per 1,000.

From the point of view of origin, there is some importance in the rapidity with which the symptoms develop after labour. For example, in one group of 81 cases medically attended 76 per cent., while in another group of 68 attended by midwives 62 per cent., developed symptoms not later than the fifth day.

Closely associated with this aspect of the question are the local conditions grouped under the name "puerperal fever," and information was obtained regarding 59 per cent. of 319 cases notified during 1921, of whom 24 per cent. (78) died. In 41 per cent. details had not been obtained, but of the remaining 189 there was a local lesion or diseased condition in two-thirds, 53 began in abortion and 7 in placenta prævia. Of the total, 125, with 33 deaths, occurred

in first pregnancies; 63, with 15 deaths, in second; 34, with 7 deaths, in third pregnancies; 22, with 1 death, in fourth pregnancies; and 75, with 22 deaths, in fifth or later. Forceps were applied on 69 occasions, of which 49 were in first pregnancies and 11 in second. Of 53 cases beginning in abortion, 24 were fifth or subsequent pregnancies. Even with the small numbers, the proportion associated with instrumental aid in first pregnancies and with abortion arrests attention.

Gynæcologists and obstetricians have devoted repeated attention to the lesions accompanying puerperal fever, but the position of the subject is extremely unsatisfactory and requires the concentrated attention of the medical schools and all those attending women in labour.

The following figures are extracted from the Annual Reports of the Registrar-General for the years given:—

SCOTLAND.—DEATHS FROM DISEASES OF PREGNANCY AND CHILD-BIRTH.

(Extracted from Registrar-General's Annual Reports.)

Diseases	1919	1920
1. Abortion; vomiting; ectopic gestation; other diseases and accidents of pregnancy, ...	112	93
2. Puerperal hæmorrhage, ...	71	107
3. Other accidents of childbirth, ...	54	75
4. Puerperal sepsis, ...	150	242
5. „ album.; convulsions, ...	108	131
6. Phlegmasia; alba dolens; phlebitis; embolism,	40	51
7. Puerperal insanity and other conditions, ...	126	136
8. „ disease of breast, ...	—	2
Totals, ...	661	840
Number of births, ...	106,268	136,546
Rate per 1,000 births, ...	6·2	6·2

VENEREAL DISEASE—AGE-INCIDENCE.

A statement of the age of patients presenting themselves for treatment for the first time is contained in the section dealing with these diseases. Corresponding information was not available for all the treatment Centres, but those given include the principal Centres for women. Of the total number there treated fully 25 per cent. were girls from 16 to 21, whereas less than 10 per cent. of the males were at corresponding ages—although the proportion rises rapidly in the ages which immediately follow. It is impossible to deduce from these figures that a lower moral code is sapping the vigour of our youth, because there is no information regarding former years wherewith to compare them, but they do point to the need for extended effort on behalf of the welfare of youth by every agency which will tend to foster self-discipline.

NOTIFICATION.

Notification of other infectious diseases has resulted in a widespread and intelligent appreciation of their methods of behaviour and spread, and there would appear to be some ground for believing that opinion is gradually crystallising round the need for some modified form of notification of venereal disease. But to place the principal forms under the general Notification Act would probably defeat its own purpose until, at least, a more definite breach has been made in the barrier which unconcern has raised round the ravages of venereal disease. It is also doubtful whether notification could be applied indiscriminately to all the clinical conditions which might be ascribed to one

or other form of disease. It is more reasonable to anticipate that more progress would be made were notification restricted in the first instance to cases where it can be shown that third parties suffer, and there is ample illustration of this in congenital syphilis and ophthalmia neonatorum.

The latter disease is already notifiable, although treatment of the parents as a result of this knowledge is, for the most part, at the moment occasional only. In both forms the object of treating the parents is to prevent their passing on the disease to the next generation, but if ophthalmia neonatorum and congenital syphilis are to be utilised for the purpose of discovering the parent and insisting on treatment, it would seem better that it should be by direct and deliberative Act of Parliament, so that the public generally should become aware of the purpose of the legislation. This, rather than the issue of an Order under the Public Health Act not intended primarily to apply to venereal disease, or at least not hitherto so interpreted, is more likely to impress the public with the gravity of the position these diseases have created. Practically all parents desire healthy children, and, as a matter of experience, the parents of children congenitally infected with syphilis are only too glad to have their children treated, but at this stage the success is much more limited than when the mother is treated before the birth of the child.

In the experience of the Royal Hospital for Sick Children, I quote from Dr. Leonard Findlay:—

"Combined treatment of the infant has reduced the mortality of congenitally-syphilitic children under three months from 70 to between 20 and 30 per cent., whereas treatment of the mother before the birth of the child invariably results in a healthy child."

Such figures establish a very strong case for the notification of congenital syphilis, and, in a similar way, the fact that one child in a family is threatened with injury to its eyesight because of parental infection should be utilised in every case of ophthalmia neonatorum of gonococcal origin to ensure that subsequent children will not run a similar risk.

REPORTS BY DIVISIONAL SANITARY INSPECTORS.

Special attention may be directed to the reports of the Divisional Sanitary Inspectors which are here included for the first time, and which supply many interesting details of the daily work of the divisions.

A. K. CHALMERS.

Public Health Department,
Sanitary Chambers,
Glasgow, 10th May, 1922.

ROBROYSTON HOSPITAL.—ADMINISTRATIVE BLOCK.

ROBROYSTON (SMALLPOX) HOSPITAL.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1921.

SECTION I.

POPULATION.

In August, 1921, the Registrar-General for Scotland published a Preliminary Report on the Census which had been taken on the night of the preceding June 19th, and showed that the number of persons within the City at that date was 1,034,069, or 25,582 more than in the corresponding area at 4th April, 1911, the date of the preceding census. A decennial increase of 2·5 per cent. is thus indicated, compared with one of 5·7 per cent. in the decennium 1901-11. The date of the 1921 enumeration, however, introduced an element of error which is likely to affect local estimates and rates based thereon until another enumeration is taken.

It has been customary to base an estimate of the intercensal population on the number of inhabited houses and the average house population obtained at the preceding census, and as the inhabited houses returned by the City Assessor at June, 1920, numbered 235,034, the population was thus estimated at 1,115,230. It was pointed out, however, at the time that the sample enumeration of 1916 suggested that a reduction in the average number of persons per house was taking place at a rate that, if common to the whole City, implied that the estimated population might readily exceed the actual by about 50,000. Until the Census of 1911, a progressive increase in the size of the average house had been associated with a progressive decrease in the number of persons per room, but at that census a fractional increase in the latter had occurred which was not wholly explained by the inclusion of the densely peopled area of Kinning Park. The 1911 factor had been 4·65, while the 1916 enumeration suggested a reduction towards 4·45, and the recent census figure was 4·4 (allowing a deduction of 1 per cent. for rented houses not occupied). The decrease in the ratio of inhabitants to houses, if fairly represented at the recent census, suggests a steepness in the rate of decrease which has had no parallel in the past and is contrary, indeed, to the movement during the previous decennium. This may be rendered clearer by the following graph:—

Before, however, accepting the Census of June, 1921, as accurate, certain other data must be taken into account. The census is usually taken in April, but owing to the coal strike in 1921 the actual date was postponed until June, at which time many Glasgow families, especially from among those with no children of school ages, had already begun summer holidaying. It was stated, indeed, that in some enumeration areas, especially where the houses were of larger size, about 10 per cent. were closed on the night of the enumeration. It may be useful, therefore, to look at the rates of increase of a few of the coast towns patronised by the Glasgow population during holidays:—

NOTE OF POPULATIONS OF CERTAIN COAST HOLIDAY TOWNS ON CENSUS NIGHT.

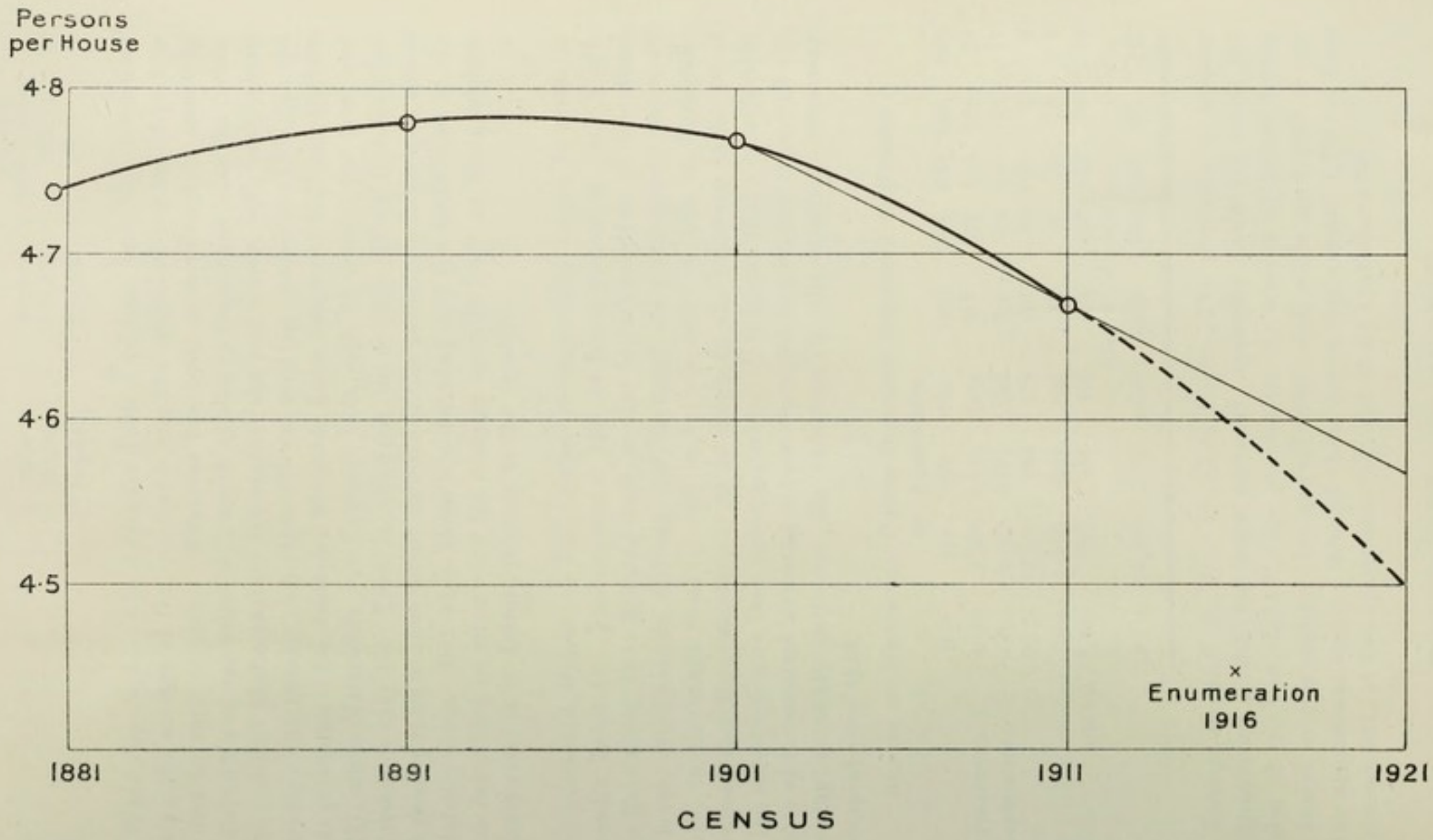
	Census.		Increase.	
	1921.	1911.	Number.	Percentage.
Argyllshire—				
Dunoon, ...	14,735	6,859	7,876	115
Ayrshire—				
Girvan, ...	7,272	4,473	2,799	63
Irvine, ...	11,826	10,179	1,647	16
Largs, ...	9,450	3,724	5,726	154
Prestwick, ...	8,516	4,879	3,637	75
Saltcoats, ...	13,477	8,585	4,892	57
Troon, ...	9,474	6,628	2,846	42
Bute—				
Millport, ...	5,834	1,614	4,220	262
Rothesay, ...	15,218	9,299	5,919	64
Isle of Arran, ...	8,294	4,628	3,666	79
Renfrew—				
Gourock, ...	10,128	7,442	2,686	36

These are the most frequented coast resorts on the Firth of Clyde, and the total increase in them is about 45,000.

Further support to the view that the census returns fall short of the actual population is afforded by comparison of the number by which the births exceed the deaths during several years of the decade. Owing to the extension of the boundaries taking effect only at Martinmas, 1912, it is not easy to deal with the births in the extended area prior to that period, but during the years 1913-21 the births exceeded the deaths by fully 90,000, and in these nine years alone represent an excess over the increase shown by the census figure of fully 65,000:—

Year	Births Registered	Deaths Registered	Natural Increase—Excess Births
1913	28,688	17,777	10,911
1914	29,455	17,719	11,736
1915	28,090	20,351	7,739
1916	27,348	16,875	10,473
1917	24,293	17,079	7,214
1918	23,733	18,821	4,912
1919	26,109	18,613	7,496
1920	32,992	17,090	15,902
1921	30,072	16,051	14,021

A difference of 50,000 in the estimate of the population represents a difference in the death-rate of 1 per 1,000, and, as the foregoing reasons have been accepted as suggesting that the census returns are an understatement, and in view of the 1916 local enumeration, the population has been assumed as at 30th June, 1921, to be 1,075,000.


Persons
per House
4·8
4·7
4·6
4·5
×
Enumeration
1916
1881
1891
1901
1911
1921
CENSUS

A further interesting fact may here be noted, especially in view of the frequent reference which is made to the disparity of the sexes at this census, that the relationship in Glasgow would appear to have little altered in the interval. For example:—

	Males	Females	Males per 1,000 Females
1911	492,205	516,282	954
1921	504,545	529,524	953

Ward Populations.—In Appendix Table I columns have been introduced showing the acreage of the new wards and the estimated number of persons per acre in each of them. Whatever has been accomplished in removing the disparities of valuation, &c., which existed in connection with the former Municipal and Parliamentary boundaries, the new wards, both with regard to acreage and density, maintain all the striking contrasts which the old wards presented. For example, Woodside has a density of 222, and Gorbals of 207, while Kelvinside and Cathcart have each 21 persons per acre, and Pollokshields only 12. There is, of course, an obvious fallacy in connection with density rates as thus stated, as some of the wards have large open spaces or unbuilt areas. But when these are deducted and the death-rates of the wards calculated in relation to the acreage actually built on the gradation of death-rates is in definite relation to the density.

Unoccupied Houses. — The number of unoccupied houses is given in Appendix Table II. The number is 143, 10 being debited to Park Ward, 33 to Kelvinside, 11 to Kinning Park, and 14 to Pollokshields; all the others are lower. Pollokshaws, Gorbals, and Exchange are credited with no empty houses; in Govanhill there is said to be one only; so also in Parkhead, Townhead and Hutchesontown. As is shown in the following table, 50 of the 143 are of not more than two apartments. It is known that a considerable number of larger sized houses have been converted into smaller ones, and the following summary indicates the reduction in the numbers remaining unoccupied since 1913:—

NUMBER OF UNOCCUPIED HOUSES CLASSIFIED ACCORDING TO NUMBER OF APARTMENTS.

	1913	1914	1915	1916	1917	1918	1919	1920	1921
One apartment, ...	4,169	3,566	2,943	1,884	957	587	319	120	33
Two apartments, ...	9,762	7,399	4,791	1,892	807	344	181	72	17
Three ,, ...	2,731	1,429	768	179	64	30	21	9	9
Four ,, ...	954	404	239	55	23	16	13	15	8
Five ,, and up,	1,094	678	536	495	283	132	103	75	76
	18,710	13,476	9,277	4,505	2,134	1,109	637	291	143

Linings Granted by Dean of Guild Court.—The provision of housing accommodation is still far below demand. Appendix Table III shows the number of Dean of Guild linings granted for the erection of houses during the twelve months ending 31st August, 1921, and, while no houses of one or two apartments appear, those of three apartments number 1,176, of four apartments 981, of five apartments 240, and of six apartments 34.

TEMPERATURE AND RAINFALL.

Appendix Table IV contains a record of the highest and lowest temperatures, mean temperature for the month, number of rainy days and amount which fell during the year, and an abstract of previous years.

WELFARE OF THE BLIND ACT.

During the year a special committee of the Corporation was appointed to consider the Welfare of Blind Persons Act, 1920, and the following report was drawn up and submitted. Owing, however, to the centralising of blind institutions in and around Glasgow, it was decided to discuss the whole question with representatives of other Local Authorities interested. The question as to whether a conjoint scheme would not be a better arrangement was under discussion at several conferences held during the latter part of 1921. The additional accommodation necessary for the number of blind persons has, however, not yet been decided.

The following is the report submitted with regard to blind persons in Glasgow, but the appendix tables have not been published, because of their size. An addendum is added indicating the position with regard to all blind persons in the south-west of Scotland, including Glasgow:—

The Provisions of the Act.—The welfare of Blind Persons Act was passed on 16th August, 1920, and requires Local Authorities to make arrangements "for promoting the welfare of blind persons ordinarily resident within their area, and to submit schemes therefor for the approval of the Board of Health within twelve months of the date on which the Act was passed."

Section 2 (4) of the Act confers certain powers on Local Authorities which may be exercised through a committee, and this committee may include persons who are not members of the Council, but who are specially qualified by training and experience in matters relating to the blind. "Not less than two-thirds of the members of the committee shall be members of the Council. This committee may appoint sub-committees."

A blind person who becomes an inmate of an institution after the commencement of the Act (10th September, 1920), is regarded as an ordinary resident in the area in which he resided before he became an inmate of such institution.

The Education Authorities are required to make or otherwise secure adequate and suitable provision for the technical education of blind persons where the persons are capable of receiving and of being benefited by such education.

Section 1 provides that the old age pension shall be paid to blind persons on attaining the age of 50 years.

Regulations issued on 18th August, 1919, specify the grants which will be paid by the Board, and certain of these may be summarised:—

(1) Workshops, £20. For each workshop employee regularly employed for not more than 48 hours per week, but no pupils or apprentices.

(2) Home Workers, £20. For each adult worker at home a grant will be made for provision of tools and equipment.

(3) (*a*) Homes, £13. For maintenance of adults incapable of work, and for whom suitable provision in their homes cannot be made.

(*b*) Hostels, £5. For provision of board and lodgings.

(4) Home Teaching, £78. Approved persons employed to teach adult blind persons in their own homes.

(5) Book Production, 2s. 6d. per volume. 2d. per copy for magazines, &c., literature produced in embossed type.

(6) Miscellaneous. Other services for the betterment of the condition of the blind or the prevention of blindness, &c.

Number of Blind.—The total number of blind persons dealt with in this Report and in the appended tables is 1,222. This number remained in February out of 1,432 reported by the Board as on their Register of the Blind, plus two children under 5 not included therein, and under deduction of certain who were dead or had been transferred to other areas, leaving 23 still to be classified. Of the 1,222, 669 are males and 553 females. Of the 669 males, 75 were under 18, 315 at ages 18-50, and 277 over 50. In two the age was unknown. Of the females the corresponding figures were 55, 213, 284, and 1. The age limits of 18 and 50 have been adopted for grouping because the Education Act of 1918 raises the responsibility of that Authority from 16 to 18, and 50 begins the period of old age pensions for the blind. But 16 is still the maximum age of the Education Authority work, as the clause raising the age to 18 is not yet operative, and the total number under their purview is less than those in the 5-18 group.

Birth-Place.—Of the total, 355 males and 297 females were born in Glasgow.

Degree of Blindness.—274 males and 220 females were totally blind in the sense that they cannot distinguish light from darkness. 392 males and 321 females can just make this distinction. In 3 males and 12 females the degree of defect was great enough to prevent the performance of work for which eyesight is necessary. These are probably myopics beyond the range of correction by glasses.

Associated Defects.—In 284 other defects were also present. 92 males and 87 females had various forms of physical defect associated with their blindness (deaf, dumb, paralytic, &c.), while in 45 males and 60 females there was also some form of mental deficiency or other nervous affection.

Poor Law Relief.—326 receive Poor Law relief from the Glasgow and Govan Parishes. In 229 this takes the form of outdoor relief.

School Ages.—Of those aged 5-18, 52 males were attending or resident in schools, 13 were in technical training schools (of whom 7 were in residence), and 9 were at home; the corresponding figures for girls being 40 attending school, 2 in training and resident, and 12 at home. Of the children at home, 2 boys and 5 girls are also mentally defective.

Working Ages.—Males.—At ages 18-50, 4 males were resident in blind institutions and 133 were employed in special workshops, and may thus in a sense be regarded as provided for; but 49 under 50 were at home variously employed by private firms or on their own account; 98 were either hawkers, itinerant musicians, or unemployed; while 17 were collecting for blind agencies, and may possibly require some further provision were the number so employed (24) reduced. This gives a total of about 164 males under 50 years of age to be provided for. Of those over 50, 45 require to be included within the same category.

There is a further group of males over 50, numbering 164, who have been regarded as unemployed or unemployable because of age or infirmity. Almost all of them have some stated form of relief—old age pension, poor relief, or superannuation allowance—but no effort has been made to verify the amounts stated. In addition, 29 are in Poor Law institutions.

Females.—Of 213 women at ages 18-50, 133 were employed in domestic duties at home, but of the balance 5 were employed on their own account, 6 were hawking or unemployed, and one was collecting for the blind; these latter may require to be provided for. In addition, 31 were employed in various institutions for the blind, and 33 were stated to be employed therein, but stay at home. 17 others over 50 years of age will also require to be considered. A further number of 233 were returned as engaged in domestic duties at home (66 being married and 53 widowed), and among them an occasional occupation of a contributory sort only was mentioned—knitting being the prevalent form. Finally, 31 were in Poor Law institutions.

SUMMARY.

	Males	Females	Total
I. *Under school age,*	1	1	2
II. *School ages—*			
(*a*) At school, ...	52	40	
(*b*) In technical training....	13	2	
(*c*) At home or casually employed, ...	9	12	
	74	54	128
III. *Working ages, 18–50—*			
(*a*) In residence in dormitories of workshops, ...	4	31	
(*b*) Employed in special workshops but staying at home, ...	133	33	
(*c*) Resident at home—			
(1) Employed outside, ...	49	5	
(2) Hawking or unemployed, ..	98	6	
(3) Blind collectors, ...	17	1	
(4) Various, ...	4	—	
(5) Domestic duties, ...	—	133	
(*d*) Poor Law Institutions, ...	10	4	
	315	213	528

	Males	Females	Total	
IV. *Ages over 50—*				
(*a*) In residence in dormitories of workshops, ...	—	3		
(*b*) Employed in special workshops but staying at home, ...	39	—		
(*c*) Resident at home—				
(1) Employed outside, ...	22	3		
(2) Hawking or unemployed, ...	17	14		
(3) Blind collectors, ...	6	—		
(4) Various, ...	—	—		
(5) Domestic duties, ...	—	233		
(*d*) Poor Law Institutions, ...	29	31		
	113	284	397	
V. *Unemployed or unemployable,*	164	—	164	1,219

Number of Blind Children known to Education Authority.—From information supplied by the Education Authority the following table has been prepared :—

Blind Children Resident in Woodburn House.

Ages (last Birthday)	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Males. ...	—	1	–	1	—	1	—	1	2	—	—	1	—	7
Females,	—	1	1	—	—	1	—	—	2	—	—	—	—	5
Total, ...	—	2	1	1	—	2	—	1	4	—	—	1	—	12

All these children attend Wolseley Street School, at which also other 11 children, resident at home, attend.

Blind Children Resident (and educated) in St. Vincent Home, Tollcross.

Ages (last Birthday)	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Males, ...	1	—	—	1	2	—	—	2	1	2	2	2	—	13
Females,	—	—	—	—	—	—	1	3	—	1	1	3	—	9
Total, ...	1	—	—	1	2	—	1	5	1	3	3	5	—	22

Blind Children attending Six Day Schools residing at home.

Age (last Birthday)	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Males, ...	—	—	—	1	2	—	2	—	4	1	3	—	2	15
Females, ...	—	—	1	1	1	1	2	2	—	3	1	1	1	14
Total, ...	—	—	1	2	3	1	4	2	4	4	4	1	3	29

At present there are 6 day schools receiving blind scholars. These, with the number attending, are :—John Street (8), Dunard Street (3), Townhead (2), Gorbals (2), Tureen Street (3)—18, to which add Wolseley Street (23)—total 41.

In addition to the above, 50 children are being educated at the Blind Asylum School, of whom 38 are resident therein, and 12 attend from their homes.

Poor Law Relief.—The number in receipt of Poor Law relief from the Parishes of Glasgow and Govan is as follows :—

Glasgow Parish Council.—Blind Poor chargeable as at 24th May, 1921.

	Outdoor.		Indoor.	
	Males.	Females.	Males.	Females.
Under 5 years of age, ...	—	—	—	1
5 to 18 „ „	1	1	1	—
18 to 34 „ „	12	10	2	2
34 to 50 „ „	19	13	5	4
50 years of age and over, ...	16	48	27	27
	48	72	35	34
Total, ...	120		69	
Gross Total, ...	189			

Govan Parish Council.

A. Outdoor Roll, ...	109
2 of whom are in St. Vincent School.	
4 in Quarryknowes (Imperial Workshops).	
6	
B. In Merryflatts, ...	21
C. In Hawkhead, ...	7
	137

Total in Receipt of Relief.

	Outdoor.	Indoor.	
Glasgow, ...	120	69	
Govan, ...	109	28	
	229	97	= Total, 326

Royal Asylum for the Blind.—The activities of this institution fall into four groups :—

(1) The elementary education of children of school age.

(2) The technical training—

(*a*) of blind children after school age;

(*b*) of those who became blind later in life. In this case all entrants are ranked as apprentices for definite periods, irrespective of age.

(3) The employment of blind workers at certain occupations.

(4) The housing of certain pupils or employees—mostly women.

Certain details are given in the following table :—

	Males.	Females.	Group Total.	Grand Total.
Numbers in Elementary Schools—				
(*a*) Resident, ...	35[1]	22[2]	57	
(*b*) Live at home, ...	2	3	5	
	37	25	—	62
Numbers in Workshops—				
(*a*) Resident, ...	6[3]	14[4]	20	
(*b*) Live at home, ...	145	42	187	
	151	56		207
				269

The parish makes a contribution for some of the foregoing, as apprentices may be of all ages, and only these, it is stated, get parish relief.

As a rule children on reaching 16 years are transferred from the school to the workshop and trained in one of the several handicrafts carried on there. They train everybody capable of being trained, and then employ them. Girls and women are paid £2 weekly after training; males, £2 15s.

St. Vincent School for the Blind, &c., Tollcross, Lanarkshire.—This institution is just beyond the City boundary. It receives and educates blind, deaf and dumb, and myopic children, and employs similarly affected girls and women. The work was formerly conducted at Smyllum Orphanage, Lanark, and children come from many areas—about one-half only from Glasgow.

No blind workers come in. All who are employed in it reside also in the institution, but of 6 boys and 9 girls who are myopics, 2 boys and 3 girls are day scholars only, and apparently live at home.

[1] One each of these from Parish Councils of Lesmahagow and Dumfries. All the others from Educational Authorities in S.W. Counties of Scotland, save 7 from Glasgow, for whom Education Authority pay nothing.

[2] 10 of these from Glasgow Education Authority area, but not paid for by Education Authority.

[3] Apprentices, or just finished technical training.

[4] Mainly apprentices, but includes one or two who can't get lodgings.

The total number of occupants is reported as:—Blind children, 41; grown-up blind girls at work, 19; myopics, 15; deaf and dumb, 112—total, 187. Only 19 are reported as workers, although all are trained in knitting, beading, sewing, &c., as part of the educational curriculum. The Educational Grant for the blind here is £12 10s.

Of the 41 children of school age, 21 are boys and 20 girls; 13 of the boys and 9 girls are Glasgow children.

When a child reaches 16, the—

Girls are retained and trained in (1) mattress making, (2) machine and hand knitting, (3) brush making, and (4) music when they display any special aptitude therefor. At present there are 19 adult girls, of whom 15 are from Glasgow, employed in one or other of these handicrafts.

Boys on reaching this age are transferred to the workshops at Quarryknowe Street, and there trained in basket, brush, and mat making, chair covering (which is also taught at school), and, more recently, boot repairing.

R.C. Imperial Workshops for the Blind, 20 and 30 Quarryknowe Street, Parkhead.—43 persons are employed here at work as follows:—

Basket making, ...	30
Brush making, ...	8
Carpet-mat making, ...	3
Chair caning, ...	—
Mattress making, ...	1
Boot repairing, ...	1
	43

At the present time men are being suspended from this workshop day by day, owing to lack of demand for the goods produced. These workshops are located in an old building of very indifferent structure, with a yard attached.

Blind Benevolent Association, 23 Fitzroy Lane.—The objects of this Association are thus described in the Annual Report for 1919:—

"The objects of the Association shall be to employ the blind at various "grades of unskilled labour, and also provide employment for those who lose "their eyesight at middle age; bringing their claims under the notice of Parish "Councils where this is advantageous; holding temperance and social meetings "to brighten their lives and inculcate into them habits of temperance and "thrift; helping them in cases of urgent distress.

"*Employment of Funds.*—It shall be the aim of the Association to apply "the funds in assisting the blind and by augmenting the weekly earnings of "the workers of the Association, and, as far as possible, to employ only the "blind as paid officials."

During the period 1st July, 1918, to 31st December, 1919, the subscriptions and donations amounted to £1,884, and the income from sales to £651, the total receipts to £3,056, less £496 on hand at 30th June, 1918.

Employs 20 blind and 5 sighted persons in splitting and bunching firewood. They are all males, thus allocated:—

Splitting and bunching (totally blind), ...		6
Carter (myopic), ...		1
Blind collectors of subscriptions—		
(*a*) By book, ...	5	
(*b*) By envelope from door to door, ...	8	
	—	13
Boy guides (sighted) with book collectors, ...		5
		25

There is also a secretary and treasurer.

Before the war soap powder was also mixed. Stick breakers are paid from 14s. to 25s. per week, according to efficiency, and are said to get a bonus of 10s. per month. Some get parish relief in addition.

The collectors receive from 20s. to 37s. 6d. per week, with £1 bonus per month, and a commission when subscriptions reach £4 per week. The envelope collectors get 20s. to 25s. and no commission. Some of these are said to have parish relief.

Aid Association for the Blind, 492 Argyle Street.—This would appear to be a similar association to that just described, but there is at present no available report, although one is said to be in preparation. The employees are mostly engaged in the making of firewood, and there is one basket-maker. These numbers are:—Stick splitting, 3; stick bunching, 4; 1 sawyer (myopic), assisted by another who is also deaf; collectors, 6; total, 15.

The stick breakers are paid from 10s. to 12s., with an occasional gift at the New Year, which seems to vary in amount, but last year was 5s. The number also in receipt of parish relief is not known.

SUMMARY OF AGENCIES PROVIDING EDUCATION, TECHNICAL TRAINING, OR EMPLOYMENT.

Blind Persons with Numbers Employed.—This can only be an approximate statement, as the numbers appear to vary from time to time, and, especially with regard to the Blind Asylum and St. Vincent School, the numbers training or employed include persons whose domicile is outwith the area of the Glasgow Local Authority. These, however, have been excluded, as far as possible, from the following tabulation :—

	Live In	Live Out	Total
I.—*Educational.*			
Glasgow Education Authority—			
(*a*) Woodburn House, Rutherglen, ...	12	—	
(*b*) Outdoor pupils attending E.A. Day Schools, (38 resident and 12 outdoor at Blind Asylum = 50.)	—	29	41
R.C. St. Vincent School, Tollcross (22)—see below.			
II.—*Educational and Technical.*			
(*a*) Royal Asylum for Blind—			
(1) School Children (Glasgow only), ...	17	5	
(2) In technical training or full employment, ...	20	187	229
	49	221	270
(*b*) St. Vincent School, Tollcross, Lanarkshire—			
(1) School Children (Glasgow only), ...	22	—	
(2) Employed at various handicrafts (Glasgow only), ...	15	—	37
III.—*Imperial Workshops for the Blind,*	—	43	43
IV.—*Blind Association, 23 Fitzroy Place,*	—	20	20
V.—*Aid Association for the Blind, 492 Argyle Street,* ...	—	15	15
	86	299	385

There is thus a considerable disparity between the numbers for whom organised employment has been found and the total number of blind persons. Reference should here be made to Table VIII. of the Appendix, where the results of an effort to classify the blind according to their willingness to enter an institution for training has been made.

Of those capable of training and willing to enter an institution for the purpose, 41 males were employed, but 50 were not working, as were also 17 females. Of those who had capacity for training, but were not willing to enter an institution for the purpose, or were already trained, only 1 male was not employed, and 268 were—as were 68 females—leaving, however, 126 females, mostly engaged probably in domestic duties. But 518 of both sexes were incapable of training by reason of some unfitness, physical or mental.

Mr. Stoddart's impression is that the accommodation now provided at the Blind Asylum for technical training might with advantage be doubled, and the foregoing analysis supports this view.

It may be observed also that blindness includes not only those whose sight has been lost through disease or injury or absence of the organs of vision, but also those with degrees of myopia so excessive that even with the help of suitable glasses they are unable to perform work for which sight is normally necessary. It would, therefore, seem essential in any effort to place the administrative treatment of the blind on an organised basis that additions to their numbers should be made only after careful examination by an ophthalmic surgeon.

A third requirement presents itself in the desirability of inducing the parents of blind children to place them under training at an earlier age than at present, and there is further need to develop a definite scheme of technical training for boys and girls just when they pass the upper limit of the school age.

The experience of St. Dunstan's has shown the need also for refresher courses at frequent intervals for all who may leave a training institution for independent work.

Home Workers.—The technical training of the home worker falls to the Education Authority, but after the training is completed, and should he decline employment in an institution, the Local Authority or an approved agency may—

(1) Supply and maintain him with a full complement of tools and equipment requisite for his industry.

(2) Supply him with the material of his industry at lowest market prices.

(3) Supply assistance in making and finishing and inspection of articles.

(4) Advise him as to current prices.

(5) Advertise and market the finished article.

(6) Arrange for periodic return as to output.

These several requirements point to the need for the closest co-operation between the Education Authority and the Local Authority, and imply the need for appointing a director or supervisor of the blind employed in technical industries.

It might reasonably aid this portion of the work were branch or district workshops established, to which those working at home would be related as out-workers.

Hostels.—The desirability of a blind worker who is not a home worker living in convenient proximity to his place of employment has given rise to the suggestion of providing hostels for them. In this connection Mr. Stoddart writes:—"By adapting a tenement which adjoins the Blind Asylum a hostel could be provided for male apprentices, separating them entirely from the accommodation provided for blind children. Owing to the difficulty of securing lodgings for apprentices, we have been obliged to accommodate 20 adults in the residential department, aged 16-20, and one old woman, aged 72.

"No accommodation is available as a hostel for female workers, and the need for this is more necessary than for male apprentices."

Homes.—By the regulations homes of the blind are residential institutions for the care and maintenance of adult blind persons who, owing to age or infirmity, are incapable of work, and for whom accommodation cannot be provided otherwise than in an institution. It would appear (Regulation 26) that any person admitted to such a home by agreement with the Parish Council shall only be reckoned as a "resident for grant purposes" if the rate of contribution by the Parish Council is not less than half the average cost per head of maintenance in the home.

The grant payable for such homes is not to exceed £13 per annum.

The Unemployable Blind living at Home.—In Table VIII the total number of persons who were untrainable is given as 518. Of these 55 only are under 50 years of age. Relatively few (74 only) are in Poor Law institutions. The responsibility of the Poor Law to the necessitous among this number does not seem well defined, but the statement is made (in the memorandum regarding the preparation of schemes) that it is an essential part of the duty of Local Authorities "to secure that reasonable provision is made for these persons." It is probable that the most difficult part of the problem of provision lies here, but its true volume will only, I think, be revealed when the ground is completely cleared by organising the conditions under which the educable are to be trained and employed.

Before considering a scheme for future provision it will be useful to supplement what has been stated in previous pages by some reference to other points of importance.

Outdoor Mission to the Blind, Office, 201 Buchanan Street.—This is an outdoor agency for teaching the blind to read in their own homes. It also grants monetary assistance in necessitous cases. Over 1,600 blind persons are stated to be on the Register of the Mission, but many of these are outwith the City Boundary. Home teachers act under the direction of a Superintendent, while there is a free lending library in the Braille and Moon types. The blind are helped in various other ways —social and other meetings being organised. It may happen also that employment is found for them, or that suitable persons are directed to make application for parochial relief. There is also a Ladies' Auxiliary associated with it. (See also financial statement hereafter.)

Occupations followed.—Tables 9 (*a*) and (*b*) (not included) indicate the occupations of males and females. In all, 340 males and 85 females are credited with the occupations named. The largest number (67 males) is engaged in basket-making, mostly in the Blind Asylum and Imperial Workshops. Other leading occupations are:—Brush makers, 20; mattress makers, 17; bed makers, 12; fender makers, 13; joiners, 11. Almost all are at the Blind Asylum.

There are also, however, among the males 16 piano tuners, 9 music teachers, 7 other teachers or musicians.

Most of the other occupations are more or less casual, such as hawkers, &c.

85 females are reported as working, 32 as machinists, 10 as rope or twine workers, and 6 as french polishers.

Cause of Blindness.—An endeavour was made to ascertain the cause of blindness, but as this was wholly dependent on the statements of the blind persons themselves it must be read with great caution :—

	Numbers.			Percentages.		
	Males.	Females.	Total.	Males.	Females.	Total.
Birth, ...	43	41	84	6·4	7·4	6·9
Venereal Diseases, ...	13	12	25	2·0	2·2	2·0
Other Eye ,, ...	221	211	432	33·1	38·2	35·4
Infectious ,, ...	27	37	64	4·0	6·7	5·2
Optic Atrophy, ...	38	26	64	5·7	4·7	5·2
Injury, ...	219	66	285	32·8	11·9	23·3
Constitutional, ...	19	58	77	2·8	10·5	6·3
Others, ...	3	14	17	0·4	2·5	1·4
Not known, ...	75	75	150	11·2	13·6	13·3
Not stated, ...	11	13	24	1·6	2·3	2·0
	669	553	1,122	100·0	100·0	100·0

It will be observed with interest that 23 per cent. of the above cases are attributed to injury.

Income of Blind Persons.—An endeavour was made to ascertain the receipts of blind workers, and this is shown in Table X. Of the total males where the income is stated, one-third earned less than 20s. per week; 25 per cent. earned between 20s. and 40s., while about 40 per cent. were earning between £2 and £3 per week. The earnings of females, where stated, are mostly below 40s. per week, machinists apparently being best remunerated.

Ability to Read.—551 of the total blind are unable to read either the Braille or Moon form of type. 463 state they can read Braille, 65 can read Moon type, 3 are learning the Braille, and in 140 cases the information is not stated.

Financial state of Existing Agencies.—Of the institutions registered by the Board the financial position, according to the latest information, is as follows :—

Imperial Workshops for the Blind.—A statement of accounts for the six months ending 31st March, 1920, shows wages amounting to £1,325, of which £1,104 was for blind workers, while sales for the same period totalled £2,265. The deficit was £161. Subscriptions amounting to £600 were received, Government grant £147, and contributions from Parish Council £102. The surplus balance was £473, stock in hand and fittings valued at £642.

St. Vincent School, Tolleross.—The accounts for the half-year to 31st March, 1920, contain wages amounting to £51, and sales of £243, but the deficit on the industrial account was £78. Government grant received was £113, and contributions by Parish Council £46. The general account surplus, after valuing stock on hand at £499, and plant, fittings, and furniture £347, amounted to £658.

Royal Blind Asylum.—The industrial account indicates that wages and bonus paid for the 17 months to 31st March, 1920, amounted to £26,000, of which £5,000 went to seeing workers, while the sales were over £70,000. A profit balance is shown of about £5,000.

The salaries for the educational departments were £770 to blind teachers and £570 to sighted teachers for education, and wages to instructors were £116 to the blind and £530 for the sighted. With Government grants of £1,034 and £43 from Education Authorities, the deficiency was over £2,000. The expenditure of hostels amounted to £6,371, but the receipts were only £2,500, while the general charity funds account, on the expenditure side, shows salaries of over £400, legal and investigation expenses of over £900, cost of blind collectors' wages, food, and office expenses of £1,437, balanced on the other side by subscriptions of £7,072, Government grant in respect of blind workers £1,070, legacies £4,068, &c.

Outdoor Mission to the Blind.—The ordinary account for the year ending 31st December, 1919, shows income from invested funds of about £250, general subscriptions £2,239, &c. The expenses, amounting to £3,277, include pensions to aged and infirm, £424; coal, clothing, and casual aliment, £406; salaries of superintendents, librarians, and collectors, £519; and six home teachers, £812 and bonus and allowance of £194.

The deficit of £557 is carried to extraordinary account, which has an income of £490 from special contributions. In the liabilities accounts assets contain investments valued at £6,106, and cash £737.

SCHEME OF EMPLOYMENT AND SUPERVISION.

In considering a scheme which will provide for all the groups of blind just described it is to be remembered that few of these are self-contained. The numbers returned in all the groups fluctuate from time to time; apprentices in technical training may be of any age, and some at least of those in receipt of outdoor poor relief may also be employed by one or other of the agencies mentioned, either as apprentices or as fully trained. It is difficult also to state the precise number who may be regarded as earning an independent living. For some of them, and especially those employed in the firewood industry, their earning capacity is probably not more than 20-25 per cent. of the normal, if even so much.

But a rough approximation to the future provision required may be made on the broad basis of the numbers included in the several groups.

School Age.—This period is naturally well provided for. Of 128 children or young persons 5-18 years of age, 92 are at school and 15 are in technical training, leaving 21 at home or casually employed or unemployed, and for these last provision for training in a useful handicraft is desirable.

Pre-School Age.—There are only two in this group. Hitherto difficulty has been felt in getting early knowledge of these children, and the Sisters of St. Vincent tell me they are prepared to take children of tender years, although the absence of information has hitherto proved a barrier. The Ophthalmia Neonatorum Regulations will remove some of this difficulty. It seems reasonable to anticipate that the education of such children might begin directly their sense of touch, hearing, and smell is developed, and it is probable that co-ordinated training in the development of these senses will be most successful if carried out in an institution, but this advantage must be carefully weighed against the obvious disadvantage of separating children from their own homes.

Ages 18-50.—This group numbers 528, who fall into separate categories. For example, there are:—

(*a*) Resident in institutions for employing the blind, ...	35
(*b*) Employed therein, but staying at home, ...	166
(*c*) In Poor Law institutions, ...	14
	215

Leaving 313 resident at home.

How many of these are usefully employed or employed to the extent to which training might have fitted them can be little more than guessed. 133 women are returned as occupied in domestic duties, and for the moment may be left aside. But 72 men and 1 woman are returned as unemployed, and in addition 43 men and 6 women are itinerant musicians, or hawkers, or unemployed—together 122 who, with adequate training, might have been more usefully engaged. Most of the remainder (49 males and 5 females) are employed with private firms or on their own account, so that it may be said of this group that at least 122 (115 men and 7 women) have no or only a precarious hold on any form of employment.

Ages over 50.—It will be useful to divide this group into two and consider the employable apart from the unemployable, who are mostly in receipt of Poor Law or other allowances. 397 belong to the first and 164 to the second category.

The Employable.—A few of these are provided for, and may be set aside. They include—

(*a*) Resident in workshops for the blind (females), ...	3
(*b*) Employed in special workshops, but staying at home (all males),	39
(*c*) In Poor Law institutions, ...	60
	102

Of the remainder 233 (females) are returned as engaged in domestic duties, and may also for the moment be held over. This leaves 62 (45 males and 17 females) engaged in casual or precarious employment similar to the 122 at ages under 50, and together making a total of 184 (160 males and 24 females), for whom some kind of workshop occupation would have been preferable. Alone these numbers about equal the total accommodation available for technical training and employment provided at the Blind Asylum.

The Unemployable of this age group (50+) number 164. They are all males; 19 are returned as in receipt of private pensions, superannuation allowance, &c.; 113 receive old age pension, parochial relief, or some other subsidy of more than 10s. per week; 15 receive less than 10s. per week; and in 17 the amount is not stated, or there is none. Together they number 145, and it is this group which would probably supply most of the inmates of a home for the blind.

It would appear, therefore, that accommodation of the several kinds mentioned should be for about 350 persons, grouped as follows :—

I.—For Training and Subsequent Occupation—

(*a*) Persons of school age (under 18), ...	21*
(*b*) Of ages 18-50, ...	122
(*c*) „ over 50, ...	62
Total added accommodation for education, technical training, and employment, ...	205
II.—Home for Unemployable Blind, ...	145
	350

* It is probable that most of these are approaching 18 years, and beyond the present upper limit of the school age (16).

This does not include any provision for hostel accommodation.

District Workshops, Hostels, and Out (or Home) Workers.—On page 20 reference has already been made to the desirability of providing a hostel for male apprentices and for female employees at the Blind Asylum. Added workshop accommodation is, however, equally necessary, and the extent of this may be taken on the basis of the figures already given to be about double the existing accommodation. It is doubtful whether this could be obtained by addition to the existing provision at the Blind Asylum. There is much, I think, to commend the view that it should take the form of auxiliary or district workshops, to which the home workers in the area might be linked up as out-workers and the marketing of their output facilitated.

There is some uncertainty as to the precise number of the blind solely engaged in home work in this sense, and no information regarding the part which their earnings contribute to their upkeep.

But by the creation of district workshops with such hostel accommodation as was requisite, and with all the home workers of the area employed as out-workers of the workshop, supervision of the home-blind would become systematised, and the provision of refresher courses in the workshops would encourage the out-worker to maintain a high degree of productive efficiency.

The Occupations of the Blind.—The proficiency in certain forms of handicraft which many blind persons acquire is common knowledge.

The experience of St. Dunstan's however, has shown that hitherto a too restricted view has been taken of the occupations in which they may become proficient, and their proficiency maintained if they have adequate supervision and refresher courses. Men trained at St. Dunstan's as shoemakers have been known to earn £4 a week. For the present the training of the Glasgow blind is more or less stabilised in a comparatively limited group of occupations. In any rearrangement of training under the Act the desirability of giving greater choice to the worker should be kept in view.

A. K. Chalmers.

Public Health Office,
Glasgow, 30th May, 1921.

SUPPLEMENTARY NOTE ON COST OF PRELIMINARY SCHEME FOR DEALING WITH BLIND PERSONS.

When the principal report of May 30, 1921, was submitted to the meeting of the committee in charge of the Act consideration was adjourned until an estimated cost of applying the proposals therein contained had been obtained. Since that date I have had an opportunity of going over the details with Mr. Stoddart, who is retiring from the Blind Asylum, and, from information supplied by him, submit the following estimated capital outlay, assuming that workshop and hostel accommodation is concentrated in place of being distributed to districts, as the report suggests.

From the report, page 22, it will have been noted that the number to be dealt with falls into several age groups. For example :—

Age Group	Number requiring Help	Nature of Help Required	Cost
School Age, ...	21	Educational Training,	Responsibility lies with E.A.
18-50, ...	122	Workshop and Hostel Accommodation,	Workshop, £10,000 Equipment, 2,500 *£12,500
Over 50, ...	62	Home Accommodation,	
Unemployable,	145	Do.	
	329		

This gives a total of 329 at ages over 18 requiring institutional accommodation, subject probably to some slight reduction in the case of those whose friends may be willing and able to offer them house room.

If hostels or homes are to be built at present, it is assumed that they will not cost less than £80 per head—*i.e.*, the cost of workshop accommodation—so that the probable cost of erection may be stated as follows :—

For Hostels and Home—329 by £80 per head, ...	£26,320
Workshop accommodation, ...	10,000
Workshop equipment, ...	2,500
	£38,820

It is understood that a grant towards maintenance of £13 per head to homes and £5 to hostels is made for each inmate thereof, whereas the average cost per resident inmate of the Blind Asylum at the moment is £62 13s.

A. K. Chalmers.

Public Health Office,
Glasgow, 2nd August, 1921.

ADDENDUM.

SUPPLEMENTARY MEMORANDUM ON BLIND PERSONS RESIDENT IN GLASGOW AND THE SOUTH-WEST OF SCOTLAND.

The following notes are supplementary to the report, dated 30th May, in respect of Glasgow cases, and the analysis now contains all blind persons resident in Glasgow and the ten counties given in Appendix Table I attached hereto.

With the inclusion of these counties and the burghs situated therein which have made returns of blind persons, the total blind persons on the register for these areas may be summarised as follows :—

Age.	Males.	Females.
– 5 years, ...	6	6
– 18 ,, ...	113	95
– 35 ,, ...	212	141
– 50 ,, ...	271	192
+ 50 ,, ...	588	580
Not stated, ...	32	14
	1,222	1,028
	2,250	
Add—Glasgow cases not tabulated (information refused, not found, not traced, &c.), ...	86	
Lanarkshire cases received since tabulation completed, ...	8	
	2,344	

Detailed information of age and sex distribution in respect of the counties and burghs is given in Appendix Table I. No returns have apparently been made by Wigtownshire and the county areas of Bute and Dumfries.

In Appendix Table II the position of the cases at the time of the inquiry is given in relation to age and sex.

* This roughly equals £100 per head, of which £80 is for building and £20 for equipment.

Children under School Age.—The number recorded is 12, of which 6 are males and 6 females, only one of each of whom is a Glasgow case. It is probable that the treatment of ophthalmia neonatorum in Glasgow since 1912 is responsible to some extent for the small number of these cases in Glasgow as compared with other areas. The total is comparatively small, and special arrangements can no doubt be made in the respective areas.

School Ages, 5-18 years.—Of the 113 males and 95 females of these ages, most were attending schools or under training, 6 were in residence in institutions other than blind institutions, while 4 were returned as working and 1 hawking. There were 16 males and 19 females recorded as remaining at home.

A number of these 35 home cases are recorded as mentally defective, but most of them are apparently detained at home for no definite reason—probably in some cases because suitable arrangements cannot be made for their education and training.

Working Ages, 18-50 years.—This group, containing 483 males and 333 females, falls mainly into three sections :—

	Males	Females
(1) At Home, ...	150	227
(2) Working—		
(*a*) In Blind Institutions, ...	140	65
(*b*) Employed otherwise, ...	153	15

while the remainder were classified as inmates of Poor Law institutions, asylums, &c., or trainees. In a few cases no information was given.

Pensionable Ages, over 50 years.—This group contains 588 males and 580 females, while there are in addition 32 males and 14 females whose ages are not stated. These may also be broadly classified in the same way :—

	Males	Females
(1) At Home, ...	389	503
(2) Working—		
(*a*) In Blind Institutions, ...	39	3
(*b*) Employed otherwise, ...	96	10

Those remaining contain a somewhat larger number of cases housed in Poor Law institutions, asylums, &c., and others not stated.

A proportion of those at home, together with a considerable number of those employed outside blind institutions, would seem to require attention from the point of view of training and education as well as in the direction of providing suitable work, and in this connection Appendix Table III serves a useful purpose as indicating the numbers of blind persons of respective ages who are stated to be capable and willing to enter an institution to learn a trade. This table shows that the large majority were either working and not willing to undertake a course of training, or had no capacity—due in most cases to infirmity or old age.

Those who were capable and expressed a desire for training may be summarised as follows :—

Age	Males		Females	
	Working	Not Working	Working	Not Working
– 35 years.	13	32	...	11
– 50 ,, ...	28	44	...	13
+ 50 ,, ...	2	19	...	4
Not stated.	2	...	...	...
	—	—	—	—
	45	95	...	28
	140		28	
	168			

The approved agencies in the South-West of Scotland are as follows :—

Name of Agency	Principal Work Undertaken
Royal Glasgow Asylum for the Blind.	Educational ; technical training ; workshops ; home.
Imperial Workshops for the Blind.	Workshops.
St. Vincent's Roman Catholic School, Tollcross, Glasgow.	School ; workshops.
Paisley and District Workshops for the Blind.	Workshops.
Mission to the Outdoor Blind for Glasgow and the West of Scotland.	Home teaching.

A. K. Chalmers.

Glasgow, 24th November, 1921.

SECTION II.

VITAL STATISTICS.

SUMMARY.

	1919	1920	1921
Population,*	1,114,656	1,115,230	1,075,000*
Acreage, ...	19,183	19,183	19,183
Persons per acre, ...	58	58	56
Number of Inhabited Houses, ...	234,649	235,034	235,537
Deaths—Number registered, ...	18,613	17,090	16,051
„ After correction for Institutions, &c.,	18,237	16,765	15,625
Births—Number registered, ...	26,109	32,992	30,072
„ After correction, ...	25,832	32,631	29,710
Death-rate per 1,000 living—All causes,	16·36	15·03	14·53(15·28)
Birth-rate per 1,000 living, ...	23·18	29·26	27·64(29·14)
Deaths under One Year—Registered, ...	2,933	3,473	3,134
„ „ „ After correction,	2,937	3,471	3,135
„ „ „ Per 1,000 births,	114	106	105

The reasons for adopting an estimated population of 1,075,000 have been given in a preceding section. This estimate is 40,000 less than that of the previous year, and introduces an obvious risk in comparing rates for 1921 with those of preceding years, which have been calculated on a population apparently in excess of the actual. In the case of the death-rate, the excess in the estimate of population of several years preceding 1921 reduces it by about ·75 per 1,000, and the birth-rate by nearly 1·5. If, therefore, the census population is adopted for 1921, the birth and death rates of that year would be increased to a similar extent on those given in the summary.

The rates thus altered are inserted within brackets in the summary given above. Detailed information of the ward rates, causes of death, and corresponding rates for the preceding years will be found in the tables appearing in the Appendix on pages 155 to 158.

BIRTHS.

The number of births registered during the year was 30,072—almost 3,000 fewer than in 1920, but considerably in excess of those registered during the later war years.

On the estimated population the birth-rate is equal to 27·64 per 1,000, as compared with 29·26 in 1920 and 23·18 during 1919.

Table V in the Appendix gives the number of births registered and rates in each municipal ward, with a comparison of the corresponding rates in the old wards, so far as incorporated, for the quinquennium 1916-20. The rates in the new wards show the same variation that occurred in the wards as formerly constituted, high rates being recorded in Mile-End (39·3), Dalmarnock (37·5), Hutchesontown (35·6), and Provan (34·6); and low rates in Pollokshields (10·4), Kelvinside (12·1), and Park (13·9).

* See page 12 for explanation of this figure.

The following table shows the birth-rates for Glasgow and Scotland for fifty years:—

	Glasgow	Scotland
1871-80, ...	36·6	34·9
1881-90, ...	36·5	32·4
1891-1900, ...	33·7	30·3
1901-1910, ...	31·2	28·4
1911-15, ...		
1916, ...	24·7	22·8
1917, ...	21·7	20·1
1918, ...	21·1	20·2
1919, ...	23·2	21·7
1920, ...	29·7	29·7
1921, ...	28·7	25·2

On the basis of the Registrar-General's returns, the following comparison is made of the rates for several periods in Glasgow and other towns:—

	1919	1920	1921
Glasgow, ...	**23·2**	**29·7**	**28·7**
Edinburgh, ...	16·6	23·2	21·5
Dundee, ...	18·7	27·4	26·4
Aberdeen, ...	20·2	29·5	26·8
London, ...	18·2	26·5	22·3
Liverpool, ...	23·2	31·1	27·4
Manchester, ...	17·7	24·9	24·8
Birmingham, ...	19·9	27·9	24·4

MARRIAGES.

GLASGOW.—MARRIAGES PER 1,000 PERSONS LIVING.

1871-1880, ...	9·1	1915, ...	10·3
1881-1890, ...	9·3	1916, ...	8·6
1891-1900, ...	9·4	1917, ...	8·3
1901-1910, ...	8·8	1918, ...	9·4
1911, ...	9·5	1919, ...	9·0
1912, ...	9·9	1920, ...	12·4
1913, ...	9·5	1921, ...	10·7
1914, ...	9·8		

This table shows that the marriage rate has remained remarkably uniform at about 9 per 1,000 during the past fifty years, the only marked exceptions being 1915, 1920, and 1921.

DEATHS.

The total number of deaths registered in the City during the year was 16,051, compared with 17,090 during the preceding year. After correction for transfers, the number on which the adjusted rate is calculated is reduced to 15,625, which represents a death-rate of 14·5 per 1,000 of the estimated population, or 15·2 on the census population.

The numbers and rates for the municipal wards are given in Appendix Table VI, together with the corresponding rates in the old wards out of which they are formed.

Notwithstanding the reduced population on which this rate is calculated, it is ·50 per 1,000 below the rate of 1920, and is the lowest hitherto recorded. The lowest rates were recorded in Cathcart, Fairfield, and Kelvinside (in the order given), and were between 8 and 9 per 1,000, while rates in excess of 17 per 1,000 were recorded in Blythswood, Cowcaddens, Mile-End, and Calton. The ward rates are all more or less in conformity with those of the areas of the old wards from which they have been formed.

On the basis of the Registrar-General's returns, the rates for Glasgow and for several of the large towns in England and Scotland are:—

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

1881-1890,	24·22	1915,	18·76
1891-1900,	21·53	1916,	15·16
1901-1910,	19·56	1917,	15·10
1911,	16·44	1918,	16·50
1912,	16·26	1919,	16·36
1913,	17·14	1920,	15·30
1914,	16·59	1921,	15·10

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

	1919	1920	1921
Glasgow,	**16·4**	**15·3**	**15·1**
Edinburgh,	16·5	13·3	14·4
Dundee,	14·7	15·3	15·3
Aberdeen,	14·8	14·6	14·4
London,	13·6	12·6	12·4
Liverpool,	17·1	16·0	14·3
Manchester,	14·4	13·4	13·6
Birmingham,	13·7	12·8	11·2

Transfer Deaths.—The deaths on which the above rate is 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 753 during 1921, compared with 892 and 932 for the two preceding years, while the "outward transfers" numbered 1,179, compared with the corresponding figures for the two preceding years of 1,217 and 1,308. The causes of death in both these categories are given in Appendix Table No. VII.

CAUSES OF DEATH.

The principal causes of death are summarised in the table which follows:—

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

	1919	1920	1921
General Diseases—			
(*a*) Infectious,	1·11	1·22	1·66
(*b*) Septic,	·07	·13	·16
(*c*) Tuberculous—			
(1) Phthisis,	1·06	1·06	1·01
(2) Others,	·45	·40	·39
(*d*) Malignant (cancer, &c.),	1·09	1·05	1·17
(*e*) Other General Diseases,	1·63	·36	·26
Diseases of the nervous system,	1·56	1·59	1·64
Diseases of the circulatory system,	1·59	1·62	1·68
Diseases of respiration,	3·27	2·95	2·39
Do. digestion,	·98	·63	·57
Congenital defects and malformations (including premature births),	·96	1·19	1·07
Violence,	·51	·67	·53
All other causes,	2·08	2·16	2·00
All causes,	16·36	15·03	14·53

The death-rate from infectious disease is 1·66 as compared with 1·22 during 1920 and 1·11 in 1919. During the year there was a reduced prevalence of most of the major infections, as well as of measles, but the incidence of whooping-cough was exceptionally heavy, the death-rate from the latter being 64 per 100,000 as compared with 13 during 1920. The rate

for enteric fever was 16 compared with 27, smallpox 7 as against 100, measles 102 as compared with 279, while scarlet fever and diphtheria were also less prevalent.

The death-rate from septic diseases continues to increase, the rate for 1921 being 16 per 100,000 as compared with 13 in 1920 and 7 only in 1919. This increase is definitely associated with the relaxed restrictions on the sale of intoxicating liquor.

Further decline in the death-rate from tuberculosis is again noticeable, that for 1921 being 101 per 100,000, against 106 in the two preceding years. The death-rate from other forms of tuberculosis is also lower at 39.

On the other hand, the death-rate from malignant diseases increased from 105 to 117. The balance of other general diseases is only 26 as compared with 36 last year and 163 in 1919. This, however, is due to the absence of influenza and pneumonia of a fatal type, which was so marked a feature of recent years.

The death-rate from diseases of the nervous system is 164 as compared with 159, and of circulatory diseases 168 as against 162. Diseases of respiration are 239, and of digestion 57, compared with 295 and 63 respectively in 1920. Deaths from congenital defects, violence, and all other causes were fewer than during the preceding year.

In Appendix Table VIII the death-rates of several groups of diseases are given for 1921, compared with the average rates of preceding quinquennia.

Age and Sex Distribution of Causes of Death.—Details of these are given in Appendix Table IX. In every 1,000 deaths, 522 were of males and 478 of females, the deaths among males being in excess of those among females at all ages save from 2 to 5 and over 75.

The deaths among males from whooping-cough, diphtheria, influenza, cancer, rheumatic fever, cerebral hæmorrhage, and heart diseases were fewer than among females; while the deaths among females were relatively less frequent from septicæmia, pulmonary phthisis, and other forms of tuberculosis. Deaths for meningitis were recorded for 58 females and 76 males, while nervous diseases other than cerebral hæmorrhage caused 283 female deaths as against 358 male deaths. Deaths from organic heart disease were approximately the same, although those from other forms of diseases of the circulatory system were considerably lower among females. Pneumonia deaths among females were equal to 75 per cent. of those among males, while diarrhœa and enteritis as a cause of death among females was considerably less than that of the other sex. Digestive diseases were also lower among females, while congenital defects, &c., and violence were considerably less numerous among females than males.

Quarterly Death-Rates.—For comparative purposes a table, based on the Quarterly Returns of the Registrar-General, is here introduced, showing the quarterly death-rates for years 1919-1921:—

GLASGOW.—QUARTERLY DEATH-RATE PER 1,000, 1919-1921.

	1919	1920	1921
First Quarter, ...	27·1	16·4	17·4
Second ,, ...	14·3	16·7	14·8
Third ,, ...	10·6	11·9	12·6
Fourth ,, ...	13·4	15·1	14·5
Year, ...	16·4	15·3	15·1

During the months of April, May, and June, when the coal miners were on strike, the weather was exceptionally fine, and a good opportunity was obtained of observing the effect of the greatly reduced coal consumption in relation to the atmospheric conditions in the City. The effect on the death-rate was quite marked, and the following report, which was submitted to the Committee on Health, contains a detailed comparison, but it falls to be noted that the rates quoted therein were based on a pre-census of the population.

THE DEATH-RATE OF THE SECOND QUARTER.

The interruption of the meteorological records for Glasgow during recent months has coincided with a period when the information which they would have afforded could scarcely fail to be of importance.

The prolonged absence of industrial smoke, the limitation of domestic supplies, the many hours of sunshine, and the long periods of drought have impressed themselves on individual memory, but we have no record of air temperatures nor of rainfall, of the hours of continuous sunshine, or of variations in the humidity of the air, which is probably its most important feature as affecting health.

The death-rate of the quarter is therefore simply a record of results, without the opportunity of bringing them into relationship with the physical factors which have helped towards their production.

That the conditions have been favourable to health is apparent. For the second quarter of the year the death-rate was 13·0 per 1,000—lower by 2·5 than the corresponding quarter of last year, and by 3·6 than that of the first quarter of the year. For the week ending July 2nd it was 11·7. About one-half of the reduction is owing to the smaller number of deaths from diseases of the respiratory organs.

Deaths from all diseases of this group—save phthisis—numbered 476, compared with 965 in the first quarter of 1921, and 896 in the corresponding quarter of last year. Pneumonia caused 270 deaths, in place of 512 and 578; and bronchitis 162 deaths, in place of 376 and 272 in the same periods. The deaths of infants under one year numbered 719, compared with 939 and 891.

In the absence of the meteorological data above mentioned there is one factor readily available which has a definite bearing on this reduction. This is the record of the dust deposited in the collecting station in several of the parks.

A complete comparison can only be made when the results from all the stations throughout the country can be considered in relation to the national death-rate of the period. But the local observations suggest that while the amount of insoluble matter in the deposit has undergone little diminution there has been a more marked fall in the amount of the soluble ingredients. Much of the insoluble content of the deposit is mineral dust, swept up by winds, whereas the soluble include the hydro-carbons given off in the combustion of coal and washed out of the atmosphere by the rain. Here it is that a record of rainfall would have been useful, as, in our ordinary experience, Glasgow enjoys good health in wet summers.

In the present instance their source was much reduced, although much wood and other substitutes for coal were largely used.

It is hoped that the illustration which the coal strike has yielded will serve to stimulate the desire to have the meteorological records for the City placed on a satisfactory basis.

Glasgow, 26th July, 1921.

Deaths in Hospitals, Nursing Homes, and other Institutions.—The number of these, as indicating institutional facilities required in relation to disease, are at the moment interesting, in view of the present financial position of many of these institutions. Details for 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, but during 1921 the uncertified deaths increased to 97 from 89 registered during 1920. Some part of the reduction

during recent years may of course be due to the greater medical facilities following the return of doctors from military service. The percentage of deaths among legitimate children not certified under 1 year was only 1·1 during 1921, and 0·5 per cent. between 1 and 5 years, while that for deaths of illegitimate children under 1 year was 1·6, while there were none between 1 and 5 years.

	Year	1919	1920	1921
Not Certified,	– 1 year,	31	21	21
	– 5 years,	1	—	4
	5 + years,	67	48	54
No Medical Attendance,	– 1 year,	22	10	13
	– 5 years,	—	—	—
	5 + years,	—	1	4
Attending Dispensaries,	– 1 year,	3	8	1
	– 5 years,	—	1	—
	5 + years.	—	—	—
Deaths of Illegitimate Children,	– 1 year,	317	399	314
	– 5 years,	124	97	102
Of these not Certified,	– 1 year,	10	5	5
	– 5 years,	1	1	—
Percentage not Certified,	– 1 year,	3·2	1·3	1·6
	– 5 years,	0·8	1·0	—
Deaths of Legitimate Children—				
Percentage not Certified,	– 1 year,	1·8	1·1	1·1
	– 5 years,	—	—	0·5

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.

Housing (Scotland) Act, 1921, extends the time for the construction of houses for the purpose of obtaining grants under Section 1 of the Housing (Additional Powers) Act, 1919.

Licensing Act, 1921, prescribes the conditions, &c., of sale of intoxicating liquor, including the strength of spirits.

REGULATIONS, CIRCULARS, AND MEMORANDA.

Ophthalmia Neonatorum—

Circular, N. M. & C., No. III, on the nature of the disease, its prevention and treatment.

Circular, N. M. & C., No. IV., requesting that a copy of Circular No. III be sent to Medical Practitioners.

Smallpox and Chickenpox—

Public Health (Chickenpox) Amendment Regulations.

Circular, I.D.B., No. 6, continuing Notification of Chickenpox.

Circular, I.D.B., No. 1, Supply of Lymph and Free Vaccination.

Encephalitis Lethargica—

Circular, I.D.B., No. 10, regarding the prevalence of this disease and the desirability of making it notifiable.

Anthrax—

Circular, I.D.B., No. 4, Shaving Brushes imported from Japan.

Infectious Disease Carriers—

Circular, I.D.B., No. 3, regarding cases of infectious disease caused by persons carrying the germs or infective virus of a disease.

Public Health (Infectious Disease Carriers) Regulations (Scotland), 1921.

Tuberculosis—

Memorandum, I.D.B., 34/20, regarding the treatment of discharged tuberculous soldiers in residential institutions.

Circular, No. 5, regarding domiciliary treatment.

Circular, No. 7, regarding the provision of medicines in domiciliary treatment.

Circular, I.D.B., No. 8, regarding claims for refund of cost of treatment of ex-service men.

Circulars, I.D.B., Nos. 12, and 17, regarding emigration of persons to Australia who have suffered from the disease.

Circular, I.D.B., No. 13, leave of absence to disabled men under in-patient treatment in Ministry of Pensions Hospitals.

Circular No. 32, asking for information as to prevalence of lupus, and the need for more adequate treatment.

Circular, T.B. No. 2, refund of cost of treatment; travelling expenses; and notification of discharges from sanatoria.

Venereal Diseases—

Circular, I.D.B. (V.D.), No. 11, return to be made by institutions approved for the treatment of these diseases.

Housing—

Regulations for the compulsory hiring of houses.

Assisted Housing Schemes (Amendment) Regulations made under Section 5 (1) and Section 16 of the Housing, Town Planning, &c., Act, 1919.

Local Authorities (Assisted Housing Schemes) Amendment Regulations.

Memorandum of suggestions for the guidance of Local Authorities in the management of houses erected by them under the State scheme of financial assistance.

Aliens—

Additional instructions to Medical Inspectors under the Aliens Order, 1920.

Food—

Memorandum respecting the official certification of certain food products intended for export to the Dominion of Canada.

Circular No. 2 on outbreaks of poisoning due to the consumption of foods.

Circular, No. 5, regarding supplementary arrangements for the examination of material relating to food poisoning.

Milk (Scotland) Order, 1921. Grade A milk; dried and condensed milk; addition of colouring matter or water.

Local Authorities Milk (Scotland) Order, 1921. Prescribes powers and duties of entry and of inspection of premises where milk is sold.

Circular, No. 9, pointing out that the Amendment of Milk (Scotland) Order, 1921, includes separated or skimmed milk.

Circular X, as to Sale of Food and Drugs Order, 1921.

Sale of Food Order, 1921.

Local Authorities' Food (Scotland) Order, 1921. Investing Local Authorities with power to enforce certain requirements under the Sale of Food and Drugs Acts.

SECTION III.

INFANT MORTALITY.

The deaths of infants under one year during 1921 numbered 3,135, compared with 3,471 in the preceding year, a decrease of 336, despite the large number of births that occurred during 1920. The Infant Mortality rate for 1921 is 105, compared with 106 during 1920, and an average rate for the quinqennium 1916-20 of 112.

The deaths under one year in each ward of the city during 1921, with the relative rates per 1,000 births, are contained in Appendix Table XII. This table also contains a comparison for the previous quinquennium (1916-20) of the old wards, parts of which are contained in the present wards.

The following tables show (1) the 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.

Illegitimate children have always a much higher Infant Mortality rate than legitimate children, although during recent years the disparity between them is lessening. During last year the rate among legitimate children was 102, while that of the illegitimate children was 163.

Infant death rate during several periods (Glasgow):—

Average of 10 years,	1891-1900,	149 per 1,000.	1916, ...	111 per 1,000.
,,	1901-1910,	135 ,,	1917, ...	129 ,,
	1911,	136 ,,	1918, ...	113 ,,
	1912,	122 ,,	1919, ...	114 ,,
	1913,	129 ,,	1920, ...	106 ,,
	1914,	133 ,,	1921, ...	105 ,,
	1915,	143 ,,		

The comparison with several large towns is as follows:—*

	1919	1920	1921
Glasgow.	**114**	**107**	**106**
Edinburgh, ...	117	89	96
Dundee, ...	126	131	114
Aberdeen, ...	118	121	94
London, ...	85	76	80
Liverpool, ...	109	113	105
Manchester, ...	97	98	94
Birmingham, ...	89	83	82

Comparison of death rates among legitimate and illegitimate children:—

GLASGOW.—DEATH-RATE PER 1,000 BIRTHS.

	Legitimate	Illegitimate		Legitimate	Illegitimate
1899-1900, ...	144	286	1916, ...	105	194
1901-1910, ...	126	457	1917, ...	125	169
1911, ...	127	260	1918, ...	108	168
1912, ...	118	185	1919, ...	110	164
1913, ...	121	227	1920, ...	101	181
1914, ...	127	211	1921, ...	102	163
1915, ...	140	206			

Ward Rates and Causes of Infant Mortality.—As with births and deaths, the alteration of the ward boundaries has not had any effect in reducing the disparity that has hitherto existed between the rates in the various wards.

* From the Registrar-General's Reports.

The highest ward Infant Mortality rate is recorded in Blythswood with 149, which is followed by Mile-End with 136, Anderston with 133, Provan 126, and Calton, Whitevale, Sandyford, Cowcaddens, and Gorbals with rates exceeding 120. The lowest rates occurred in Cathcart, with the exceptionally low rate of 25; Kelvinside, 44; Camphill, 46; Dennistoun, 48; and Langside, 50.

Despite the high birth rate obtaining during the past two years, it is encouraging to find that, during both years, the Infant Mortality rate has been lower than at any previous period. The causes of death among infants under one year vary to a certain extent with the prevalence of certain groups of disease, especially respiratory, digestive, and infectious diseases, and appendix tables numbers XIII and XIV give details of the causes for each month of life among males and females respectively.

The rates shown in these tables are summarised below along with the corresponding rates in four periods since 1903. Deaths from immaturity still form more than one-third of the total deaths, but those due to diseases of the respiratory system show a decrease which, to a considerable extent, may be explained by the favourable weather conditions obtaining during the greater part of the year. On the other hand, this factor was probably responsible for the increased death rate from digestive disease, which is usually associated with a dry warm summer. The rate from diseases of the nervous system is lower, as is also that from tubercular diseases.

The death rate from infectious disease, however, was higher than that of the preceding year, owing largely to the marked prevalence of whooping-cough during the spring and early summer months. More than half of the total male infant deaths and less than half the female infant deaths occurred within the first three months.

Causes of Death.	Average 1903-05	Average 1906-10	Average 1911-15	Average 1916-20	1921
Males—					
I. Immaturity, ...	49	44	46	46	41
II. Diseases of Respiratory System,	36	29	30	27	22
III. Diseases of Digestive System,	24	23	23	18	21
IV. Diseases of Nervous System,	16	11	10	8	7
V. Tuberculous Diseases, ...	6	6	6	3	3
VI. Infectious Diseases, ...	15	17	18	11	14
VII. Suffocation, ...	1	2	1	—	—
VIII. All other Causes, ...	7	7	12	10	9
All Causes, ...	154	139	146	123	117
Females—					
I. Immaturity, ...	39	36	36	36	36
II. Diseases of Respiratory System,	28	23	24	21	16
III. Diseases of Digestive System,	20	19	19	14	15
IV. Diseases of Nervous System,	12	9	8	6	5
V. Tuberculous Diseases, ...	5	5	4	3	2
VI. Infectious Diseases, ...	15	17	18	11	12
VII. Suffocation, ...	1	2	1	—	—
VIII. All other Causes, ...	4	7	9	9	6
All Causes, ...	124	118	119	100	92

NOTIFICATION OF BIRTHS.

The number of notifications of births received during 1921 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 2½ per cent., but most of these are subsequently intimated when attention has been directed to the matter.

Nature of Attendance at Births.—The proportion of births medically attended has fallen from 48·6 per cent. in 1914 to 39·2 in 1921, which is the same as for last year. This leaves a balance of 60·8 per cent. of births not medically attended.

Still Births.—The percentage of still births known to have occurred in Glasgow usually averages about 4. During 1921 it was 3·8. The lowest percentage recorded since records have been kept is 3·6 during the war years 1916-1917. The number of still births occurring fluctuates considerably even from month to month.

The percentage attended medically or in institutions is 5·5 for 1921, compared with 2·8 non-medically attended, but if those medically attended in institutions are excluded the former rate is reduced from 5·5 to 3·9. This larger percentage among medical cases is no doubt due to the fact that some condition has been recognised which made it advisable to call in a doctor in certain cases where a midwife was in the first instance employed. Among the births medically attended in institutions there were 317 still births, or 10·7 per cent of the total.

The bacteriological examination of a proportion of children still born was stopped at the end of the year, and only in special circumstances will examination be made.

MATERNITY AND CHILD WELFARE SCHEME.

During the year no material alteration was made in the Child Welfare Scheme, although the Anderston Day Nursery was closed with the expiry of the lease of the premises, and a new building erected at the corner of Stirling Street and Stewart Street, Cowcaddens. Formerly the nursery was situated in a double shop, which was altogether inconvenient, and was later transferred to the Elgin Church Mission Hall while the new nursery was being erected.

With the co-operation of the Child Welfare Advisory Committee it has been possible to extend the activities at the centres, and classes on cookery and dressmaking have been begun while a series of social evenings was arranged at the London Road Centre during the winter.

The following statement indicates the centres where similar classes may be begun, those marked (1) being suitable for cookery and sewing, in addition to social evenings; those marked (2) for sewing classes and social evenings only:—

Consultation Centres.	Day Nurseries.
(1) London Road.	(2) Windsor Terrace.
(1) Cowcaddens Centre.	(2) 132 Adelphi Street.
(2) Elder Park Clinic.	(1) Weir Street.

INFANT CONSULTATIONS.

During the year one additional consultation was arranged at London Road on Monday forenoon, while another at the same centre was changed from Tuesday forenoon to Wednesday at the same hour.

The following is a statement of the consultations held each week:—

	10.30 A.M.	2 P.M.
MONDAY, ...	130 Adelphi Street, S.S. 77 Port Street, Anderston. London Road.	69 London Road. 614 Dobbie's Loan. 131 Weir Street
TUESDAY, ...	Hill Street Hall, Shettleston. Church, Garngadhill.	77 Port Street, Anderston. South Avenue Govan (Ante-Natal). 87 Campbellfield Street.
WEDNESDAY,	77 Port Street, Anderston. Ruchill Church, Maryhill. Town Hall, Govan. London Road.	69 London Road. 614 Dobbie's Loan. Town Hall, Govan.
THURSDAY, ...	15 Peel Street, Partick. Hill Street Hall, Shettleston. 131 Weir Street.	15 Peel Street, Partick. 614 Dobbie's Loan. 69 London Road. 130 Adelphi Street, S.S.
FRIDAY, ...	130 Adelphi Street, S.S. Church, Garngadhill. 69 London Road.	614 Dobbie's Loan. 69 London Road (Ante-Natal). Elder Hospital, Govan.

Vaccination is also done at Sanitary Chambers at 1 p.m., Tuesdays.

The following table shows the attendances at each consultation during the year 1921, and also in 1920:—

ATTENDANCE AT INFANT CONSULTATIONS, 1921.

	No. of Consultations.	Children – 1 Year. No. of Attendances. Primary.	Children – 1 Year. No. of Attendances. Subsequent.	Children + 1 Year. No. of Attendances. Primary.	Children + 1 Year. No. of Attendances. Subsequent.	Total No. of Attendances. Primary.	Total No. of Attendances. Subsequent.	1920 Total No. of Attendances. Primary.	1920 Total No. of Attendances. Subsequent.
Weir Street,	97	401	2,590	276	538	677	3,128	499	1,952
London Road,	282	1,566	8,444	569	1,970	2,135	10,414	1,392	4,841
Adelphi Street,	139	805	2,971	356	865	1,161	3,836	1,016	3,295
Port Street,	146	604	4,299	317	1,593	921	5,892	723	2,772
Cowcaddens,	193	1,161	5,887	479	1,496	1,640	7,383	863	3,197
High Street,	—	184	234	80	103	264	337	848	2,403
Maryhill,	49	284	1,607	73	167	357	1,774	361	1,375
Shettleston,	100	559	3,157	117	462	676	3,619	595	2,441
Partick,	100	565	3,602	280	1,238	845	4,840	790	3,134
Garngad,	101	449	2,017	269	898	718	2,915	486	2,293
Govan Town Hall,	100	475	2,350	302	656	777	3,006	467	1,893
Elder Hospital,	48	481	1,620	—	—	481	1,620	330	1,095
Campbellfield Street,	50	277	1,656	69	203	346	1,859	952	4,224
	1,405	7,811	40,434	3,187	10,189	10,998	50,623	9,322	34,915
						61,621		44,237	

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

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

	1919	1920	1921
Birth Debility,	48	42	16
Prematurity,	4	53	33
Marasmus,	103	213	76
Digestive Disorders—			
Malnutrition,	—	227	391
Diarrhœa,	8	10	1
Enteritis,	4	5	4
Gastritis,	2	—	1
Respiratory Diseases—			
Bronchitis,	58	16	27
Pneumonia,	18	12	6
Tuberculosis,	—	1	1
Syphilis,	2	21	32
Measles,	—	1	—
Whooping-Cough,	9	—	30
Scabies,	22	12	—
Rickets,	65	18	69
Impetigo,	1	—	—
Eczema,	3	—	2
Ophthalmia,	—	1	—
Others,	—	1	1
TOTAL,	347	633	690

ANTE-NATAL CONSULTATIONS.

Glasgow Royal Maternity Hospital.—A comparison with the previous year shows that the total number of cases attending the dispensary for the first time increased from 2,126 during 1920 to 2,545 in 1921, while the total attendances were respectively 3,151 and 6,034. During 1921, 1,112 cases were treated to a termination in delivery. The number admitted to the ante-natal wards during 1921 was 657, compared with 803 in 1920. At the infant consultations held at the Maternity Hospital there were 4,520 attendances, as compared with 3,631 during the previous year. The first attendances increased from 901 to 984.

	1919	1920	1921
ANTE-NATAL DISPENSARY—			
Number attending for first time, ...	1.749	2,126	2,545
Total Attendances, ...	3,960	3,151	6,034
Number treated to a termination in delivery,	663	833	1,112
Number sent to Hospital from Dispensary—			
(*a*) for confinement, ...	465	642	779
(*b*) ,, treatment, ...	117	165	188
(*c*) ,, miscarriage, ...	40	60	58
ANTE-NATAL WARDS—			
Average number under treatment, ...	28	22	17
Number admitted, ...	703	803	657
Total Days, ...	10,318	7,974	6,194
Condition on dismissal :—			
(1) Recovered, ...	191	120	144
(2) Improved.	158	210	129
(3) Confinement completed, ...	338	437	283
(4) Died, ...	8	11	3
(5) Left against advice, ...	—	—	—
(6) No change, ...	—	34	80
INFANT CONSULTATION—			
First Attendances, ...	530	901	984
Subsequent Attendances, ...	2,059	2,730	3,536
Total, ...	2,589	3,631	4,520

Govan Nurses' Home (Govan).—The numbers attending the Ante-Natal Dispensary of the Nurses' Training Home, Govan, were as follows:—

First Attendances. 470; Subsequent Attendances, 301—Total, 771.

Of the cases attending, 195 were first pregnancies and 194 subsequent pregnancies. The following statement shows the condition of these:—

Albuminuria, ...	14	Phthisis Pulmonalis, ...	3
Contracted Pelvis, ...	20	Bronchitis, ...	7
V.D., ...	8	Exhaustion, ...	1
Varicose Veins, ...	30	Indefinite Debility, ...	3
Anaemia, ...	28	Nothing abnormal detected,	180
Constipation, ...	65		
Dental Sepsis, ...	16	Total, ...	389
Cardiac Disorder, ...	14		

Of the 389 cases referred to in the foregoing summary, 372 were born alive, 360 being full time and 12 premature, while 17 were stillborn, of which 8 were full time and 9 premature.

Most of the others attended the clinic only once before a definite opinion was formed as to their condition, and included mothers who were being attended by doctors and midwives in private practice, as well as others who attended merely to make application for milk or meals, while a few were non-pregnant.

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:—

	1920	1921
Enquiry cards returned, ...	23,861	21,585
Full information obtained, ...	22,216	20,036
Doctor found in attendance, ...	177	116
Duplicates, ...	—	—
Wrong addresses, ...	1	2
Others, ...	1,467	1,431
Enquiry cards issued, ...	23,559	21,905
Of those for whom full information was obtained—		
Legitimate, ...	20,190	18,987
Illegitimate, ...	1,713	1,391
Born at full term, ...	20,823	19,370
Premature births, ...	1,080	1,008
Condition of Infant at Birth—		
Well nourished, ...	18,768	17,525
Fairly nourished, ...	1,518	1,266
Badly nourished, ...	801	846
Still-born, ...	816	741
Nature of Feeding at First Visit—		
Breast, ...	18,549	16,963
Artificial, ...	1,214	1,309
Breast and Artificial, ...	614	591
Still born, ...	816	741
Dead at First Visit, ...	877	765
Adopted, ...	33	9

In addition to home visitation, the nurses attend the Infant or 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 indicates the number of first and revisits overtaken, together with records of results:—

FIRST VISITS.

	1919	1920	1921
Infants visited under one year of age, ...	15,572	20,469	18,484
Infants visited over one year of age, ...	1	2	—
	15,573	20,471	18,484
Removed and new address not traced, ...	183	374	500
Not found at address given, ...	3	—	—
Out at time of visit, ...	—	—	32
In hospital or nursery, ...	15	55	104
Dead, ...	533	768	828
Refused admittance, ...	—	46	26
Doctor in attendance, ...	181	177	113
Information refused, ...	—	54	66
Still-born, ...	730	869	783
Visits unnecessary, ...	651	684	595
Visits resented, ...	57	—	—
Adopted, ...	56	48	45
Nursed out, ...	11	12	2
	17,993	23,558	21,578

REVISITS.

	1919	1920	1921
Infants visited under one year of age, ...	3,271	3,523	2,664
Infants visited over one year of age, ...	935	1,065	1,702
	4,206	4,588	4,366
Removed and new address not traced, ...	608	775	692
Out at time of visit, ...	105	123	83
In hospital or nursery, ...	31	33	26
Dead, ...	672	671	530
Adopted, ...	29	17	14
Refused admittance, ...	—	4	2
Doctor in attendance, ...	—	3	2
Visits to mothers, ...	5	4	—
Unable to gain admission, ...	—	—	—
Visits unnecessary, ...	—	—	4
Visits resented, ...	3	6	—
Nursed out, ...	2	2	1
Information refused, ...	—	—	1
	5,661	6,226	5,721

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
1919, ...	13,919	1,548	106	15,573
1920, ...	18,771	1,548	157	20,476
1921, ...	17,144	1,193	147	18,484

Generally speaking, those classified as "well" on the occasion of the first visit were not revisited, but those tabulated as "fair" and "bad" were kept under observation by the nurses, and the following table is a summary of results:—

REVISITS.

	Still Good	Much Improved	Slightly Improved	No Improvement	Worse	Total
1919, ...	2,893	1,257	56	—	—	4,206
1920, ...	3,459	1.098	23	3	—	4,583
1921, ...	3,153	1,182	22	9	—	4,366

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 between 300 and 400.

As the period of visitation generally extends to 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 1917-1919:—

Year	Year old	Removed	Dead	Ceased to be Visited.	Visits Unnecessary	No Information	Visits Resented	No Visitor	Total
1917	1,661	291	207	82	40	7	7	19	2,314
1918	1.439	169	237	124	32	16	14	21	2,052
1919	1,571	195	171	176	26	20	8	12	2,179

The feeding of the infants is indicated in the following table:—

	1917	1918	1919
Year old—			
Breast only, ...	404	354	532
Breast and Artificial Food, ...	677	487	471
Artificial Food only, ...	580	598	568
Removed—			
Breast only, ...	132	80	113
Breast and Artificial Food, ...	41	19	26
Artificial Food only, ...	31	21	15
No Information, ...	87	49	41
Dead—			
Breast only, ...	69	98	99
Breast and Artificial Food, ...	36	25	21
Artificial Food only, ...	44	49	29
No Information, ...	58	65	22
Ceased to be visited—			
Breast only, ...	52	65	116
Breast and Artificial Food, ...	12	29	32
Artificial Food only, ...	18	30	28
Visits unnecessary—			
Breast only, ...	16	24	18
Breast and Artificial Food, ...	8	7	3
Artificial Food only, ...	8	1	4
No Information, ...	8	—	1
No Information, ...	7	16	20
Visits resented—			
Breast only, ...	5	10	4
Breast and Artificial Food, ...	—	1	1
Artificial Food only, ...	2	—	—
No Information, ...	—	3	3
No Visitors, ...	19	21	12
	2,314	2,052	2,179

INFANT MORTALITY IN RELATION TO THE INDUSTRIAL OCCUPATION OF WOMEN.

The practice, which had been in operation since the adoption of the Notification Act, of reporting to H.M. Inspector of Factories and Workshops all births notified in which information is obtained that the mother was employed, was continued till November, when the procedure was stopped, in consequence of the issue by the Scottish Board of Health of the Factories and Workshops (Transfer of Powers) Order, 1921. Till the date of the issue of the Order, 495 intimations had been sent to the Factory and Workshops Inspector, compared with 1,697 for the whole of the preceding year. Where inquiry is necessary, that is now made by the nurses under the Child Welfare Scheme.

DAY NURSERIES.

The unsuitable Day Nursery accommodation in several districts of the City was referred to in last year's report, and, as already mentioned, the nursery in Anderston district has been discontinued because suitable accommodation for it could not be found. Enquiry was also made as to whether suitable accommodation could not be obtained in Maryhill district where the nursery was closed several years ago, and the question has also been under

COWCADDENS DAY NURSERY.

SCOTSTOUN COUNTRY HOME.—STRETCHER BEDS ON LAWN.

MOUNT BLOW COUNTRY HOME.

MOUNT BLOW COUNTRY HOME.—DORMITORY.

consideration regarding Shettleston and Parkhead. A site in Cowcaddens at the corner of Stewart Street and Stirling Streets and formerly occupied by several very insanitary tenements, was utilised for the erection of a Day Nursery in Cowcaddens district, and the following is a short description of the accommodation provided:—

Cowcaddens Day Nursery.—The building is to be situated at the corner of Stewart Street and Stirling Street, Cowcaddens.

It will consist of two portions:—(*a*) Day Nursery, and (*b*) Administrative.

The Day Nursery, which faces due south, will accommodate 30 children in two rooms—one for infants, and one for young children—30 square feet of floor space being allowed to each child. A verandah, 7 feet 6 inches broad runs the whole length of the south front, and will be entered by a two-leaved door as regards the distal half of the building; and as regards the proximal half, the whole front is constructed of three double doors.

The administrative portion contains the following accommodation:—Wash-house and drying room; bathroom, with 2 bath sinks, 2 wash-hand basins (provision has, however, been made for the addition of a third wash-hand basin if necessary), a slunge sink room, with water-closet, opens off the bathroom; one water-closet is meantime shown on the plan, but a second can be added if advisable. There are also private dressing-room, reception room, linen closet, milk room, larder, kitchen and scullery, cleaners' closet, staff room, and staff lavatory.

The number of Day Nurseries now under the administration of the Corporation is 7, including one Kindergarten, and as reference has been made to them elsewhere the following figures are all that need be added to complete the record:—

Nursery	No. of days open	Total Attendances during the year	Average	Maximum number admitted
London Road, ...	229	6,216	27	33
Cowcaddens, ...	224	2,683	12	27
Phœnix Park Kindergarten, ...	176	2,798	16	29
Milton, ...	265	8,343	31	45
Partick, ...	265	2,089	7	17
Hutchesontown, ...	249	5,975	24	34
Weir Street, ...	205	4,353	21	28

COUNTRY HOMES.

Two of the Country Homes mentioned in the report for last year, namely those at Mount Vernon and Scotstoun, were open during the whole of the year, and the following statement indicates the condition of the children on admission:—

	Mount Vernon		Scotstoun		Total
		Readmissions		Readmissions	
Rickets, ...	29	3	79	7	118
General Malnutrition, ...	5	1	3	—	9
Bronchitis, ...	6	—	3	—	9
Paresis, ...	—	—	2	—	2
Debility after acute illnesses, ...	9	2	1	—	12
Anæmia, ...	8	2	1	—	11
Nervousness, ...	2	—	1	—	3
Healthy, but mother about to be confined,	—	—	3	—	3
Debility, ...	—	—	15	—	15
	59	8	108	7	182
	67		115		

The numbers of dismissals during the year were 65 from Mount Vernon and 107 from Scotstoun, and the condition on dismissal is summarised in the following statement:—

	Mount Vernon	Scotstoun	Total
Much improved, ...	33	53	86
Not improved, ...	2	13	15
Parents leaving city, ...	3	6	9
Transferred suffering from infectious disease,	18	22	40
Taken home by parents (fretting, &c.), ...	8	13	21
Died (broncho-pneumonia), ...	1	—	1
	65	107	172

Considerable difficulty was experienced during the year with the occurrence of infectious disease among the children admitted to the Home, despite special enquiry as to the occurrence of disease, especially Measles and Whooping-Cough, at the addresses from which it is proposed to admit children, in addition to special enquiry as to the history of the child itself. All of course are medically examined before admission, and kept under medical supervision while in the Home, but it would be an advantage were it possible to find accommodation in which to put entrants under observation before admitting them to the Homes.

SUPPLY OF MILK AND MEALS TO NECESSITOUS MOTHERS AND CHILDREN.

During the first half of the year 1920, when the high price of milk led to a considerable reduction in consumpt in the poorer districts of the City, the Local Authority put into operation a scheme for providing supplies free, or at reduced prices, in necessitous cases, to expectant and nursing mothers and to children under five years of age. (For details see Report for 1920.) Consequent on the continued and increasing trade depression the need became more widely felt in the later months of the year, and in December the Local Authority and the Scottish Board of Health approved of a scheme which came into operation in January, 1921.

The following extracts from a report submitted at the time to the Child Welfare Committee indicate the conditions under which the Scheme was introduced:—

* * * * * * * * * * *

CO-OPERATION WITH EDUCATION AUTHORITY.

There are several reasons suggesting public advantage in co-operating with the Education Authority. Already they may feed and clothe and provide medical treatment for necessitous children of school age, and some at least of these provisions are applicable to children from two years of age, *i.e.*, those attending nursery schools or hostels (about 150 in all).

The Director of Education and his staff have been good enough to supply the department with the details of the basis of their investigations into the economic standards of the families they are already dealing with in the above sense, and these may be compared with our own for last year.

* * * * * * * * * * *

The Education Authority's scale, revised in September last, is as follows:—

	Feeding		Clothing		Total	
	s.	d.	s.	d.	s.	d.
Man, ...	9	6	3	6	13	0
Woman, ...	8	3	2	10	11	1
Boy, ...	8	0	2	3	10	3
Girl, ...	7	6	2	4	9	10

Adding these figures together, there is given for a family of four persons the cost of feeding and clothing, namely :—

Feeding	Clothing	Total
33s. 3d.	10s. 11d.	44s. 2d.

If to this sum there is added 14s. 9d. (rent and gas, 7s. 6d.; coal (2 cwts.), 5s. 9d.; household necessaries, 1s. 6d.), the total would be 58s. 11d., and a family with this income would not receive any allowance.

But if the income of the family were under 58s. 11d., but not under 54s. 4d., an allowance would be made in respect of part boots and clothing for the children—the sum of 54s. 4d. being arrived at as follows :—

Food for family, as before, ...	33s. 3d.
Clothing for husband and wife, ...	6s. 4d.
Rent, &c., ...	14s. 9d.

If the income of the family were under 54s. 4d. an allowance would be made both in respect of food and clothing for children of school age.

Stated conversely, where the income of a family of the number mentioned is under 54s. 4d., it is assumed that the parents are unable to provide either food or clothing for the children; where the income is over 54s. 4d. but under 58s. 11d., it is assumed that food can be provided for the children, but not the whole cost of boots and clothing; where the income is above 58s. 11d. it is assumed that the family will be able to make ends meet.

Taking a similar family on the Corporation scale, the result would work out as follows :—

Assume Income of family at Education Authority minimum of, ...		58s.	11d.
Deduct Education Authority allowance for rent and gas, ...		7s.	6d.
Leaves, ...		51s.	5d.
Allow for husband, ...	1·0		
„ wife, ...	·8		
„ child—14, ...	·8		
„ child—10, ...	·7		
Equal to adult males, ...			3·3
Or, a net weekly income per adult male of, ...		15s.	7d.

As has been explained, the Corporation's minimum scale for feeding and clothing was 15s. per week per adult male, so that in the case of such a family no allowance would have been made in respect of milk.

There is close comparison in the family given between the two scales, but it would probably be admitted that the Corporation minimum rate per week per adult male should now be increased, as the average daily cost per official in hospital for food only now varies from a minimum of 1s. 8d. per day at Knightswood to a maximum of 2s. 1¾d. in Robroyston. In this event, of course, the Corporation scale would become more favourable than the Education Authority's scale.

The Education Authority have a further scale which applies in the case of an application for free medical treatment. In this case where the total income of the household, from all sources, is less than three guineas, or being above this sum does not exceed a sum which allows 22s. for each adult, 11s. for each child, and 10s. extra for medical treatment, such treatment will be provided by the Authority free of cost on application. In a family similar to that already dealt with medical treatment would thus be given did the total income of a household from all sources not exceed 76s. per week, but apparently is given in every case where the household resources do not amount to 63s. per week. It seems open to question why in any case 10s. should be allowed for medical treatment when it is proposed to provide such treatment by the Authority free of cost, and even excluding this allowance for medical treatment the income limit in such cases rises to 66s. compared with 58s. 11d. in other necessitous cases. This standard, however, does not apply to the provision of food or clothing.

Investigations re Income.—On this question two suggestions may be considered :—

(1) That the Education Authority be asked to undertake this for the Public Health Authority; or

(2) That as the whole proposal is one rather in the region of relief than of medical treatment, investigation and payment should rest with the Distress Committee, on certification by this department that the case is one in which milk is required.

Experience and policy alike suggest that this department should not undertake to verify the economic position of the recipient family. It will be sufficient for the

department to determine on medical grounds that the need for a grant exists, and to arrange otherwise for verification of the parents' statement of the family income.

* * * * * * * * * * *

The Education Authority already make enquiry regarding families in which there are children of two years of age and upwards, and it would probably not add seriously to their work were they asked to undertake investigations for other families, which would consist mainly of one child, although probably they would ask that any extra expense incurred by them in doing so should be refunded by the Corporation.

It would afford a good illustration of co-operation between the Public Health and Education Authorities. In practice it would begin in a medical examination and certification by one of the Clinical Officers of the Infant Consultations that food or milk was required. Save in emergency cases no milk would be supplied until the application had been reported on by the Education Authority. Where the family was already known to the Education Authority delay beyond twenty-four hours need not occur; when special investigation had to be made, a delay of 48 hours might be entailed.

Dependent upon the volume of cases falling to be dealt with, some addition might also be necessary to the clerical and nursing staffs of this department.

27th November, 1920.

As originally outlined, the intention was that milk would be granted only to children attending the Infant Consultations, who showed definite signs of ill-health, provided the family income was less than the economic scale already applied by the Education Authority in dealing with applications for the supply of food and clothing for necessitous school children. It was also arranged that enquiries as regards family income should be made by the officers of the Education Authority, in the expectation that many of the families likely to come under notice would probably already be on the records of that Authority, and thus duplicate investigations would be avoided.

It was early obvious that the number of cases falling to be dealt with would be considerable, and with the occurrence of the Coal Strike, when unemployment became almost universal, the congestion at the Infant Consultations was so great as practically to stop the ordinary routine of Child Welfare work. Arrangements were therefore made to receive applications at other centres (mainly in public halls) and the condition as to medical certification was waived, so that grants both of milk and meals were authorised on an economic basis only.

Contrary to expectation, it was found that of the families applying for milk and meals under the Child Welfare Scheme, only about 25 per cent. had already been registered by the Education Authority, and later, in consequence of the great pressure of applications, it became necessary to relieve the Education Authority of the work of investigation into economic conditions, and a staff was set up under the Local Authority, although the scale, as adjusted from time to time by the Education Authority, continued to be the criterion of necessity.

(*a*) MILK.

The quantity of milk granted was one pint per day in the case of expectant and nursing mothers and to children up to five years of age, except in the case of children between four and twelve months, who received one and a-half pints per day. This standard of supply was continued until the month of July*, when supplies ceased to be given to expectant mothers until the last three months of pregnancy; and on 2nd November, 1921†, when the supply to infants was limited to one pint per day at all ages.

* and † were in consequence of instructions from the Board of Health.

The growth in the demand is illustrated in the following summary of the reports made to the Child Welfare Committee:—

1921	Number of Expectant and Nursing Mothers	Children under 5 Years	Pints per Day	Cost per Day
February 5, ...	192	586	826½	£18 0 11
March 5, ...	525	1,482	2,124½	46 15 9
April 9, ...	1,148	3,260	4,600	85 11 0
May 7, ...	2,977	7,465	10,366	150 15 7
June 4, ...	3,910	9,873	14,274½	189 4 10
June 18, ...	4,219	10,312	15,032	198 12 9
July 23, ...	3,506	9,638	13,668	180 19 3
August 5, ...	2,621	9,016	11,312½	150 0 2
September 2, ...	3,843	9,150	13,534	179 5 9
September 30, ...	4,125	9,449	14,061	196 13 11
October 28, ...	4,412	11,754	16,705	233 7 10
November 25, ...	4,713	12,517	16,984	254 13 4
December 23, ...	5,151	13,234	18,385	275 17 4

While the scheme provided for supplies being given at reduced prices, in the great majority of cases it was found that the family income fell below the scales in operation from time to time, so that almost the whole supplies were given free. From the commencement of the scheme in the month of January, till the end of the year, the total expenditure for milk approximated £55,000, and the following tables show the distribution of the orders issued, both as regards original and "repeat" applications, and as to cost:—

Rate per Pint charged to Applicant	Number of Families	Number of Expectant and Nursing Mothers	Number of Children under 5 Years	Total Number of Pints ordered
ORIGINAL APPLICATIONS.				
4d., ...	53	30	89	3,472
2d., ...	240	130	337	14,112
Nil, ...	27,112	14,234	33,861	1,380,554
	27,405	14,394	34,287	1,398,138
REPEAT APPLICATIONS.				
4d., ...	4	2	8	308
2d., ...	392	193	630	23,492
Nil, ...	45,092	23,103	61,899	2,442,874
	45,488	23,298	62,537	2,466,674
TOTALS.				
4d., ...	57	32	97	3,780
2d., ...	632	323	967	37,604
Nil, ...	72,204	37,337	95,760	3,823,428
	72,893	37,692	96,824	3,864,812

While of course the period of supply to individual families varied, not an inconsiderable number continued to receive supplies throughout the whole period. Taking the total figures given above, however, it is shown that for each original application there were till the end of the year 1·66 repeats, and as each supply was for a period of 28 days, the average period for which each family had drawn supplies till the end of the year was slightly over 74 days.

(*b*) MEALS.

The distress which had been growing more acute during the early months of the year, reached a climax on the occurrence of the Coal Strike in the month of April, and the committee took into consideration the question of the supply of meals, and a scheme was begun on 2nd May under which dinners were

supplied daily, except on Sundays, to nursing and expectant mothers and to children between three and five years. As from 21st September, dinners were also supplied to infants between nine months and three years. The following is a typical week's menu of the dinner tables:—

Monday, ...	Mince, Bread, and Tea.
Tuesday, ...	Stewed Steak, Potatoes, and Pudding.
Wednesday, ...	Soup, Bread, and Pudding.
Thursday, ...	Mince, Potatoes, and Pudding.
Friday, ...	Soup, Bread, and Pudding.
Saturday, ...	Steak Pie, Bread, and Tea.

Arrangements were made with a large contractor, who prepared the meals at a central kitchen and delivered in bulk by motor to the several dinner tables, where the meals were served to the mothers and children. The following table shows the dates of opening of the various centres and the total number of meals to expectant and nursing mothers and children between three and five years, and infants between nine months and three years, served at each:—

TABLE SHOWING WHEN DINNERS WERE FIRST SERVED, AND ORDERS ISSUED FROM 2ND MAY TILL 31ST DECEMBER, 1921.

CENTRE	Date of Opening 1921	Mothers	Children 3—5 years	* Infants 9 mos.—3 yrs	Total
St. Mungo Halls, ...	May 2	96,783	65,460	46,045	208,288
National Kitchen, Govan,	,, 10	38,706	35,609	18,631	92,946
Gallowgate, ...	,, 10	57,548	41,833	34,827	134,208
Cowcaddens, ...	June 6	38,225	22,085	17,120	77,430
Parkhead, ...	,, 6	35,293	27,212	12,435	74,940
Maryhill, ...	,, 24	11,599	9,226	7,222	28,047
Partick, ...	July 1	20,895	18,555	11,898	51,348
Kingston, ...	,, 5	30,340	21,931	18,527	70,798
Townhead, ...	,, 11	26,705	25,496	21,232	73,433
Anderston, ...	,, 25	34,003	25,959	24,282	84,244
Govan Town Hall, ...	Dec. 1	9,792	9,249	10,764	29,805
Bridgeton, ...	,, 1	9,115	7,356	10,650	27,121
		409,004	309,971	233,633	952,608

* Dinners for Infants started 21st September, 1921.

Till the end of the year the expenditure incurred for meals was approximately £38,000.

(c) ECONOMIC CONDITIONS.

As indicated in the report dated 27th November, 1920 (formerly referred to), the scale of necessitousness applied by the Education Authority to applications for feeding and clothing of school children, was also adopted in connection with the Child Welfare Scheme. From time to time the scale was criticised as being too lavish, but it still, as amended in consequence of the reductions in the cost of living, remains the standard of the Local Authority. Appended hereto is a report on an investigation into the economic conditions of the families who made original or repeat applications during the week ending 20th August, 1921:—

SUPPLY OF MILK AND MEALS TO NURSING AND EXPECTANT MOTHERS AND CHILDREN UNDER FIVE YEARS OF AGE.

REPORT *re* ECONOMIC CONDITIONS IN FAMILIES FROM WHOM APPLICATIONS WERE RECEIVED DURING WEEK ENDED 20TH AUGUST, 1921.

Applications.—The applications dealt with in the following notes are those which were received during the week ended 20th August, and the following Summary indicates briefly how they were disposed of:—

Number of Applications received, ...		1,183
Of which granted—free, ...	1,174	
reduced rate, ...	5	
Refused—income over scale, ...	4	
		1,183

Family conditions.—The family conditions which were found were as follows :—

(*a*) Husband and Wife and Children, ...	1,108
(*b*) Widower and Children, ...	3
(*c*) Widow and Children, ...	22
(*d*) Deserted Wife and Children, ...	6
(*e*) Unmarried Mothers and Children, ...	35
	1,174

The majority of the cases come within Group (*a*) and these are dealt with in greater detail in the following Summaries :—

Employment Conditions—

(*a*) Husband and Wife and Children—

Husband unemployed, ...	1,029
Husband on short time, ...	53
Husband working full time, but income under scale, ...	26
	1,108

Income.—Appendix Table I shows the numbers of applications from families of varying numbers in groups according to amount of income at the date of application. The table also shows the amount allowed by the scale to each size of family, and the following briefly summarises the position :—

Without income, ...		269
Income under £1 per week—		
(*a*) Unemployment benefit sole source of income, ...	411	
(*b*) Others, ...	142	
		553
Income under £2 per week, ...		197
,, ,, £2 10s. per week.		56
,, ,, £3 ,, ...		26
,, ,, £3 10s. ,, ...		4
,, ,, £4 ,, ...		3
		1,108

Occupations.—Appendix Table II shows the occupations of the applicants in Group (*a*), the classification being that which was adopted in connection with the Census of 1911. It will be observed that out of the total of 1,108, 649 had been employed in connecton with the iron and steel, shipbuilding, engineering, and allied trades, 125 in connection with the transport trades, while 194 may be classed as general labourers.

(b) *Widower and Children.*—Only three applicants are in this group, including two shipyard workers and one general labourer. One of the shipyard workers with three children had no income, and the other with four children had an income of 23s. per week. The income of the general labourer, who also had three children, was his unemployment benefit of 15s. per week.

(c) *Widow and Children.*—In all these cases the applicant was engaged in home duties, and the family income consisted in contributions from grown-up sons and daughters. Size of family and income compared with relative scale are shown in Appendix Table III and are summarised thus :—

Without income, ...	1
Income of £1 per week, ...	4
,, £2 ,, ...	12
,, £2 10s. per week, ...	2
,, £3 ,, ...	2
,, £3 10s. ,, ...	—
,, £4 ,, ...	1
	22

(d) *Deserted Wife and Children.*—Six deserted wives and children are included among the applicants, of whom the particulars are as follows :—

(1) Wife and 1 Child, ... No income.
(2) " " ... "
(3) " " ... "
(4) Wife and 2 Children, ... Income, 28s. per week.
(5) " " ... Income, 10s. per week (Pension of member of family).
(6) Wife and 3 children, ... Income, 19s. per week. Bottler in aerated water factory on short time.

(e) *Unmarried Mother and Children.*—Thirty-five applicants are included in this group, and are summarised in the following table :—

	Scale	Weekly Income at Date of Application				Total
		None	-£1 Unemployment Benefit only	-£1 Others	-£2	
Expectant Mothers, ...	£1 11 1½	6	—	3	—	9
Mother and Child. ...	1 11 1½	15	3	6	1	25
Mother and 3 Children,	2 4 0½	—	—	1	—	1
		21	3	10	1	35

Where income is shown other than unemployment benefit it consists in some instances in allowances (mostly very small sums) from the father, and sickness benefit under Health Insurance Acts.

SUMMARY.

The following table generally summarises the position of the several groups dealt with in detail above :—

	Without Income	Unemployment Benefit only	With Income, but within authorised Scale	Total
(*a*) Husband and Wife and Children,	269	411	428	1,108
(*b*) Widower and Children, ...	1	1	1	3
(*c*) Widow and Children, ...	1	—	21	22
(*d*) Deserted Wife and Children, ...	3	—	3	6
(*e*) Unmarried Mother and Children,	21	3	11	35
	295	415	464	1,174

A. K. CHALMERS.

APPENDIX—Table I.

Group (a)—*Table showing Numbers of Families and various Sizes and Incomes compared with Scale.*

Size of Family.	Scale	Weekly Income at Date of Application.								Total
		None.	-£1 Unemployment Benefit only.	-£1 Others	-£2	-£2 10s.	-£3	-£3 10s.	-£4	
Husband and Expectant Wife,	£2 2 8½	4	13	—	1	—	—	—	—	18
Husband and Wife and—										
1 child.	2 2 8½	82	125	36	30	—	—	—	—	273
2 children, ...	2 9 2	74	101	31	38	6	—	—	—	250
3 "	2 15 7½	42	70	16	37	8	1	—	—	174
4 "	3 2 1	33	51	25	32	14	5	1	—	161
5 "	3 8 6½	14	25	15	21	12	7	1	—	95
6 "	3 15 0	11	20	11	16	12	3	—	—	73
7 "	4 1 5½	5	2	6	13	1	4	2	—	33
8 "	4 7 11	2	3	2	6	1	5	—	—	19
9 "	4 14 4½	1	1	—	2	1	—	—	—	5
10 "	5 0 10	1	—	—	1	1	—	—	1	4
11 "	5 7 3½	—	—	—	—	—	1	—	2	3
		269	411	142	197	56	26	4	3	1,108

APPENDIX—Table II.

Group (a)—Occupations of Applicants.

1. General or Local Government of Country,			2
2. Defence of the Country,			10
3. Professional Occupations and their subordinate Services,			1
4. Domestic Offices or Services,			2
5. Commercial Occupations,			3
6. Conveyance of Persons, Goods, and Messages—			
(a) On Railways,		4	
(b) ,, Roads, (Carters, Coal Carriers, Motor Drivers, &c.,)		60	
(c) ,, Seas, Rivers, and Canals,		19	
(d) Dock Labourers,		31	
(e) Others,		11	
			125
7. Agriculture,			—
8. Fishing,			—
9. Mining and Quarrying—Coal Mines,			36
10. Metal, Machine, Implement, and Conveyance Manufacture—			
(a) Iron and Steel Manufacture,		65	
(b) Manufacture of other Mixed or Unspecified Metals,		1	
(c) Engineering and Machine-making—			
Labourers,	100		
Tradesmen and others,	199		
		299	
(d) Electrical Apparatus,		6	
(e) Arms,		1	
(f) Miscellaneous Metal Trades,		11	
(g) Ships and Boats—			
Workers in Iron,	137		
,, Wood,	15		
Labourers,	114		
		266	
			649
11. Precious Metals, Jewels, Watches, Instruments, and Games,			2
12. Building and Works of Construction—			
(a) Painters,		13	
(b) Other Tradesmen,		6	
(c) Labourers,		18	
			37
13. Wood, Furniture, Fittings, and Decorations,			8
14. Brick, Cement, Pottery, and Glass,			5
15. Chemical Explosives, Oil, Soap, Resin, &c.,			1
16. Skins, Leather, Hair, and Feathers,			4
17. Paper, Stationery, Books, and Prints,			3
18. Textile Fabrics,			4
19. Dress,			12
20. Food, Tobacco, Drink, and Lodging,			8
21. Gas, Water, Electricity, and Sanitary Service,			2
22. Other General and Undefined Workers and Dealers—			
(a) Labourers—General,		111	
Corporation Statute Labour,		42	
,, Other Departments,		12	
Palacerigg Labour Colony,		20	
(b) Others,		7	
(c) Employment not stated,		2	
			194
			1,108

APPENDIX—TABLE III.

Group (c)—Table showing Numbers of Families and various Sizes and Incomes compared with Scale.

Size of Family.	Scale.	Weekly Income at Date of Application.							Total.
		None.	- £1.	- £2.	- £2 10s.	- £3.	- £3 10s	- £4.	
Wife and 1 child, ...	£1 11 1½	1	1	3	—	—	—	—	5
,, 2 children, ...	1 17 7	—	1	2	—	—	—	—	3
,, 3 ,, ...	2 4 0½	—	2	6	1	—	—	—	9
,, 4 ,, ...	2 10 6	—	—	1	—	1	—	—	2
,, 5 ,, ...	2 16 11½	—	—	—	1	—	—	—	1
,, 6 ,, ...	3 3 5	—	—	—	—	—	—	—	—
,, 7 ,, ...	3 9 10½	—	—	—	—	1	—	1	2
		1	4	12	2	2	—	1	22

The income of the families was ascertained at the time application was made, a suitable form of schedule being used for the purpose, and covering enquiries as to income from other sources than employment, *e.g.*, Labour Exchanges, Pensions, Parish Council, &c. When there was any reason to suspect inaccuracy in the information given, further investigations were made through employers, and at Pensions or other Authorities, and while it no doubt happened that some persons not entitled to receive either milk or meals under the scheme wrongly obtained same, it may be taken as an indication that the extent of the abuse was not great, that in thirty-six cases which were reported to the Procurator-Fiscal, with a view to prosecution, and which were further specially investigated by the Police on his behalf, no action was taken by him in twenty cases, the results in the others being as follows:—

Admonished, ...	2
Fined £1 1s. or 10 days' imprisonment, ...	1
,, £2 ,, 10 ,, ,, ...	2
,, £2 ,, 20 ,, ,, ...	2
,, £2 2s. ,, 20 ,, ,, ...	1
,, £2 2s., ...	1
,, £3 3s. or 10 days' imprisonment, ...	1
,, £3 3s. ,, 20 ,, ,, ...	4
,, £3 3s. ,, 30 ,, ,, ...	2
	16

SUPPLY OF DRIED MILK.

Besides the supply of milk and meals under the special arrangements described above, dried milk continued to be given to infants attending the Consultations, whose state of health, in the opinion of the Medical Officers, suggested that milk in this form would be preferable. For the most part this took the form of Glaxo, but in the later months of the year Cow and Gate Full Cream Dried Milk was also added. The number of infants receiving supplies of dried milk for the first time during the year was 2,173, and these and other infants brought forward from the previous year made subsequent attendances to the number of 30,792.

To these infants there were issued 60,176 packets, each of which contains 1 lb. of the milk powder, convertible into seven pints of milk. Of the total

packets 23,721, or fully 30 per cent. were given free; while 5,377 packets were sold at the nominal price of 6d. each, 7,610 packets at 1s. 2d., 4,771 at 1s. 8d., and the balance of 18,697 packets at the full price of 2s. 6d. The total cost of the 60,176 packets was £6,849 5s. 7d. and the proceeds of sales, £3,313 1s., leaving as a net deficit falling to be borne by the Corporation the sum of £3,536 4s. 7d., of which sum £2,673 8s. 9d. was due to free supplies alone.

OPHTHALMIA NEONATORUM.

During the year 1921, 926 cases of ophthalmia neonatorum were notified, as compared with 787 cases during the previous year, and 731 in 1919. The increased number of cases is partly explained by the large number of births occurring during the year, and also by the issue in July of a circular by the Scottish Board of Health regarding precautions to be observed especially as to the application of a 1 per cent. solution of silver nitrate. This has made midwives and others more careful, and an increasing number of slight inflammations are now being notified. The rate for the year is 30·9, compared with 24·1 and 28·1 respectively for the two preceding years.

OPHTHALMIA NEONATORUM CASES AND CASE-RATES PER 1,000 BIRTHS, ACCORDING TO NATURE OF ATTENDANCE AT BIRTH.

Nature of Attendance at Birth.	Cases.			Rates.*		
Year	1919	1920	1921	1919	1920	1921
Doctors,	87	93	97	10·7	9·3	10·8
Institutions,	35	37	60	21·1	14·3	22·6
Inst. Nurses,	83	84	198	31·3	23·6	52·4
Midwives, &c.,	523	566	566	27·9	34·3	39·0
Regd. by P.H.D. Staff.	728	780	921	—	—	—
Doctor in Attendance,	—	2	1	—	—	—
Treated in other than Local Authority Hospital,	2	3	2	—	—	—
Treatment refused,	1	—	—	—	—	—
Removed,	—	—	1	—	—	—
Dead,	—	2	—	—	—	—
No information,	—	—	1	—	—	—
Total cases of Ophthalmia Neonatorum,	731	787	926	27·9	24·1	30·9
Not Ophth. Neon., but notified as such,	7	—	2	—	—	—
Notifications received,	738	787	928	28·1	24·1	31·0

* Calculated on Live Births notified, less duplicates.

N.B.—"Doctors found in attendance" are included in "Doctor in attendance," and deducted from "Midwives," &c.

Period at which symptoms appear:—

Cases occurring at Age—	1919	1920	1921
– 12 hours,	53	53	102
– 4 days,	351	361	428
– 8 ,,	215	229	257
+ 8 ,,	109	137	134
	728	780	921

Association with Syphilis.—Swabs of the discharge from eyes are taken in most cases, and the association of the disease with syphilis observed, as shown in the following tables:—

	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.	Per Cent. with Syphilis.
1919,	182	6	3·3	314	2	·6	232	—	—	728	8	1·1
1920,	151	9	6·0	385	—	—	244	2	·8	780	11	1·4
1921,	143	2	1·4	473	2	·4	305	2	·6	921	6	·7

Of the 921 cases, 616 (most of which were not medically attended) were examined for the presence of gonococcus, and of these 143 were reported positive, which is equal to 23 per cent. as compared with almost 28 per cent. during 1920. Of the gonococcal cases only 2 were associated with syphilis, equivalent to 1·4 per cent., and 2 were found among the non-gonococcal cases.

Results of Treatment.—These are given in the following table. Among the gonococcal cases 109 were cured without any defect out of a total of 133 cases treated to a termination, which is equal to 82 per cent., as compared with 99 per cent. where gonococcus was not found in a total of 640 cases similarly treated.

In 2 cases where syphilis was stated to be present in association with the gonococcal organism, one died and the other had one eye destroyed.

It is very satisfactory to record, however, that no case of total blindness occurred among the cases of ophthalmia neonatorum dealt with during the year.

Result.	No Syphilis.			Syphilis Present.		
	1919	1920	1921	1919	1920	1921
Gonococcal.						
Cured (no defect),	134	107	109	3	1	—
Corneal Defects—						
One eye good,	14	7	11	—	1	—
,, ,, fair,	3	2	2	—	2	—
,, ,, blind,	2	8	6	—	2	1
Both eyes good,	1	4	4	1	—	—
,, ,, fair,	4	2	1	—	—	—
,, ,, blind,	1	—	—	—	—	—
Removed,	—	3	1	—	—	—
Dead,	17	9	7	2	3	1
	176	142	141	6	9	2
Non-Gonococcal.						
Cured (no defect),	304	364	636	1	—	3
Corneal Defects—						
One eye good,	—	2	2	—	—	—
,, ,, fair,	—	—	—	—	—	—
,, ,, blind,	1	—	1	—	—	—
Both eyes good,	—	—	1	—	—	—
,, ,, fair,	—	—	—	—	—	—
,, ,, blind,	—	—	—	—	—	—
Removed,	2	2	8	—	—	—
Dead,	5	17	8	1	—	1
Refused treatment,	—	—	1	—	—	—
	312	385	657	2	—	4
Unclassified.						
Cured,	232	242	116	—	1	—
Removed,	—	—	—	—	—	—
Dead,	—	—	—	—	1	—
	232	242	116	—	2	—
Total,	720	769	914*	8	11	6

* Excludes one case still under treatment.

Treatment of Mothers.—The former practice of offering treatment to mothers has been continued, but few continue treatment until cured. Those who desire to return home because of household duties are urged at attend for treatment at such convenient times as may be arranged.

MIDWIVES (SCOTLAND) ACT, 1915.

The present is the fifth year of the operation of this Act, and the summaries which follow indicate the work done in its administration during 1921. The records of the two preceding years are given for comparison.

During the year 364 midwives intimated their intention to practice; 43 of these notified for the first time, 33 of whom were entitled to registration by examination, while 4 had been in practice in 1914. Two of these latter were County midwives who only very occasionally attended confinements within the City boundary.

The practice of visiting midwives quarterly, in their own homes, is continued; and special visits are also made regarding contact with infection, complaints, &c. Investigation of the latter resulted in 3 midwives being reported to the Board, two of whom were struck off the roll. Six midwives died, and 12 have removed from the City. A certain number annually retire from practice.

Attention is directed to the following points:—

(1) Death occurring in midwife's practice before a registered medical practitioner is in attendance. Two midwives sent such notices. In one case the cause of death was certified "Embolus, 10 days after parturition," and there had been no premonitory symptoms. The other case occurred in a district where, though many doctors have consulting rooms, few are resident. The death certificate in this case was "Retained placenta after child-birth and shock." The midwife sent early for help, but local calls and telephone messages failed, and finally the husband got a doctor from the neighbouring burgh of Rutherglen.

(2) Rule E 21 (2).—The increase of notices under this (calls for medical assistance during pregnancy) is gratifying as it seems to show that midwives are feeling their responsibility more, in regard to ante-natal work.

(3) *Ophthalmia Neonatorum*, Rule E 21 (5) (e).—The small number of requests for medical attendance under this head in comparison with the number of cases occurring in midwives' practice needs some explanation. When a midwife notifies ophthalmia neonatorum under the Public Health (Ophthalmia Neonatorum) Regulations (Scotland), 1918, such notice is accepted in lieu of medical call notice, and treatment is taken up under supervision of the Medical Officer of Health. The number of these notifications is, however, misleading, because the most conscientious midwives may appear in an unfavourable light. For instance, the midwife who notified 40 cases is a very satisfactory woman with a large practice. In only three of these cases was there a positive result, but in all there was inflammation or discharge from conjunctiva. In 10 cases there was no material for a swab.

The year 1922 begins a new era in regard to the work of handy women. On 30th December, 1921, a circular was issued to all uncertified women who had notified more than one birth to this department, warning them that in future it would be illegal to attend confinements except under the direction of a registered medical practitioner. Three women who have continued to work in spite of this warning, have been reported to the Procurator-Fiscal.

In regard to Rule E 16, after receipt of the circular from the Scottish Board of Health on the Prevention of Ophthalmia Neonatorum, dated July 16th, 1921, the Local Authority issued a circular to all midwives offering to supply them free, on application, with 1 per cent. silver nitrate solution. It was

some time before they all availed themselves of this offer, so it is hardly yet possible to report on the result of the change.

	1919	1920	1921
Midwives in Practice during year, ...	365	370	364
THE QUALIFICATIONS FOR CERTIFICATION UNDER ACT, HELD BY THE FOREGOING WERE—			
In Practice, December, 1914, ...	210	210	205
C.M.B. (Scotland) Examination, ...	95	108	107
Other recognised qualifications, ...	60	52	52

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 15,212 births attended by midwives 12,000 occurred in the practice of midwives with 50 confinements or more in the year:—

BIRTHS NOTIFIED BY MIDWIVES.

	Births Notified			
	1919	1920	1921	Midwives
Under 50 Notifications.	3,201	3,249	3,213	215
50-100 ,, ...	2,860	4,171	3,524	51
100-200 ,, ...	4,308	5,300	4,622	34
200-300 ,, ...	1,512	2,283	2,772	11
300-400 ,, ...	947	1,753	642	2
400-500 ,, ...	495	—	439	1
Over 500 ,, ...	—	537	—	—

STILL-BIRTHS NOTIFIED BY MIDWIVES.

	Midwives			Still-Births notified		
Notifications	1919	1920	1921	1919	1920	1921
1-5, ...	118	133	138	258	272	282
6-10, ...	9	17	12	71	117	89
11-15, ...	1	1	3	15	12	40
Over 15. ...	1	1	—	19	22	—
	365	152	153	373	423	411
Percentage of Births attended, ...				2·8	2·4	2·7

The figures in the two following summaries contain records of the cases 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 OCCURING IN PRACTICE OF MIDWIVES.

	Midwives			Cases notified		
Notifications	1919	1920	1921	1919	1920	1921
1-5, ...	95	128	129	198	255	278
6-10, ...	19	14	20	143	103	147
11-15.	4	7	5	53	86	63
16-20, ...	4	—	2	67	—	35
21-25, ...	1	—	—	25	—	—
Over 25, ...	—	2	3	—	69	95
	123	151	189	486	513	618
Percentage of Births attended, ...				3·6	2·9	4·1

CASES OF PUERPERAL FEVER OCCURRING IN PRACTICE OF MIDWIVES.

	Midwives			Cases		
	1919	1920	1921	1919	1920	1921
1 Case, ...	51	44	44	51	44	44
2 Cases, ...	9	18	18	18	36	36
3 ,, ...	5	6	5	15	18	15
4 ,, ...	2	4	3	8	16	12
5 ,, ...	—	1	1	—	5	5
6 ,, ...	—	1	—	—	6	—
	67	74	71	92	125	112

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

Notifications	Midwives 1919	Midwives 1920	Midwives 1921	Requests made 1919	Requests made 1920	Requests made 1921
Under 10, ...	322	163	144	489	562	584
11-20, ...	24	37	34	345	516	494
21-30, ...	13	5	19	325	121	480
31-40, ...	3	12	14	104	419	502
41-50, ...	2	4	3	98	173	132
Over 50, ...	1	3	3	84	211	265
	365	224	217	1,445	2,032	2,457

There has been a large increase both in number and percentage of requests for medical assistance in succeeding years, viz.:—1919, 10·9; 1920, 11·7; 1921, 16. The increase is due to the fact that midwives are becoming more familiar with the rules of the Midwives Act, and so send the duplicate notices required.

The *Nature of Emergencies* is given in the following statement:—

NATURE OF EMERGENCY.	1919	1920	1921
(1) In all cases in which a woman during pregnancy, labour, or lying in appears to be dying or is dead,	—	1	1
PREGNANCY—			
(2) In cases of a pregnant woman, where there is any abnormality or complication, such as—			
(*a*) Deformity or stunted growth, ...	22	24	8
(*b*) Loss of blood, ...	14	26	42
(*c*) Abortion or threatened abortion, ...	21	29	69
(*d*) Excessive sickness, ...	—	—	7
(*e*) Puffiness of hands or face, ...	5	9	7
(*f*) Fits or convulsions, ...	1	1	3
(*g*) Dangerous varicose veins, ...	1	—	3
(*h*) Purulent discharge, ...	1	4	8
(*i*) Sores of the genitals, ...	—	—	—
(*j*) Others, ...	—	—	12
LABOUR—			
(3) In the case of a woman in labour at or near term, when there is any abnormality or complication, such as—			
(*a*) Fits or convulsions, ...	9	12	9
(*b*) A purulent discharge, ...	1	1	6
(*c*) Sores of the genitals, ...	9	22	16
(*d*) A malpresentation, ...	67	59	37
(*e*) Presentation other than the uncomplicated head or breech, ...	109	160	788
(*f*) Where no presentation can be made out, ...	7	5	6
(*g*) Where there is excessive bleeding, ...	46	45	78
(*h*) Where two hours after the birth of the child the placenta and membranes have not been completely expelled, ...	64	75	125
(*i*) In cases of serious rupture of the perinæum, or of other injuries of the soft parts, ...	237	348	374
(*j*) Prolonged labour, ...	468	621	170
(*k*) Others, ...	—	—	17
LYING-IN—			
(4) In the case of a lying-in woman, when there is any abnormality or complication, such as—			
(*a*) Fits or convulsions, ...	4	4	7
(*b*) Abdominal swelling and tenderness, ...	15	10	17
(*c*) Offensive lochia, if persistent, ...	12	4	7
(*d*) Rigor, with raised temperature, ...	13	9	7
(*e*) Rise of temperature above 100° F., with quickening of the pulse for more than twenty-four hours, ...	68	126	187
(*f*) Unusual swelling of the breasts with local tenderness or pain, ...	14	8	6
(*g*) Secondary post-partum hæmorrhage, ...	1	1	8
(*h*) White leg, ...	4	6	4
(*i*) Others, ...	—	—	70

THE CHILD—	1919	1920	1921
(5) In the Child, when there is any abnormality or complication, such as—			
(a) Injuries received during birth, ...	—	2	5
(b) Any malformation or deformity endangering the child's life, ...	15	28	22
(c) Dangerous feebleness, ...	124	195	177
(d) Inflamation of, or discharge from, the eyes, however slight, ...	6	7	5
(e) Serious skin eruptions, especially those marked by the formation of watery blisters, ...	4	3	1
(f) Inflammation about, or hæmorrhage from, the navel, ...	5	5	3
(g) Others, ...	—	—	64
Cannot be classified, ...	77	182	41
	1,444	2,032	2,457

DEATHS (NOTIFIED BY MIDWIVES) BEFORE A DOCTOR WAS IN ATTENDANCE.

1919, ...	7 mothers	35 infants.
1920, ...	4 ,,	56 ,,
1921, ...	2 ,,	37 ,,

LAYING OUT THE DEAD.

1919, ...	5 mothers	6 infants.
1920, ...	3 ,,	9 ,,
1921, ...	2 ,,	9 ,,

ARTIFICIAL FEEDING.

1919, ...	60 Notifications.
1920, ...	53 ,,
1921, ...	40

INTIMATION OF EXPOSURE TO INFECTION.

Diseases	1919	1920	1921
Puerperal Fever, ...	42	83	79
Measles, ...	8	17	5
Whooping-Cough, ...	—	3	4
Scarlet Fever, ...	3	4	5
Diphtheria, ...	3	4	6
Pemphigus, ...	2	4	2
Influenza, ...	1	1	1
Pneumonia, ...	—	—	3
Erysipelas, ...	—	2	1
Enteric, ...	1	—	—
Itch.	1	—	—
Others, ...	5	2	4
Smallpox, ...	—	4	—
	66	126	110

PUERPERAL FEVER.

Appendix Table XVII shows the number of cases occurring in each of the years 1919-21, and the number removed to hospital.

The proportion per 1,000 births during the year, compared with 1919 and 1920, was as follows:—

1919, ...	7·0 per 1,000 births.
1920, ...	9·0 ,,
1921, ...	10·8 ,,

During the six years from 1915 to 1921 special records of cases were kept, from which the following percentages of attendances at births have been calculated:—

PERCENTAGE OF CASES ATTENDED BY DOCTORS, MIDWIVES, &c., DURING THE YEARS 1915-1921.

ATTENDANCE AT BIRTH.

Year	Doctor	Midwife	Nurse and Doctor	Institutional Nurse	Institution	Others
1915,	27	36	17	11	9	...
1916,	16	41	22	8	9	4
1917,	33	36	18	5	5	3
1918,	20	34	13	15	8	10
1919,	24	42	19	4	7	4
1920,	30	34	16	9	9	1
1921,	25	27	10	13	14	11

"Others" includes cases outwith the city.

ANALYSIS OF INQUIRY INTO 319 CASES OF PUERPERAL FEVER, GLASGOW, 1921.

In attendance at birth—Midwives, 112 (in 25 cases doctor assisting); doctors, 89 (in 8 cases midwife assisting); institutions, 83; handywomen, 2; septic temperature before confinement, 1; beyond boundary per Glasgow institutions, 12; others, 20 (largely abortions without attendant).

Probable Source of Infection	Number of Pregnancy 1	2	3	4	5 and over
Forceps, ...	29	11	1	—	7
Forceps and stitching, ...	10	—	—	—	—
Forceps and retained placenta or membranes	3	—	—	—	—
Forceps cervical lacerations and hæmorrhage	1	—	—	—	—
Forceps and hæmorrhage, ...	4	—	—	—	—
Failed forceps—craniotomy, ...	2	—	1	—	—
Adherent or retained placenta or membranes	5	2	1	—	4
Stitching, ...	5	1	—	1	—
Complete or incomplete abortion, ...	8	8	8	5	24
Previous uterine trouble, ...	1	1	1	1	1
Abscess before confinement, ...	2	—	—	—	—
Breast trouble, ...	2	1	—	1	1
Venereal disease, ...	1	1	1	—	—
Malpresentation, ...	1	—	—	—	2
Hæmorrhage, ...	2	2	—	1	6
Placenta prævia, ...	1	1	1	2	2
Induced labour, ...	—	—	—	1	—
Purulent discharge, ...	1	2	—	—	—
Septic temperature before confinement, ...	—	—	—	1	—
Varicose veins, ...	—	2	1	—	—
Still-birth—Husband in prison for assault,	—	1	—	—	—
Midwife had erysipelas, ...	—	1	—	—	—
Imbecile girl with unclean habits sharing patient's bed, ...	—	1	—	—	—
No information, ...	47	28	19	9	27
	125	63	34	22	75

SECTION IV.

INFECTIOUS DISEASE.

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 zymotic diseases dealt with under the Infectious Diseases (Notification) Act, 1889, are summarised in the following table since the year 1910. The case-rates given in the column headed "All Others," includes in the earlier years only measles, whooping-cough, and chickenpox, but more recently ophthalmia neonatorum, trachoma, malaria, dysentery, certain forms of acute diseases of the central nervous system, and the various forms of pneumonia made notifiable from time to time are now embraced. The rates for most of the major diseases are lower than those of 1920, which latter, however, were considerably higher than those obtaining during the latter years of the war. The most important epidemiological feature of the year was the cessation of smallpox which had begun early in 1920. Apart from one case occurring in March, none were recorded after January, and the regulations for the compulsory notification of chickenpox issued by the Board of Health, which had been continued for a further six months after 1st October, 1920, were not renewed.

GLASGOW.—CASE-RATE PER MILLION OF THE POPULATION FOR CERTAIN ZYMOTICS AND FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED, SINCE 1910.

Year	Typhus Fever.	Enteric Fever.	Continued and Undefined.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Cerebro-Spinal Fever.	Phthisis.	Non-Pulmonary Tuberculosis.	All Others.	Total.
1910,	19	427	29	142	1	5,277	2,435	58	[1]4,508	...	25,586	38,482
1911,	9	489	14	170	3	4,020	2,418	64	2,973	...	25,732	35,892
1912,	43	311	14	181	...	3,687	2,211	24	2,983	...	29,307	38,761
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	[2]1,088	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

[1] Pulmonary tuberculosis made compulsorily notifiable, Jan., 1910.
[2] Non-pulmonary tuberculosis made compulsorily notifiable, July, 1914.

Six cases of typhus fever occurred during the year. Cases of enteric fever fell from 227 to 108, the case-rate for the present year being only 100, as compared with 204 during the last year, and is the lowest recorded apart from that of 1917, during which, however, a large proportion of the male population of ages at which the disease is prevalent were on service. It should also be borne in mind that cases of para-typhoid are now included under this heading. The rate for continued and undefined fevers varies from year to year, and last year it was 7 compared with 13 for the year 1920.

Puerperal fever has shown a marked increase during the past two years, the rate for 1920, namely 267, being again exceeded by a rate of 299 for 1921. Much

of this increase can of course be explained by the increase of births occurring during the past two years, especially when compared with the war years. The rates, however, are considerably in excess of those occurring in the pre-war years. There is only a slight reduction in the case-rates for scarlet fever and diphtheria. These, and the various other diseases given in Appendix Tables XVII and XVIII, are further dealt with in the following pages.

PRINCIPAL ZYMOTIC DISEASES.

The death-rates for several periods have been:—

1881-90,	...	3·600 per 1,000 living.	1915,	...	2·993 per 1,000 living.
1891-1900,	...	3·282 ,,	1916,	...	1·733 ,,
1901-1905,	...	2·660 ,,	1917,	...	2·063 ,,
1906-1910,	...	2·450 ,,	1918,	...	1·434 ,,
1911, ...	...	2·544 ,,	1919,	...	1·583 ,,
1912, ...	...	1·883 ,,	1920,	...	1·224 ,,
1913, ...	...	2·484 ,,	1921,	...	1·116 ,,
1914, ...	...	2·218 ,,			

As far as possible the comparison in the above table has been preserved by including only infectious diseases that have been notifiable for most of the period given. The tendency is towards decrease.

SMALLPOX AND VACCINATION.

The outbreak of smallpox which began in the spring of 1920 ceased in January, 1921, although one isolated case was registered during the month of March. During the year 20 cases were registered. The history of the outbreak was fully described in the Annual Report for 1920, and, in order to complete the analysis, an addendum was added with the information in respect of the additional cases occurring in 1921, so that no further reference is required. Cases registered and the numbers treated in hospital, together with the case-rates, are contained in Tables XVII and XVIII in the appendix.

Vaccination.—Free vaccination continues to be carried on at the infant consultations, and the following statement shows the number successfully vaccinated at each of the centres during the past three years. Formerly free vaccination was performed at the Public Health Office only, but since the arrangement for vaccination at the consultation centres, the numbers have considerably increased. In 1921, 2,065 infants were successfully vaccinated, as compared with about 1,000 during the two preceding years, and numbers approximating between 250 and 350 at the time the extended facilities were inaugurated.

The number of children certified as insusceptible was 15 which, allowing for a number which probably failed to return for the second or third vaccination, is approximately 1 per cent., and is similar to the proportion indicated in the return of the Registrar-General shown on the table on page 60.

STATEMENT SHOWING NUMBER OF INFANTS VACCINATED AT THE CHILD WELFARE CONSULTATIONS DURING THE YEARS 1919-1921.

	1919	1920	1921
Public Health Office, ...	49	60	109
Garngad, ...	84	57	184
Port Street, ...	62	78	145
Ruchill, ...	68	68	90
Merryland Street, ...	45	57	142
Adelphi Street, ...	123	138	203
Partick, ...	85	110	135
Weir Street, ...	—	40	96
London Road, ...	117	63	305
Shettleston, ...	95	96	167
Campbellfield Street, ...	81	143	108
Cowcaddens, ...	104	136	276
Elder Hospital, ...	27	43	105
	940	1,089	2,065

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,	407	1915,	7,062
1908,	2,183	1916,	7,013
1909,	2,653	1917,	7,017
1910,	3,231	1918,	6,049
1911,	3,791	1919,	6,489
1912,	4,371	1920,	4,342
1913,	6,804	1921,	4,992
1914,	7,580		

The following table shows the results of primary vaccination of children since the year preceding the Act of 1907. The percentage successfully vaccinated fell to 54 in 1918, but recovered slightly to over 60 in 1919, which is probably associated with the outbreak of smallpox early in the following year, when the vaccination campaign began.

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

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

Year	Successfully vaccinated	Insusceptible of vaccine disease	Died before vaccination	Conscientious objection to vaccination	Vaccination postponed	Unaccounted for
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	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
1909	67·2	0·8	10·6	12·6	1·7	7·1
1910	64·8	0·5	9·8	16·0	1·6	7·3
1911	65·2	1·2	12·0	11·8	1·5	8·3
1912	57·3	0·6	10·4	22·0	1·8	7·9
1913	54·7	0·6	10·6	24·9	1·6	7·6
1914	51·7	0·9	12·1	25·1	1·8	8·4
1915	56·2	0·6	10·0	24·9	1·8	6·5
1916	55·2	0·7	9·7	26·6	2·1	5·7
1917	55·2	0·9	9·7	27·3	2·2	4·7
1918	54·4	1·0	10·0	26·6	2·5	5 5
1919	60·4	0·7	8·9	25·5	0·6	3·9

TYPHUS FEVER.

Only 6 cases of this disease were recorded during 1921, as compared with 9 in 1920 and 32 in 1919. The cases were distributed in the Wards as follows:—

Park,	4	Partick West,	1
Govan,	1		

The 4 cases registered in Park Ward were inmates of one house in New City Road district, and occurred during February.

The death-rate for several periods has been as follows:—

1881-90,	·040 per 1,000	1915,	·000 per 1,000
1891-1900,	·016 ,,	1916,	·005 ,,
1901-10,	·006 ,,	1917,	·001 ,,
1911,	·004 ,,	1918,	·009 ,,
1912,	·003 ,,	1919,	·007 ,,
1913,	·036 ,,	1920,	·002 ,,
1914,	·002 ,,	1921,	·001 ,,

ENTERIC FEVER.

Tables XVIII in the appendix gives the case-rates of enteric fever since 1914, and shows that the prevalence of the disease was comparatively low during 1921. It should be remembered, however, that almost all the men returned from military service had been inoculated with anti-typhoid vaccine.

The effect of extensive inoculation in the Army has resulted in a change in the sex incidence of enteric fever, well illustrated in the accompanying table, which shows the numbers occurring among females for the years 1914 to 1921, with the corresponding proportion in males as a comparison per 100 females. From 1914 to 1916 cases among males exceeded those among females, and the same thing occurred in 1918-19, but in diminishing proportion, while in 1917 and 1920-21 there were relatively fewer cases among the males.

Sex and Age Incidence of Enteric Fever, 1914-1921.

		Age Periods—Proportion per 1,000 Cases								
	All Ages	-1	-2	-5	-15	-25	-45	-65	65+	Ratio Males to 100 Females
Males.										
1914	210	9	19	57	271	224	339	81	—	141
1915	143	—	—	56	287	238	335	77	7	116
1916	104	—	10	38	270	192	365	125	—	117
1917	45	—	—	44	200	267	356	133	—	98
1918	72	—	—	56	236	250	250	208	—	103
1919	58	17	17	35	242	172	345	172	—	102
1920	113	9	35	71	354	159	266	106	—	93
1921	52	—	19	77	288	269	212	135	—	99
Females.										
1914	149	—	40	60	249	195	349	94	13	100
1915	123	—	8	73	334	228	268	89	—	100
1916	88	—	11	46	204	307	328	104	—	100
1917	46	—	22	22	302	262	262	130	—	100
1918	70	—	43	57	200	286	343	71	—	100
1919	57	—	18	18	228	350	298	88	—	100
1920	114	—	—	105	254	272	299	70	—	100
1921	56	—	—	18	214	339	322	107	—	100

For several periods the death-rate from enteric fever in Glasgow has been—

1881-1890,	·230 per 1,000	1915,	·050 per 1,000
1891-1900,	·215 ,,	1916,	·036 ,,
1901-1910,	·127 ,,	1917,	·013 ,,
1911,	·075 ,,	1918,	·025 ,,
1912,	·051 ,,	1919,	·014 ,,
1913,	·036 ,,	1920,	·027 ,,
1914,	·077 ,,	1921,	·016 ,,

The following table gives the case-mortality for each year since 1919, together with the mortality:—

	1919	1920	1921
Per cent. treated in hospital.	92	93	96
Case-mortality per cent.,	14	13	16
,, in hospital,	13	11	16
,, at home,	22	44	14

Regarding the Ward distribution of the disease, Gorbals was most heavily affected during the year, 16 cases being registered, Kinning Park had 10, and Kingston 7.

SCARLET FEVER.

In 1921 there was a slight reduction in the number of cases registered, 3,517, as compared with 3,767 during 1920. The number of cases removed to hospital represents a percentage of 97 as compared with 95 for the two preceding years, while the case-mortality per cent. was slightly lower at 1·5. The mortality-rate of cases treated in hospital was 1·5, as compared with 2·3 for those remaining at home.

The distribution throughout the Wards of scarlet fever indicates that the populous areas along the south side of the river were most heavily affected, followed by the area in the extreme east end of the City, namely, Shettleston, Tollcross, and Parkhead. Both are densely populated districts, and in both there is a considerable population of young children of susceptible ages.

The seasonal incidence of the disease shows a distinct rise during the autumn which, however, continued into the winter months although not to any marked degree. Of the total cases registered 2,011 were females, compared with 1,506 males, and the age of maximum prevalence was between 5 and 10 years, females preponderating considerably during the years of adolescence and thereafter.

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

1881-90,... ...	·490 per 1,000	1915, ...	·261 per 1,000
1891-1900, ...	·295 ,,	1916, ...	·147 ,,
1901-10,... ...	·116 ,,	1917, ...	·033 ,,
1911, ...	·116 ,,	1918, ...	·022 ,,
1912, ...	·093 ,,	1919, ...	·044 ,,
1913, ...	·131 ,,	1920, ...	·053 ,,
1914, ...	·215 ,,	1921, ...	·050 ,,

The percentage treated in hospital and mortality of cases treated in hospital and at home were as follows:—

	1919	1920	1921
Per cent. treated in hospital, ...	95	95	97
Case-mortality per cent,...	1·8	1·6	1·5
,, ,, in hospital, ...	1·8	1·4	1·5
,, ,, at home, ...	—	5·1	2·3

The number of return cases—*i.e.*, cases sickening after dismissal of a previous case from hospital—has increased only in ratio to the number of cases occurring, as the percentage of 2 has remained uniform during the past four years. Of the return cases 37 per cent. occurred within one week of the hospital dismissal, 25 per cent. within two weeks, and 38 per cent. over that period.

Glasgow, 1917-1921.—RETURN Cases.—Time Elapsing between Return of Earlier and Sickening of Subsequent Cases.

Year.	– 1 week.	– 2 weeks.	2 weeks and over.	Total.	Percentage of total Dismissals.
1917, ...	13	22	21	56	3
1918, ...	5	14	10	29	2
1919, ...	16	21	7	44	2
1920, ...	24	31	6	61	2
1921, ...	28	19	30	77	2

The number of secondary cases remains fairly constant at 3 to 4 per cent., the number occurring within one week after disinfection for a previous case being 59 per cent., compared with 26 per cent. within two weeks, and 15 per cent. over that period.

GLASGOW, 1917-1921.—SECONDARY CASES OCCURRING IN HOUSEHOLD AFTER DISINFECTION.

Year.		-1 week.	-2 weeks.	2 weeks and over.	Total.	Percentage of cases removed to hospital.
1917,	...	39	9	9	57	3
1918,	...	23	8	8	39	3
1919,	...	42	15	15	72	3
1920,	...	80	27	7	114	3
1921,	...	74	32	19	125	4

DIPHTHERIA AND MEMBRANOUS CROUP.

The incidence of diphtheria and membranous croup is slightly lower than during the preceding year, there being 1,856 cases registered, as compared with 2,017 during 1920. Experience has indicated that these diseases follow a cyclical course which takes from 10 to 14 years to complete, and it may be that the reduction in 1921 is merely accidental and probably to a certain extent associated with the reduction in the number of school children, which is one of the results of the lower birth-rate during several years of the war.

Of the cases registered 1,762 were removed to hospital, representing 94 per cent. of the total, while the case-mortality per cent. was slightly lower at 7 as compared with 8 and 9 respectively during 1920 and 1919. The case-mortality of those treated in hospital was 6·6, as compared with 13·8 for those not removed to hospital.

The seasonal distribution indicates the usual rise in autumn, and the age distribution that the period of maximum incidence was at ages 5 to 10 years.

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

1881-90,	...	·280 per 1,000 living.	1915,	...	·155 per 1,000 living.
1891-1900,	...	·231 ,,	1916,	...	·126 ,,
1901-05,	...	·134 ,,	1917,	...	·138 ,,
1906-10,	...	·205 ,,	1918,	...	·164 ,,
1911. ...	...	·221 ,,	1919,	...	·144 ,,
1912, ...	...	·232 ,,	1920,	...	·144 ,,
1913, ...	...	·181 ,,	1921,	...	·120 ,,
1914, ..	...	·145 ,,			

The case-rate since 1914 is shown in Appendix Table XVIII.

In the following table the percentages treated in hospital and mortality of hospital and home cases are given:—

	1919	1920	1921
Percentage treated in hospital, ...	90	95	94
Case mortality per cent., ...	8·9	8·0	7·0
,, in hospital, ...	9·1	7·6	6·6
,, at home, ...	4·4	15·5	13·8

ERYSIPELAS.

1,004 cases of erysipelas were recorded during the year (475 were males, 529 were females); 519 were removed to hospital. This is a slight decrease on 1,090 for the preceding year, and, although not so numerous as in pre-war days, it reflects to a certain extent the effect of the relaxation of the restrictions on the sale of liquor, which coincided with reduced numbers occurring towards the end of the war. The age distribution of the cases registered during the year indicates that females under 45 years of age are more liable to the disease than males, but from 45 to 55 the male cases are in excess of the females.

CEREBRO-SPINAL FEVER.

63 cases were recorded, as compared with 85 during the preceding year, and 80 in 1919. The case-rates given in Table XVIII in the appendix show that the disease has not been less prevalent since 1914.

ACUTE ENCEPHALITIS LETHARGICA, ACUTE POLIO-ENCEPHALITIS, AND ACUTE POLIOMYELITIS.

This group of diseases of the central nervous system was responsible for 42 cases in all, 27 of which were ascribed to acute encephalitis lethargica, 2 to acute polio-encephalitis, and 13 to acute poliomyelitis. No special grouping of these diseases was noted, their occurrence being widely spread over the City. The seasonal incidence would appear to indicate spring and early summer as the period during which they are most numerous.

The sex distribution of acute encephalitis lethargica shows 14 males and 13 females, while the sex incidence of the other forms was similar.

TROPICAL DISEASES.

The arrangements begun in 1920 for the treatment of these diseases were continued during 1921, and the following is a statement of the number of dispensary diets and cases attending for the two periods:—

Dispensary	1920 (Nov. and Dec.) No. of Diets	Attendances First	Attendances Others	1921 No. of Diets	Attendances First	Attendances Others
Elmbank Crescent, ...	18	—	—	458	—	—
Malaria, ...	—	105	—	—	756	—
Dysentery, ...	—	10	—	—	94	—
	18	115	189	458	850	4,369
Black Street, ...	22	—	—	188	—	—
Malaria, ...	—	141	—	—	239	—
Dysentery, ...	—	14	—	—	30	—
	22	155	221	188	269	1,717
Adelphi Street, ...	12	—	—	112	—	—
Malaria, ...	—	66	—	—	222	—
Dysentery, ...	—	2	—	—	23	—
	12	68	65	112	255	1,068
Totals, ...	52	338	475	758	1,364	7,154

Cases removed to Hospital during the year 1921:—

Local Authority Hospitals—Dysentery,	54	Malaria,	2
Bellahouston (Pensions) Hospital—Dysentery,	79	Malaria,	221
	133		223

The following report has been prepared by Drs. Macgregor and Frew:—

TREATMENT OF AMOEBIC DYSENTERY BY ALCRESTA AND EMETIN.

(Published in "Glasgow Medical Journal.")

Alcresta exhibited either alone, or as an adjuvant in the treatment of amoebic dysentery by Emetin, was introduced into this country from America two or three years ago, having been tried there and elsewhere with some degree of success. The experience of Dr. Andrew Connal (formerly of Belvidere Hospital) in West Africa, is that these drugs in combination are superior to former methods of treatment, and are as useful in the more chronic and recurring forms of the affection as in its acuter early stage. The cases of amoebic dysentery now met with in this country as a residue of the war, are of the chronic intractable type, and very resistant to treatment.

Since April, 1921, several cases of this type have been treated in Ruchill Fever Hospital, by the oral administration of Alcresta combined with hypodermic injections of Emetin. In all 15 cases have been so treated, and the following is a brief account of the results and of the subsequent history of 7, in which the entamoeba or its cysts were found in the stools at the commencement of the treatment. The remaining 8 cases have not been included because the diagnosis rested on the patients' histories, and, although they had symptoms of dysentery, the stools on or just previous to their admission to hospital did not contain the entamoeba histolytica.

The method adopted was to administer one tablet of Alcresta* by the mouth thrice daily, along with a hypodermic injection of Emetin (one grain) daily for 10 days. A combined course of this kind is equivalent to the administration of approximately 20 grains of Emetin, 10 orally, and 10 hypodermically. After an interval of a week, a second similar course of treatment is given, and this may, if thought necessary, be followed by a third course at a further interval of a week.

The following is a brief note on each case treated by this method :—

(1) J. A.—Contracted dysentery, Salonica, 1916. An intractable case. Has spent the best part of 4 years under treatment in various hospitals. In Ruchill Hospital, April-June; entamoeba histolytica present on admission. Two courses Alcresta and Emetin. Stool negative twice on dismissal. Attended clinic, October, 1921, reporting further relapses; entamoeba histolytica again present. No permanent improvement. At present in convalescent home (March, 1922).

(2) J. R.—Said to have contracted dysentery in France, 1915. Had continuous diarrhœa for 10 weeks before admission. In hospital, April-May, 1921; pathogenic cysts present on two occasions just prior to admission, and again on admission; two courses Alcresta and Emetin; stool negative (twice) on discharge. No further relapses. Present condition (March, 1922) satisfactory; no diarrhœa; stool microscopically normal.

(3) J. O.—Contracted dysentery, Egypt, 1915. History of severe recurring attacks. Hospital, April-May, 1921. Entamoeba histolytica present on admission; two courses Alcresta and Emetin. Stool negative (twice) on discharge. Diarrhœa returned within a month after discharge with pathogenic amoeba still present. Symptoms of recurring diarrhœa continued till re-admitted to hospital, March, 1922; suffering from diarrhœa with blood and mucus, which has again cleared up after one course of Alcresta and Emetin.

(4) P. D.—Contracted dysentery, March, 1919. Hospital, May-June, 1921. Entamoeba histolytica present before and on admission. Stool negative (twice) on discharge. Condition in March, 1922—has had occasional mild diarrhœa since discharge. Condition satisfactory. Stool microscopically normal.

(5) G. P.—Contracted dysentery, Egypt, 1917. Hospital, May-June, 1921. Entamoeba histolytica pathogenic cysts present before and on admission. Stool negative (twice) on discharge. Condition, March, 1922—complains of regular recurrences every 3 or 6 weeks. General condition fair. Specimen dysenteric in character, and entamoeba histolytica present.

(6) J. M'L. — Contracted dysentery, 1918. Hospital, May-June, 1921. Entamoeba histolytica present on admission and repeatedly since December, 1920. Discharged well. Stool negative (twice) on discharge. In October and November, 1921, pathogenic cysts still present. Complains of constant mild diarrhœa.

(7) W. P.—Contracted dysentery, 1916. Hospital, August-September, 1921. Intractable case—several times in hospital. Entamoeba histolytica constantly present for months prior to admission. One course Alcresta and Emetin. Much improved, but pathogenic cysts still present on discharge. Had also a Flexner Y infection. Remained well for 5 months after discharge, but has relapsed severely, February-March, 1922. Entamoeba histolytica cysts present. This patient had a double course of Alcresta alone as an outdoor patient during May, 1921, with a definite improvement in his condition, which was, however, not permanent.

The cases recorded were all examples of old-standing chronic infections for which treatment had hitherto been of little avail. It will be noted that most of them contracted the disease during the early part of the war, when facilities for diagnosis and appropriate treatment had not been perfected to the degree which they ultimately reached. Among these early infections are to be found the most intractable cases. The results of the treatment are judged by the after-histories of the

* Each tablet contains the alkaloids (Emetin and Cephaelin) from 10 grains of ipecacuanha, U.S.A. The alkaloids are held in absorption by hydrated aluminium silicate (Martindale & Westcott).

patients. In two of the cases in the above series the result so far appears to have been satisfactory, their condition having remained good and their stools microscopically negative ten months after discharge from hospital. The remaining five, after more or less brief periods of improvement, have relapsed, pathogenic amoebae or cysts again appearing in their stools. In all the improvement during treatment was marked and rapid, and all, with one exception (Case No. 7), had normal and microscopically negative stools on discharge. A couple of negative results only indicate, of course, that the amoeba has been reduced in numbers and is difficult to find, and cannot be accepted as a standard of "cure." As the after-histories of these five patients showed, the benefit produced by the courses of treatment was short-lived. Possibly a third course of Alcresta and Emetin, or larger doses of the former, might have been administered. The "Annals of Tropical Medicine and Parasilology" (Vol. xl, No. 1, June 1917) contain an account of the results of treatment of amoebic dysentery by Alcresta. The authors conclude, from an experience of 93 cases in which the drug was given alone, that "(1) a sufficient first treatment will cure about 65 per cent. of cases. (2) A course of 20 to 25 grains Emetin in this form seems, on the whole, to give the best results. Ten grains or less is probably insufficient." It is thought worth while to record this experience of the combined method of treatment, limited as it is, especially as the cases treated were old-standing and intractable infections. The drug was in all cases well borne by the patients.

6th April, 1922.

PNEUMONIA AND INFLUENZA.

These are dealt with under the section on respiratory diseases.

MEASLES.

Measles during the year 1921 shows a marked reduction as compared with recent years; indeed, the case-rate per million was only 2,837, as compared with 10,577 during 1920, and somewhat similar rates during the years back to 1914. The disease was most prevalent from February to May, but this observation also applied more or less to recent years, although in some of them it may have tended towards a late spring or early summer maximum. Whooping-cough, on the other hand, was very prevalent during the same period.

An enquiry into the epidemiology of measles in rural and urban areas formed the subject of a paper by Dr. R. M. F. Picken, formerly Divisional Medical Officer of Health for the Northern District of the City, and now Medical Officer of Health of the City of Cardiff, which he read at a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine. It dealt with the incidence and fatality of measles in relation to social conditions, especially with regard to Glasgow and Renfrewshire, and was published in the "Journal of the Royal Society of Medicine," 1921, Vol. XIV (Section of Epidemiology and State Medicine), pp. 75-81.

The number of cases occurring and the number treated in hospital are given in Appendix Table XVII, while the death-rates are contained in Table VII.

For several periods the death-rate has been as follows:—

1881-90,... ...	·680 per 1,000	1915, ...	·866 per 1,000
1891-1900, ...	·784 ,,	1916, ...	·471 ,,
1901-10,... ...	·573 ,,	1917, ...	·569 ,,
1911, ...	·375 ,,	1918, ...	·332 ,,
1912, ...	·664 ,,	1919, ...	·294 ,,
1913, ...	·560 ,,	1920, ...	·279 ,,
1914, ...	·465 ,,	1921, ...	·102 ,,

WHOOPING-COUGH.

Of the total cases of whooping-cough registered, 10,748, the number removed to hospital was 801. The number of cases registered is much in excess of those registered during the preceding year, and, as already stated when considering death-rates, the case-rate is higher than any that has hitherto been recorded.

The death-rate, as shown in the following summary for several periods since 1881, shows that the fatality of the disease has not been exceeded since 1915, when, however, the climatic conditions predisposed to lung complications during the early part of the year.

The death-rate from the disease for several periods has been as follows:—

1881-90,	...	1·150 per 1,000 living.	1915,	...	·943 per 1,000 living.
1891-1900,	...	·879 ,,	1916,	...	·148 ,,
1901-10,	...	·750 ,,	1917,	...	·775 ,,
1911, ...	...	·625 ,,	1918,	...	·371 ,,
1912, ...	...	·307 ,,	1919,	...	·565 ,,
1913, ...	...	·729 ,,	1920,	...	·130 ,,
1914, ...	...	·496 ,,	1921,	...	·642 ,,

The numbers of cases and deaths registered and the death-rate per million living during the years 1918-21 are as follows:—

	Cases	Deaths	Death-rate per Million Living
1918,	4,038	413	371
1919,	6,709	630	565
1920,	2,671	145	130
1921,	10,748	690	642

The number removed to hospital is shown in Appendix Table XVII.

CHICKENPOX.

In 1921 there were recorded 5,644 cases of chickenpox compared with 5,602 during the preceding year, and, as Appendix Table XVIII shows, the case-rate is the highest during the period 1914-21. The disease was, however, compulsorily notifiable until 31st March, and it was during the first three months in that period of the year that its prevalence was most marked, the maximum number of cases registered being in April. The age of maximum attack was from 5 to 10 years.

OTHER INFECTIOUS DISEASES.

In Appendix Table XVII will be found a record of the number of other infectious diseases dealt with, showing the number of each disease treated in hospital. Of these the most important are trachoma and influenza. In the footnote to the table referred to, the various diseases included under "others" are detailed.

Influenza.—The number of cases recorded was 43, but, as the disease is not notifiable, most of these cases were brought to notice because special request had been made for removal to hospital. 22 of them were admitted to hospital. There was no marked prevalence of the disease during the year, especially of the acute and fatal type, which has been quite a noticeable feature of recent years.

Anthrax.—During the year one case of anthrax was recorded in man, which occurred during June in Govanhill district. The patient was 37 years of age, and was admitted to hospital on 9th April from the Victoria Hospital.

He complained of swelling of neck and chest, which commenced as a small pimple on the left side of the neck about 5th April. The bacillus anthracis was found in smears from the pustule which was incised under chloroform, but the patient died on the evening of the following day.

The patient had purchased a new shaving brush a few days before the date of onset of the disease.

During February a patient resident in Largs attended, on the instruction of his medical adviser, at the Victoria Infirmary, where the disease was diagnosed as that of anthrax. The patient stated that he had skinned a bullock which had died in Largs 10 days previously, and that six days later a small pimple appeared on the right hand between the thumb and the forefinger. The Medical Officer of Health of the district was informed of the history and reported that on enquiry the bullock had been found to have suffered from anthrax.

Anthrax in Animals.—On 1st February the Veterinary Surgeon reported an outbreak of anthrax at a farm supplying one of the hospitals with milk, and the Physician-Superintendent was advised to take special precautions until the matter was cleared up. No case occurred in association with it.

The Veterinary Surgeon reported on 23rd February that an animal brought to Moore Street Abattoir from Uddingston was affected with anthrax. On enquiry at the County Medical Officer, he reported that the animal was sold on 4th February, with a view to being sent to the Glasgow market the following day, but it was not forwarded until the 23rd. At that time the animal was stated to be quite well, except that it did not take so much food as usual.

On 30th June the Veterinary Surgeon reported by telephone that a carcase of a sheep had been found affected with anthrax in Moore Street Cattle Market. It was one of a consignment of 20 from Peebles, and died shortly after arrival. The usual precautions were taken.

On 27th December the undressed carcase of a cow from Carntyne was found in the market to be affected with anthrax. The matter was reported to the committee, who, after hearing the circumstances, agreed to take no action.

DIARRHŒA AND ENTERITIS.

The incidence of these diseases is to a considerable extent associated with weather conditions, and the year 1921, having a low rainfall and a temperature above the average, is probably responsible for the larger number of deaths from diarrhœa.

The following table shows the numbers of deaths at three age periods for 1921, compared with the respective numbers during the two preceding years:—

	Age in Years.			
	-1	-5	5+	Total.
1919, ...	292	95	113	500
1920, ...	340	61	71	472
1921, ...	455	135	112	702

The association of temperature with incidence of the disease is indicated in the following summary:—

	1919		1920		1921	
	Mean Temp. in Shade	Deaths under 1 Year	Mean Temp. in Shade	Deaths under 1 Year.	Mean Temp. in Shade	Deaths under 1 Year
June, ...	54·3	8	56·8	36	57·2	17
July, ...	56·7	13	55·7	32	61·3	45
August, ...	56·0	56	55·7	53	59·3	101
September, ...	52·2	64	53·7	42	54·4	85

Fly Nuisance.—Following the custom of preceding years, the regular weekly removal of material from all dung pits throughout the City was commenced in the month of June, and continued till 24th September. In all 14,884 sprayings of pits were carried out, 293 gallons of disinfectant being used, the total cost incurred amounting to £403 7s. 10d., or an average of 6½d. per spray.

RABIES.

No case of rabies is known to have occurred, but a number of persons bitten by dogs were reported by the police for inquiry. These are shown in relation to the season of occurrence and the severity of the bite:—

	Slight	Serious
1st quarter, ...	22	1
2nd quarter, ...	73	2
3rd quarter, ...	56	3
4th quarter, ...	37	...
	188	6
	194	

1920, ... 218. 1919, ... 449.

TRACHOMA.

During 1921, 75 notifications were received, 7 of which were duplicates, so that 68 new cases were brought to the notice of the department. The places of birth of these cases were:—

Scotland, ...	43	Russia, ...	5
Ireland, ...	8	Spain, ...	1
England, ...	3	Unknown.	8

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

Age	Males	Females	Total
- 5, ...	1	1	2
- 10, ...	8	3	11
- 15, ...	7	5	12
- 20, ...	5	10	15
- 25, ...	5	6	11
- 35, ...	4	5	9
- 45, ...	3	2	5
- 55, ...	2	—	2
- 65, ...	—	1	1
	35	33	68

Of the total cases 23 were in attendance at school. In 5 schools multiple new cases were recorded—4 in one school, 3 in another, and 2 cases in 3 others.

STATED DURATION OF THE DISEASE AT TIME OF NOTIFICATION.

Under 4 weeks, ...	15
„ 3 months, ...	10
„ 6 „	9
„ 9 „	4
„ 1 year, ...	5
„ 5 years, ...	17
Over 5 „	8
	68

Of the 68 cases 11 were admitted to hospital, as the necessary treatment could not conveniently be undertaken at the dispensary. The following is a statement of the total cases on the Register during the year:—

1. *Still under Treatment—*		
Corporation Dispensary, ...	135	
Other Dispensaries, ...	9	
Treated by Private Practitioners, ...	18	
Institutions, ...	12	
	—	174
2. *Not under Treatment—*		
Eyes stated to be well, ...	23	
Refused treatment or unable to attend, ...	21	
	—	44
3. *Discharged from Corporation Dispensary—*		
Eyes good, ...	104	
Not Trachoma, ...	102	
Dead, ...	7	
	—	213
4. *Others—*		
Left City, ...	49	
Removed before completion of treatment and not found,	66	
Beyond Boundary, ...	41	
	—	156

SECTION V

RESPIRATORY DISEASES.

PHTHISIS.

Although showing slight variation from year to year the reduction in the death-rate from tuberculosis since 1881 has been fairly uniform and the rate for the year 1920 is lower than anything hitherto recorded, being 1,007 per million persons living compared with 1,062 in 1920 and 1,057 in 1919. The following summary shows the rates since 1881:—

1881-90,	2·680	per 1,000 living.	1915,	1·386	per 1,000 living.
1891-1900,	2·015	,,	1916,	1·319	,,
1901-1910,	1·533	,,	1917,	1·271	,,
1911,	1·305	,,	1918,	1·245	,,
1912,	1·318	,,	1919,	1·057	,,
1913,	1·412	,,	1920,	1·062	,,
1914,	1·310	,,	1921,	1·007	,,

In several large towns the death-rate for the years 1914-1920 has been:—

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

	1914	1915	1916	1917	1918	1919	1920
Glasgow, ...	**130**	**137**	**132**	**127**	**124**	**104**	**106**
Edinburgh, ...	117	114	108	118	96	95	85
Dundee, ...	144	154	143	120	141	89	99
Aberdeen, ...	105	131	115	112	111	86	93
London, ...	143	160	153	171	178	122	106
Liverpool, ...	163	186	181	197	208	145	141
Manchester, ...	177	192	184	186	180	133	117
Birmingham, ...	123	133	131	136	135	116	95

The following summaries refer to the cases notified during 1921, together with a comparison since the introduction of compulsory notification of pulmonary tuberculosis in 1910 and non-pulmonary forms in 1914:—

SUMMARY OF CASES AS AT 31ST DECEMBER, 1921.

Total cases registered from 1st January, 1910, to 31st December, 1921, ...		29,878
Less—Died, ...	16,117	
(1) Verified on notification, but subsequently—		
Removed and not traced, ...	2,047	
Removed from Glasgow, ...	1,924	
(2) Not discovered on notification:—		
Not found at address given, ...	1,056	
Notified from Poor Law Institution (with no fixed abode) but still remaining on Register, ...	514	
(3) Subsequently taken off records as not suffering from pulmonary tuberculosis, ...	1,180	
		22,838
Total cases under observation at 31st December, 1921, ...		7,040

Since notification was introduced 29,878 cases have been recorded, of whom it is known that 16,117, or about 54 per cent., had died before 31st December, 1921. Of cases verified on notification 3,971 have removed, of whom 1,924 are known to have gone furth of the City, while 2,047 could not be traced; 1,057 were not found at addresses from which they had been notified, while 514 others had only a Poor Law address. In 1,180 cases the diagnosis of pulmonary

tuberculosis was not confirmed on observation, and their names were accordingly taken off the registers. There thus remained 7,040 cases under observation at 31st December, 1921.

Along with the diminution in the death-rate recorded above the number of cases registered, while varying from year to year, also shows a downward tendency, the number recorded in 1921 having been 2,045, compared with 2,240 in 1920 and 2,099 in 1919, the latter being the lowest number until last year.

Year	Cases Registered	Year	Cases Registered
1910, ...	3,506	1916	2,516
1911, ...	2,326	1917, ...	2,682
1912, ...	2,340	1918, ...	2,513
From added area, ...	335	1919, ...	2,099
1913, ...	2,534	1920, ...	2,240
1914, ...	2,410	1921, ...	2,045
1915, ...	2,332		

Cases registered during 1921.—As shown above, the number of cases registered during the year 1921 was 2,045. Of these, 1,807 were notified in terms of the Infectious Disease (Notification) Act, 1889, and Tuberculosis Regulations, 1912. 76 were sent by the Pensions and Military Authorities, while 162 were ascertained from other sources, as shown below:—

1. *Source of Notified Cases:—*			
1. Occurring in private practice, ...			1,100
2. Occurring in public practice:—			
(*a*) Poor Law cases at home addresses, ...	42		
Poor Law cases from hospitals and poorhouses,	183		
Poor Law cases at dispensaries, ...	6		
		231	
(*b*) Charitable dispensaries and infirmaries, ...	174		
Corporation dispensaries, ...	302		
		476	
			707
Total cases notified, ...			1,807
2. *Source of Information in Cases not notified:—*			
(*a*) From admission and dismissal sheets of Poor Law Institutions, ...		25	
(*b*) School Medical Officers, ...		42	
(*c*) Port Local Authority, ...		4	
(*d*) County Medical Officer, ...		16	
(*e*) From death cards only, ...		75	
			162
3. *From Pensions and Military Authorities,*			76
Total cases registered,...			2,045

Cases among Registered Deaths.—In cases where the first information regarding the occurrence of the disease was obtained from the death registers inquiry was made at the medical practitioner certifying the death regarding the omission to notify, and the explanation given in the majority of cases was that the doctor certifying the death had only seen the patient a day or two before death, and had reason to believe that notification had already been made by some other party. The omissions to notify during 1910 numbered 189, but fell to 80 during 1911, and to 35 during 1912. In 1913 they numbered 44, and 75 in 1921, or 3·6 per cent. of the total cases occurring in the latter year.

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, ...	1,940
Cases at home but not visited at request of medical attendant, ...	53
Cases where only known address was an institution, ...	50
Cases not found at address given, nor traced,...	2
	2,045

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 1,807 cases so notified:—

Notifications	Private	Public	Total	Percentage Public
Primary, ...	1,100	707	1,807	39·1
Multiple, ...	186	164	350	46·3
	1,286	871	2,157	40·4
Percentage multiple to primary notifications in each group, ...	16·9	23·2	19·4	

Age Distribution of Cases Registered.—This information is given for each of the three years ending 1921, in the following table:—

	1919		1920		1921	
Age	M.	F.	M.	F.	M.	F.
– 5 years, -	36	25	54	31	53	48
– 10 ,, -	62	70	55	63	74	91
– 15 ,, -	72	83	59	80	68	81
– 20 ,,	82	91	103	110	100	110
– 25 ,, -	137	128	186	120	147	152
– 35 ,, -	290	217	354	199	224	220
– 45 ,, -	252	142	260	158	196	137
– 55 ,, -	171	88	187	78	130	69
– 65 ,, -	74	30	76	37	82	36
Over 65 years,	34	15	18	12	18	9
Total, -	1,210	889	1,352	888	1,092	953
Grand Total,	2,099		2,240		2,045	

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:—

	1919		1920		1921	
	M.	F.	M.	F.	M.	F.
1 Apartment, ...	197	163	226	181	167	194
2 ,, ...	562	462	660	464	541	514
3 ,, ...	180	142	200	135	185	152
4 ,, and up, ...	89	73	119	75	92	59
In Institutions and not traced, ...	182	49	153	27	107	34
Total, ...	1,210	889	1,358	882	1,092	953
Grand Total, ...	2,099		2,240		2,045	

Institutional Treatment.—The following table shows admissions to institutions of patients suffering from pulmonary tuberculosis during the years 1914-1921:—

Year	Local Authority Hospitals	Sanatoria	Poor Law Institutions	Total
1914, ...	645	370	675	1,690
1915, ...	1,250	562	880	2,692
1916, ...	1,233	667	892	2,792
1917, ...	1,144	616	809	2,569
1918, ...	986	561	671	2,218
1919, ...	948	501	609	2,058
1920, ...	1,731	739	630	3,100
1921, ...	1,904	725	658	3,287
	9,841	4,741	5,824	20,406

Dispensary Attendances.—The following shows in tabular form the attendances and consultations at the various tuberculosis dispensaries in each year, 1919 to 1921; all forms of tuberculosis are included:—

Dispensary	Number of Consultations	Primary Attendances Males	Primary Attendances Females	Subsequent Attendances Males	Subsequent Attendances Females
1919, ...	1,173	2,554		60,432	
1920, ...	1,239	2,161		51,318	
1921.					
Brown Street, ...	318	260	308	10,123	7,375
Black Street, ...	232	273	282	5,889	5,421
Elmbank Crescent, ...	156	184	176	3,456	2,369
Granville Street, ...	139	185	248	5,156	3,007
Adelphi Street, ...	260	162	110	5,344	2,497
Govan, ...	194	183	171	4,164	3,024
Total, ...	1,299	1,247	1,295	34,132	23,693
		2,542		57,825	

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

NUMBER OF VISITS MADE.

1919	1920	1921
56,266	55,778	40,461

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; 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

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.—In 1916 the National Association for the Prevention of Consumption agreed to make the interest on the purchase price of Bellefield Sanatorium the basis of a fund out of which to provide clothing for patients going to sanatoria. This amounts to about £400 per annum, and has enabled the Tuberculosis Department to meet a very real want, as many patients are poorly clad and unable to make the journey to sanatoria, especially in winter. In 1916, 148 patients; in 1917, 138 patients; in 1918, 161 patients; in 1919, 225 patients; in 1920, 119 patients; and in 1921, 107 patients were provided with various articles of clothing in accordance with the above scheme.

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, ...	1,142	1918, ...	1,412
1915, ...	1,464	1919, ...	1,207
1916, ...	1,502	1920, ...	1,185
1917, ...	1,493	1921, ...	1,141

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 SHOWING NON-PULMONARY TUBERCULOSIS CASES REGISTERED DURING 1914-1921, WITH LOCATION OF DISEASE AND SEX.

Year	Glands		Bones & Joints		Abdomen		Meninges		Multiple		Other		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
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
Total, ...	1,348	1,626	1,492	1,215	1,001	845	791	755	284	214	532	443	5,448	5,098
Grand Total, ...	2,974		2,707		1,846		1,546		498		975		10,546	

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

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

Year	Under 1 year		1-5 years		5-10 years		10-15 years		Over 15 years		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
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
Total, ...	418	294	1,416	1,048	1,150	1,028	869	1,002	1,595	1,726	5,448	5,098
Grand Total, ...	712		2,464		2,178		1,871		3,321		10,546	

The following table shows admission to institutions of patients suffering from non-pulmonary tuberculosis during the years 1915-1921:—

Year	Local Authority Hospitals	Sanatoria	Poor Law Institutions	Total
1915, ...	10	7	—	17
1916, ...	26	16	87	129
1917, ...	76	35	187	298
1918, ...	150	69	171	390
1919.	264	88	186	538
1920, ...	566	68	136	770
1921, ...	764	70	185	1,019
Total, ...	1,856	353	952	3,161

About midsummer, 1921, Robroyston Hospital, which had been occupied by smallpox patients, again became available for tuberculosis, and its use is reflected in the increased number of cases, both pulmonary and non-pulmonary, treated in Local Authority institutions. At the same time an increased number of cases has been dealt with in Poor Law institutions, which may in some degree be due to the depressed industrial conditions which prevailed during the year.

OTHER RESPIRATORY DISEASES.

The deaths and death-rates from respiratory diseases—including croup, but excluding pneumonia—during the years 1919-1921 are as follows:—

Year	Deaths	Death-rate per million
1919, ...	1,506	1,351
1920, ...	1,346	1,207
1921, ...	1,097	1,021

Pneumonia.—The Infectious Disease Regulations issued by the Board of Health in 1919 included acute primary pneumonia and acute influenzal pneumonia as notifiable diseases. In the former group 3,318 cases were recorded, and in the latter 274 during 1921. Deaths from these diseases and other respiratory diseases show a marked reduction during the year, no doubt due to a large extent to the favourable weather conditions. Further reference to this association is made on page 30.

The deaths and death-rates from pneumonia and influenza have been as follows:—

Year	Pneumonia		Influenza	
	Deaths	Death-rate per million	Deaths	Death-rate per million
1919, ...	2,137	1,918	1,761	1,580
1920, ...	1,949	1,748	313	281
1921, ...	1,475	1,372	208	193

SECTION VI.

VENEREAL DISEASE.

During the year few alterations were made in the arrangements under the Local Authority Scheme for the treatment of Venereal Diseases. At the approved centres the work continues to be performed satisfactorily, although it must be remembered that certain alterations would add to the efficiency of the scheme.

The main defect at the moment is the inadequate provision for the indoor treatment of males. At present there are only 15 beds for adult male patients at the Royal Infirmary, and an occasional bed at the Western and Victoria Infirmaries.

This defect has been accentuated during the year under review by the decision of Glasgow Parish Council to cease treating cases of venereal disease. Similarly, the Govan Parish Council have found it impossible to set apart accommodation in Merryflatts Hospital. The type of case suitable for parish hospitals provides, it is true, a special problem, but it is analogous to that which arose in connection with the homeless poor suffering from tuberculosis. In many instances admission is sought to the Poorhouse because of the homelessness of the applicant, while his illness may be of such a character as to admit of outdoor treatment. By providing, therefore, outdoor treatment for cases suitable therefor, the Local Authority is discharging its duty. It remains with the Parish Authorities to furnish the necessary lodging and subsistence accommodation for such as can be treated outdoor, but have no home.

The difficulty of providing accommodation for seamen with no fixed abode in the City and for aliens discharged from ships and awaiting transport to their own country, has been referred to in previous reports.

For female in-patients the accommodation is in excess of the demand, although it is unfortunate that its aggregation under one roof does not admit of such social segregation as would be possible were some female beds available in general or women's hospitals. There are 73 beds in the Lock Hospital and 23 cots for young children, while the average number of each occupied during the year was 32 and 21.

On the cessation of the smallpox epidemic, the wards at Baird Street Reception House were re-opened (22nd April, 1921) for the reception of cases of venereal disease, for which 20 beds for children and 12 cots for infants are provided.

The structural alterations at the Bellahouston Dispensary have now been completed, and it is hoped to commence treatment here shortly. 4 beds are provided for female in-patients.

In addition to the foregoing, it is to be remembered, of course, that the non-communicable sequelæ of any form of venereal disease usually find bed accommodation in the general hospitals.

The following tables show the consultations held at present at the various Centres:—

TIME-TABLE OF VENEREAL DISEASE TREATMENT CENTRES.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
MALES—						
Royal Infirmary, ...	1.30 p.m.	—	1.30 p.m.	—	1.30 p.m.	—
Western Infirmary, ...	—	5.30 p.m.	11 a.m.	—	—	—
Victoria Infirmary, ...	—	—	9.30 a.m.	—	—	9.30 a.m.
186 Broomielaw, ...	6 p.m.	—	6 p.m.	6 p.m.	2 p.m.	—
FEMALES—						
Lock Hospital, ...	9 a.m.	9 a.m.	9 a.m.	7 p.m.	9 a.m.	—
Western Infirmary, ...	—	—	—	5.30 p.m.	11 a.m.	—
Victoria Infirmary, ...	—	—	9.30 a.m.	—	—	9.30 a.m.
Baird Street Reception House,	—	—	10 a.m.	—	10 a.m.	—
CHILDREN—						
Lock Hospital, ...	—	—	—	—	—	9 a.m.
Sick Children's Hospital Dispensary, ...	3 p.m.	—	—	3 p.m.	—	—
Baird Street Reception House,	—	—	10 a.m.	—	10 a.m.	—
EYE CASES ONLY (both sexes)—						
Eye Infirmary Dispensary, ...	5.30 p.m.	—	—	5.30 p.m.	—	—

Towards the end of the year the growth of work at the Broomielaw Dispensary necessitated the provision of an extra diet. The sessions had become too long and frequently lasted for hours. An unduly prolonged session is bad both from the point of view of medical efficiency and the length of time a patient may have to wait before receiving attention. There is no incentive for a patient to attend regularly if two or more hours are spent in the waiting-room. An extra evening diet was instituted, and while it has not resulted in any increase of new patients attending this centre, it is proving beneficial in the ways desired.

A satisfactory feature during the year was the decision of the Western Infirmary Directors to undertake the treatment of outdoor cases of gonorrhœa in the female for an experimental period. The experiment is still going on and proving of value. It will in all likelihood be made permanent.

The centre at the Royal Infirmary continues to attract the largest proportion of male cases, but it is unfortunate that it has hitherto been impossible to provide an evening session.

During the present period of industrial unemployment many men are able to attend afternoon sessions, but when conditions improve the need for an evening consultation will become clamant again.

It is hoped that the new centre at the Bellahouston Dispensary will in part meet this demand. One evening session will be instituted to begin with, and, if experience suggests that others are necessary, it is hoped that they will be established.

It is also hoped that this centre will provide for the majority of cases, both male and female, resident on the south side of the river, as, being more accessible to them, it may lead to an increase in the number of attendances and, therefore, the efficiency of the scheme.

If cases resident on the south side are referred to this centre from the others, the congestion at present general will be lessened.

WORK OF THE CENTRES.

The following is a summary of the returns made by the various centres during the year:—

Patients treated at the several Centres during the Year 1921.

	Royal Infirmary	Western Infirmary		Victoria Infirmary		Lock Hospital		Broomielaw	Baird Street Reception House		Sick Children's Hospital		Glasgow Eye Infirmary		Total
In-Patients—															
New cases suffering from—	M.	M.	F.	M.	F.	Ad.	Ch.	M.	Ad.	Ch.	M.	F.	M.	F.	
Syphilis,	94	13	8	20	10	14	105	—	—	8	14	11	2	6	305
Soft Chancre,	12	—	—	—	—	—	—	—	—	—	—	—	—	—	12
Gonorrhœa,	65	4	—	—	—	97	40	—	—	5	—	—	—	—	211
Syphilis and Soft Chancre,	1	—	—	—	—	1	—	—	—	—	—	—	—	—	2
Syphilis and Gonorrhœa,	8	—	—	—	—	208	15	—	—	—	—	—	—	—	231
Gonorrhœa and Soft Chancre,	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Syphilis, Gonorrhœa, and Soft Chancre,	—	—	—	—	—	12	—	—	—	—	—	—	—	—	12
Conditions other than Venereal,	7	—	—	—	—	—	6	—	—	2	—	—	—	—	15
Total,	189	17	8	20	10	332	166	—	—	15	14	11	2	6	790
		25		30		498					25		8		
Aggregate Days' Residence,	5,106	844	471	571	507	11,825	7,695	—	372		321	460	133	107	28,412
		1,315		1,078		19,520					781		240		
Out-Patients—															
New cases suffering from—															
Syphilis,	889	234	120	26	30	217	211	150	94	61	94	149	61	49	2,385
Soft Chancre,	310	12	—	—	—	—	—	62	—	—	—	—	—	—	384
Gonorrhœa,	1,290	1	13	—	—	317	39	318	21	5	—	—	—	—	2,004
Syphilis and Soft Chancre,	8	—	—	—	—	—	—	1	—	—	—	—	—	—	9
Syphilis and Gonorrhœa,	91	1	21	—	—	383	6	13	5	—	—	—	—	—	520
Gonorrhœa and Soft Chancre,	25	—	—	—	—	—	—	2	—	—	—	—	—	—	27
Syphilis, Soft Chancre, and Gonorrhœa,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Conditions other than Venereal,	223	52	36	—	—	16	16	51	19	16	—	—	4	—	433
Total,	2,836	300	190	26	30	933	272	597	139	82	94	149	65	49	5,762
		490		56		1,205			221		243		114		
Aggregate Attendances,	3,936	3,899	3,504	615	546	18,325	2,174	16,715	881	341	621	892	559	484	93,542
		7,403		1,161		20,499			1,272		1,513		1,043		
Pathological Examinations—															
Wasserman Reactions,	1,970	1,279		580		*1,420		*362	*135		*534		*211		6,491
Spirochætes,	181	47		—		145	—	65	*2		—		—		440
Gonococci,	164	185		33		4,216	1,997	658	65		—		—		7,318
Total	2,315	1,511		613		7,778		1,085	202		534		211		14,249

* At Public Health Laboratory.

The total number of new cases attending at the various centres during the year was 6,552, as compared with 6,565 in 1920—a negligible decrease. It should be noted that 122 of these were treated at the Glasgow Eye Infirmary, where work under the scheme commenced only in January, 1921.

Regarding the number of women and children treated, there seems definite evidence of an increase. The total number attending the Lock Hospital, Baird Street Reception House, and the Royal Hospital for Sick Children was in 1921, 2,207—an increase of 89 over the number for 1920.

Most of the females and children are treated at these centres, and while the number of female cases at the Western and Victoria Infirmaries was not extracted in 1920, it is unlikely that it was greater than in 1921, as the total number of cases of both sexes at these centres was slightly greater in the latter year.

At the two main centres for male patients, the Royal Infirmary and the Broomielaw Dispensary, the number of new cases shows a decrease of 245, *i.e.*, from 3,867 to 3,622. The Broomielaw figures, however, show an increase of 170, while the decrease at the Royal Infirmary is 415. It is probable that the increase at the Broomielaw Dispensary is due to this centre becoming better known and attracting patients who otherwise would have sought treatment at the Royal Infirmary. Part of the decrease at the Royal Infirmary may be due to this cause, but there still remains a considerable number to account for.

When the number of females and children show an increase, it is most unlikely that Venereal Diseases in the male are on the decrease.

The Venereal Diseases Scheme has now been long enough in operation to have attracted the people who are really desirous of being treated. During the year there has been no great public movement to induce the laggards among the women to seek treatment, yet they have been coming with greater frequency.

Separating out the figures for the two main male centres, it is found that syphilis cases alone have decreased from 1,368 to 1,133, a difference of 235; while syphilis accompanied by other venereal disease have increased by 16.

The figures for gonorrhœa show a decrease in gonorrhœa alone amounting to 153, while combined with other forms of venereal disease there are 171 fewer cases as compared with last year's figures.

Before attaching too much significance to this decrease, it must be recalled that the popular belief is that the consequences of these diseases are not severe enough to warrant any serious effort to seek a cure. In the case of gonorrhœa it is commonly believed that self-treatment by means of syringing can effect a cure, and undoubtedly many men treat themselves in this way.

The surprising fact is shown again by the figures for the year that more cases of syphilis, either alone (2,690) or accompanied by some other venereal disease (3,464), came for treatment to the centres during the year, as compared with gonorrhœa. Similar figures for gonorrhœa are:—alone, 2,215, and accompanied by other venereal disease, 3,007.

Actually, therefore, 85 more patients having a syphilitic infection appeared than in 1920, while those with a gonorrhœal infection were fewer by 343.

It is the experience of most medical men to meet with more cases of gonorrhœa than of syphilis.

Hitherto, little attention has been paid to the education of medical students in the treatment of these diseases, and it may be that practitioners undertake the treatment of gonorrhœa with less preparation than they do that of syphilis with its accepted modern treatment by intravenous injections.

The successful treatment of gonorrhœa demands a skill and knowledge of instrumentation which makes very considerable demands on time.

On the other hand, the treatment of syphilis by modern methods is such as can be undertaken by any competent medical man and requires less time per patient.

It is unfortunate that more practitioners do not avail themselves of the facilities for post-graduate teaching in venereal disease given each year in the City.

There are about 500 practitioners of medicine in Glasgow, yet, during the year, 12 only took advantage of the free supplies of Salvarsan available.

DURATION OF TREATMENT OF INDOOR AND OUTDOOR PATIENTS AT THE SEVERAL CENTRES.

In-patient Treatment.—The average days' residence of each patient at the different institutions has been calculated with a view to comparing the varying lengths of stay.

Average Days' Residence of New In-Patients at the various Centres during 1921.

Patients suffering from—	Royal Infirmary.	Western Infirmary.		Victoria Infirmary.		Lock Hospital.		Broomielaw Dispensary.	Baird Street Reception House.	Sick Children's Hospital.	Glasgow Eye Infirmary.	
	Males.	M.	F.	M.	F.	Ad.	Ch.	Males.	Children.	All Cases.	M.	F.
hilis, ...	20·5	42·0	59·0	28·5	50·7	38·6	30·2	—	22·2	31·24	66·5	17·8
Chancre, ...	21·5	—	—	—	—	—	—	—	—	—	—	—
orrhœa, ...	37·2	74·5	—	—	—	39·1	97·2	—	38·8	—	—	—
hilis and Soft Chancre, ...	25·0	—	—	—	—	31·0	—	—	—	—	—	—
hilis and Gonorrhœa, ...	35·0	—	—	—	—	32·4	39·3	—	—	—	—	—
orrhœa and Soft Chancre,	41·0	—	—	—	—	—	—	—	—	—	—	—
hilis, Gonorrhœa, and Soft Chancre, ...	—	—	—	—	—	44·9	—	—	—	—	—	—
ditions other than Venereal,	15·7	—	—	—	—	—	6·8	—	6·1	—	—	—
Average days' residence of Total Cases, ...	27·0	49·6 / 59·0 — 52·6		28·5 / 50·7 — 35·9		35·6 / 46·4 — 39·2		—	24·8	31·2	66·5	17·8

Average Number of Attendances per Out-Patient at the various Centres.

Patients suffering from—	Royal Infirmary.	Western Infirmary.		Victoria Infirmary.		Lock Hospital.		Broomielaw Dispensary.	Baird Street. Reception House.		Sick Childrens' Hospital.	Glasgow Eye Infirmary.	
	Males.	M.	F.	M.	F.	Ad.	Ch.	Males.	Ad.	Ch.	All Cases.	M.	F.
hilis, ...	15·54	16·3	20·62	23·65	18·2	19·8	7·58	13·3	6·7	5·6	6·2	9·16	9·87
t Chancre, ...	6·1	4·58	—	—	—	—	—	31·8	—	—	—	—	—
norrhœa, ...	19·4	1·0	57·0	—	—	20·27	10·0	37·9	7·0	5·4	—	—	—
philis and Soft Chancre, ...	10·2	—	—	—	—	—	—	5·0	—	—	—	—	—
philis and Gonorrhœa, ...	20·5	13·0	10·4	—	—	19·4	25·2	38·8	13·0	—	—	—	—
norrhœa and Soft Chancre,	27·2	—	—	—	—	—	—	16·5	—	—	—	—	—
philis, Gonorrhœa, and Soft Chancre, ...	—	—	—	—	—	—	—	—	—	—	—	—	—
ndition other than Venereal,	1·6	2·23	1·91	—	—	1·0	1·8	2·6	1·5	1·4	—	1·0	—
verage Attendance for Total Cases, ...	15·5	13·0 / 18·4 — 15·1		23·65 / 18·2 — 20·7		19·6 / 8·0 — 17·0		28·0	6·3 / 4·1 — 5·75		6·2	8·6 / 9·9 — 9·1	

For the seven centres treating in-patients the average days' residence per patient is 35·9 days, as compared with 37·5 for the six centres recognised in 1920. This represents a reduction of 1264 days on the total of 790 in-patients for 1921.

The figures for the Royal Infirmary need no comment apart from the time spent in the venereal ward of cases not suffering from venereal disease.

The average at the Western Infirmary is high, due to the inclusion of four cases of gonorrhœal arthritis associated with gleet, and requiring prolonged bed treatment.

Here also, the average residence of syphilitic cases is above the average for the City. For the most part they consist of disease of the nervous system. The average for female cases in the Victoria Infirmary was also high.

The remarkable feature of the returns of the Lock Hospital is the length of time required to treat gonorrhœa in the child, the average residence of adults being 39, and that of children 97 days.

The difficulty of eradicating this disease in children is well known.

The average indoor residence of children suffering from syphilis at Baird Street, the Royal Hospital for Sick Children, and the Lock Hospital is approximately one month, after which treatment can be continued at the out-patient department.

The high average residence shown for males at the Glasgow Eye Infirmary is due to two exceptional cases admitted from Ayr.

Out-patient Treatment.—Turning to the table for out-patients, it falls to be recorded that the average number of attendances per patient during the year was 16·2, as compared with 10 in 1919 and 13·8 in 1920.

The steady improvement in this direction is distinctly encouraging and gives rise to hope that gradually patients will come to realise that attendance until the Clinical Officer pronounces a cure is necessary in their own interest as well as in that of others.

It may be noted here that the centres have not been asked to furnish figures regarding the number of cases who ceased attending before completion of treatment.

The new Form V.R.I. of the Scottish Board of Health contains this information and will be completed at the end of May, 1922, by all the centres. It has not been thought desirable to anticipate this return, as the clerical work involved is very heavy, necessitating the scrutiny of all records for over two years in the case of syphilis. The standard of cure, or the attainment of a state of non-infectivity, in this disease demands the occasional attendance of the patient at the centre for two years after completion of treatment.

The increased average attendance is spread over all the centres, with the exception of Baird Street Reception House, where the average remains practically the same as last year

Broomielaw continues to show the highest average attendances of all patients among the centres, although for syphilis alone the average is low. This is due to the number of seafaring men attending this centre, men who undergo one course of treatment and then proceed to sea, treating themselves by mercury internally until they come to port again.

The proximity of this dispensary to the shipping centre probably accounts for the large number of attendances of men suffering from soft chancre. Attendance once daily, or even oftener, entails no great demand on their time.

On the other hand, many of the patients at Baird Street Reception House travel from places outwith the City, and frequent attendance, especially in the case of housewives, is exceedingly difficult. This suggests that, to be effective, facilities for treatment should be conveniently situated to the population requiring them.

It may be noted that the average attendance per out-patient in gonorrhœa is generally higher than in syphilis, as is the average days' residence for in-patients. The early discomfort and pain in gonorrhœa induce the patient who has once come to a treatment centre to attend faithfully at the outset, probably two or three times a day, while the complications of the disease frequently demand prolonged residence as an in-patient.

AGE-INCIDENCE OF NEW CASES.

The age-incidence and marital condition of new patients attending the Lock Hospital, Royal Infirmary, and the Broomielaw Dispensary, have been taken for the year.

The following table shows the actual numbers and the percentages of the total coming at the several age-periods. The figures for the Lock Hospital exclude the children treated there.

These figures represent the majority of the adult male and female patients presenting themselves for the first time during the year, and the ages for the sexes may be usefully compared. The Lock Hospital treats females alone, while the other two centres are solely for the treatment of males.

The most striking figure is that of the female patients for the age-group 20 years and under. More than one-quarter of the total female patients are here represented.

No such excess for male patients is shown at this age-group, less than 10 per cent. being shown at the Royal Infirmary and still less at Broomielaw.

The figures for the Lock Hospital show a decided drop following the 24th year of age, 53·9 per cent. of the cases occurring at or prior to this age.

For male patients the decline is more gradual, there being no marked decrease until the 29th year is reached, while a figure comparable to the percentage of female cases at 24 years and under is not reached until the 27th year in the male.

These figures show that while venereal diseases are chiefly acquired in youth, it would appear to be more prevalent among females at an earlier age than among males.

This is a fact of practical importance to which further reference is made in the preface.

Ages and Marital Condition of New Cases registered during 1921.

Lock Hospital—	20 and under	21	22	23	24	25	26	27	28	29	30	Carry forward
	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	M. S. W.	
Number of Cases, ...	73 262 —	42 55 —	44 44 —	53 41 —	33 36 —	24 15 —	31 19 —	32 6 —	28 9 —	26 8 —	39 9 —	
	335	97	88	94	69	39	50	38	37	34	48	
Percentage of Total, ...	26·5	7·6	7·0	7·4	5·4	3·1	4·0	3·0	2·9	2·6	3·8	

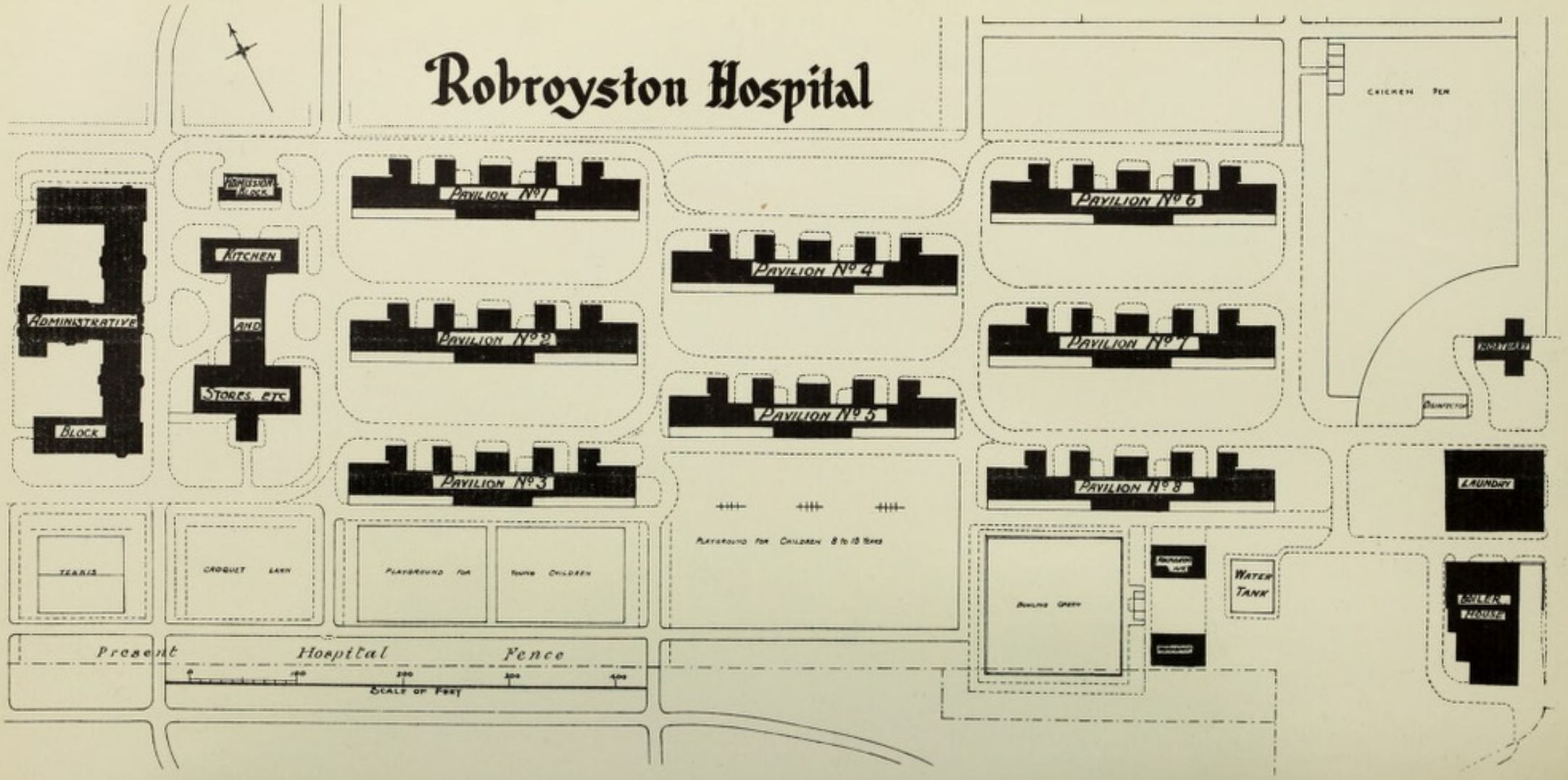
	Brought forward	31	32	33	34	35	36	37	38	39	40 and over	Total
Number of Cases, ...		19 1 —	22 6 —	22 10 —	31 4 —	25 3 —	22 2 —	11 — —	24 2 —	15 1 —	101 15 —	
		20	28	32	35	28	24	11	26	16	116	1,265
Percentage of Total, ...		1·6	2·2	2·5	2·7	2·2	1·9	0·9	2·1	1·3	9·2	

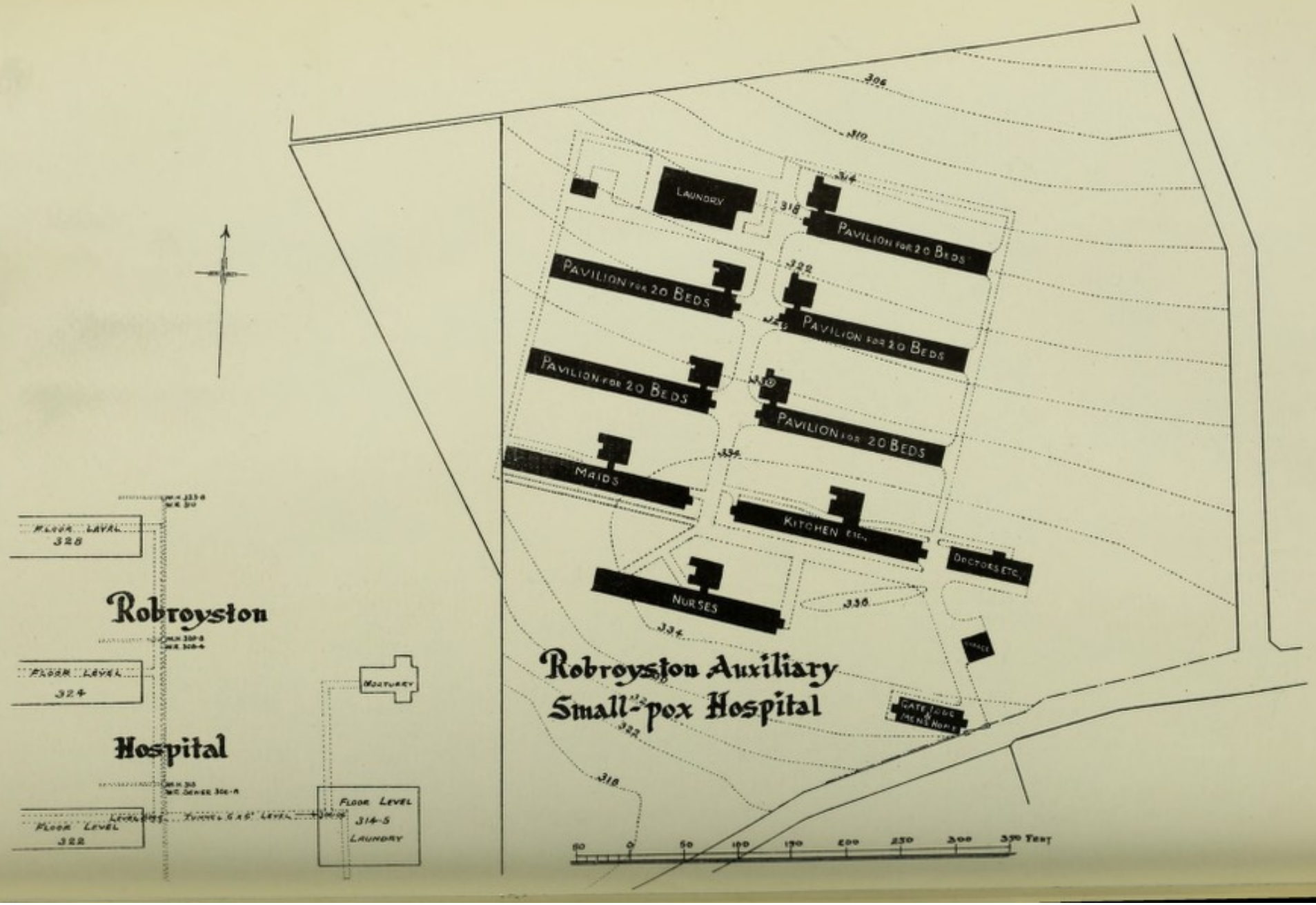
Glasgow Royal Infirmary—	20 and under	21	22	23	24	25	26	27	28	29	30	Carry forward
Number of Cases, ...	6 276 —	6 195 —	2 180 2	8 174 1	8 193 4	13 165 1	32 173 3	36 99 3	63 108 12	25 101 8	16 109 6	
	282	201	184	183	205	179	208	138	183	134	131	
Percentage of Total, ...	9·3	6·6	6·1	6·1	6·8	5·9	6·9	4·6	6·0	4·4	4·3	

	Brought forward	31	32	33	34	35	36	37	38	39	40 and over	Total
Number of Cases, ...		40 40 2	39 47 11	23 72 4	34 50 2	21 50 9	20 56 1	9 33 4	10 28 9	24 5 6	210 62 76	
		82	97	99	86	80	77	46	47	35	348	3,025
Percentage of Total, ...		2·7	3·2	3·3	2·8	2·6	2·6	1·5	1·5	1·2	11·5	

Broomielaw Dispensary—	20 and under	21	22	23	24	25	26	27	28	29	30	Carry forward
Number of Cases, ...	— 46 —	5 39 —	3 51 —	2 39 —	5 35 —	5 34 —	5 34 —	5 28 —	6 36 —	10 17 —	12 13 —	
	46	44	54	41	40	39	39	33	42	27	25	
Percentage of Total, ...	7·7	7·4	9·0	6·9	6·7	6·5	6·5	5·5	7·0	4·5	4·2	

	Brought forward	31	32	33	34	35	36	37	38	39	40 and over	Total
Number of Cases, ...		5 10 —	9 9 —	10 11 —	3 3 —	3 11 —	1 3 —	6 4 —	4 1 —	5 1 —	42 18 8	
		15	18	21	6	14	4	10	5	6	68	597
Percentage of Total, ...		2·5	3·0	3·5	1·0	2·3	0·7	1·7	0·9	1·0	11·4	


Robroyston Hospital
Admission Block
Kitchen
and
Stores etc
Administrative
Block
Pavilion No 1
Pavilion No 2
Pavilion No 3
Pavilion No 4
Pavilion No 5
Pavilion No 6
Pavilion No 7
Pavilion No 8
Chicken Pen
Laundry
Water Tank
Tennis
Croquet Lawn
Playground for Young Children
Playground for Children 8 to 10 Years
Bowling Green
Present Hospital Fence
Scale of Feet


Robroyston Auxiliary
Small-pox Hospital
Robroyston
Hospital
LAUNDRY
PAVILION FOR 20 BEDS
PAVILION FOR 20 BEDS
PAVILION FOR 20 BEDS
PAVILION FOR 20 BEDS
PAVILION FOR 20 BEDS
MAIDS
KITCHEN ETC.
DOCTORS ETC.
NURSES
GARAGE
GATE LODGE
MENT NURSE
MORTUARY
FLOOR LEVEL 328
FLOOR LEVEL 324
FLOOR LEVEL 322
FLOOR LEVEL 314·5
LAUNDRY
306
310
314
318
322
326
330
334
336
60 0 50 100 150 200 250 300 350 FEET

SECTION VII.

HOSPITALS, &c.

The need for additional accommodation for cases of tuberculosis and the decision of the Corporation to treat cases of this disease in Robroyston Hospital made it necessary to consider the question of hospital provision for isolated cases of smallpox. Ultimately, it was decided to purchase and transfer the army huts erected at Stobhill Hospital during the war to Robroyston, and the accommodation thus provided is described in the following report:—

ROBROYSTON (AUXILIARY) SMALLPOX HOSPITAL.

The plans submitted to the Board, along with this Report, show the site of the Hospital which it is proposed to erect on vacant ground to the east of the present institution. The military huts, 10 in number, at present at Stobhill Hospital will be transported to Robroyston and re-erected there. Of these ten huts, nine have the following dimensions:—

Dimensions, ...	160′ 9″ × 23′ 9″ × 11′ average height.
Floor area, ...	3,818 square feet.
Cubic space, ...	41,998 cubic feet.

Number of patients at 2,000 cubic feet = 20.

The tenth pavilion is a smaller one, measuring 110 feet 6 inches by 23 feet 9 inches.

Five of the huts will be utilised for patients, giving accommodation for 100, with nurses' room, linen room, ward kitchen, sink room, 2 bathrooms, lavatory accommodation, and calorifier chamber attached to each. One of the huts is being adapted as a nurses' home, with 20 bedrooms, sitting-room, linen room, ward-maid's scullery, 3 bathrooms, lavatory accommodation, and calorifier house. A hut will be utilised as a maids' home with similar accommodation, and one will also be remodelled to contain kitchen and stores, nurses' and maids' dining-rooms, general stores, and a dispensary. Another hut will be adapted for doctors' and matron's quarters, giving accommodation for two doctors, with sitting-room, bathroom, &c. There is also a gate-lodge, which comprises quarters for male staff numbering 5, with sitting-room, bathroom, and office.

A garage for two ambulances is provided with concrete floor, and a 500-gallon underground steel storage tank for motor spirit. One of the huts is being utilised as laundry and wash-house with concrete floor. The mortuary will be built of new material.

The Auxiliary Hospital will thus be self-contained, and all its services, save heating, lighting, water supply, and sewerage, will be separated from those of the Main Hospital at Robroyston.

The buildings will be heated by means of hot-water pipes, fed by a main steam pipe from the present boiler-house at Robroyston to the calorifier in each of the pavilions. The sewage will be led into the main sewerage system of the Hospital, as shown on the plans.

The estimated staff required for the proposed 100 beds would be as follows:—

Medical Officers, ...	2
Matron, ...	1
Nursing Staff, ...	20
Maid, ...	16
Male staff, ...	5
Total, ...	44

The administrative portion of the Hospital is so designed that an extension to 200 beds can be rapidly undertaken without increase or enlargement of the essential administrative buildings, with the exception of the nurses and maids' quarters.

In the continued absence of smallpox it was arranged to utilise these beds as further accommodation for tuberculosis, and the Scottish Board of Health approved of the arrangements generally, subject to certain conditions as to the administration of the Auxiliary Hospital from the Main Hospital, and that none but recently and satisfactorily vaccinated cases of tuberculosis be admitted in the meantime, and then only those in the less acute stage who might be removed at once in the event of smallpox occurring.

Bellefield.—The extension of Bellefield Sanatorium, Lanark, has been in contemplation at various times since it was acquired, but the prohibition of building during the war made it necessary to delay the erection of extensions. A beginning has now been made, and the particulars of the proposed additional accommodation are described in the following report to the Board of Health. Subsequent to approval, however, the acquisition of additional ground made it desirable to alter slightly the design and also the location of the added pavilion.

The original and amended reports here follow:—

BELLEFIELD SANATORIUM EXTENSION.

REPORT BY THE MEDICAL OFFICER OF HEALTH TO THE LOCAL GOVERNMENT BOARD.

The present accommodation of Bellefield Sanatorium is 42 beds, exclusive of the chalets, which are only used during the summer months. The plans for the proposed extension are designed to increase the accommodation for patients to 132 beds, exclusive of the chalets, by the erection of three contiguous single-storey pavilions holding 30 patients each, a total of 90 beds.

The estimated staff for 132 beds is based on the assumption that a forty-eight hour week will shortly be in operation. On this basis additional accommodation is provided by an extension of the administrative block so as to give total accommodation for 26 nurses and 22 maids. Accommodation is also provided for an additional medical officer. Provision is made for a maids' dining-room and additional clothing and general storage. The plans also show proposed extensions to the patients' dining-room, boiler house, and to the room for electric storage batteries.

Although the plans show accommodation as above for 132 beds, it is proposed to erect meantime only two of the pavilions of 30 beds each, which will bring the total accommodation for patients up to 102 beds, excluding the chalets, the erection of the third pavilion being held over pending additional ground being obtained. It is, however, intended to proceed at once with the extension of the administrative accommodation as for 132 patients. As the existing septic tank is too small and its site is too near the pavilions, it will be necessary to provide a new tank in a more suitable position.

(*The design and accommodation of the pavilion has been altered, and is described in the supplementary memorandum which follows*):—

The verandah, which is 9 feet deep and of granolithic, will be uncovered, except that portion in front of the double-bedded rooms, which will be covered to a depth of 5 feet.

A service corridor at the rear of the pavilion connects the sanitary annexe with the wards and rooms, and a through passage connects it with the verandah in front.

Administrative Block.—The additional accommodation in the administrative block provides for 20 bedrooms for nurses and 4 for maids in the annexe behind the block, and 4 double-bedded maids' rooms over the present laundry, with additional lavatories.

Provision is also made for the following:—

Bedroom for Matron.
Bedroom for Medical Officer.
Extension of the general store accommodation near the kitchen.
Extension of the maids' dining-room, sewing-room, and clothing-store.
Extension of boiler house and a new electric battery storage room.

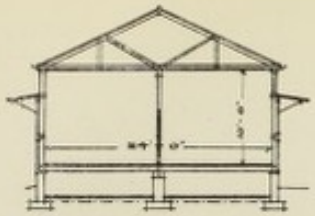
The dimensions of the new nurses' rooms are 12 feet by 8 feet 6 inches, with a cubic capacity of 1,020 cubic feet, and those of the double-bedded maids' room are 14 feet by 12 feet 6 inches, with a cubic capacity of 1,575 cubic feet.

By rearranging the existing accommodation of the administrative quarters, provision is made for nurses' dining and sitting-rooms, and doctors' dining and sitting-rooms.

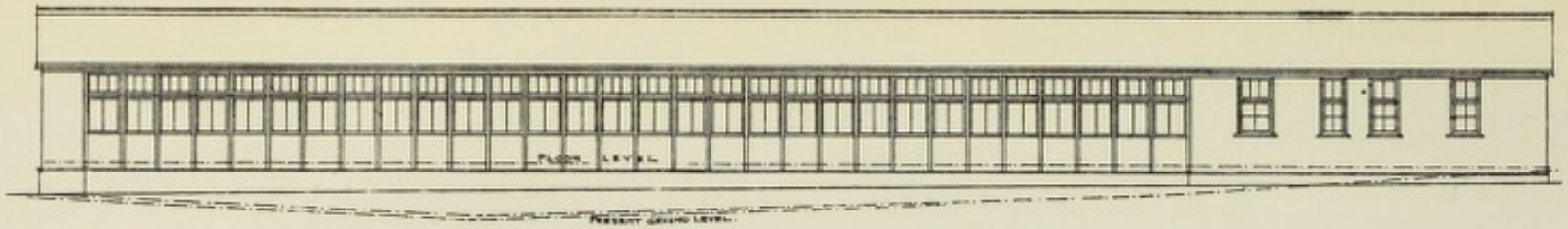
The buildings will be of brick, rough cast.

REPORT ON AMENDED PLANS.

The plans of the proposed extension of the Sanatorium at Bellefield, which were approved by the Board in their letter of 13th February, 1920, showed the disposition of the new ward blocks, and also the necessary additions to the administrative side of the Institution. Since then an adjoining field of about five acres in extent has been acquired by the Corporation, the situation of which is shown in the block plan

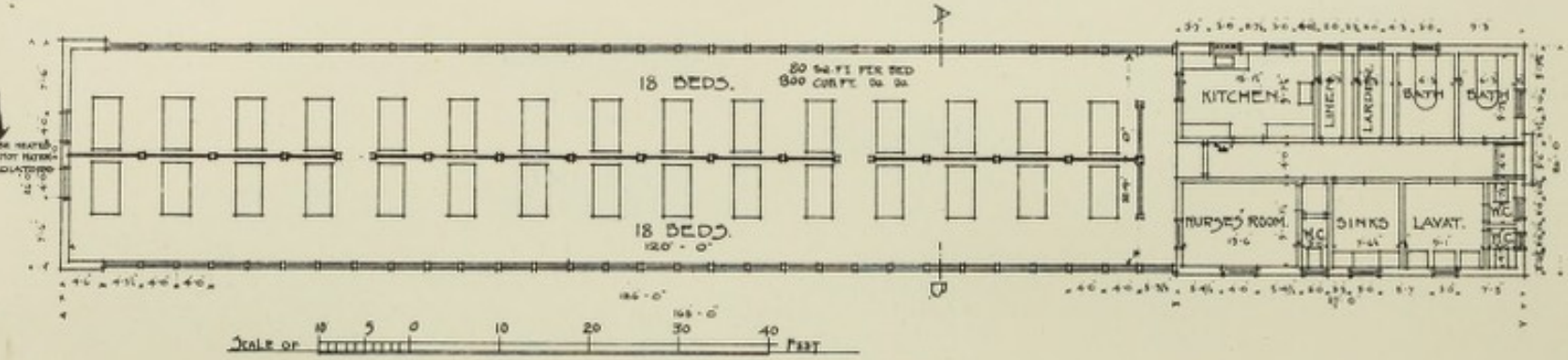


SECTION A.B.

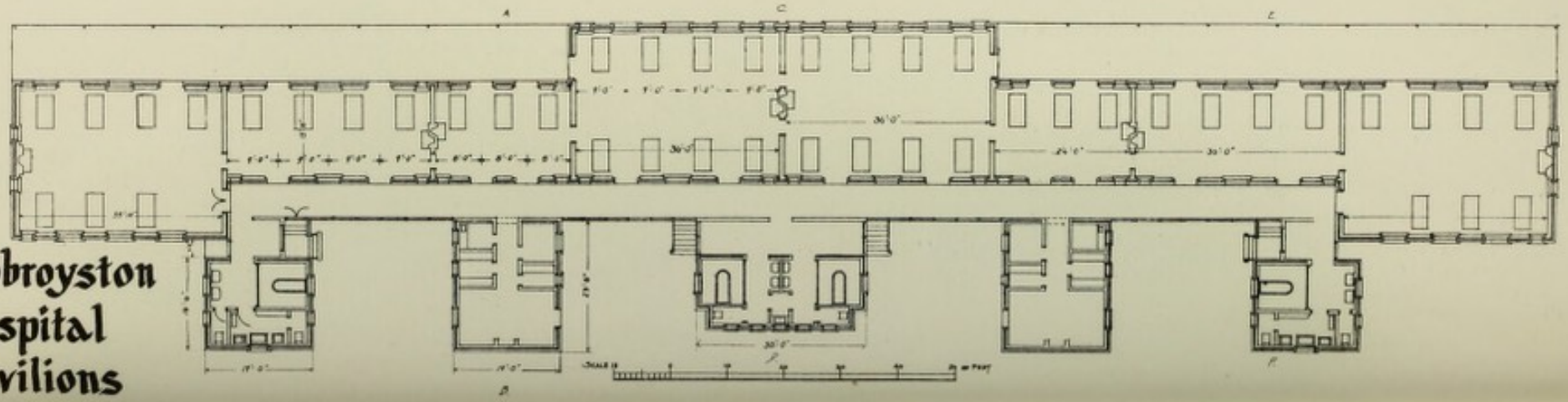


EAST ELEVATION.

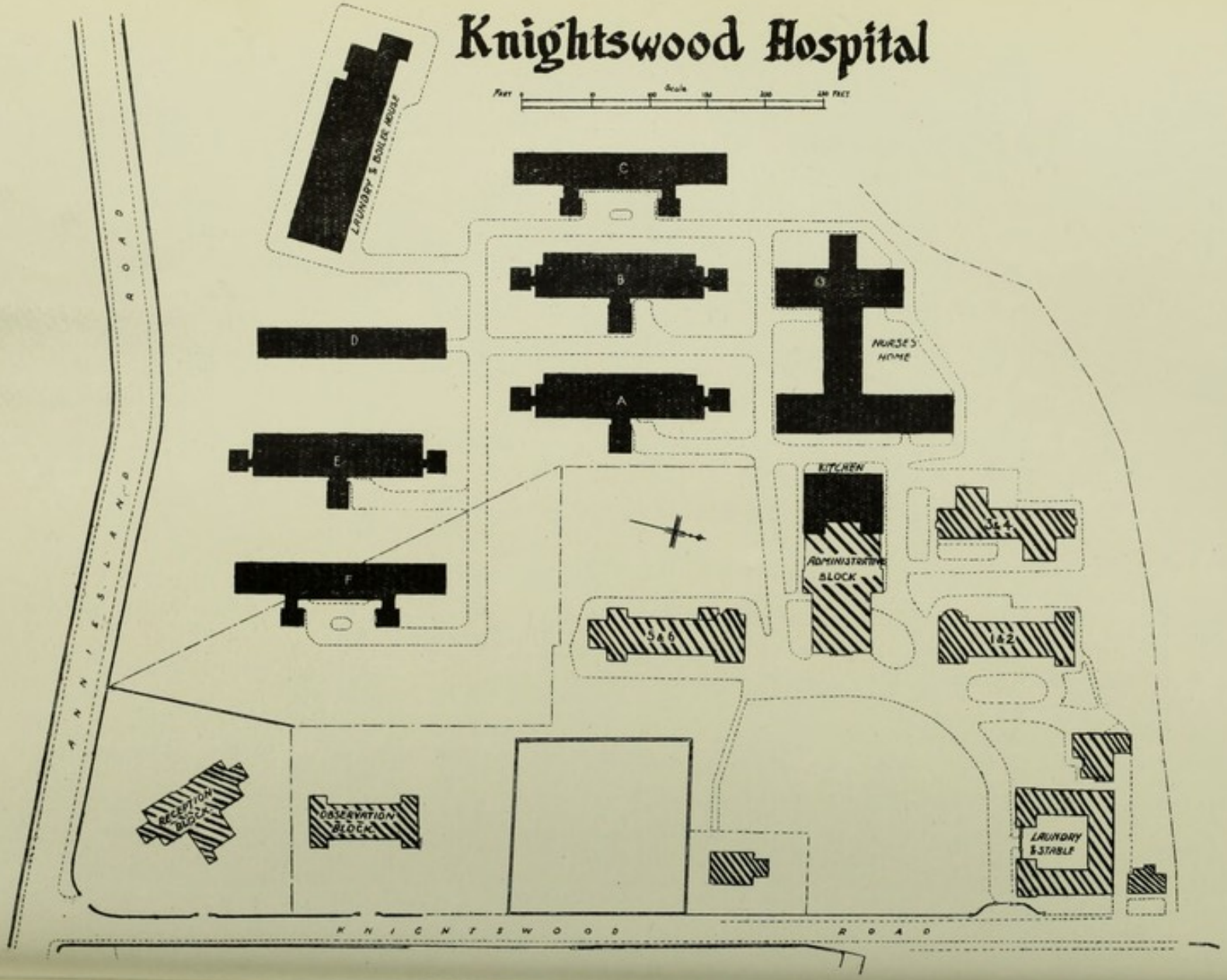
Knightswood Hospital Pav. D.



Robroyston Hospital Pavilions



Knightswood Hospital



No. 1B now forwarded. As the acquisition of this field allows of a better disposition of the proposed new ward blocks, it has been thought advisable to alter them somewhat in position and at the same time to remodel slightly their internal arrangements.

The description contained in the Bellefield Sanatorium Extension Report of 3rd July, 1919, as forwarded to the Board, falls, therefore, to be altered in the following particulars:—

The ward blocks have been redisposed on the site to better advantage and now consist of two conjoined 24-bed pavilions (A and B on the plan), a single 36-bed pavilion (C), and a 28-bed pavilion (D), the latter situated in the recently acquired field.

The portions (A and C) shaded deep red on the block plan No. 1B will be erected forthwith, and provide the additional accommodation for 60 patients already approved.

While it is not contemplated to proceed at present with the erection of blocks B and D, they are introduced on the plan to show a future probable extension.

Opportunity has also been taken to improve the design of the ward blocks. The accommodation in the annexes has been arranged more advantageously and a boot-room inserted. The cross section of the 2-bed wards has also been altered and is now similar to that adopted for Southfield Sanatorium. The height of the ceiling remains at 10 feet, as already approved by the Board.

The two ward blocks now proposed contain 36 and 24 beds respectively. Each of these has four 2-bed cubicles; while the larger has also two wards for 14 patients each and the smaller two wards for 8 patients each. The floor area per bed has been reduced to 80 square feet.

MEARNSKIRK (FORMERLY SOUTHFIELD) HOSPITAL AND SANATORIUM.

Under the scheme for the institutional provision of cases of tuberculosis, begun under the scheme which followed the enactment of the National Insurance Act, the Corporation purchased in 1913 the estate of Southfield, situated about 8 miles due south of the City, and plans for the utilisation of the estate for the erection of a Sanatorium, and a Home for pre-tuberculous children, were prepared and submitted to the Local Government Board at the time.

With the delay, however, that has occurred, the disposition of the buildings has been reconsidered, and the following is a report on the amended plans now approved by the Board.

The total area of the estate is 320 acres, but the buildings and the necessary free space will occupy little more than 50 acres of the ground. The rest of the area is occupied by four farms, so that the total area required for the Sanatorium may be increased if required. The ground is of a heavy loam soil overlying whin rock, and is on an average 530 feet above sea level. The distance of the site from the nearest station (Whitecraigs) is $2\frac{3}{4}$ miles, and from the centre of the City it is $7\frac{3}{4}$ miles, but from the farthest point to be served, 10 miles.

The water supply will be obtained from Eastwood and Mearns District supply, and be available, without the provision of a water tower, for every purpose, including fire, in all the buildings proposed to be erected.

It is proposed to treat the sewage bacteriologically. All the drains will be carried to a septic tank situated to the north of the site, and the effluent will be conveyed to a burn near by.

The following report describes the intended provision:—

SOUTHFIELD (NOW MEARNSKIRK).

REPORT TO THE SCOTTISH BOARD OF HEALTH ON THE PROPOSED CHILDREN'S HOSPITAL FOR NON-PULMONARY TUBERCULOSIS AND MALE SANATORIUM.

The following report has been prepared to accompany the final plans submitted to the Board of Health, in accordance with the Board's letter of 4th June, 1921, which contains approval for the erection on Southfield Estate of an institution for the accommodation of 300 patients.

With the exception of the main kitchen, all the administrative buildings have been redesigned in strict proportion to the approved number of patients. The main kitchen, however, where the difficulty of future extension would be considerable, has been designed as for the large institution, a procedure approved by the Board in their letter of 9th July, 1921.

A general description of the Southfield Estate and its geology is already contained in the descriptive report forwarded to the Board in September, 1914.

All the buildings have been to a greater or less extent remodelled, in order to reduce the cost as much as possible. New plans and a fresh description of the whole institution are now forwarded.

The present plans show :—

(1) A children's hospital for the treatment mainly of surgical tuberculosis, to accommodate 164 patients;

(2) A sanatorium for adult males, to accommodate 136 patients.

The total accommodation will thus be 300 beds.

Great difficulty has been experienced in finding suitable levels for the buildings in order that rock-cutting might be reduced to a minimum. It will be noted that the buildings have been disposed in two main axial lines radiating from a common centre, and that they have been carefully fitted into the contours so as to ensure a minimum amount of under-building. The administrative blocks will serve equally for both institutions as well as for the future extension, the boiler-house and wash-house being equidistant between the children's hospital and the sanatorium.

All the buildings have an exposure varying from south-west to south-east.

The intention of the Corporation is to extend the children's accommodation at some future date to a maximum of 300 beds on a site shown in the block plan.

The children's hospital is situated to the south of the site. The block plan also shows the site of the future extension of the children's hospital, with its isolation pavilion.

The sanatorium blocks lie on the extreme north of the site.

DETAILED PLANS.

Children's Dormitory Block for 50 beds.—This consists of two wards, each containing 24 beds, with a centrally-placed isolation room attached to each. The central portion of this block contains the ward service accommodation arranged on each side of a central corridor. This central portion comprises the following :—Day room (17 feet by 24 feet), nurses' room and teachers' room; linen cupboards in front. Behind are situated the kitchen and stores and two lavatory blocks, along with boot-rooms, dressing-room, and nurses' cloakroom, and water-closet. Each ward has the following dimensions :—

Length, ...	88 feet.
Breadth, ...	22 ,,
Height, ...	10 ,,
Floor area, ...	1,936 square feet.
Floor area per bed, ...	80 ,,

In front of each ward is a verandah, 10 feet wide, above which will be fitted a glass cover, as shown in the cross-section.

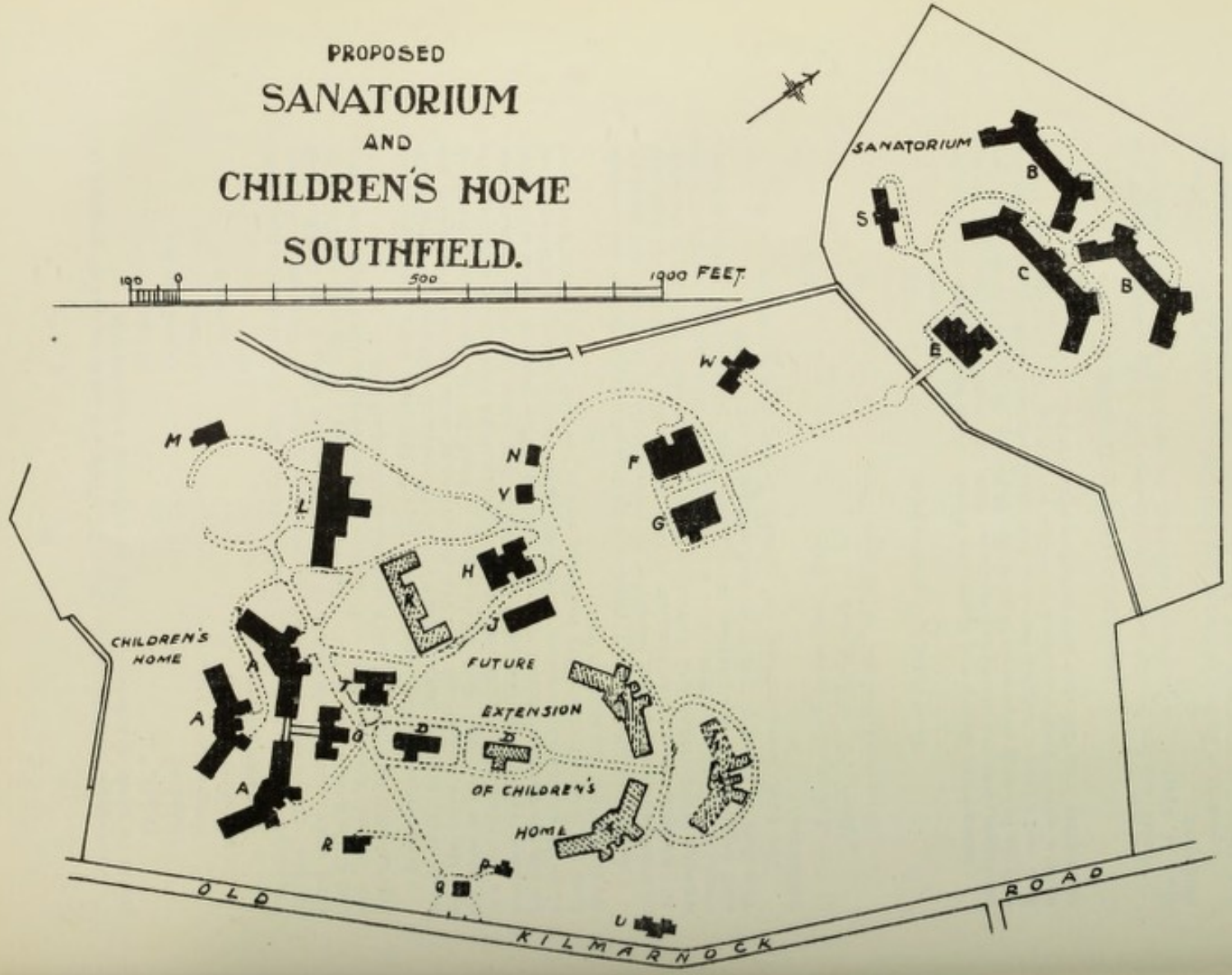
The size of the day-room and the lavatory and locker accommodation have been arranged on the principle that approximately 50 per cent. of the patients treated in each ward will be bed cases at any one time.

Operating Theatre and X-Ray Block.—This is shown on the block plan attached by corridor to two of the hospital blocks. This block consists of a plaster room, sisters' room, surgical dressing-room, a room for dressings and splints, X-ray and developing room, and waiting room. The operating theatre, 20 feet by 20 feet, is centrally situated, and contains the theatre itself with its annexe, a steriliser room, anæsthetic and recovery rooms. This block has been designed on the following principles. The plaster room to be efficient should be ample in size; the surgical dressing-room is intended for the dressing of septic cases; the dressing and splint room provides facilities for storage of splints and also for the preparation of dressings for the whole institution. The waiting room attached to the X-ray room will be used by sanatorium patients waiting for X-ray examination. The operating theatre is simply designed and will be heated by radiators. The recovery and anæsthetic rooms will be separated from the corridor by curtains instead of doors.

Isolation Block, Children's Hospital.—This is of simple design on the cubicle system, and easily capable of extension if necessary. This accommodation (14 beds) has been arrived at on the basis that patients will remain under treatment for an average period of six months. Each cubicle measures 9 feet square, and the partitions will be 7 feet high, as shown in the cross-section.

PROPOSED

SANATORIUM AND CHILDREN'S HOME SOUTHFIELD.



A. Dormitory Block for 50 Beds.
B. Pavilion Block for 48 Beds.
C. Pavilion Block for 36 Beds.
D. Isolation Pavilion for 14 Beds.
E. Sanatorium Dining Hall, and Recreation Room.
F. Boiler-house and Engine Room.
G. Wash-house and Laundry.
H. Kitchen, Nurses' Dining Room, and Mens' Dining Room.
J. Stores.
K. Site of future Maids' Home.
L. Nurses' Home.
M. Matrons' and Doctors' Home.
N. Garage.
O. Operating Machine.
P. Mortuary.
Q. Gate Lodge.
R. Medical Superintendent's House.
S. Supervisor's Pavilion for 10 Beds.
T. Administrative Centre.
U. Three Houses for Workmen.
V. Men's Quarters.
W. Workshop Block.

Area—71·886 Acres,

Sanatorium for Male Adults (Block B).—This will accommodate 48 patients in all, 32 in wards of 8 beds each, with the following measurements :—

Length, ...	30 feet.
Breadth, ...	21 feet 6 inches.
Height, ...	10 feet.
Floor area, ...	645 square feet.
Floor area per bed, ...	80 ,,

The remainder are accommodated in 2-bed wards, with a floor area of 80 square feet per bed. The cross-section on the plan shows the proposed arrangement of corridor, ward, and verandah; the height of these 2-bed wards being 9 feet 3 inches, and that of the 8-bed wards 10 feet. This block is divided into two, each containing its own nurses' room, kitchen and lavatory accommodation, linen-room, test-room, drying-room, boot-room, lavatory, and locker accommodation.

Sanatorium for Male Adults (Block C).—In this block there is accommodation for 36 beds; with the exception of 4 single-bed wards, the accommodation here will take the form of 2-bed wards. The dimensions of these and the cross-section are the same as have been described in regard to Block B. In the centre of this block is a day-room, 16 feet by 30 feet, and also certain rooms required for administrative purposes, two medical examining rooms with dark room for throat examinations, an administrative office, test-room and lavatory. This group of rooms is intended to be the administrative centre for the sanatorium, which is considerably separated from the main administrative buildings, and is essential to the proper working of the sanatorium as a separate unit.

Sanatorium—Supervisor's Pavilion.—This is of simple design and contains accommodation in separate rooms for 10 persons, with 2 day-rooms and lavatory, &c., accommodation. The function of this pavilion will be to house the male staff engaged in supervision and instruction of the patients under training in the workshops. It is estimated that six of the rooms in this block will be occupied by the staff required for this purpose, leaving four beds for patients' accommodation. This block is, therefore, partly for staff and partly for patients.

The total accommodation for patients in the male sanatorium is thus, as follows :—

2 Blocks, "B" in the Block Plan, ...	96 beds.
Block, "C" in Block plan, ...	36 ,,
Supervisor's Pavilion, "S" in Block Plan, ...	4 ,,
Total Patients' Accommodation, ...	136 ,,

Sanatorium, Dining and Recreation Rooms.—This block consists of a conjoined recreation room and dining-hall separated from one another by a temporary screen, with the following dimensions respectively, 45 feet by 30 feet, and 50 feet by 28 feet. Both rooms have a common entrance, with cloakroom and lavatory accommodation, while a service kitchen is situated behind the dining-hall, and comprises kitchen and servery with dish store and storage accommodation.

ADMINISTRATIVE BUILDINGS.

Maids' Kitchen, Nurses' and Maids' Dining-room.—The kitchen portion of this block is designed, as previously explained, to serve the larger institution when completed.

It consists of kitchen proper, 30 feet by 44 feet, with scullery, 20 feet by 20 feet, and still-room, vegetable and fish store, and other necessary accommodation. Food will be prepared here for the whole institution. Attached to the kitchen by means of two separate serveries, each 15 feet by 14 feet 6 inches, are the dining-rooms for maids and nurses, the former 24 feet by 30 feet and the latter 24 feet by 40 feet. Both of these rooms are capable of expansion.

Stores Block.—This block contains provision store, with storage accommodation for bread, meat, and ice; also a milkhouse with separate entrance. Also a steward's store and office, along with a van entry and unloading platform. Upstairs is the clothing store and sewing-room.

Matron and Doctors' Home.—This block contains separate accommodation for the Matron and the Medical Staff, with common kitchen and scullery. The Matron's quarters consist of dining-room, bedroom, and sitting-room; the Medical Staff's quarters of dining-room, sitting-room, library, and 4 bedrooms, with appropriate lavatory accommodation. The heights of the ceilings are shown as 10 feet on the ground floor and 9 feet in the upper floor.

Men's Quarters.—Accommodation is provided here for a male staff of 11 persons, the ground floor plan showing lavatory and linen accommodation, and the upper floor plan showing lavatory accommodation, sitting, and writing-rooms. The height of the ceilings are 9 feet on the ground floor and 8 feet 6 inches in the upper floor.

Workshop.—This is of simple design, consisting merely of a large workshop with store, office, and lavatory attached. It has not been thought advisable at this stage to divide it in accordance with the different kinds of work to be carried on. This can be done later, if necessary. This building is readily capable of extension.

Garage and Mortuary.—In the former, accommodation is provided for three cars, and a joiner's workshop is attached.

The latter contains mortuary, post-mortem room, and chapel.

Gate Lodge.—The plan shows a 4-apartment house with office attached, and also a separate entrance for visitors apart from the gate. The heights of ceilings are 9 feet on the ground floor and 8 feet 6 inches on the upper floor.

Workmen's Houses.—Three 5-apartment houses are shown of similar design to those already authorised for erection at Robroyston Hospital.

Medical Superintendent's House.—This is shown as a 6-room and kitchen house, containing 2 public, 3 bedrooms, and a study. The heights of the ceilings are shown as 9 feet 6 inches on the ground flo r and 9 feet in the upper floor.

Boiler-house and Engine-room.—This building consists of a boiler-house with space for two Lancashire boilers, a heating chamber adjoining, and rooms for the electrical generators and storage batteries. There are also workshops for the various trades connected with the engineering plant. Future accommodation is shown by a dotted line, making provision for a third boiler.

Laundry.—This building is designed as simply as possible, and consists of receiving-room, wash-house, laundry, and despatch-room. The machinery is shown approximately, both as to quantity of plant and relative position. There is no separate staff laundry. The disinfection chamber is shown as an annexe to the wash-house.

Administrative Centre.—This block contains the clerical department, waiting-room, offices for Superintendent and Matron, and attached to it is the dispensary with its store, and the laboratory with its preparation room. On the upper flat is provided a nurses' lecture room. Lavatory accommodation in this block is arranged as follows:—

Separate lavatories for male and female visitors on the ground floor with male staff lavatory accommodation opposite, while the female staff lavatory is situated on the upper floor.

Nurses' and Maids' Home.—This block is of three storeys, each 9 feet high, and has been so designed as to avoid dark internal corridors. It is intended to house in this building the nursing staff, maids, and female administrative staff.

On the ground floor there is accommodation for two assistant matrons, and there is also provided two writing-rooms, a small kitchen, boxroom, and 2 linen-rooms. On this floor, apart from the assistant matrons' accommodation, there are 40 bedrooms for staff.

On the first floor there are a large nurses' recreation room, 2 writing-rooms, boxroom, and 2 linen-rooms, along with 43 bedrooms for staff.

On the second floor there are 2 writing-rooms, boxroom, 2 linen-rooms, along with 43 bedrooms for staff. A recreation room for maids is not provided for at present; the writing-rooms on the second floor will be used for this purpose.

The lavatory accommodation on each floor is as follows:—5 baths, 5 water-closets, and 10 wash-hand basins.

Fire-places are provided in eight of the bedrooms, which will be used for sick nurses. The nurses' recreation room extends through the two upper storeys, and gives access to a verandah continued across the front of the building in the form of a colonnade.

Heating Arrangements.—All the buildings will be warmed by means of hot-water radiators, with the exception of workmen's houses and the gate lodge. This will be carried out on the mechanically-accelerated principle, so that all the exhaust steam from the electric light engines will be utilised. The hot-water service will also be done on the mechanically-accelerated principle.

Construction.—It is proposed that all the administrative buildings be built of brick, but alternative prices will be taken for backing the walls with concrete, as there is an abundant supply of whin on the site, which would form an excellent aggregate for concrete. Exposed facings, such as lintels and sills, will be formed in pre-cast concrete.

With regard to the ward blocks for the accommodation of patients, the foregoing remarks apply, but, as a further alternative, prices will be taken for a more temporary type of construction.

The workshop will be built entirely of a temporary type of construction.

RECEPTION HOUSES.

Baird Street Reception House.—Since the prevalence of smallpox ceased, the accommodation at Baird Street Reception House is again utilised for the treatment of ophthalmia neonatorum, trachoma, and venereal diseases in children under 10 years of age.

South York Street Reception House.—The following table shows the contacts and cases dealt with at this reception house during the year, compared with 1920:—

CONTACTS &c. ADMITTED TO RECEPTION HOUSE.

South York Street	1920 Total	1921 Adults	1921 Children	1921 Total
Smallpox, ...	680	21	6	27
Typhus Fever, ...	30	10	3	13
Enteric ,, ...	3	3	2	5
Scarlet ,, ...	5	6	3	9
Diphtheria,...	7	1	—	1
Impetigo, ...	2	3	14	17
Verminous Persons treated, ...	9	67	5	72
Itch, ...	8	14	15	29
Itch and Impetigo, ...	5	1	—	1
Total, ...	749	126	48	174

DISINFECTING STATIONS.

Sanitary Wash-houses.—The following table summarises the washings and disinfections carried out at Ruchill and Belvidere Sanitary Wash-houses during the year 1921:—

	Belvidere	Ruchill	Total
Number of washings, ...	9,159	8,901	18,060
Average number per day, ...	25·1	24·4	49·5
Articles washed and disinfected, ...	303,415	352,452	655,867
Average number of articles per washing,	33·13	39·48	36·31
Fuel consumed, ... tons	555	651	1,206
Fuel used per article, ... lbs.	4·01	4·14	4·10
Soap and powder used per article, ... ozs.	·37	·64	·54
Disinfectant do. ... ozs.	·46	·55	·53

NUMBER OF WASHINGS, ARTICLES DISINFECTED, &c., FOR YEARS 1919-21 INCLUSIVE.

	Washings	Articles	Sprayings	Whitewashings
1919, ...	23,150	896,801	14,675	132
1920, ...	20,543	812,796	20,155	1,499
1921. ...	18,060	655,867	19,196	21

SECTION VIII.

OFFENSIVE TRADES.

During the year five applications were lodged with the Local Authority for permission to establish or extend the operations of offensive trades. These are described shortly in the following notes:—

Soap Boiler.—Application was made by a firm to establish the business of soap boiler in Parkhead district of the City. The premises consisted of a large modern building with brick walls and concrete floors; well lit, and fitted with louvre ventilators on the roof. The building was in a good state of repair and satisfactorily drained. The applicant had carried on the business in the existing premises for a considerable time.

The processes carried on included the manufacture of washing soda and soap powder, the latter being produced by the boiling of cottonseed oil and caustic lye. No licence had been obtained in the past, and the reason for the present application was because of a proposal to add animal fats to the vegetable oils at present used. The tallow to be dealt with would, it was stated, be obtained from tallow melters and not made on the premises.

Suitable arrangements of boilers, &c., were undertaken and any effluvia arising from the contents in process of heating carried by a pipe and delivered under the bars of a furnace provided for steam raising purposes, and the applicant undertook to use no other method for exhausting the tallow barrels than scraping with a knife.

Within a radius of 100 yards there was a considerable amount of property, containing dwelling-houses, workshops, stables, &c., but, as the business proposed to be carried on was that of soapmaking, and did not entail the boiling of raw tallow, it was not likely to cause nuisance if properly conducted. The committee recommended that the licence be granted on a further condition, that the barrels containing the tallow would not be exhausted by steam.

Tallow Melter.—Permission to continue the licence for extended and more fully-equipped premises for the purpose of tallow melter was granted after consideration by the committee of an application in respect of premises in Dennistoun district. The business here has been established for over 30 years. The construction of the building and the condition of the drainage, &c., were all satisfactory, and there are no dwelling-houses within a radius of 100 yards. The material handled is sweet fat, collected at the Meat Market daily, conveyed and dealt with on the day of delivery, for edible and commercial purposes. The plant provided was satisfactory for the business, and the method of dealing with materials such as would prevent nuisance occurring, the exhaust from the boilers being conducted to the furnace bars.

The conditions on which the application was granted were—(1) that the three existing tallow vats should not be increased; (2) all vapours and fumes should be led into the furnace and there consumed; and (3) no accumulation of bones or fat or other residues to be kept in the premises so as to cause offensive smells.

Another application was made to establish the same kind of business in Carntyne district. The premises were formerly occupied by a rope manufacturer, and it was proposed to collect fat from shops, to be melted down for

the manufacture of soap, &c., and the residue sold as manure. In order to make the place suitable for this business, the applicant undertook considerable alterations of walls, floors, ventilation, suitable drainage, &c., and to provide lavatory accommodation.

The fat to be digested was to be boiled by means of steam, while suitable provision was made for the prevention of offensive vapours from the storage vats, boiler, coolers, &c. There were no houses in the immediate vicinity, and the necessary sanction was granted, subject to the alterations and the improvements suggested being made.

Skinner or Hide Factor.—An application was made during the year for the transfer of a skinner or hide factor's business to new and larger premises. The business carried on was merely that of collecting and storing the hides, which were salted at the time of collection, and no further process with them was carried on. The new premises were situated in a railway arch, which was structurally quite good, with concrete floor and sandstone walls; drainage satisfactory, and provision was made for water supply and latrine accommodation. It was also proposed to make satisfactory means of ventilation.

The application was granted by the Local Authority on condition that no process of manufacture and no boiling, liming, or scraping of hides would be carried on; that the hides would only be collected, trimmed, and salted in the premises, and despatched therefrom not later than seven days after being brought there, in addition to making the necessary improvements of the premises.

An appeal was lodged by an adjoining firm, and an inquiry held by the Board of Health in June, when it was dismissed.

Horse Slaughterers.—The annual renewal of licences for the businesses of slaughterer of horses and knackers in respect of premises in the Northern Division of the City was granted.

SECTION IX.

GLASGOW PORT LOCAL AUTHORITY.

The issue of new regulations during the year was made the subject of the following memorandum for the consideration of the Port Local Authority Committee:—

PORT SANITARY ADMINISTRATION.

REPORT BY MEDICAL OFFICER OF HEALTH

ON

(1) Public Health Port Administration (Infectious Diseases) Regulations, 1921;

(2) Regulations by the Scottish Board of Health, in respect of grant in aid of Port Sanitary Administration (26th April, 1921);

(3) Circular letter of the Board thereon, I.D.B. No. 9, 1921.

Scope of the Regulations.—The Public Health Port Administration (Infectious Diseases) Regulations, 1921, considerably extend the scope of port administration. They enable the Medical Officer to board any ship arriving in port and cause it to be brought to, and, if necessary, moored or anchored in some safe and convenient place, while it is being examined for the purposes described in them. In detail these include the examination of persons suffering from infectious disease, or where there is reasonable ground for believing that such disease may be or has been present during a period of three weeks prior to arrival; and of persons who are suspected to be verminous. They empower the Medical Officer to detain on shipboard, or remove to an appointed place on shore, any person who comes within the purview of the provisions, and cause such person and his clothing, or other articles, to be cleansed and disinfected. They empower him also to prohibit such person from leaving the ship, save under such conditions as he may prescribe for the purpose of preventing the spread of disease; to require the master to assist in taking such steps as are reasonably necessary to prevent the spread of infection, to remove conditions on the ship likely to convey infection, and to assist in taking steps to prevent the escape of rats or other vermin, and for their destruction, &c.

Purposes of the Grant.—To meet the increased outlay to be incurred in discharging these new obligations a grant from Exchequer funds will be given equal to one-half of the approved expenditure on—

(1) Staff salaries, including clerical and rat-catcher.

(2) The provision and maintenance of office accommodation, including medical examination rooms, waiting-rooms, &c.

(3) The provision and maintenance of hospital accommodation for smallpox and other infectious diseases.

(4) The provision and maintenance of places for contacts.

(5) The provision and maintenance of cleansing, disinfecting, and disinfestation apparatus, and stations for (*a*) persons, (*b*) ships, and (*c*) clothing, bedding, &c.

(6) The provision of facilities for laboratory enquiries.

(7) The provision and maintenance of suitable means of transport for (*a*) boarding vessels and (*b*) removing patients to hospital.

(8) The provision and maintenance of mortuary and post-mortem accommodation.

(9) The provision and maintenance of premises and appliances necessary in connection with the examination of food, &c.

(10) Any other services required or approved by the Board.

All these are subject to the qualification that where the services and accommodation are shared by a Port Local Authority with other branches of Local Authority services, the allocation of the relative expenditure between the various branches shall be subject to the Board's approval.

In calculating the amount to be paid under the regulations, the Board shall take into account the sum received or receivable by the Local Authority out of the Sanitary Officers' Grant in respect of the salary of the Medical Officer of Health and Sanitary Inspector.

For many of the purposes for which the regulations are intended, the Port Local Authority has hitherto been dependent on help from the parent Local Authority, *i.e.*, the Local Authority of Glasgow. It was one of the arguments for placing the administration of the port in the hands of that Authority, that preventive machinery

was already in being from which considerable assistance could be obtained for port purposes should any emergency arise. So that, save in respect of hospital accommodation under the Cholera, &c., Orders, and for smallpox—for the accommodation of which an arrangement was come to with the Greenock Local Authority—all the other infectious diseases which arrive by ship are accommodated, where such is necessary, in the Glasgow hospitals, and are only removed on the arrival of the ship in Glasgow harbours.

In considering how the foregoing regulations may be given effect to, it will be remembered that hitherto we have been able to carry on the work at the boarding station with the use of a launch in association either with the pilots or H.M. Customs.

Boarding was done at first by arrangement with the Clyde pilots, thereafter in association with them and with the Preventive Officer of H.M. Customs, and later with the Customs Officers alone, this being rendered necessary because the pilots removed their station to Gourock, which is some distance below the Customs boarding station at Princes Pier.

Article 8 of the regulations reads :—" The Local Authority may, for the purposes of these regulations, and if so required by the Board, shall, after providing for the appointment of a staff, provide or arrange for the provision of :—

(1) Premises and waiting-rooms for the purpose of medical examination;

(2) Apparatus or means for the disinfection of ships and persons, or clothing, and other articles;

(3) Premises for the temporary accommodation of persons to which such accommodation is required for the purpose of the regulations;

(4) Hospital accommodation for persons to whom these regulations are applicable; and

(5) Means of transport."

Such medical examination as required to be made in the past was done on board; but it may happen—although at the moment the alien traffic is scarcely of sufficient volume to make the need urgent—that examination rooms and special disinfestation rooms on shore will become a necessity. This raises the question as to the most convenient site for such station.

At present there are four disembarking quays on the Clyde, viz. :—

(1) Princes Pier, Greenock, where passengers are frequently landed when the ship has lost the tide and is unable to proceed direct to Glasgow. Passengers and luggage are only landed here, where the Customs officials examine both, previous to being entrained to Glasgow.

(2) *Yorkhill Wharf.*—This wharf is used by ships of the Anchor Line Company for the landing of passengers, baggage, and cargo. It is about 10 minutes' walk from the car and Partick Central Station.

(3) *Prince's Dock, Shed A, Berths* 1 *to* 4.—These berths are used by the C.P.O. Steamship Company for the landing of passengers, baggage, and cargo. They are about 5 minutes walk from the car line.

(4) *Prince's Dock, Shed D, Berths* 14 *to* 17.—These berths are used by the Donaldson Line (now called the Anchor-Donaldson Line), also for the landing of passengers, baggage, and cargo, and are about 5 minutes' walk from the car line.

Were representation made to passenger shipping companies, and an agreement come to whereby all passengers would be landed at the same place, the most convenient of all is Yorkhill Wharf, it being a river berth. It is also the wharf where more than half the passengers are at present disembarked. Between 1st January and 15th June, 1921, 2,281 passengers of the Anchor Line were disembarked here, compared with 1,836 disembarked at Prince's Dock by the two companies, namely, C.P.O.S. and the Anchor-Donaldson. Were one landing-place agreed upon, the requisite accommodation for examination and the apparatus for disinfection and disinfestation could be there provided, and the expense and difficulty of multiple landing-places avoided.

Should the shipping companies fail to agree to the arrangement of one uniform landing-place, an alternative is the erection of a complete examination and waiting-room station at Prince's Dock where two companies disembark passengers at present, and only an examination and waiting-room at Yorkhill Wharf, whence persons landed and requiring further medical examination and treatment could be transported by ambulance or otherwise to Prince's Dock Station, where disinfection and delousing could be carried out.

NOTE.—From Princes Pier to Gourock Pier is over 2 miles. It has been suggested, however, that as the Customs Boarding Area on the water extends to within a few hundred yards of the water area where the pilots board, the question of co-operation with them is not barred, unless the phrase "Customs Boarding Station" is limited strictly to the situation of the headquarters.

The following table gives the number of British and alien passengers and crews of passenger ships arriving in the port from January to 15th June, 1921 :—

	Passengers British	Passengers Alien	Crews
PRINCE'S DOCK—			
C.P.O.S., ...	838	63	985
Anchor-Donaldson, ...	743	192	1,266
	1,581	255	2,251 = 4,087
	1,836		
YORKHILL—			
Anchor Line, ...	1,151	1,130	2,050 = 4,331
	2,281		

In pre-war days each of these companies had a weekly service from Canada and America to the Clyde, and it is understood that these pre-war sailings will be resumed when the new ships are available.

Boarding.—The Customs board all ships arriving overseas, light or loaded, but do not board ships coming light coastwise. In the case of vessels from foreign coming coastwise with foreign inward cargo on board, the Customs Officer in most cases hails the ship for particulars—name of ship, master's name, port of loading, tonnage and nature of cargo, and only in the case of vessels carrying Asiatic crews do they ever put the question: "Crew all well?" The affirmative answer to this question, while it may cover the state of health on board at the moment, gives the P.L.A. Officer no indication as to sickness, however recent, occurring during the voyage.

Occasions arise where the ship is boarded by the P.L.A. and Customs Officer, and the ship goes to an anchorage. The Customs Officer collects and seals up the dutiable stores. This may take hours, and the P.L.A. Officer is obliged to wait until the Customs officials are finished and thus much valuable time is lost. Again, on the other hand, the P.L.A. Boarding Officer cannot complete his duties with any satisfaction on vessels proceeding direct to Glasgow on the tide, as the Customs Officer's duties are brief—he is only required to grant the master of the vessel pratique, after verbal answers to health questions have been given.

Sick.—Sick are not permitted to be carried on the Customs launch, nor is it permitted to make any special run except where a case of sickness is reported to them, and the Medical Officer desires to go on board the ship to ascertain the nature of the illness. It is not possible for the P.L.A. Officer to visit all vessels running on the tide and boarded by an Officer of Customs, to whom cases of sickness are reported which, in his opinion, do not come within the purview of the Cholera Order. The Officer of Customs, of course, reports such sickness to the Medical Officer, who consequently can do nothing in the matter further than 'phone the case to Glasgow, or follow up by train if possible.

Aliens Order.—The requirements of the Aliens Order were dealt with in a report of 16th July, 1920, which was approved at the meeting of the Port Local Authority on 11th August. The work in this connection would fall to be done by the staff, in association with the Immigration Officer, and any premises provided for the purposes of the Port Regulations would function for similar purposes under the Aliens Order.

Boarding and Removal of Sick.—In several preceding paragraphs the difficulties of boarding in association with officers of other departments, whose duties may in given cases occupy more or less time than the Boarding Medical Officer requires, have been described. In actual experience the Medical Officer loses time by waiting on board if the other officers' duties take longer—or by deferring his own work until the ship's arrival in Glasgow. This must always be so if the retention of the launch alongside any vessel is determined solely by the time required by the officers of another department. Moreover, the Customs' launch is not available for removing sick, whether passengers or crew.

These things would seem to suggest that an independent launch, adequate for all weathers and capable of carrying sick, is necessary for Port Local Authority purposes.

Against this there is obviously the capital charge for providing the launch, and the current charge of maintaining an adequate crew to man it during the twenty-four hours.

Alternately, an arrangement with a local hirer for such services as are required might be arranged,* but, owing to the irregularity of arrivals, this might be little short of the whole-time services of one boat.

* Since this Report was prepared a note has been received from the Marine Motor Company, Greenock, offering to provide the necessary services for boarding and returning from vessels arriving at the Tail of the Bank. This takes no account of removal of the sick, which has only on two occasions required to be undertaken.

But it might, with great reason, be urged that either arrangement was increasing unnecessarily an already financially-overweighted Port Service. The Customs, the Pilot Service, and the Port Local Authority have all boarding duties to perform at or round about the same place. If each is to be provided with independent and separate boarding facilities the work of all three might no doubt be done efficiently, but it could not be said to be done economically. The question is, might it not be done quite as efficiently, and at much less cost, were the arrangements which obtained for some years before the war reverted to, and all three work from the same launch, with the addition of a relief boat (a motor launch would serve the purpose) for such contingencies as have been indicated. Until the possibilities of an arrangement of this character have been exhausted, I do not feel justified in recommending the provision of separate boarding facilities for Port Local Authority purposes.

The further steps necessary to put the Port Regulations into effective working order are:—

(1) To enquire at the passenger shipping companies with regard to the possibility of one disembarking station, in order to provide the premises required for inspection and waiting, &c.; and

(2) To invite the Customs and Pilot Service to consider a unified scheme for providing boarding facilities, and the probable cost thereof.

SUMMARY OF WORK DURING THE YEAR 1921.

1,242 vessels from foreign ports passed the boarding station at Greenock during the year 1921. Of this number, 421 had come from or called at ports which were infected within the meaning of the Cholera Order.

The following table shows the number of arrivals in each month of the year in the several groups, as also the number of crews and passengers:—

NUMBER OF SHIPS ARRIVING FROM FOREIGN PORTS—YEAR 1921.

Month.	(A) H.M. Customs.	From Infected Ports. (B) With Foreign Cargo.			(C) Light, or with Outward Cargo.			Total of B and C.			(D) From Non-Infected Ports, with or without Cargo.			Total.		
		Ships.	Crew.	Pass.	Ships.	Crew.	Pass.	Ships.	Crew.	Pass.	Ships.	Crew.	Pass.	Ships	Crew.	Pass.
January, -	89	19	1,356	3	19	1,482	2	38	2,838	5	83	3,241	343	121	6,079	348
February, -	72	17	1,212	1	19	1,197	...	36	2,409	1	67	2,629	334	103	5,038	335
March, -	64	19	1,124	2	18	1,169	...	37	2,293	2	60	2,174	145	97	4,467	147
April, - -	69	20	1,482	3	17	1,357	3	37	2,839	6	52	2,593	729	89	5,432	735
May, - -	59	10	484	4	12	854	...	22	1,338	4	46	2,609	1,567	68	3,947	1,571
June, - -	63	13	760	1	12	723	1	25	1,483	2	53	3,518	2,082	78	5,001	2,084
July, - -	75	14	970	3	9	526	...	23	1,496	3	66	4,040	1,606	89	5,536	1,609
August, -	70	18	1,012	7	16	1,133	1	34	2,145	8	73	3,800	1,572	107	5,945	1,580
September, -	99	31	1,684	1	20	1,289	1	51	2,973	2	75	3,670	1,300	126	6,643	1,302
October, -	86	15	1,243	27	19	1,232	...	34	2,475	27	83	4,006	1,405	117	6,481	1,432
November, -	90	16	1,213	11	16	953	2	32	2,166	13	77	3,432	887	109	5,598	900
December, -	97	23	1,338	5	29	2,125	1	52	3,463	6	86	3,338	842	138	6,801	848
Totals, -	933	215	13,878	68	206	14,040	11	421	27,918	79	821	39,050	12,812	1,242	66,968	12,891

The following table shows the nature and distribution of the diseases met with in the year 1921. The first column shows the total number of cases and the others the destination, whether treated in hospital or at home, of those found on arrival.

46 cases were removed to hospital in Glasgow; 35 were allowed to proceed home under special precautions; 6 deaths occurred, of which 4 were pneumonia (buried at sea), 1 was C.S. fever (buried at sea), and 1 was infantile diarrhœa, the body being conveyed to Glasgow for burial.

To complete the table, column 3 shows that 47 cases were dealt with at other ports during the voyage. Particulars of these are not available in each case, but, where necessary, disinfection was carried out in Glasgow.

Return of INFECTIOUS DISEASES on Board Ships Bound for Glasgow during 1921.

Diseases.	Total Number of Cases during Voyage.	Cases Found on Arrival.	Cases Dealt with in other Ports.	Cases Sent to Hospital in Glasgow.	Cases Sent Home.	Deaths during Voyage.
Cholera, ...	—	—	—	—	—	—
Plague, ...	—	—	—	—	—	—
Smallpox, ...	1	—	1	—	—	—
Enteric Fever, ...	13	4	9	4	—	—
Scarlet Fever, ...	2	2	—	2	—	—
Diphtheria, ...	2	2	—	2	—	—
Measles, ...	8	2	6	2	—	—
Chickenpox, ...	4	3	1	3	—	—
Pertussis, ...	2	2	—	2	—	—
Cerebro-spinal Fever, ...	1	—	1	—	—	1
Phthisis, ...	13	9	4	4	5	—
Venereal Disease, ...	15	11	4	—	11	—
Malaria, ...	18	10	8	3	7	—
Pneumonia, ...	22	16	6	16	—	4
Parotitis, ...	2	2	—	2	—	—
Diarrhœa, with temperature,...	3	3	—	—	3	1
Tonsilitis, ...	2	2	—	—	2	—
Trachoma, ...	1	1	—	—	1	—
Dysentery, ...	3	3	—	3	—	—
Continued Fever, ...	3	3	—	3	—	—
Influenza, ...	5	1	4	—	1	—
Quinzy, ...	1	1	—	—	1	—
Glandular Swellings, ...	6	3	3	—	3	—
For Observation, ...	1	1	—	—	1	—
	128	81	47	46	35	6
		128		81		

ENTERIC FEVER.

Of the 13 cases of enteric fever recorded, 4 were found on arrival and were removed to hospital in Glasgow. 9 cases were dealt with in other ports. All the cases were members of crews.

MEASLES.

Only 8 cases of measles were noted during the year, of which 2 were found on arrival (juvenile passengers) and were removed to hospital. The other 6 cases were dealt with in other ports.

PHTHISIS.

Of the 13 cases noted, 9 were found on arrival, 6 being passengers and 3 members of crews. The other 4 cases dealt with in other ports were members of crews.

VENEREAL DISEASE.

15 cases of venereal disease were noted during the year. Of these 11 were found on arrival, 1 being a rejected male passenger.

MALARIA FEVER.

18 cases, all members of crews, were noted during the year. On one ship 7 cases were treated in another port, and 1 in Glasgow.

PNEUMONIA.

Of the 22 cases noted, 16 were found on arrival and were removed to hospital in Glasgow, where 1 died. 6 cases were treated in other ports or at sea, of whom 3 died. All the 22 cases were members of crews.

ALIENS ORDER.

The Aliens Order came into force on 1st September, 1919. This Order governs the landing of aliens in the United Kingdom at approved ports and inspection by the Immigration Officer and Medical Inspector.

The purpose of the examination of aliens at approved ports is to exclude aliens—

(*a*) whose presence is likely to be a danger to the public health; or

(*b*) who are likely to become a charge on public funds because—

(i) they are or may become incapable of supporting themselves and their dependents; or

(ii) their condition is such as to render it probable that they will need treatment and care which they are unable to provide themselves.

During the year 1921, 56 vessels carrying alien passengers arrived at the port—4 from Portland Maine; 4 from St. John's, N.B.; 26 from New York; and 22 from Montreal. These in all carried 3,490 alien passengers. Of this number 2,926 were American citizens on holiday (non-transmigrants). The table given below shows in detail number and nationality of the aliens:—

RETURN OF ALIEN PASSENGERS ARRIVING AT THE PORT OF GLASGOW, 1921.

Nationality	Non-Trans.	Transmigrant	Total
American Citizens,	2,926	36	2,962
Polish,	—	245	245
Swedish,	2	6	8
Spanish,	3	2	5
Belgian,	—	4	4
Norwegian,	—	12	12
German,	1	10	11
Peruvian,	3	—	3
Danish,	7	14	21
Finnish,	1	23	24
Slovakian,	—	3	3
Italian,	13	34	47
French,	5	5	10
Greek,	1	3	4
Russian,	3	7	10
Bulgarian,	—	4	4
Japanese,	9	—	9
Roumanian,	1	55	56
Syrian,	—	2	2
Dutch,	6	20	26
Mexican,	2	1	3
Chinese,	2	—	2
Lithuanian,	—	1	1
Austrian,	—	7	7
Serbian,	—	1	1
Esthonian,	—	1	1
Ukranian,	—	8	8
Latvian,	—	1	1
Totals,	2,985	505	3,490

REJECTIONS UNDER THE ALIENS ORDER.

The Immigration Officer is charged with the duty of deciding whether an alien should be allowed to land. It is, therefore, essential that the Medical Inspector and the Immigration Officer should make their examinations concurrently. The general examination frequently discloses facts of medical importance, and on the result of medical examination, coupled with a consultation with the Immigration Officer, are based the latter's ultimate decision in most cases.

The following aliens were conditionally rejected on medical grounds, or landed under supervision:—

(1) *Trachoma.*—A second-class alien passenger granted leave to land on condition that he presented himself for further medical examination on shore, as he was suspected of suffering from trachoma. Further medical examination indicated conjunctivitis, consequently he was permitted to land unconditionally. This man was landed during the currency of the Order permitting conditional landing for further medical examination. This section is now cancelled.

(2) *Debility.*—A third-class alien passenger refused permission to land, as he was suffering from debility following an abdominal operation (recent). The Immigration Officer, on interrogating the man, found that he was not in a position to support himself. After consultation, it was decided to reject the case, and he returned by the same ship to New York.

(3) *Whooping-Cough.*—A child suffering from whooping-cough granted conditional landing. Removal to hospital.

(4) *Phthisis and Debility.*—One family of 4 persons rejected because father had phthisis and debility. The parents were British born, and Immigration Officer granted 3 months' conditional landing. On representation to Home Office by father, and after consideration of case, the Chief Inspector of Aliens was of the opinion that the restrictions should be withdrawn. Ultimately, the family returned to New York, *via* Liverpool, owing to the great amount of unemployment in this country. Their stay in this country was less than 3 months.

(5) *Phthisis Pulmonalis.*—A female alien second-class passenger suffering from phthisis pulmonalis rejected, but granted medical certificate under paragraph 61 of Order (Instructions to Medical Inspectors). She was British born, and granted conditional landing for 6 months by the Immigration Officer, but, for personal reasons, she returned to New York after a stay of only 3 weeks.

(6) *Pneumonia and Phthisis.*—An alien seaman, chief officer of a Norwegian ship, suffering from pneumonia and phthisis, was permitted to land at Glasgow for discharge, on condition that he entered hospital and that on discharge therefrom he reported to the Immigration Officer. This was carried out, and the patient returned home to Norway.

NUISANCES ON SHIPBOARD.

2,108 inspections and reinspections of vessels in harbour were made during the year. The visits to oversea steamers numbered 1,232, and the revisits 473. In oversea sailing vessels 10 inspections and 4 revisits were made, while 288 coasting steamers and 10 sailing craft were examined, revisits being paid to 83 of the former and to 8 of the latter. 209 verbal warnings were given to masters where nuisances of a minor nature were found, and 85 intimations and 4 notices (under the Public Health Act) were served where defects existed. 381 verbal instructions were given, and 560 notices served on masters of vessels *re* locking up water-closet accommodation while vessels were in port.

The nuisances discovered numbered 1,196—in forecastles, rooms, &c., 506, and in water-closets, wash-houses, &c., 207, while structural defects were found in 235 instances—225 within crews' quarters, and 10 in water-closet and lavatory compartments. General complaints were recorded in 248 instances.

Sanitary Defects and Nuisances.—The following table shows the sanitary defects or nuisances found on board vessels arriving in the harbour:—

NUISANCES FOUND WITHIN THE GLASGOW AREA DURING THE YEARS 1919-1921.

ARISING FROM MISUSE	1919	1920	1921
Forecastles, Rooms, &c.—			
Alleyways and companionways dirty, ...	87	110	54
Floors, mat coverings, ceilings, woodwork, &c., dirty, ...	276	351	222
Interior of ships' sides or woodwork dirty (to be limewashed or repainted), ...	132	167	108
Galleys dirty, ...	4	1	—
Tables and benches dirty, ...	179	235	108
Scuppers choked (water lying stagnant), ...	10	2	14
Afterpeak flooded, ...	—	2	—
Cattlemen's quarters dirty, ...	—	5	—
Rooms flooded, ...	—	5	—
	688	878	506
Water closets, Wash-houses, &c.—			
Floors, ceilings, and woodwork dirty,	232	246	81
Basins, hoppers, or troughs fouled, corroded, or choked, ...	130	135	70
Scuppers choked, ...	4	12	8
Wash-house dirty, ...	—	3	—
Interior requiring limewashing or repainting, ...	—	—	48
	366	396	207
GENERAL NUISANCES.			
Food lockers dirty, ...	—	12	48
Bilges (hold) dirty, ...	20	52	48
Gear and food-stuffs stored in sleeping compartments, ...	5	1	—
Drinking-water tanks dirty and in need of re-cementing, ...	93	176	92
Do. out of repair or uncovered, ...	3	3	1
Accumulation of rubbish in forecastle or on deck, ...	13	20	44
Forecastle infested with vermin, ...	16	17	14
Forecastle overcrowded, ...	—	—	1
	150	281	248
ARISING FROM STRUCTURAL DEFECTS.			
Forecastles, Rooms, &c.—			
Overhead decks leaking, ...	88	105	63
Ports defective, ...	170	196	91
Skylights out of repair, ...	—	1	—
Without scupper-pipe or same cemented, ...	1	2	—
Ventilators plugged, out of repair or unshipped, ...	1	3	—
Without bogies or funnels, or such out of repair, ...	38	1	8
Inadequately lighted or ventilated, ...	6	12	15
Radiators or steam-pipes defective, ...	11	9	24
Doors to forepeak and forecastle broken, ...	1	1	—
Ships' sides leaking, ...	4	4	6
Anchor chain exposed by sheathing being out of repair, ...	2	3	—
Doors of food lockers and seats out of repair, ...	6	16	15
Requiring wood-sheathing or cork-spraying for "sweat," ...	2	5	2
Hawse-pipes defective, ...	—	7	—
Floors broken and out of repair, ...	2	6	—
Bulkhead between forecastle and w.c. compartment broken, ...	2	—	—
Inadequately ventilated, ...	19	—	—
Scuppers required, ...	—	12	—
Bunks in a decaying condition, ...	—	2	—
Waste pipe leaking, ...	—	—	1
	353	399	225

NUISANCES FOUND WITHIN THE GLASGOW AREA (*Continued*)—

	1919	1920	1921
Water-closets, Urinals, Wash-houses, &c.—			
Flushing apparatus, basins or discharge pipes defective, ...	2	15	1
New water-closet required, ...	7	9	—
Ports defective, ...	—	6	—
Floor and woodwork out of repair, ...	4	—	—
Doors broken and new locks required (w.c.'s must be locked while ship is in harbour), ...	6	7	4
Ventilators plugged, ...	—	1	—
Woodwork of w.c. basin broken, ...	—	1	5
Compartments defective in light and ventilation, ...	2	8	—
	21	47	10

The following table shows the nationality and crews of oversea vessels which arrived within the Glasgow area during 1919-21:—

Nationality	Number of Vessels 1919	1920	1921	Number of Crews
American, ...	32	88	90	3,765
Argentine, ...	—	1	—	—
Belgian, ...	—	2	3	75
Brazilian, ...	—	—	1	36
British, ...	893	1,114	935	57,149
Danish, ...	24	10	10	183
Dutch, ...	12	7	8	177
Finnish, ...	—	2	11	229
French, ...	13	11	5	121
German, ...	—	—	1	17
Greek, ...	8	6	4	134
Italian, ...	19	9	5	198
Japanese, ...	9	18	11	1,021
Latvian, ...	—	—	1	8
Norwegian, ...	97	85	94	1,997
Peruvian, ...	1	—	—	—
Portuguese, ...	—	2	—	—
Russian, ...	1	2	—	—
Spanish, ...	31	56	43	1,178
Swedish, ...	36	13	20	426
Uruguayan, ...	—	1	—	—
Total, ...	1,176	1,427	1,242	66,714

The following table shows the number of oversea and coastwise ships inspected in the harbour during the years 1919-1921:—

	1919	1920	1921
Inspections—			
Oversea Steam, ...	1,162	1,427	1,232
,, Sail, ...	12	11	10
Coast Steam, ...	268	571	288
,, Sail, ...	26	23	10
Re-inspections—			
Oversea Steam, ...	364	501	473
,, Sail, ...	9	11	4
Coast Steam, ...	71	196	83
,, Sail, ...	6	16	8
Intimations, ...	132	180	85
Warnings, ...	242	291	209
Notices, ...	3	6	4
L. A.'s Letters, ...	8	10	—
Nuisances—			
Functional, ...	1,054	1,269	713
Structural, ...	374	430	235
General, ...	150	281	248

Of the total arrivals 935 were British, and 307 were vessels sailing under a foreign flag, the latter including fifteen different nationalities—Norwegians, Americans, Spaniards, Swedish, and Japanese predominating.

Drinking Water.—Where any suspicion arises as to the suitability of water supplies for dietetic purposes a sample is submitted to the Bacteriologist and City Analyst respectively, and during 1921 seven were taken. Two of them were reported as suitable, and five as unsuitable. Of the latter, three of the supplies were shipped from Montreal, while the other two were obtained at Halifax and Lake St. Peter (Gulf of St. Lawrence) respectively. Notice was given in each instance, requesting that the tanks be cleaned and cement washed.

UNSOUND FOOD REGULATIONS.

The following table shows the character and quantity of the food-stuffs imported direct during 1921 (but does not include coastwise or transhipped cargoes), a percentage of which was examined by the Food Inspectors before its removal:—

Article.	Weight Tons.	Cwts.
Apples, ...	31,094	4
Apricots, ...	177	19
Almonds, ...	711	9
Bananas, ...	21	—
Bacon, ...	8,887	8
Baking Powder, ...	212	13
Barley, ...	47,890	—
Butter, ...	376	16
Cereals (Oats, Rye, &c.),	134,518	19
Cheese, ...	3,245	4
Coffee, ...	—	6
Cocoa, ...	105	17
Condiments, ...	243	5
Confectionery, ...	214	11
Cream of Tartar, ...	340	4
Eggs, ...	5,184	18
Eggs (liquid). ...	1,631	8
Eggs (albumen), ...	226	17
Figs, ...	198	9
Fish (canned, &c.), ...	834	17
Fruits (canned), ...	1,383	12
Fruits (dried), ...	3,537	11
Fruit (pulp), ...	2,389	19
Flour (various), ...	229,021	15
Farinaceous Foods, ...	4,645	2
Glucose, ...	4,721	9
Grapes, ...	3,648	3
Grape-Fruit, ...	19	5
Ham, ...	13,346	1
Honey, ...	41	12
Lard (pure), ...	3,637	2
Lard (compo.), ...	995	9
Carry Forward,	503,503	4

Article.	Weight. Tons.	Cwts.
Brought Forward,	503,503	4
Lemons, ...	2,616	—
Liquorice, ...	15	7
Meal (various), ...	9,842	8
Meats (canned, &c.),	839	7
Melons, ...	2,364	15
Milk (canned), ...	888	18
Milk (powder), ...	54	11
Molasses, ...	994	15
Macaroni, ...	347	7
Nuts (various), ...	1,518	3
Oils (various), ...	3,452	19
Onions, ...	13,999	17
Oranges, ...	21,058	10
Orange and Lemon Peel,	8	3
Peaches (canned), ...	253	12
Pears, ...	531	14
Pears (canned and dried),	822	12
Pineapples, ...	309	3
Plums (canned and dried),	113	9
Pomegranates, ...	1,116	5
Potatoes, ...	8	—
Peas, ...	6,680	16
Rice, ...	7,275	12
Sundries, ...	436	6
Sugar, ...	14,887	11
Syrup, ...	94	12
Tomatoes, ...	160	—
Tomatoes (canned), ...	544	18
Vegetables (canned),	389	12
Wheat, ...	119,946	13
TOTAL, ...	715,074	19

The following food-stuffs were found unfit and disposed of to the satisfaction of the Medical Officer of Health:—

Article.	Weight. Cwts.	Qrs.	Lbs.
Apples, - - -	143	3	0
Apple Juice, - -	115	2	4
Currants, - - -	153	2	0
Herrings, - - -	75	0	0
Oranges, - - -	362	2	0
Bitter Oranges, - -	18	2	12
Prunes, - - -	17	2	15
Raisins, - - -	3	1	22
Lemons, - - -	5	0	0
Confectionery, - -	12	0	0
Flour, - - - -	227	2	0
Apricot Pulp, - -	324	0	22
Plums, - - - -	12	0	0
Pomegranates, - -	24	0	0
Rolled Oats, - - -	111	0	0

Total weight, - - - 1,605 cwts. 2 qrs. 19 lbs.

It has been noted that the total weight of food-stuffs imported during the year was 715,074 tons 19 cwts, or 143,983 tons 19 cwts. less than last year. Of the total imports over 1,605 cwts., or ·012 per cent., were found to be unwholesome.

During the year the following food-stuffs were sampled and submitted to the City Analyst, who reported as follows:—

Article.	Sample Reported Fit for Human Consumpion.	Sample Reported Unfit for Human Consumption.	Notes on Defective Samples.
Apples, ...	—	7	83 cwts. destroyed.
Apple Juice, ...	2	—	
Butter, ...	10	1	
Do. (Maple), ...	1	—	
Do. (Peanut), ...	1	—	Consisted of ground earth-nuts.
Cream of Tartar, ...	11	4	Excessive amount of lead present.
Egg Yolk, ...	33	1	Contained 2·08°/. boric acid.
Fish (tinned), ...	3	—	
Flour, ...	9	2	Sacking and flour contaminated with free sulphuric acid.
Fruit (tinned), ...	7	1	Large percentage of tins blown or burst.
Jam (Apricot), ...	1	—	
Milk (dried or condensed),	5	—	
Nujol, ...	1	—	
Olive Oil, ...	1	—	
Oranges, ...	—	1	Bad, contaminated with oxide of iron.
Peppermint, ...	1	—	
Peppesoni, ...	1	—	
Pork and Beans (tinned), ...	1	—	
Roast Beef (tinned), ...	1	—	
Soup (tinned), ...	1	—	
Tartaric Acid, ...	1	2	Excessive lead.
Vegetables (tinned Beans, Peas, Tomatoes, &c.)	8	—	

Foreign Meat Regulations.—The following table gives the total quantities of food material landed in the Port of Glasgow during the year 1921, a percentage of which was examined under the Foreign Meat Regulations. The returns for 1919 and 1920 are given for comparison:—

	1919	1920	1921
BEEF.			
Quarters, ...	54,524	28,287	98,094
Bags, ...	1,095	4,256	7,994
Rumps (tierces), ...	4,930	3,957	4,045
Mess ,, ...	720	1,100	635
,, (barrels), ...	1,151	1,520	975
,, (boxes), ...	1,700	135	—
Boneless (boxes), ...	25,545	25,035	29,473
,, (cuts), ...	42,593	26,861	—
Suet.	—	—	251
VEAL.			
Carcases, ...	70	—	109
Sides, ...	665	759	677
Quarters, ...	—	—	59
Bags, ...	—	—	73
Cuts, ...	1,049	—	—
Packages, ...	—	730	—
Boxes, ...	—	655	284
Forward,	134,042	93,295	142,669

	1919	1920	1921
Forward,	134,042	93,295	142,669
MUTTON.			
Carcases, ...	294,539	239,858	14,075
Cuts (bags), ...	3,086	79	—
Casings, ...	—	—	36
PORK.			
Ribs (tierces), ...	—	15	—
Carcases, ...	—	500	1,001
Mess (barrels), ...	1,412	1,145	825
,, (carcases), ...	300	220	—
,, (boxes), ...	—	180	—
,, (tierces, ...	—	110	—
Tongues, &c. (bags or boxes), ...	440	—	—
Kidneys, ,, ,, ...	1,911	—	—
Hearts, ,, ,, ...	1,077	69	—
Livers (tierces), ...	2,895	—	5
Casings (barrels or tierces), ...	335	167	163
Cheeks (boxes), ...	206	—	—
Ham (tierces), ...	147	—	—
Caule Fat (boxes), ...	—	440	1,307
Offal (bags), ...	—	12,020	—
Raw Tripe (bags), ...	—	253	—
Cooked Tripe (boxes), ...	—	817	—
Sundries (tierces or bags), ...	18,208	847	—
Total Packages, ...	458,598	350,015	160,081

Expenditure and Revenue.—This is summarised in the table which follows. During the year 1921 the Boarding Medical Officer returned from military service and resumed duty at the Tail of the Bank. This explains the increased expenditure at the Boarding Station, while increased bonus and higher hospital charges are responsible for the difference in the other items:—

EXPENDITURE AND REVENUE FOR THE YEARS ENDING 31ST MAY.

	1920	1921	1922
Expenditure.	£	£	£
Boarding Station, Greenock, ...	445	855	818
Glasgow Harbour, ...	2,243	2,862	2,524
General and Administrative, ...	750	893	1,179
Medical Inspection under Aliens Order, ...	—	—	556
Total, ...	3,438	4,610	5,077
Revenue.			
From other Authorities, &c., and Government Grant,	157	175	3,298
Glasgow Expenditure, ...	3,281	4,435	1,779

RATS AND MICE (DESTRUCTION) ACT, 1919.

This Act came into operation on January 1st, 1920. Section 6 (1) of the Act applies to a vessel as if the vessel were land. A leaflet, as below, embodying this section and indicating the best methods of dealing with rats, is given to all masters on arrival at the Port of Glasgow:—

PORT LOCAL AUTHORITY.

RATS AND MICE (DESTRUCTION) ACT, 1919.

The attention of Ship Masters is drawn to the following provisions of the Act and requirements of the Local Authority:—

PROVISIONS OF THE ACT.

(1) The Rats and Mice (Destruction) Act applies to a vessel as if the vessel were land, and the Master of the vessel the occupier thereof. (Section 6 (1).)

(2) The Local Authority may by notice served on the Master of a vessel within its district require him to take such necessary and reasonably practicable steps as are prescribed by the notice, for preventing the escape of rats and mice from the ship, and if the Master fails to comply with the requirements of any such notice he shall be liable, on summary conviction, to a fine not exceeding Twenty Pounds.

REQUIREMENTS OF LOCAL AUTHORITY.

(a) *To prevent the passage of rats from the vessel to the wharf, the following precautions must be taken*:—

(1) Rat-guards should be affixed to mooring ropes in such manner that the passage of rats from the ship to the wharf is prevented; or

(2) The moorings should be wrapped in canvas and tarred for about two feet as they leave the ship and reach the wharf.

(3) Cargo gangways should be withdrawn, or tarred or whitewashed, whilst the ship is "silent." Passenger gangways should be well lighted at night, or removed.

(4) Ship stores and gear should periodically be removed to prevent harbouring rats, and no refuse food-stuffs allowed to accumulate whilst in port.

(b) *To rid a vessel of rats*:—

(1) Ships trading with Mediterranean ports east of Marseilles or with other ports east of the Suez Canal should be deratised at the termination of each voyage, and whilst the holds are empty. Similar precautions should be observed on ships trading with South American ports, and with such other ports as are from time to time reported as infected with plague.

(2) The most effective method for destroying rats on board ship is by fumigating the holds, alleyways, cabins, food stores, pantries, living quarters, chain-lockers, and peaks with sulphur gas, and the Master or Owner of any vessel which is found to be definitely infested will be required to use this method.

(3) Simultaneously with this a deck search should be instituted of boats, steam-pipe casings, winch barrels, or other places which may afford shelter to rats.

(4) Systematic trapping should be carried out both whilst the vessel is in port and at sea. If the ship is empty, regular inspection should be made of holds, store rooms, and elsewhere, and rat hunts instituted.

(5) The keeping of cats on board is of definite advantage.

(6) It is of considerable value when rats are confined within the limits of a ship to catch them alive, to kill all the females, and to set the males at liberty on board.

(c) *Precautions in handling rats*:—

(1) Rats caught alive should be drowned and then burned in the ship's furnace. At no time should rats be handled directly owing to the risk of accidental plague infection. No rats, dead or alive, must be taken outside the dock gates except by consent of the Port Local Authority.

(2) Effort should be directed to keeping the ship rat-free. Any increase in the number of rats on board or unusual mortality among them, should be reported to the Port Medical Officer immediately the ship arrives in port.

N.B.—Nothing in this Act affects the power of the Port Local Authority to deal with rats as a preventive measure against plague. Under the Plague Regulations, any obstruction to an Officer of the Authority involves a penalty not exceeding One Hundred Pounds, with an additional Fifty Pounds for each day the obstruction continues.

The following table shows number and species of rats destroyed on ships, and in warehouses, stores, &c., during the year:—

TABLE I.

Number.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for the Year.
SHIPS—													
Black Rats, ...	32	16	23	78	25	21	39	56	10	49	66	49	464
Brown Rats, ...	148	85	95	112	170	74	88	112	28	47	64	52	1,075
Rats examined, ...	59	38	52	66	76	20	25	38	20	45	49	42	530
WAREHOUSES AND STORES—													
Non-infected, ...	96	56	25	30	162	67	31	61	10	30	27	16	629

Of the total number (1,539) trapped, 530 were examined for evidence of plague with negative result. Brown rats form fully half of the total caught.

TABLE II.

PLAGUE PRECAUTIONS—MEASURES AGAINST RATS.

Vessels arriving in the Port Sanitary District.			VESSELS SUBJECTED TO MEASURES OF RAT DESTRUCTION.					
			Number of Vessels.			Number of other Vessels.	Measures employed (trapping, poisoning fumigation, &c.).	Results.
Plague Infected.	Plague Suspected.	From Infected Ports.	Plague Infected.	Plague Suspected.	From Infected Ports.			Number of Rats killed.
Nil	Nil	421	Nil	Nil	99	106	Trapping. 194 ships. ...	1,439
							SO_2, 11 ,, ...	100
								1,539

REMARKS.

In 99 ships from Infected Ports 755 rats were caught by trapping.
In 106 ships from Non-infected Ports 684 rats were caught by trapping.
6 ships from Infected Ports were fumigated with SO_2 and 41 rats were destroyed.
5 ships from Non-infected Ports were fumigated with SO_2 and 59 rats were destroyed.

SECTION X.

HOUSING.

HOUSING, TOWN PLANNING, &c., ACTS, 1909-1919.

The following table summarises the proceedings taken during the year under Section 25 of the Act of 1919, the defects dealt with being such as defective plaster of walls and ceilings in closes, staircases, houses, and water-closet apartments, disrepair of woodwork, sash cords, &c., of windows and broken panes of glass, defective woodwork and fittings of doors, presses, sinks, coal-bunkers, &c., and minor defects of roofs, broken rhones, &c. Altogether 1,497 preliminary intimations were given, covering 4,482 complaints in 2,475 houses. In 495 cases the repairs asked for were forthwith carried out, but in 1,002 cases it was necessary for the Local Authority to issue statutory notices. 886 of these notices were complied with, but in 116 it was necessary for the Local Authority themselves to execute the repairs.

HOUSING, TOWN PLANNING, &c., ACTS, 1909-19.

(Section 25, Act 1919.)

Division	No. Issued	No. of Complaints	No. of Houses Affected
Intimations—			
Central, ...	243	979	509
Northern, ...	400	1,489	912
Eastern, ...	654	1,592	815
South-Eastern, ...	38	73	40
South-Western, ...	162	349	199
	1,497	4,482	2,475
Statutory Notices—			
Central, ...	239	773	362
Northern.	324	969	584
Eastern.	278	633	329
South-Eastern, ...	29	61	30
South-Western, ...	132	230	131
	1,002	2,666	1,436
Per cent. Statutory Notices to Intimations, ...	67	60	58
Sent to Master of Works to execute Repairs—			
Central, ...	3	7	3
Northern, ...	66	157	88
Eastern, ...	15	20	15
South-Eastern, ...	5	7	5
South-Western, ...	27	45	26
	116	236	137
Per cent. to Intimations, ...	8	5	6
, to Statutory Notices,	12	9	10

INCREASE OF RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1920.

Applications to the number of 431 for certificates, in terms of Section 2 (2) of the above Act, were received during the year. Of these 97 were refused, and 334 granted, 154 of the latter being in respect that the houses affected were not in all respects reasonably fit for human habitation, and 180 in respect that the houses were not in a reasonable state of repair. The following summary shows the distribution throughout the several administrative divisions:—

GLASGOW.—APPLICATIONS FOR CERTIFICATES UNDER SECTION 2 (2) OF THE INCREASE OF RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1920.

District	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.	10	5	14
Northern, ...	28	24	54
Eastern, ...	51	107	70
South-Eastern, ...	2	16	21
South-Western, ...	6	2	21
	97	154	180
		334	

The demand on housing accommodation has already been referred to in Section I of this report, and the following memorandum deals with the difficulty of separation of the sexes in smaller houses. In Glasgow 66 per cent. of the houses are of one and two apartments.

SEX OVERCROWDING IN SMALL HOUSES.

Year by year, the vital statistics of the country repeat with some insistence the extent of illegitimacy in the birth-rate, and show it either as a proportion of the total births, or as a ratio to the unmarried and widowed females between the ages of 15 and 45.

It is not the purpose here to consider the fluctuations which have occurred in recent years, although it is of interest to note that, when calculated on the latter basis, a considerable reduction in the illegitimacy rate has been demonstrated during the last fifty years.

Almost coincidently, the average age at marriage has increased, and the juxtaposition of these two features may have a moral significance. But before finally concluding that such is the case, a third factor in the problem is necessary, and would be supplied if we could compare the prevalence of venereal disease over the same period. Sufficiently accurate data for the comparison are not available. It is quite true that treatment centres are attended to-day as they never were formerly—within recollection at least. This fact, unsupported by other evidence, is not of itself sufficient to show that these diseases are more prevalent, but it does indicate a wider recognition of the incalculable suffering which these diseases inflict on the innocent—on the wives and children of men who discard moral standards.

One in every two children in schools for the blind is blind as a result of gonorrhœal ophthalmia, or syphilis acquired from its parents; one in every six of the male admissions to asylums has acquired syphilis in his earlier years, or inherited it from his parents; the late results of gonorrhœa and syphilis are in all our hospitals. Sir William Osler said that:—"A student who was thoroughly taught syphilis, and all the diseases which arise from it, would acquire a good knowledge of all branches of his profession."

Can we turn this recently acquired knowledge to practical ends? If we look at the social distribution of these diseases to-day, what do we find? Where are their results most obvious? The unskilled labourer has the highest incidence, or death-rate, from them; the upper and middle classes next. Lowest in the scale is the agricultural labourer, and after him the miner. Education, bereft of moral values, is no preventive.

Nor has legislation been more fortunate, as witness the failure of the C.D. Acts. Indeed, almost every modern nation, and many of those of earlier times, has at one time or another in its history tried to suppress the courtesan; and all have failed.

It must be remembered that we are dealing with a natural impulse, which develops as the child passes through adolescence to manhood, and with the development of a physiological function regarding which it has been no one's duty in the past to instruct him.

It is the period when character is being formed, when the teaching of earlier years should find a personal application in moulding those powers of self-restraint which form the basis of civilization.

But if the development takes place under conditions which tend to relax the moral fibre, youth is cast on an uncharted ocean of desire, and may make shipwreck both of his own life and of others.

It is to one of those conditions I specially desire to invite attention, as it has a direct bearing on the number of apartments required for healthy family life.

Many Commissions have reported on the prejudicial effect of health and morals of the overcrowding of small houses—none, for our present purpose, more emphatically, I think, than those of the Birth-Rate Commission.

But there is one aspect of overcrowding which has not hitherto received the attention it requires.

I am far from believing that vice is solely a material expression of the influence of bad environment, physical or moral, or both together, but these create an atmosphere in which the tendency becomes easy.

The common occupancy of sleeping rooms by adults of both sexes is one of the many blots of smaller houses.

At the Census of 1911, I cited several illustrations. Let me here quote examples, beginning with one-apartment houses. In one, there were eight persons, of whom two were adults or adolescent males, and four females; in another, six persons, three of each sex, and all adults or adolescents; in still another, there were five males and two females. Similarly of the two-apartment houses. In a household of eleven persons, there were five males and three females, at the age-periods just mentioned; in another, of nine persons, six were females and two males; again, five females and three males, with two children.

The examples sufficiently indicate the pressure during hours of sleep. Bye-laws may regulate the separation of the sexes in lodging-houses, but these were all houses privately occupied, mostly by members of one family.

Further light was thrown on this pressure on sleeping accommodation by the enquiries which became necessary when consumption was included among the notifiable diseases. The recent returns refer to conditions at present existing.

Of 5,736 cases under treatment at home, 1,259 had sleeping rooms to themselves.

Of the 4,477 cases remaining, 5,245 other persons occupied the same bed as the patient, and in addition 3,626 occupied the same room, but a separate bed.

"*Ticketed*" *Houses.*—There are 19,000 such houses in the City. They are under regulations for the purpose of controlling the number of inmates only; the question of sex is not included. But a recent enquiry for the express purpose of ascertaining the mixture of sexes, supplied the following illustrations:—

In a one-apartment house, a father of 52 occupied the same bed with a mentally-defective daughter of 24, who had an illegitimate child of 10. In another, with space for five adults, a father and daughter shared the same bed. In another, with space for 2½, a mother occupied the same bed with two sons, of 19 and 20 years respectively. Several illustrations of this were disclosed, as were also illustrations of fathers and daughters. In several illustrations, the mothers occupied the same bed with grown-up sons and daughters.

In two-apartment houses, similar illustrations occurred. The parents occupy the kitchen bed; the grown-up sons and daughters occupy a bed in the room. Two illustrations of the latter are sufficient—a son of 19 and daughter of 21 in one case; a son of 19 and a daughter of 25 (who was pregnant) in another.

Few of these illustrations are taken from houses where "legal" overcrowding existed, but all of them mark a danger zone to morals, if not to health. Modern standards of housing are rightly requiring separate sleeping-room accommodation for the sexes, but we are still a long way from its realisation.

SECTION XI.

REPORT OF THE GLASGOW PUBLIC HEALTH LABORATORY, YEAR 1921.

Diphtheria.—Diphtheria has pre-eminence amongst the infectious diseases in the exact knowledge which has been acquired as to its causation, modes of transmission, and specific preventive and curative treatment.

The specimens from suspected cases (4,269) gave positive results in 21 per cent.

The examination of contacts is an essential part of this work. When cases occur in households, schools, or hospitals, a systematic examination of contacts is undertaken, which often reveals the presence of the bacillus in persons apparently healthy. During the year 1,128 contacts showed the bacillus diphtheriæ in 5 per cent. The isolation and treatment of these unsuspected carriers of the infection thus has a far-reaching influence in preventing the spread of the disease.

Enteric Fever.—Enteric fever, which may be regarded as one of the surest indices of defective sanitation, has shown a marked declension within the city in the past fifty years, and, as a reflex of its gradual extinction, the specimens from suspected cases of enteric fever have shown a gradual decrease in the twenty-one years since the laboratory began its operations. There have been various factors contributing to this diminution of the disease, and, while the part played by bacteriology in this result cannot be ascertained, it is recognised that the early diagnosis of the disease by laboratory methods contributes effectively in securing prompt measures of isolation, treatment, and prevention. The agglutination test was performed with 294 specimens of blood from suspected cases and showed that 74, or 25 per cent., were suffering from the disease. It is noteworthy that the percentage of positive results obtained in 1900 was 51·7, as against 25 in 1921.

Tuberculosis.—The examination of sputum as a routine procedure in the diagnosis of pulmonary tuberculosis has been carried out in 3,432 specimens from the medical practitioners of the City, and in 1872 specimens from the tuberculosis dispensaries. The percentage of positive results was 20 in the former and 14 in the latter. The smaller percentage of positive results in the dispensary cases is attributable to the larger number of doubtful or early cases seeking alvice at these centres. The appearance of tubercle bacilli in the sputum indicates the transition of the disease from the early to the second stage.

Vincent's Angina.—The ulcero-membranous sore throat distinguished since 1898 as Vincent's Angina appears to be on the increase in recent years, but this apparent increase may be attributable to the more extended application of bacteriological diagnosis. The notable increase which took place in the French Army during the war, from the prevalent 2 per cent. of peace time to the exceptional 23 per cent. of the trenches and camps, gained for the affection the transient name of "trench throat." In the British Army it is said, on the other hand, to have been more prevalent in the soldiers at home than in those at the front.

The causative organism appears in two forms as a spindle-shaped bacillus and a spirochæte, which are invariably present in large numbers. The organism is also associated with inflammation and ulceration of the gums, and in Vincent's Angina the disease tends to spread from the throat to the gums. Like certain other pathogenic organisms, it is a common inhabitant of the mouth, more especially in debilitated persons and those with carious teeth. In mouths which are clean and healthy this organism may be absent or few in number, but in mouths unclean and unhealthy it is very abundant; its excessive presence, in short, is an indication of a septic condition of the oral cavity. It gives a disagreeable odour to the breath—an odour which is intensified to fœtor in Vincent's Angina.

Vincent's Angina, when acute, is difficult to distinguish clinically from diphtheria, and laboratory examination is essential to its diagnosis. By way of determining the extent of its prevalence, the throat swabs coming to the laboratory for the diagnosis of diphtheria have also been examined, as far as possible, for Vincent's Angina. This investigation has been carried on for three years.

In the course of 1921 these examinations, carried out by Drs. Clark and Ralston, numbered 3,565, and they discovered 91 cases of Vincent's Angina, indicating a prevalence of the disease to the extent of 2·6 per cent. among the sore throats examined. A double infection with diphtheria was present in 13 per cent. of the cases of Vincent's Angina. In 1920 these percentages were respectively 2·6 and 6·6, and in 1919 3·8 and 5·6. It will be seen from the following table that the disease has apparently reached pre-war prevalence:—

	Number of Swabs Examined	Percentages Positive	Percentage of Positive Cases also Infected with Diphtheria
1918, May-Dec., ...	1,024	11·0	15·0
1919, ...	2,559	3·8	5·6
1920, ...	2,920	2·6	6·6
1921, ...	3,565	2·6	13 0

Malaria.—Being a mosquito-borne disease, malaria does not bulk largely in our returns, except in those who have returned to this country after a sojourn in countries where the mosquito perpetuates the disease.

Dysentery.—The number of cases dealt with at the laboratory by Dr. W. R. Wiseman is somewhat higher this year than in 1920—425 as compared with 383. An increase in new cases is not thereby represented, but rather a slightly more extended prosecution of cases already chronically infected. The amœbic type again greatly outnumbers the bacillary type, and is altogether confined to ex-service men. Many of these are chronic cases which have proved very resistant to treatment. They are greatly benefited for a time by the measures adopted, but after varying intervals many of them have a recurrence of symptoms.

A few cases of bacillary dysentery occurred among the civilian population —women and children—and it is of interest to note that most of these were caused by a sub-species of the dysentery bacillus which was not fixed as a dysentery organism previous to 1915. As, however, practically all cases of acute bacillary dysentery in this country in pre-war days were caused by types or sub-species known to the bacteriologist at that time, it would follow that the sub-species we have been meeting lately is a new and direct importation due to the war.

As mentioned in the Report for 1920, the number of bacteriological examinations made is considerably higher than the number of patients. The absence of any tendency of either type of dysentery to spread among the population has again been a striking fact.

Ophthalmia Neonatorum.—Ophthalmia neonatorum is not only the most destructive infectious eye disease, but the largest single factor in causing preventable blindness. Of the persons registered as blind in the United States, 10 per cent. are blind as the result of ophthalmia neonatorum, and the loss of sight in 25 to 30 per cent. of the children in the blind schools of that country is attributed to the same cause. In Great Britain a committee of the British Medical Association reported in 1909 that more than one-third of those in blind schools owed their affliction to this disease. A blind child costs the Education Authority of Glasgow an excess of £10 for its schooling.

It is to be borne in mind that ophthalmia neonatorum is not always the result of gonococcal infection. Organisms other than the gonococcus cause ophthalmia of a less severe type during the early days of life, and so it is that in a considerable number of cases the examination of smears from the eyes of the newly-born has revealed the presence of staphylococci, streptococci, pneumococci, Koch-Week's bacillus, and the Morax-Axenfeld bacillus. Several cases of diptheritic infection of the eye were diagnosed in older subjects in 1920, but no such cases came within the purview of the laboratory in 1921.

Since notification was made compulsory in 1911, the examinations made in the laboratory have reached a total of 7,873, with 41 per cent. of positive results. In no disease is compulsory notification more justified in its results, for by ensuring early diagnosis and early treatment it is successfully contributing to the prevention of one of the most preventable of the infectious diseases. In the crusade against this form of preventable blindness, the bacteriological laboratory takes an important part.

The Wassermann Reaction.—As was indicated in my last report, the Harrison method of performing this test was adopted early in 1921. The past year's experience has confirmed its advantages.

Several investigations were undertaken during the period under review.

(1) With a view to determining the positive percentage-rate in diseased conditions of the eye and its adnexa, 1,000 serums were examined. This study yielded valuable information. There were 28 clinical types of eye disease submitted, and the results obtained by Dr. J. L. Brownlie showed that a large precentage of patients suffering from diseased conditions of the retina, iris, and optic nerve gave a positive reaction to the Wassermann test.

(2) A statistical review also has been made of the effect of different anti-specific drugs in the treatment of all stages of the disease, as evidenced by the Wassermann reaction. This was done to determine the value of the Wassermann reaction as a guide in the treatment of syphilis. This inquiry is proceeding.

(3) With a view to determining the positive percentage-rate in an average sanatorium population, 411 serums of patients resident in Robroyston Hospital were tested. The question as to latent syphilis being a causative or predisposing factor in the production of the tubercular state was in doubt. Shortly, the results were—

Total	Number Positive	Percentage Positive
411	24	5·8

The results were illuminating, in that they showed 5·8 per cent. of positive reactions amongst individuals in whom there was no obvious sign of syphilis, and in whom the disease had not been previously suspected.

The total number of serums submitted for the Wassermann test during 1921 was 6,718. Of these, 2,591 were positive, giving a percentage-rate of 39. Included in these totals were 1,091 serums from treated patients whose blood had been examined previously on one or more occasions. Of these, 568 were positive, which represents a figure of 52 per cent.

Thirty-three specimens were submitted in which the amount of serum obtainable was insufficient to carry out the test.

In 1920 the respective figures were:—Total, 4,788, with 1,287 positive, and a percentage of 27. Eighty-five specimens were unsuitable for test purposes.

Milk Supply and Tuberculosis.—The examination of milk for tubercle falls into three categories, namely:—(1) Samples submitted by the Veterinary Surgeon; (2) samples taken at the railway stations; and (3) hospital milk supply.

(1) *Veterinary Surgeon's Samples*—

	Total	Positive	Percentage Positive
Milk from country cows with diseases of the udder,	54	2	3·7
Milk from town cows with diseases of the udder,	302	7	2·31
Periodic examinations of herds supplying hospitals,	475	2	·42
Collective examination of whole herds supplying city milk proved tubercular, ...	43	3	7
Duplicate samples for confirmation of previous result,	23	—	—
	897		

(2) *Samples of Milk taken on its arrival at the Railway Stations*—

June 16—Dec. 28, ...	104	4	3·85

Each sample was allowed to stand in the laboratory for twenty-four hours, and an inoculation was made from the cream and the deposit respectively. Four positive results were obtained, tuberculosis being produced by both the cream and the deposit of three of the samples and by the cream of the fourth. The animal inoculated with the deposit of the latter died in four days from malignant œdema. The results obtained confirm those previously got from milk sampled at railway stations on its arrival in the city.

(3) *Hospital Milk Samples*—

Fortnightly Examination of Supply to—	Total	Positive	Percentage Positive
Belvidere, ...	26	2	7·7
Shieldhall, ...	26	—	—
Ruchill (1), ...	26	4	15·4
Ruchill (2), ...	26	—	—
Knightswood,...	26	—	—
Robroyston, ...	26	—	—
	156	6	

Three of the positive results from Ruchill occurred in consecutive samples, and were probably derived from one and the same tubercular cow in the herd.

Examination of Rats for Plague. — Rats to the number of 466 were brought to the laboratory during 1921 from the ships and the docks and from different parts of the city to be examined for plague. The examination was carried out as formerly by dissection and by cultural and microscopical methods, and revealed no trace of the disease. The last occasion on which a case of plague occurred in the city in the human subject was in a Lascar seaman in 1906, but the disease has not shown itself in the rats from ships, docks, or the city generally since 1903.

While the systematic examination of the rodents is primarily undertaken for plague, advantage is taken of their number to observe certain of their biological characteristics.

There is a popular belief with regard to the relative numbers of the sexes that the males greatly preponderate over the females. This has not been borne out by the laboratory examinations, which have been systematically carried out for twenty years. The year 1920 may be taken as affording an average of this extended observation, and shows that the relative numbers of males to females is 1·4 to 1 for the brown rat, 1·9 to 1 for the black rat, and 1·8 for the roof rat.

As formerly, the rats examined comprised three species—the brown rat (*Mus norvegicus* or *decumanus*), the black rat (*Mus rattus*), and the roof rat (*Mus alexandrinus*). Their respective numbers were 222, 141, and 103, but from year to year these numbers show variation according to the places from which they are taken.

While the brown rat shares the harbour, and to some extent also the shipping, with the other two species, it prevails almost exclusively in the city. At the same time the black rat and the roof rat have been found at places some distance from the harbour, namely:—Govan, Cheapside Street, Argyle Street, and Sauchiehall Street. Thus we have evidence that the black rat and the roof rat, both of which are regarded as migratory from the East by the shipping, are capable of spreading in the city from the docks.

Rats that were with young (16) carried litters ranging from 1 to 13, and averaged 8·5. The brown rat is said to be more prolific than the black rat or the roof rat, and this was borne out by the laboratory records.

This fertility of the rodents accounts for their great number in places providing abundant food supplies and favourable conditions for nesting.

Staff.—The staff of the laboratory is at present limited by accommodation, which has for several years been taxed to the fullest possible extent, and the steady increase of work has so increased routine work for the individual members that research work is greatly handicapped. It is anticipated that the new laboratory will be ready for occupation this year, and that it will provide the additional accommodation so much needed.

R. M. BUCHANAN.

SUMMARY FOR YEAR 1921.

Number of specimens submitted by medical practitioners:—

	1921			1920		
	Total	Number +	Per cent. +	Total	Number +	Per cent. +
Diphtheria, ...	4,269	888	21	3,385	865	26
Enteric Fever, ...	294	74	25	412	128	31
Tuberculosis, ...	3,432	689	20	3,272	687	21
Total, ...	7,995	1,651	21	7,069	1,680	24

Source	Total	Positive	Percentage Positive
193 Households, ...	569	34	6
1 School, ...	5	—	—
1 Dairy and 1 Farm, ...	41	—	—
Hospitals, Reception Houses, &c., ...	513	28	5
Totals, ...	1,128	62	5
Repeated Examinations, ...	26	6	23
		1920	
Totals, ...	2,526	158	6
Repeated Examinations, ...	67	20	29

TUBERCULOSIS DISPENSARIES.

During the year 1,872 specimens of sputum from patients attending the tuberculosis dispensaries were examined, and the bacillus of tuberculosis was found in 270 of these, or 14 per cent. The comparative figures for the preceding year were 1552, 188, and 12 per cent.

Ophthalmia Neonatorum.—Examinations of specimens:—

	1921			1920		
	Total	Positive	Percentage Positive	Total	Positive	Percentage Positive
From Medical Officer of Health,	1,198	390	33	980	432	44
From Medical Practitioners, ...	16	7	44	7	—	—
	1,214	397	33	987	432	44

WASSERMANN TEST.

The following statement shows the number of specimens of blood or fluid examined by Wassermann test. Under Section (*d*) the number of examinations for other Local Authorities is given, these being undertaken under special agreement with these Authorities, as they have no laboratory facilities of their own:—

Specimens received from—

	Total	Positive	Percentage Positive
(*a*) *Practitioners*—			
Original—Blood, ...	1,566	556	36
Cerebro-spinal Fluid,	10	5	50
Duplicate—Blood, ...	218	120	55
(*b*) *Institutions*—			
Original—Blood, ...	2,966	1,119	38
Cerebro-spinal Fluid,	76	22	29
Duplicate—Blood, ...	559	297	53
(*c*) *Medical Officer of Health*—			
Original—Blood, ...	769	232	30
Cerebro-spinal Fluid,	30	5	17
Duplicate—Blood, ...	258	113	44
(*d*) *12 Other Local Authorities*—			
Original—Blood, ...	209	83	40
Cerebro spinal Fluid,	1	1	100
Duplicate—Blood, ...	56	38	68
Totals—			
Original—Blood, ...	5,510	1,990	36
Cerebro-spinal Fluid,	117	33	28
Duplicate—Blood, ...	1,091	568	52
	6,718	2,591	39
		1920	
Totals, ...	4,788	1,287	27

In 1921 there were 33 specimens and in 1920 there were 85 specimens in which the amount of serum obtainable was insufficient to carry out the test.

The Wassermann Reaction in Diseases of the Eye.

	Total	Number Positive	Percentage Positive
Iritis, ...	203	53	26·1
Keratitis, ...	173	84	48·5
Eye Disease, ...	96	32	33·3
Optic Atrophy, ...	92	24	26
Choroiditis, ...	91	11	12
Dimness of Vision, ...	75	24	32
Optic Neuritis, ...	45	4	8·8
Retinitis, ...	44	5	11·3
Iridocyclitis, ...	33	7	21·2
Nerve Paralysis, ...	28	7	25
Diplopia, ...	24	7	29·1
Corneal Ulcer, ...	15	7	46·6
Blindness.	14	4	28·5
Myopia, ...	13	2	15·3
Conjunctivitis, ...	10	3	30
Kerato-iritis, ...	8	4	50
Retino-choroiditis, ...	7	2	28·5
Nystagmus, ...	6	1	16·6
Uveitis, ...	5	—	—
Cataract, ...	5	—	—
Scleritis, ...	3	—	—
Corneo-iritis, ...	2	2	—
Amblyopia, ...	2	—	—
Specific Vitreous, ...	2	1	—
Glaucoma, ...	1	—	—
Xerosis, ...	1	—	—
Myosis, ...	1	1	—
Nyctalopia, ...	1	1	—

Miscellaneous Specimens.

In addition to the specimens tabulated above, 6,859 of a miscellaneous nature (as compared with 6,440 in 1920) were investigated for the Medical Officer of Health, the Veterinary Surgeon, the Baths Department, the Water Department and medical practitioners in the city. These may be summarised as follows:—

	Health Department	Medical Practitioners
Diphtheria—Swabs, Milk, Virulence Test, ...	139	37
Enteric Fever—Blood, Urine, Fæces, ...	33	28
Tuberculosis—Urine, Smear, Milk—Exudate, ...	15	60
Gonococcal Infections (other than Ophthalmia Neonatorum),	123	452
Examination for S. pallida—Exudate, ...	18	29
Cerebro-spinal Fever—Swabs, ...	16	2
Vincent's Angina—Swabs, ...	82	3,481
Bacterial Diagnosis — Blood, Urine, Food-stuffs, Smears, Dust, Water, Calf-lymph, Mud, Fungus, ...	20	95
Dysentery—Fæces, Urine, ...	121	134
Paratyphoid, ...	—	3
Malaria—Blood Films, ...	47	16
Ringworm—Samples of Hair, ...	1	2
Anæmia—Blood, ...	1	—
Anthrax—Feeding-Stuffs, ...	7	—
Food-poisoning, ...	16	10
Milk Samples taken at Railway Station, ...	104	—
Calf Lymph, ...	11	—
Disinfectant Fluid, ...	2	—
Differential Count—Blood, ...	1	1
Sample of Water, ...	20	—
Bilharziosis—Urine, ...	1	1
Cytological Examination, ...	1	—
Fæces for Worms, ...	—	1
Pneumococcus—C.S.F. Fluid, ...	—	2
Spermatazoa—Smears, ...	—	6
Influenza—Sputum, ...	—	2
Malignancy—Tissue, ...	—	4
	779	4,366
Carry forward, ...	5,145	

Brought forward, ...						5,145
Hospitals—	Belvidere	Ruchill	Knights-wood	Shield-hall	Rob-royston	
Diphtheria—Swabs, Virulence Test,	11	15	9	50	10	
Enteric Fever — Urine, Fæces, Blood, Pus, ...	133	—	—	33	1	
Tuberculosis—Milk, Sputum, ...	26	56	26	26	28	
Cerebro-spinal Fever—Cultures,	14	—	—	—	—	
Vincent's Angina—Swabs, ...	—	—	2	—	—	
Bacterial Diagnosis—Sputum, Blood,	7	1	—	—	—	
Paratyphoid Fever—Blood, ...	—	2	—	—	—	
Dysentery—Fæces, &c., ...	14	145	—	—	—	
Influenza—Swab, Sputum, ...	1	5	1	—	—	
Bacterial Diagnosis, ...	—	—	—	—	1	
			617			617
Veterinary Surgeon—						
Milk Supplies for Tuberculosis—						
Town cows with disease of udder,			...	...	...	302
Country ,, ,, ...			...	...	...	54
Hospital milk supply, ...			...	...	...	475
Herds supplying city milk, ...			...	...	...	43
Duplicate samples for confirmation,			...	...	...	23
Milk samples for organisms, ...			...	...	...	84
Baths Department—						
Water for bacteriological examination,			...	...	...	68
Water Department—						
Samples of water,*			...	...	..	48
						6,859

* Bacillus Enteritidis Sporogenes was absent in 10 c.c., and Streptococci in 50 c.c. throughout the year.

Examination of Rats in relation to Plague. — During the year 466 rats were brought to the laboratory and examined for evidence of plague, with negative results.

The following table gives the numbers examined in relation to the places from which they were obtained, and a comparison with last year:—

Year.	From the City	From Ship-board	From Docks	Total	Plague Infected
1921, ...	92	275	99	466	—
1920, ...	189	60	158	407	—

SECTION XII.

PART I.

SUMMARY OF OPERATIONS UNDER THE SALE OF FOOD AND DRUGS ACTS; DAIRIES, COWSHED, AND MILKSHOPS ORDERS; AND OTHER ACTS, BY THE SUPERINTENDENT FOOD INSPECTOR.

The Sale of Food and Drugs Acts.—During 1921, 4,442 samples in all were examined, of which 3,185 were obtained informally, and 1,257 were procured in terms of the statutes. Of the former 362, or 1 in 9, were found non-genuine, and of the latter 113, or 1 in 11.

Proceedings were initiated against vendors in respect of 75 samples, inclusive of 3 samples of margarine, the provisions in relation to the sale of which were being contravened.

The total fines and expenses imposed amounted to £437 6s.

The details of operations under these Acts are set out in the subjoined tables.

Preservatives in Milk.—Although all samples of milk are examined for the possible presence of chemical preservatives, no sample has in this respect been adversely reported upon for many years, doubtless owing to the prevailing practice of pasteurisation of milk by distributors, which sufficiently enhances its keeping qualities. During 1921, however, formalin was detected in 5 samples, proceedings being taken in two instances, and salutary penalties imposed.

Water in Butter. — A feature of the year in regard to butter samples examined has been the number in which excess of moisture was found, and almost invariably associated with Irish creamery butter. While this class of butter has always shown a relatively high water-content, it has hitherto, with rare exceptions, been within the permissible limits of 16 per cent. An explanation proffered is that the year was one of the warmest and driest on record, necessitating the undue storage of water to ensure supplies, and a consequent rise of temperature above that desirable for efficient churning, and that, coupled with a markedly high relative humidity for periods, the water therefore could not be sufficiently expelled from the butter in its subsequent preparation.

Use of Warranty.—The question of the application of the provisions of the Acts relating to a warranty, as a defence in respect of a sale to the prejudice of the purchaser, has been somewhat prominent during the past year. The ease with which such a defence may be established and a seller released from his responsibilities under the statutes are such as to seriously mitigate against the protection of the consumer, and thus to render abortive what is the fundamental objective of the statute.

Article	1920 Samples taken Informal	1920 Samples taken Statutory	1921 Samples taken Informal	1921 Samples taken Statutory	Non-Genuine Informal	Non-Genuine Statutory	Convictions	Withdrawn and Expenses Paid	Withdrawn	Deserted Simpliciter	Dismissed Not Proven
Arrowroot, ...	—	1	—	1	—	—	—	—	—	—	—
Barley, ...	—	5	—	—	—	—	—	—	—	—	—
Beer, ...	1	—	—	—	—	—	—	—	—	—	—
Borax, ...	—	—	—	1	—	—	—	—	—	—	—
Brandy, ...	1	—	—	—	—	—	—	—	—	—	—
a Butter, ...	375	112	681	174	79	31	10	1	—	2	2
Buttermilk, ...	10	1	—	—	—	—	—	—	—	—	—
b Calcined Magnesia, ...	—	—	16	8	16	8	1	1	—	—	2
Cheese, ...	3	—	3	2	—	—	—	—	—	—	—
c Cinnamon, Ground, ...	22	11	4	16	1	5	1	1	—	—	—
Cocoa, ...	—	—	3	—	—	—	—	—	—	—	—
Coffee, ...	43	8	21	10	—	—	—	—	—	—	—
Cooking Fat, ...	—	—	—	2	—	—	—	—	—	—	—
Compounded Drug, ...	—	—	1	1	1	1	—	—	—	—	—
Confectionery, ...	5	—	—	—	—	—	—	—	—	—	—
Cornflour, ...	—	2	—	—	—	—	—	—	—	—	—
Cream, ...	—	1	1	—	—	—	—	—	—	—	—
Cream of Tartar, ...	17	30	24	11	8	1	—	—	—	—	—
Dried Eggs, ...	—	—	—	—	—	—	—	—	—	—	—
Dripping, ...	1	8	32	17	2	—	—	—	—	—	—
Egg Yolk, ...	2	—	7	—	—	—	—	—	—	—	—
Flour, ...	—	3	—	—	—	—	—	—	—	—	—
,, (Self-raising), ...	—	7	1	4	—	—	—	—	—	—	—
Flowers of Sulphur, ...	—	—	1	—	—	—	—	—	—	—	—
Ginger, Ground, ...	5	2	3	9	—	—	—	—	—	—	—
d Gin, ...	—	—	3	1	1	1	1	—	—	—	—
Honey, ...	—	—	1	—	—	—	—	—	—	—	—
Gregory's Powder, ...	—	—	3	—	—	—	—	—	—	—	—
Ice Cream, ...	—	—	8	—	—	—	—	—	—	—	—
Invalid Food, ...	—	—	1	—	—	—	—	—	—	—	—
Lard, ...	10	21	5	26	—	—	—	—	—	—	—
Liquorice, ...	—	—	3	—	—	—	—	—	—	—	—
Linseed (Crushed), ...	1	2	13	—	—	—	—	—	—	—	—
Lime Juice, ...	—	—	—	—	—	—	—	—	—	—	—
Lime Water, ...	—	—	9	—	2	—	—	—	—	—	—
Malt Extract, with C.L. Oil,	1	—	—	—	—	—	—	—	—	—	—
e Margarine, ...	2	8	5	9	—	—	2	1	—	—	—
Milk Powder, ...	3	—	—	—	—	—	—	—	—	—	—
,, Condensed, ...	1	1	2	—	—	—	—	—	—	—	—
f ,, Skimmed, ...	2	2	3	9	—	1	1	—	—	—	—
g ,, Sweet, ...	3,292	806	2.149	828	217	43	30	—	—	1	2
Mince, ...	—	—	2	—	—	—	—	—	—	—	—
Mustard, ...	8	14	—	4	—	—	—	—	—	—	—
Oatmeal, ...	—	3	—	—	—	—	—	—	—	—	—
Oil, Almond, ...	1	1	9	—	—	—	—	—	—	—	—
,, Camphorated, ...	17	8	16	2	1	—	—	—	—	—	—
,, Olive, ...	17	5	2	—	—	—	—	—	—	—	
Potted Veal, ...	—	—	1	—	—	—	—	—	—	—	—
Pepper, Black, ...	18	18	2	4	1	—	—	—	—	—	—
,, White, ...	17	17	8	17	1	—	—	—	—	—	—
Preserves, ...	—	—	12	2	—	—	—	—	—	—	—
Rice, ...	4	7	1	2	—	—	—	—	—	—	—
h Rum, ...	2	—	12	10	3	3	1	1	—	—	1
Sausages, ...	—	—	2	—	—	—	—	—	—	—	—
Semolina, ...	—	1	—	—	—	—	—	—	—	—	—
Seidlitz Powder, ...	—	—	9	—	4	—	—	—	—	—	—
Stout, ...	1	—	1	—	—	—	—	—	—	—	—
Sugar, ...	—	—	1	—	—	—	—	—	—	—	—
Sweet Spirit of Nitre,	—	—	10	1	3	1	—	—	—	—	1
Syrup, ...	—	—	1	—	—	—	—	—	—	—	—
Tapioca, ...	—	2	—	1	—	—	—	—	—	—	—
Tartaric Acid, ...	2	1	—	1	—	—	—	—	—	—	—
Tartar Substitute, ...	1	—	—	—	—	—	—	—	—	—	—
Tea, ...	1	—	2	—	—	—	—	—	—	—	—
Tincture of Quinine, ...	1	—	—	—	—	—	—	—	—	—	—
Vinegar, ...	—	2	—	—	—	—	—	—	—	—	—
i Whisky, ...	75	4	91	84	22	18	9	—	—	3	—
Wine, ...	1	—	—	—		—	—	—	—	—	—
Totals, ...	3,963	1,114	3,185	1,257	362	113	56	5	—	6	8

(*a*) Fines, £64 11s. 6d.; Expenses, £1 11s. 6d.
(*b*) ,, £10; ,, £1 11s. 6d.
(*c*) ,, £12 12s.; ,, £1 10s.
(*d*) ,, £6 6s.
(*e*) ,, £3 12s.; ,, £1 11s. 6d.
(*f*) Fines, £4 4s.
(*g*) ,, £284 17s.
(*h*) ,, £5 5s.; Expenses, £2 2s.
(*i*) ,, £37 12s.

That such a defence is, in addition, liable to grave abuse has long been recognised, and legal imprimatur given thereto by precluding its application to milk (*vide* Milk and Dairies (Scotland) Act, 1914), which, *inter alia*, enacts:—"A warranty or invoice shall not be available as a defence to any proceedings under the Sale of Food and Drugs Acts, 1875 to 1907, where the article in respect of which the proceedings are taken is milk."

The putting into operation of this Act was, however, postponed owing to the outbreak of war, and, in terms of the Postponement Act, 1915, is still in abeyance. In the present state of the law no effort would appear to require to be made by a trader to ensure the genuineness of the commodity he transfers to the consumer other than such passive action as is contained in the obtaining of a warranty. Should proceedings be subsequently taken against the warrantor, he in turn is entitled to absolvitor on showing that when he gave the warranty he had reason to believe that the statements or descriptions contained therein were true to the best of his knowledge.

If, in the interests of the consumer, it seems fitting to preclude the defence of warranty in relation to the sale of milk, no sound reason can be adduced why it should not apply with equal cogency to any article of food, and, as in the case of milk, leave the seller to his own redress, as is provided for under Section 28 of the 1875 Act and at common law.

Spirituous Liquors.—Systematic inspection and sampling were carried out for the due enforcement of the Spirits (Prices and Description) Order, 1920, and 24 contraventions in respect of overcharge or failure to label were reported to the Procurator-Fiscal for his information and consideration. In the subsequent proceedings instituted, £58 10s. in penalties were imposed.

With the demise of the Ministry of Food on 31st August, 1920, the Spirits Order ceased to operate, and control in respect of prices ended. The provisions in relation to the strength of spirits are now entirely governed by the Sale of Food and Drugs Acts and the Licensing Act, 1921, Section 10, which came into force on 1st September, 1921, and enacts that—"In determining whether an offence has been committed under the enactments relating to the sale of food and drugs by selling to the prejudice of the purchaser whisky, brandy, rum, or gin not adulterated otherwise than by any admixture of water, it shall be a good defence to prove that such admixture has not reduced the spirit more than 35 degrees under proof, and Section 6 of the Sale of Food and Drugs Act, 1879, is hereby repealed." This Act also abolished the Liquor Control Board, which by Orders had permitted the sale of spirits 50 degrees under proof, without prejudice to the purchaser. Consequent upon this return to approximately pre-war conditions of sale, some difficulty was experienced in securing that clear and adequate disclosure was made, in terms of the Sale of Food and Drugs Acts, where spirits reduced to more than 35 degrees under proof were proffered in response to a demand for "whisky," &c.

In subsequent proceedings against certain vendors, important judgments bearing upon the question were delivered by the Stipendiary Magistrate, two of which may be quoted:—

(1) "Where there is an article of human consumption in large demand, it is curious that at this time of day new experiments in evasion should be presenting themselves and the general trend of law on the subject should be calling for renewed examination. The issue, it seems to me, is extremely simple. If a person orders a staple or particular and distinctive commodity, he is entitled to get it, and the seller must either supply it or make it specifically clear to the purchaser that

what he is having offered to him is different from, or inferior to, what the order required. The Food and Drugs Acts put this matter on a sufficiently definite footing. Section 6 of the 1875 Act requires that the seller shall supply goods of the nature, substance, and quality of the article demanded, and another section makes it necessary where the article supplied was disconform to the quality of the article demanded, to give express notice by a label *on or with the article*. The present case is one of a class occasioned by the anomalies in the transition from what may be called the liquor-control period to the normal conditions in public-houses. In this case (1) the purchase was made by Food Inspectors upon an order for whisky, without any qualification other than the word "whisky"; (2) it was supplied from a bottle which had a small-type label upon it, to the effect that the contents were 'Strength, under 43 U.P.' (this label was not seen or read by the Inspectors); (3) the meaning is possibly not so clear to the ordinary person, as the law would plainly desire to meet the spirit of the Food and Drugs Acts (this label was not seen, and certainly was not read, by the Inspectors; (4) there was a cask of whisky on the gauntrees which had a label 'Strength weaker than 43 U.P.,' but there was no proof that that label, which was read by the Inspectors, was at all applicable to the bottle of whisky from which the supply was made; and (5) upon analysis in the statutory manner, the so-called whisky was found to be reduced by the admixture of water to more than 35 per cent. under proof, and was therefore not whisky. Under these circumstances I have no hesitation in holding, first, that the liquor sold was disconform to the quality required; and, second, that it was delivered without any such label or specific and direct intimation as would be a defence. A number of cases were put before me, especially judgments by the Sheriff-Substitutes in Glasgow and Dunfermline. There is a difference of opinion on the part of these learned judges. For my part, I am clear that, as it is the demand which determines the standard, the failure of the seller in the present case to supply whisky involves her in the consequences of an infringement. It wasn't proved to me that the whisky supplied was accompanied by any sufficient declaration to the purchaser that it was of inferior standard to the order. I therefore find the charge proved."

(2) "In some respects this case has features resembling the preceding one. The order given by the Food Inspectors was for whisky, and the supply was made from a barrel on which there was a label in these terms, 'Whisky, contains under 65 per cent. proof spirits, 1s. 2d. per glass.' The label, however, was not readable from the point where the Inspectors stood, nor from the outside of the bar. They had not read the label, nor had their specific attention in any way been called to the label, or to the fact that the liquor was watered down to below the standard. On the analysis being made, it was found that the liquor was reduced by the admixture of water to more than 35 degrees under proof, and was therefore not whisky of statutory strength. It appears to be an elementary principle of the sale of food and drugs that, if the seller is not supplying an article of the standard strength, in terms of the order given to him, he ought to make what is virtually a new bargain with the purchaser, by intimating clearly and unequivocally that the article he proposes to supply is not of the quality or substance ordered, but is a different article from what the intending purchaser has asked for. Any other principle would lead to confusion worse confounded, and make chaos of the law of Food and Drugs. I therefore find the respondent guilty."

Drugs.—In the case of some compounded drugs examined, there was in evidence a lack of care in the quantity and quality of the ingredients, 4 samples of seidlitz powder and 2 of a compound drug being found more or less disconform to the requirements of the British Pharmacopœia.

In some samples of calcined magnesia, excess of lime (CaO) was present, and in one sample in which the percentage was 3·72 per cent. proceedings were instituted and proof heard at some length.

The Magistrate, in finding the charge "not proven," held, *inter alia*, (1) that a material fact was that the analyst for the defence averred that he had never found less than 1 per cent. in any sample; and (2) that it was too general a proposition to hold that the sample was not genuine, in respect that it was not conform to so loose and vague a definition as that contained in the British Pharmacopœia, viz., "the slightest reaction for lime." The facts as disclosed have been reported for the information of the compilers of the British Pharmacopœia to the Registrar, General Medical Council, London.

Food and Milk Orders.—In view of the termination of the Ministry of Food, various provisions relating to food and milk, the continuance of which was deemed desirable, were re-enacted and consolidated in (1) The Sale of Food Order, 1921; and (2) The Milk (Scotland) Order, 1921. With the exception of the provision relating to net-weight sales contained in the former, the enforcement of these Orders, being a charge as for operations under the Sale of Food and Drugs Act, were assigned to this department.

The Food Order briefly (1) requires the labelling of imported meat, bacon, ham, or lard exposed for sale by retail, with the word "Imported," or words disclosing the country of origin; (2) precludes the sale or exposure for sale of imported eggs as "fresh" or "new laid," unless the description includes the word "Imported" or words disclosing country of origin; (3) sets up standards of composition of jams, and their labelling in conformity therewith, including name and address of manufacturer; (4) provides that any substance described as dripping shall only be prepared from raw beef or mutton fat or mutton bones, and not contain more than 2 per cent. free fatty acids, nor more than 1 per cent. in all of water and substances other than fat; and (5) enacts that margarine shall contain at least 80 per cent. of oil and fat.

Owing to an apparent misapprehension among traders that with the end of D.O.R.A. *all* control had ceased, attention was at first devoted by the Food Inspectors to bringing the provisions of the Order relating to labelling of imported produce to their knowledge. Under the Order, 49 samples of dripping, 14 of preserves, and 3 of edible fats were examined, and 8 samples of dripping and 3 of preserves were found disconform thereto. Information in respect of 10 contraventions was submitted to the Procurator-Fiscal, 1 each being in respect of ham, bacon, and meat, 4 of eggs, and 3 of dripping, and in the subsequent proceedings £13 13s. in penalties imposed.

By the operations of an Amending Order of 1922 the principal Order emerges in a somewhat emasculated form, as the provisions relating to lard, jam, and fats (including dripping and margarine) are thereby revoked.

Under the Milk Order (as amended) it is provided, *inter alia*, (1) that, except under licence granted by or under the authority of the Scottish Board of Health, no milk shall be sold or advertised as "graded" milk, nor shall any liquid in the making of which dried or condensed milk has been used be sold as milk or under any description of which the word "milk" forms part; and (2) that no colouring matter or water shall be added to milk or cream intended for sale, nor shall such milk or cream be knowingly sold, offered, or exposed for sale.

These provisions will preclude the preparation and sale as milk of what was hitherto known as reconstituted milk, which at times was resorted to by the large distributors during periods of abnormal scarcity, in order to eke out supplies. It will further preclude the addition to milk of annatto (a vegetable substance used in the colouring of butter and cheese), in order to impart a fictitious richness to its appearance. Since the coming into force of this Order, only one sample of milk has been found disconform thereto, viz., in respect of the presence of annatto.

Biological Test Samples.—For the six months ending 31st December, 1921, 104 samples of milk as consigned by farmers under contract to city dairymen were procured at railway stations, and examined for the presence of the tubercular organism. 77 samples were supplied from Ayrshire farms,

18 from Lanarkshire, 7 from Renfrewshire, and 1 each from Midlothian and Kirkcudbright. 4 samples were found positive, 3 being from farms in Ayrshire and 1 from the County of Lanark. In terms of the powers contained in the Glasgow Police (Amendment) Act, 1890, the Veterinary Surgeon is empowered to visit the farms and examine the herds.

7 miscellaneous samples (other than milk) were also submitted to biological examination.

Butter and Margarine Acts. — 12 applications for registration were received during the year, 2 being in respect of "butter factories," and 10 for premises to be used for wholesale dealing in margarine. The premises, upon inspection, were all found in compliance with the statutes, and duly placed on the register. The number and nature of premises on register at end of year were as follows: — Manufactories of margarine, 1; wholesale dealers in margarine, 211; wholesale dealers in milk-blended butter, 9; and butter factories, 16. The latter premises were, in terms of the Act, periodically inspected, and samples obtained therein by the Food Inspectors. All were found satisfactory.

Fertiliser and Feeding-Stuffs Act, 1906.—No formal request as to the procuring of samples in terms of the statute was received during the year, but 12 samples of feeding-stuffs as received by cowkeepers were informally obtained. 5 were of linseed cake, and 1 each of maize meal, bean meal, dairy meal, dairy cake, cotton cake, compound feedlets, and linseed. 2 samples were found to be slightly disconform to prescribed parts of invoice, in respect of oil and albuminoids, and 1 to contain a small percentage of foreign seeds, the latter probably an accidental admixture. In the interval the feeding-stuffs in question had been disposed of, which precluded official samples being obtained.

Food Inspection.—The inspections of markets, shops, and stores for the detection of unsound and unwholesome food numbered 11,732, and 71 lots were adjudged unfit for human food and dealt with accordingly, the total weight of foodstuffs thus dealt with being 62 tons 8 cwts., exclusive of 500 eggs. One trader was prosecuted for having in his possession for sale 44 lbs. of unsound canned salmon, and was fined in £15.

10 notices were served upon occupiers of premises in which food was sold or prepared for sale in respect of failure to maintain an adequate degree of cleanliness or repair therein, and these, with one exception, received due attention. In the latter case proceedings were instituted, and a penalty of 10s. 6d. imposed.

The Sale of Horse Flesh, &c., Regulation Act, 1889.—There are now no premises in which horse flesh is sold by way of trade for human food.

Dairies. — 1,355 dairies were on register at 31st December, 1921, as against 1,308 in 1920. The inspections of premises numbered 19,721, and 151 intimations were issued in respect of minor breaches of the regulations, alterations, or improvements. 4 prosecutions were taken against milk dealers in respect thereof—2 for failing to cleanse and scald milk vessels used for conveyance of milk from a distance, 1 for keeping milk vessels used in the distribution of milk in dwelling-house, and 1 in respect of the use of part of registered dairy premises as a sleeping apartment. £7 10s. in fines, in all, were imposed.

A sample of milk was complained of as "being cloudy, and having a deposit showing presence of minute insects when strained." It was submitted to the City Bacteriologist, who reported thereon as under:—

"The sample showed a considerable deposit of dirt, amongs which several larvæ were found. There were also a few of the same larvæ in a strainer accompanying the sample. The larvæ, being of a very unusual type, were sent to the British Museum (Natural History) in London, for identification, and the following report has been received:—

"'23rd March, 1922.

"'The larvæ found in deposit in milk, which you sent to the Director for identification, are those of one of the moth-flies (*Psychodidæ*). Several species of these flies are commonly found breeding in cow dung, and your suggestion as to their origin in the milk is no doubt the correct one.

"'T. W. EDWARDS.'"

Dr. Buchanan adds:—"The *Psychodidæ*, popularly known as 'Owl Midges,' are minute moth-like flies very commonly found on windows in houses. Some of them are bloodsuckers, and one of them is the notorious phlebotomous fever fly (*P. papatasi*).

"My suggestion to the British Museum as to the source of the larvæ was that they were most probably derived from one of the fæcal masses very commonly attached to the hindquarters of a cow, and this suggestion finds some corroboration in the above report."

An endeavour was made to trace the source of supply of the milk in question, but without success.

Further representations were made during the year to the Scottish Board of Health to have the Milk and Dairies (Scotland) Act, 1914, and the Tuberculosis Order, 1914—suspended on the outbreak of war—brought into operation, but without effect. The Board state that, without the explicit authority of the Cabinet, no administrative measures involving expense can be put into operation, and that consequently they have no power to bring the Milk and Dairies Act into being, and that, in respect of the Order, the matter is entirely in the hands of the Ministry of Agriculture.

Byres.—The number of byres licensed in terms of the Cattle Sheds in Burghs (Scotland) Act, 1866, is now 53, compared with 51 at the end of 1920. The number of cows for which these premises are licensed is 1,024, and the average number kept 743, as against 1,008 and 756 respectively in 1920. Byres without grazing facilities now number 7 only. 541 inspections were made and 20 intimations issued under the regulations, or of repairs or improvements required, were issued, and duly complied with.

DETAILS OF CITY BYRES AS AT 31ST DECEMBER, 1921.

	Grazing			Stall-Fed		
Cubic space per Cow	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 feet,	39	806	564	6	91	75
At 800 ,,	7	87	68	1	40	36
Totals, ...	46	893	632	7	131	111

Ice-Cream Shops.—The number of premises on the register at end of year was 654, as against 637 in 1920. Periodic inspections were made therein, in terms of the regulations applicable to milk purveyors. The total inspections numbered 9,427, and 127 notices were issued in regard to minor breaches of regulations or of repairs or improvements desired. Proceedings were taken in respect of 5 contraventions of the regulations, viz.:—Failing to register, 2; using unsuitable premises, 1; and using premises as a dwelling-house, 2. £9 in penalties, in all, were imposed.

With a view to determining the possible presence of zinc in ice-cream as made in containers composed of that metal, which is practically in universal use, 8 samples as purveyed were procured and examined. In 7, metallic zinc was found, the quantity varying from ·0010 to ·0091 per cent., which is equivalent to ·07 and ·637 of a grain per pound. In 1 sample no trace was found.

PART 2.

AIR PURIFICATION — SMOKE ABATEMENT.

REPORT BY SUPERINTENDENT SMOKE INSPECTOR.

57 prosecutions were taken against firms issuing smoke in excessive quantities, and a conviction was obtained in every case. 42 of these were first offences, 10 were second offences, and 5 were third offences within the preceding twelve months. The average fines imposed were—for first offences, 29s.; for second offences, 47s. 3d.; and for third offences, 85s. 2d. The maximum penalty for first offences is 40s., and for second or subsequent offences, £5.

Tar Melters. — The attention given in 1920 to the suppression of smoke from tar and asphalt melters was continued during 1921, and 5 users of these appliances were convicted and fined in sums ranging from 20s. to £5. This action, together with that of the Sub-Committee on Air Purification in calling the attention of the committees of two Corporation deparrments who use these melters extensively in the streets to the desirability of burning smokeless fuel in their furnaces, has resulted in a considerable reduction in the density of the smoke issuing from them. Gas coke is now almost invariably the fuel used.

Steam Wagons. — The steam wagon, which is an even more flagrant offender than the tar melter, has been receiving a good deal of the Smoke Inspectors' attention. Action was taken against seven users of these vehicles in the Police Courts during the year, and resulted in the full first-offence penalty of 40s. being imposed in each case.

The real solution of this problem is to be found in the possession of powers to prohibit the burning of bituminous fuels in their furnaces, as their construction does not permit of its smokeless combustion.

Low Chimneys. — An increasing amount of time is being taken up investigating complaints regarding smoke issuing from heating-furnace chimneys which, on account of their low height and proximity to dwelling-houses materially aggravates nuisance. It would save much of the Inspectors' time and prevent a great deal of unnecessary annoyance to those affected by the smoke from such chimneys if, before the users of small steam boilers and heating furnaces were allowed to connect such furnaces to existing chimneys, the height and sectional area of those chimneys were made the subject of inquiry, to ascertain if they can reasonably be expected to adequately draught the furnaces they are meant to serve.

Oil-Burning Installations.—During the coal shortage a number of steam users adapted their steam-boiler furnaces to suit the burning of oil. In most cases the burners installed were cheap in price and crude in construc-

tion, and produced more smoke than the coal furnaces they replaced, but in a few other cases more perfect systems were installed, and these proved to be quite satisfactory and came very near to being smokeless in working. The former gave place to coal burning immediately that fuel became more plentiful, but the latter continued to be used until cheapening coal made the cost of oil burning prohibitive.

By the use of electricity for power purposes and the extended use of gas and coke in industrial furnaces, the number of smoke-producing chimneys in the city is gradually lessening. It is to be remembered, however, that, while the carbonaceous matter which is the main constituent of smoke represents a potential heat loss, the observance of the conditions which would ensure its complete combustion in hand-fired furnaces may fail to raise their heat-efficiency. This is because the additional air required for combustion reduces the temperature of the gases in the furnace, but increases the combined volume of air and gas passing through, and therefore the quantity of heat lost to it. So that, on an average, the heat-efficiency of a hand-fired furnace is generally lower than one mechanically stoked.

Smoke Abatement League Classes.—The classes for instruction of firemen in the principles of combustion and furnace management were continued during the winter session of 1921-22. Three classes were held at two centres, and ran concurrently throughout the session, at each of which twelve lectures were given. The enrolments numbered 64, and the attendance averaged 98 per cent., while, as the result of the examination at the end of the session, 11 firemen passed with merit and were awarded certificates of competency.

Soot-Collecting Gauges.—The inter-city system of soot-collection by means of deposit gauges, begun in 1914, still continues. The carboys containing the deposit from the nine gauges placed throughout the city are collected on the last day of each month, and taken to the Corporation Chemist for analysis. The results of his analysis, together with the information obtained from other centres, are published monthly in the *Lancet*, through the medium of the Meteorological Office, London.

A table showing the mean monthly deposit under the various headings, calculated in pounds per acre, for 1921, is given, along with comparative figures of total soluble and insoluble deposits for the previous four years. This table indicates that, compared with the previous year, 1921 had a reduced mean monthly deposit of 20·3 per cent., and compared with 1918 the decrease amounted to 33·8 per cent., while in terms of tons per day over the whole city the daily mean deposit in 1921 was less by $5\frac{3}{4}$ tons than that of 1920, and $11\frac{1}{2}$ tons compared with 1918. This seems a substantial reduction, and, if taken at its face value, indicates an improving atmosphere. The contributory effect of the coal shortage will be remembered. In order to measure the very finely divided matter which remains suspended in the air for long periods, as distinct from that deposited, an automatic standardised instrument, which filters a measured volume of air through a definite-sized disc of white filter paper, has been in use for some time. The method of estimating the extent of the pollution of the atmosphere by this instrument involves the use of a calibrated scale of shades, which indicate the quantity of impurity per cubic metre of air filtered. From the figures thus obtained curves are prepared, which show the actual impurity in the atmosphere from time to time. One such instrument is in operation in Glasgow, and a number of others will shortly be at work. They will be operated by the Corporation Chemist.

PART 3.

GENERAL SANITARY OPERATIONS.

REPORTS BY DIVISIONAL SANITARY INSPECTORS.

CENTRAL DIVISION.

The general work of sanitary inspection and supervision has been carried out with tact and energy throughout the year.

There are, in the Central Division, 48,063 dwelling-houses—4,692, or 9·76 per cent., of one apartment; 18,045, or 37·54 per cent., of two apartments; and 25,326, or 52·7 per cent., of over two apartments.

In the general work of the Nuisance Department, 203,633 visits of inspection were made, and 16,761 complaints were discovered and dealt with.

Cleaning of Closes and Stairs. — 1,573 notices and cards were issued in connection with the washing of closes and stairs. This branch of the work continues to take up a good deal of the time of the Inspectors, and a considerable improvement in the condition of the closes and stairs in the district has resulted.

Limewashing of Closes and Staircases.—During the year 1,770 properties were reported in which the external walls or walls of closes and staircases were in need of limewashing. Notices were issued, and the work was carried out, in most cases expeditiously, but in several cases pressure had to be brought to bear upon the owner before the work was executed.

Regulated Houses. — There are four classes of houses embraced in the term "Regulated Houses"— namely, houses let-in-lodgings, farmed-out houses, common lodging-houses, and "ticketed" houses.

There are comparatively few houses registered as houses let-in-lodgings—only 54. 20 of these were registered during the year, and 6 were removed from the register. 197 visits of inspection were made to these houses—91 during the day and 106 during the night. On the whole, the houses comply with the provisions of the bye-laws.

The farmed-out houses require more supervision. There are 520 registered farmed-out houses in the Division, to which 4,782 visits of inspection were paid during the year. The bye-laws relating to this class of dwelling were rigidly enforced, and several prosecutions were instituted, both against the owner and the principal tenant.

The first case was entered in Court early in the year. The owner of 14 farmed-out houses in East Campbell Street, who failed to remedy certain structural defects, was proceeded against. The Magistrate allowed him 14 days to remedy these defects. The Order was complied with.

The keeper of the same houses was proceeded against for failing to provide furniture and domestic necessities, as required by the bye-laws. She was also given time to have these supplied, and complied with the Order.

On 23rd March the principal tenant of houses at 56 Carrick Street was fined £4 4s. for a breach of Section 23 of the bye-laws—viz., for permitting a telescoped house of two apartments to be occupied by two separate families.

At the annual registration of farmed-out houses the keeper of houses at 111 Gallowgate, who had repeatedly ignored the warnings of the Inspector regarding the condition of the houses, was refused registration by the Corporation. She appealed to the Sheriff, who, after a lengthy hearing of the case, upheld the decision of the Corporation.

Action was taken against another keeper for failing to provide the necessary furniture in her farmed-out houses at 57 and 59 Cheapside Street. On the work being done, the case was withdrawn.

On the 29th December, the keeper of farmed-out houses at 66 Piccadilly Street was fined £3 3s. for failing to provide the necessary furniture in her houses.

The results of these cases have had a good effect on other keepers in the Division, and to-day the Inspector finds the keepers more willing to comply with the bye-laws.

The farmed-out house of to-day is a vastly superior one to that of a few years ago. The provisions of the new bye-laws have worked wonders. With the exception of one tenement—standing appealed under the Housing Acts—a water supply has been introduced into every house separately occupied.

The iniquitous system of letting telescoped houses to separate families is no longer tolerated, and there is at least a reasonable supply of furniture and domestic necessities in each house.

The majority of the farmed-out houses in this district are in Ward XII (Blackfriars), and the Inspector, in his statement on this kind of house, remarks that the class of tenants has in many cases improved. Many of the present tenants in these houses are of the respectable working class, probably owing to the shortage of houses of a better class.

It is gratifying to report, he further states, that this class of lodging-houses is very much improved; overcrowding is seldom found and cases of infectious disease rarely occur.

Common Lodging-Houses.—We have 43 common lodging-houses on the register, including 25 seamen's boarding-houses.

During the year no addition has been made to the register of common lodging-houses, but 1 was removed therefrom. 1 boarding-house was added, and 3 removed. 1,724 visits of inspection were made during the day, and 133 intimations of irregularities were served on the various keepers.

We have had no difficulty in persuading the keepers to continue to conform to the requirements of the bye-laws. Even although their houses are meantime outwith the definition of "common lodging-houses," they realise that this is only temporary. The newer lodging-houses are so well fitted up that the charges are not likely to be reduced to sixpence or less per night. The time is perhaps opportune for securing a change in the definition of the term "common lodging-houses," perhaps on the lines of a declaration clause, as in farmed-out houses.

The older class of lodging-house, *with bunks*, is gradually being removed, there being only one house of this kind in the Central Division. This change is observed with satisfaction, as the new form is a great improvement, better light and ventilation being secured, and altogether the arrangements are more suitable.

We have classified the lodging-houses in the Division, taking the Sailors' Home and the Corporation houses as the standard for the first-class house. There are 6 first-class houses, 9 second-class, and 3 third-class.

In view of the suspicion that, owing to the common lodging-houses being meantime legally outwith the definition of the term "common lodging-houses," these are not being kept in such good condition as formerly, I asked Mr. M'Pherson, who previously acted as supervisor of common lodging-houses, to visit and report on this point. He states that these houses are as well kept as ever they were, there being, in some cases, a distinct improvement in them.

The seamen's boarding-houses and emigrant houses are exceptionally quiet at present, owing to trade conditions, and some of the keepers are letting to ordinary boarders. We have retained these houses on the register, and continue to keep them under supervision.

Ticketed Houses. — We have 3,591 "ticketed" houses on our register—1,818 of one apartment, 1,735 of two apartments, and 38 of three apartments. During the year 25 houses were added to the register — 8 single apartments and 17 two apartments. 17 of these had formerly been farmed-out houses.

An attempt is made to visit the "ticketed" houses at least once quarterly, and towards this end 14,717 night-time visits were made during the year. 1,188 cases of overcrowding were discovered—562 in the one-apartment houses, 619 in the two-apartment houses, and 7 in the three-apartment houses. In only 1 case was a prosecution instituted, when a fine of 5s. was imposed. This is in marked contrast to the time prior to 1914, when usually 12 to 20 cases were brought before the Magistrates in the Police Courts each week. There was, of course, no scarcity of houses then.

In all the other cases advice, and warnings where necessary, was given, and especially was this attitude taken in cases where lodgers were found, and the warning was usually found to be effective, so that to-day the Inspector reports comparatively few houses are found overcrowded with adult lodgers—at all events, adult lodgers not connected with the family. Those found were almost invariably the sons and daughters of the family who had been married during or since the war, and, being unable to find house accommodation elsewhere, had taken up their abode in the old home.

This Inspector comments on the necessity, in any future displacement of the occupants of this class of property, of provision being made to suit the displaced tenants.

Female Inspectors.—During the year, 19,334 house-to-house visits were made by our three Inspectors. 390 houses were found to be dirty, and in 200 cases the beds and bedding were reported as being dirty. This necessitated 1,116 revisits, and 571 were ultimately found to be cleansed.

216 visits were made to the various schools in the district, and 3,609 children were examined, 219 of whom were found to be verminous and 79 dirty. Arising out of this school work, 1,736 of the homes were visited, 32 of which were found dirty, and in 26 instances the bedding was found dirty.

One Inspector remarks that the fortnightly visiting of schools for inspection of dirty and verminous children has continued with little change, except in one respect. For some time past less difficulty has been experienced in enforcing the

cleansing of children found verminous and dirty, owing to the fact that a greater number of children than formerly have been clothed this year by the Education Authority, and good clothing is, of course, more easily kept in order than rags. The fact, too, that the Authority has supplied the clothing can be used as an argument to have the necessary cleansing carried out, when the case is put before the parent or guardian.

Workshops.—We have on our register 2,050 workshops. In addition to the General Register of Workshops, each Inspector was supplied at the beginning of the year with a Ward Register, in which the workshops in each Ward are classified in trades. This has resulted in a purging of the General Register, 353 workshops having been removed from the register and 51 added. 6,448 visits of inspection were made. 317 defects were dealt with, and 330 defects were remedied during the year; this included some which were brought forward from 1920.

We received from H.M. Inspector of Factories 35 intimations of defects of a sanitary nature in workshops, which were remediable under the Public Health Act and not under the Factory Acts. All of these were acknowledged, and the matters attended to.

H.M. Inspector also notified us on 18 occasions when he was instituting proceedings under the Sanitary Accommodation Order, 1903.

The majority of the workshops in this district are in Wards XII and XIII (Exchange and Blythswood). The Inspector for Blythswood, in his report of the year's work, states that the demand for business premises and the increase in rents of such premises have caused an increase in the use of attics as workshops, this being specially noticeable in those for the making of wearing apparel. These, while suitable as far as lighting is concerned, are not so good from the point of view of ventilation. Opening roof windows are the usual means of ventilation, but it has been found that those windows are almost invariably kept closed by the workers, to avoid "draughts."

The provision of sanitary conveniences is also a problem in such places. The whole place has probably been used as an office prior to its conversion into a workshop, with either a water-closet inside each apartment or a common convenience on the landing. The difficulty of securing separate accommodation for each sex is usually met by "earmarking" a certain proportion of the conveniences.

There has of late been no market for cloth clippings, which forms the trade waste of many of our clothing workshops, and these, strewn as they are about the floor, present an untidy appearance, which has been the cause of many intimations being issued by the Factory Inspector.

Restaurant Kitchens.—A large number of these are underground. These, as a rule, are very clean, but, of course, the nature of the work carried on in them causes them to fall readily into a dirty condition. Because of their situation, the use of artificial light is necessary at all times when in use, and proper ventilation is difficult. There is at present no remedy for this. Underground bakehouses are the only underground places which are dealt with by statute, and we will require to await the passing of an Act of Parliament forbidding the use of basements and underground premises as workshops of any kind.

There are still a number of underground bakehouses in use—usually found in good order. The most common complaints with regard to ordinary bakehouses are accumulations of caked dough on the floor, and in those where gas is used and ventilation is not all that could be desired there are heavy, offensive smells, due to spent gas.

Workshops are seldom found overcrowded. Complaints are frequently received regarding the lack of adequate provision for heating, and sometimes regarding the impurities which are added to the atmosphere of the workshop on account of the means adopted to secure a reasonable temperature.

Why the Local Authority should not enforce Section 6 of the Factory and Workshop Act, 1901, is a question which ought to be considered by the Board of Health.

Drainage. — The smoke test has been applied to drainage systems on 581 occasions during the year.

With regard to 252 properties where we had reasonable grounds to believe that the drains were defective, we applied the smoke test, and in 82 per cent. of these properties defects were found to exist, although in only 10 per cent. were the defects found in the houses from which the complaint originated.

A good part of the Drainage Inspector's time is occupied in the inspection of work in course of construction. An important feature during the year in this division has been the supervision of the drainage work in connection with a large number of tea-rooms and restaurants which have been constructed, or the premises extended, notably "The Ca'dora," in Union Street; Gersons, Ltd., Sauchiehall Street; Cranston's, Queen Street; and "The Prince's," Argyle Street. The drainage systems of such places are usually of an elaborate description, and strict supervision is necessary to ensure that the work is carried out in a satisfactory manner.

In connection with drainage construction, we are in a very unsatisfactory position at present, more especially in connection with the erection of dwelling-houses. Building regulations and bye-laws have been prepared, and are supposed to be observed, but in many cases where the plans are docketed by the Board of Health officials the building regulations and bye-laws are waived, and the work is carried out free from all official control.

The existing regulations were drawn up by men experienced in building, and most of the provisions are deemed necessary for safety, and, as a matter of fact, have from experience proved necessary for safety and health. Yet these are ignored, and no other regulations are observed.

If the Board of Health have authority to set aside local building regulations, I submit that they ought to be called upon to enact alternative regulations, and in this way accept responsibility for the drainage work which is being carried out on their authority at the present time. The following are some of the requirements of our bye-laws which are not observed in buildings erected by the authority of the Board of Health :—

(1) Trapping of waste drains from soil drains;

(2) Size and weight of soil pipes and waste pipes; and

(3) The fixing of a trap under each fitting and the ventilation of branches receiving the discharge from more than one fitment.

In one case at least one of the foremost sanitary engineers refused to execute work as desired, on account of the danger from syphonage — the almost certain danger—through lack of adequate ventilation.

Not only are we powerless to interfere, but we are much handicapped when dealing with buildings being erected outwith the sanction of the Board of Health. In such cases we insist on the local regulations being observed, but we feel that tradesmen look upon the procedure as inconsistent, to say the least, and it is not easy at all times to explain the position.

Another Assistant Inspector directs attention to the fact that many complaints are made regarding the old pan water-closet. He points out that it is now over a quarter of a century since the construction of such closets was discontinued, and that the time is now ripe for securing power to order their removal and the substitution of a more modern convenience.

Housing. — In dealing with structural defects in houses in this division, we work both under the Public Health Act and the Housing Acts.

Should the survey of a whole tenement reveal structural defects in several or all of the houses, we deal with this under the Housing Acts; but if, in the course of a daily visitation throughout the district, some structural defects are discovered in houses here and there, these are dealt with under Section 16 of the Public Health Act, and in this way it is unnecessary to bring before the Executive Committee of the Corporation matters which might be deemed trivial.

In connection with our work under the Housing Acts, 2,623 visits of inspection were made during the year. 980 intimations were issued, embracing defects in 564 houses. 29 applications for certificates under the Rent Restriction Act were received; 10 were granted and 19 refused.

The following table shows the work done under the Housing, Town Planning, &c., Act, including the Rent Restriction Act :—

Ward	Intimations issued	No. of Houses involved	Applications for Certificates	Granted	Refused	Visits
12. ...	301	164	6	4	2	848
13. ...	199	116	1	—	1	583
14. ...	291	167	7	3	4	610
15. ...	177	109	4	—	4	533
16. ...	1	1	—	—	—	3
22. ...	3	1	3	1	2	3
23. ...	3	2	3	—	3	28
24. ...	5	4	4	2	2	13
25. ...	—	—	1	—	1	2
Totals,	980	564	29	10	19	2,623

During the year the usual defects found in the houses inspected were broken glass, broken sash-cords, broken plaster, defective wood-casing of sinks, missing batten rods of windows, and (in top-flat houses) leaking roofs.

In the older houses most of the internal partitions are of lath and standard, which are easily broken down by careless tenants, thus accounting for the large number of cases of broken plaster. This type of partition also provides a run for vermin, and affords them an opportunity of infesting the whole tenement.

It does not appear to be illegal to erect such partitions, but the deletion of the words, "dividing separate houses," in Section 75 (1) of the Building Regulations Act, 1900, would achieve that end. That, of course, would not prevent vermin moving about where the inner sides of external walls are strapped, lathed, and plastered to prevent damp, as this would provide an equally good ladder. Only hollow-wall construction would achieve this in external walls.

In the case of wood linings of sinks, many of the defects are due to plumbers tearing out the woodwork when getting access to burst pipes, and putting it back in a haphazard way.

The space under sinks is often found damp and foul-smelling; this dampness is caused by badly-fitting woodwork and pipe blocks lying out of level, with the result that when the swan-neck crane gets slack and falls back the water drips on to the block, and thence under the sink, or it may also be caused by a "drag" on the supply pipe, causing the pipe to tilt where it passes through the wooden upstand. This also leads to drips running along the pipe to the floor under the sinks; additional holdfasts would remedy the latter defect.

Probably an alteration of By-law 76 of the Building Regulations Bye-laws, making the offence retrospective (after a time-limit), would remedy matters to some extent, but the abolition of all front woodwork and the sink-stool would be a greater improvement.

Broken window glass is the cause of a vast amount of trouble between landlord and tenant, and very frequently the Sanitary Inspector is appealed to by the tenant. Boys playing football, &c., in back-courts get blamed for a great amount of the broken glass found, and without doubt much of the damage is done in this way.

Broken sash-cords are only a matter of wear, but batten rods are commonly lost on account of tenants removing or loosening them (after cutting the sash-cord of the lower sash), to permit of the cleaning of the windows without sitting outside.

Enforcing, or if necessary the recasting, of Section 102 (5) of the Building Regulations Act, would be advantageous here.

Defective roofs are generally the result of the slate nails having rusted away. In most of the older slated buildings, it is almost impossible to repair the roof, as the nailing on of slates at one point causes others higher up to slip down a little, and so lose "lap." The scrambling of tradesmen and chimney-sweeps over the roof is also the cause of many slates sliding out of position. A strong wind may even shake the roof sufficiently to cause leaks to develop, through the moving of the unnailed slates. There would be considerable advantage were it possible to deal with such a roof as a "recurring" nuisance, and so secure the stripping and reslating of the whole roof.

We have compiled during the past year a very valuable statement, embracing every back land in the Division. In this report on back lands, the number and size of the houses, population, and rentals are stated for the following groups:—

(1) Houses officially closed, but still occupied;
(2) Houses standing appealed under Section 17;
(3) Houses that could be taken up under Section 17;
(4) Houses situated in "obstructive" buildings;
(5) Houses badly situated only; and
(6) Houses in good repair and well situated.

In the first group—houses formally closed, but still occupied—we have only one property, *i.e.*, that at 37 Clyde Street, Anderston. In this property there are nine two-apartment houses, with a population of 31 adults and 9 children; the total rental is £134.

In the second group—houses standing appealed under Section 17—we have 10 tenements. In these 10 tenements there are 21 one-apartment houses and 77 two-apartment houses. The population is 270 adults and 108 children; the total rental is £932 5s.

In the first group—houses in respect of which a Closing Order is in force—the proprietor could be proceeded against under Section 24 of the Housing, Town Planning, &c., Act, 1919, under which a penalty of £20 can be imposed on summary conviction for reletting or occupying a house ordered to be closed, but the difficulty is to find accommodation for the tenants.

With regard to the 10 tenements in the second group, which are standing under appeal, it seems desirable that the appeals should be awakened. If the closing of houses cannot be permitted at the present time, we ought to be in a position to call for the repairs, and this we cannot do so long as the appeal is pending.

In all these properties, with one exception, the rents have been raised. If the Sheriff were to grant the appeal, or the Local Authority withdraw the Closing Order, then we could ask for repairs.

The foregoing properties are back lands, but there are many front lands in a similar position.

In the third group—back-land houses that could be taken up under Section 17 of the Housing, Town Planning, &c., Act, 1909, and represented as unfit for human habitation—we have 17 tenements. These 17 tenements contain 57 houses of one apartment, 67 of two apartments, and 11 of over two apartments, with a total population of 393 adults and 151 children. The total rental of these properties is £1,250.

The fourth group—back lands that are obstructive only—embraces 17 tenements. These buildings may be dealt with under Section 38 of the Housing Act, 1890, and demolished. The houses contained in this group are 128 of one apartment, 108 of two apartments, and 4 of over two apartments. The population is 646 adults and 306 children. The total rental is £2,508.

In the fifth group there are 14 tenements, which are back lands badly situated, but which are neither "obstructive" nor ripe for taking up under Section 17. The number of houses in this group is 22 of one apartment, 83 of two apartments, and 9 of over two apartments. The population comprises 348 adults and 153 children. The total rental is £1,228.

In the last group of back lands, we have 19 tenements favourably situated, and neither obstructive nor yet within the purview of Section 17. In this group there are 92 one-apartment houses, 104 two apartments, and 6 over two apartments. The population is 596 adults and 221 children. The total rental of this group is £2,234 10s.

These six groups contain all the back lands in the Central Division. There are 77 such properties, containing 798 houses—320 of one apartment, 448 of two apartments, and 30 of over two apartments. 33 of the back lands are in congested areas and occupy congested sites. 25 of the back lands occupy congested sites in congested areas. There are 29 "obstructive" buildings.

28 of the properties could be dealt with under Section 17 of the Housing, Town Planning, &c., Act, and 86 of the houses could be dealt with under Section 40 of the Building Regulations Act.

Only 164 of the back-land houses are through-and-through, 318 are back-to-back houses, and 374 are "telescoped" houses—houses in which one of the apartments can only be entered by passage through the other apartment.

The houses in 40 of the back lands are "ticketed" houses, and in 22 of the tenements access can only be gained to the houses through long, dark lobbies.

In all the properties, with the exception of 6, a sink and water supply are in each house, and the water-closet accommodation is common, but convenient.

In 29 of the properties the old built ashpit still exists, but in the majority of cases ashbins have been introduced.

36 of the back lands have no wash-house accommodation. In 12 cases the existing wash-houses are in a dilapidated and unuseable condition, in only 29 cases the use of the wash-house being available.

The total population of the back lands in our Division is 2,284 adults and 948 children. The total rental is £8,286 15s. Most of the back lands in the Division are in Ward XII (Exchange). Over 8 per cent. of the dwelling-houses in this Ward are in back lands, of which there are 31 in this Ward alone.

68	per cent.	occupy congested sites;
51	,,	are in congested areas;
45	,,	could be dealt with as unfit;
33	,,	are "obstructive" buildings;
47	,,	of these houses are of one apartment; and
48	,,	of the larger houses are back-to-back.

We cannot suggest that these properties ought to be closed at present, but our object ought ultimately to be to get rid of the back lands entirely, commencing with those in Groups 1, 2, 3, and so on. Towards this end, it might be advisable to get in touch with the Housing Department, and secure their co-operation to provide new houses, suitable and convenient in every way, into which the occupants who would be displaced through our representations could be transferred.

WILLIAM ROY,
Divisional Sanitary Inspector.

Central Division,
23 Montrose Street,
Glasgow, March, 1922.

NORTHERN DIVISION.

General Nuisances.—16,281 nuisances were dealt with during the year. The items forming this total are detailed in Table XXII, and for the first time the figures refer to the reconstituted Wards. Comparison of the sanitary conditions prevailing in one Ward with those in another has sometimes been made, on the basis of the

number of nuisances dealt with per acre or per 100 dwelling-houses, but it is difficult to obtain a figure that will serve as an accurate basis of comparison. The acreage figure is misleading in the case of a Ward with a large area of vacant ground, while the number of nuisances dealt with per 100 dwelling-houses is unreliable where the Ward is largely occupied by business premises.

It is unsafe, therefore, to draw conclusions from comparisons made on such figures as the above; but, although the number of the population has necessarily some bearing on the matter, as a general rule the sanitary character of a Ward is well reflected in the total number of nuisances discovered.

The number of nuisances dealt with during the year in the nine Wards in the Division is given in the following table:—

Ward	Total Number of Nuisances, &c., dealt with
VIII (Provan),	2,539
IX (Cowlairs),	1,151
X (Springburn),	1,255
XI (Townhead),	1,657
XVII (Cowcaddens),	3,100
XVIII (Woodside),	2,545
XIX (Ruchill),	1,250
XX (North Kelvin),	1,366
XXI (Maryhill),	1,418
Whole Division,	16,281

Cowcaddens, although greatly altered in its boundaries, is still the "dirty" Ward of the Division. The added area is very similar in its general features to the portion cut off, and there is therefore no diminution of the number of nuisances discovered as compared with former years.

The standard formerly maintained by Woodside has been lowered by the inclusion within the new Ward boundaries of the Lyon Street locality, which, containing as it does a large number of insanitary tenements, yields an abundant crop of nuisances.

In the Garngad portion of Provan Ward there are many old tenements closely packed together, and, as in other places, a considerable number of careless tenants; and these, each in its own way, contributed to the large number of nuisances discovered in the Ward.

Court proceedings were taken in connection with the matters specified in the following table:—

Default	Number of Prosecutions
Sheriff Court—	
Defective drainage,	1
Tenements without wash-house accommodation,	1
Application under Rent Restriction Act,	1
Police Court—	
Cleansing of closes and stairs,	68
Dirty houses and bedding,	3
Overcrowding in house let-in-lodgings,	1
Whitewashing of staircases,	5

Two cases brought before the Sheriff regarding properties in connection with which the common washing-houses had been allowed to fall into such a state of disrepair that they could not be used by tenants were unsuccessful. They were in the nature of "test" cases, and were brought for the purpose of ascertaining whether or not the want of proper facilities for washing is a "nuisance" within the meaning of the Public Health Act. After hearing evidence, the Sheriff dismissed the cases, and the following is an extract from his Interlocutor:—

> "A nuisance cannot be a purely negative thing. It is not a nuisance not to have a water-closet in the house, nor an ashbin adjoining thereto. The nuisance is the filth left lying where these are, or should be. The nuisance complained of here is not the want of a wash-house, but the fact that people are washing in their houses. My sympathies are with Dr. Chalmers, for I think that tenants should not only have a wash-house, but should have baths in their houses. You have not got legislation to enforce this, and until you get legislation you will have to do without the great many things that are at present desirable. I am convinced that this is not a 'nuisance' within the meaning of the Public Health (Scotland) Act, 1897."

Dirty Closes and Stairs.—A special effort to deal with this troublesome form of nuisance was made in Cowcaddens and Provan Wards. Upwards of 2,000 cards, showing the dates on which the rotation of cleaning fell due, were issued to tenants in these Wards, and a warning was given in every case that failure to comply with the bye-laws would render the tenant liable to prosecution. The various tenements were for some time thereafter visited three times weekly by two Inspectors, in order to make sure that the rotation of cleansing was duly observed, and in 56 cases it was found necessary to bring defaulting tenants before the Magistrates.

The rotation card as a means of regulating the cleansing of stairs, &c., was largely a failure in pre-war days, owing to the frequent removal of tenants, and the consequent upsetting of the rotation, but this difficulty does not present itself nowadays, and it has been possible to effect a marked improvement of the condition in which the stairs, &c., in these Wards are kept.

As can be readily understood, the arranging of the cards and the subsequent visits to the tenements take up a great deal of the time of the Inspectors, but the work is important, and if it is to have any permanent value it must be carried out systematically and persistently.

Overcrowding.—There is evidence of considerable overcrowding of dwelling-houses throughout the Division generally, but its actual extent is not easily ascertainable, although the Census figures may throw some light on the matter.

The following are examples of conditions which come under the notice of our Inspectors from time to time; they refer to dwelling-houses of the non-ticketed class:—

(1) A two-apartment house, occupied by two families. In the kitchen there are three adults and two children, and in the room four adults and four children.

(2) A small two-apartment house, with inside water-closet. This house is occupied by a husband and wife, eight grown-up daughters, and a child. A single bed is made up in the water-closet.

(3) A single-apartment house, occupied by husband and wife and six children, whose ages range from 17 years to 15 months. One of the children (a boy of 10) is a cripple, suffering from disease of the spine.

(4) A dark single-apartment basement house was found in a badly-overcrowded condition. The family in this case consisted of husband and wife, four daughters (whose ages are 19, 17, 12, and 10 years), four sons (whose ages are 15, 4, 1½, years, and 2 weeks)—ten persons in all. The capacity of the house is 1,400 cubic feet.

(5) The worst case discovered was that of a family of thirteen living in a single apartment. The family consisted of the father and mother and eleven children, whose ages ranged from 19 years to 7 months. The death of the youngest child reduced the number to twelve. There are two bed spaces in the apartment, and two extra beds have to be made up every night on the floor.

Ticketed Houses.—In pre-war days, when houses were plentiful, from 8 to 9 per cent. of the ticketed houses visited were found overcrowded, but last year the percentage over the whole year was 15 — a serious increase, with which we are powerless to deal, owing to the insufficiency of house accommodation.

For the purpose of comparing the extent to which overcrowding exists in the "ticketed" houses in different localities in the Division, a special record of the night inspections made during the last three months of the year was kept, and the result is detailed in the accompanying table. During the period, 3,890 of the 6,479 "ticketed" houses in the Division were visited.

Taking the figures over the whole of the areas dealt with, it is found that, on an average, 16 per cent. of the single-apartment houses and 17 per cent. of the two-apartment houses are overcrowded to a greater or less degree. Garngad, Townhead, Parliamentary Road, and Burnside Street give the worst results, the number of houses found overcrowded in these localities being well over the average for the whole. Port-Dundas and Garscube Road are better, comparatively, than was expected, while Maryhill gives the best figure.

With regard to the degree of overcrowding within the houses, or the average number of persons found in excess of the legal standard of 400 cubic feet for an adult and 200 cubic feet for a child under ten years of age, it will be seen that all the areas are much alike in this respect.

Perhaps the most striking picture of the overcrowed conditions prevailing in these houses is contained in the statement of the total number of persons found in excess of the legal standard. It may be explained that, in arriving at these figures, a record was made of the actual number of persons in each overcrowded house, and the number in excess was estimated on the principle that the latest comers in the family (the youngest members) are the "overcrowders." Thus, in a house ticketed for four adults, but actually occupied by four adults and four children, the excess is stated in the table as being four children, not two adults. The overcrowding

may be said to have been caused in every case by the tenant's own family, the absence of lodgers being rather remarkable. In a few cases relatives of the tenants were found living with the family, but these were not considered *lodgers*.

That there is so much overcrowding in these small houses is to be deplored, and the unhealthy physical and moral conditions under which so many children are living are specially regrettable features. Taking the single apartments and the two apartments together, it will be seen that in the 633 overcrowded houses there are 439 adults and 972 children more than there is legally room for — an urgent plea, if such is still needed, for more houses.

RESULT OF NIGHT INSPECTIONS FOR OVERCROWDING IN CERTAIN AREAS DURING THE PERIOD 1ST OCTOBER TO 31ST DECEMBER, 1921.

Abstract.

	Single Apartments		Two Apartments		Single and Two Apartments combined	
Number of houses inspected, ...	2,309		1,581		3,890	
Number found overcrowded, ...	363		270		633	
Percentage overcrowded,	16		17		16	
	Adults	Children	Adults	Children	Adults	Children
Number of persons in excess, ...	230	541	209	431	439	972
Average number in excess, ...	0·6	1·5	0·8	1·6	0·7	1·5

Housing.—The continued scarcity of houses made it impossible to take action for the closing of uninhabitable houses, and the whole of our work under the Housing Acts was in the direction of maintaining the houses in a reasonable state of repair.

Action for the repair of properties was taken under Section 25 of the Housing Act of 1919, and also under the Public Health Act. Where the disrepair gave rise to conditions which could be dealt with as a "nuisance" — such as leaking roofs, woodwork decayed and causing smells, &c.—it was dealt with under the Public Health Act, and the work carried through in this way is included in the general statement of nuisances, &c. Otherwise, notices were issued in terms of Section 25, and our operations thereunder are detailed on page 108.

The items of disrepair most commonly discovered are defective plasterwork, torn and loose wallpaper, broken glass, sash cords, and woodwork of windows, decayed and broken woodwork of sinks, floors, &c, leaking roofs, and defective vents.

In the great majority of cases, requests for repairs are reasonably complied with by owners without undue delay, and in one case only was an appeal made to the Sheriff against a notice. The appeal was, however, ultimately withdrawn, and the Court expenses paid by the appellant.

In one property, where we met an unwilling owner, considerable difficulty was experienced before the repairs were carried out to our satisfaction. The owner here, in one of his houses (a single apartment), where the whole of the plaster of the ceiling had fallen, attempted repair by tacking strips of wallpaper to the exposed lath. Needless to say, this was of no use, and did not prevent dust falling all over the house. The next material to be tried was ordinary roofing felt, and, as it was fixed rather neatly and a coat of whitewash had afterwards been applied, the finished work looked fairly well. The felt had one serious defect, however—it was highly inflammable, and, despite the owner's suggestion that it was asbestos, it had to be removed, and an ordinary plaster ceiling was ultimately provided.

In the repair of the brickwork of the walls of the close in the same tenement, the cementing material used was a mixture of ashes from the ashpit and mud scraped from the surface of the back-court. This, however, was discovered while the work was in progress, and the repairs had to be started again from the beginning with proper materials.

In fairness to property owners generally, it should be stated that this case was altogether exceptional.

Increase of Rent (Restriction) Act.—98 applications for certificates, in terms of the Act, were made during the year, and of these 45 were granted and 53 refused.

The number of applications has fallen remarkably, and during the first three months of the present year (1922) no applications whatever were made.

The test case (21 Lyon Street) under this Act was appealed to the Court of Session, with the result that it was determined by the Court that an action at the instance of the Corporation, as Sanitary Authority, to suspend an increase of rent, in terms of this Act, is competent.

Common Lodging-houses and Farmed-out Houses. — These were kept under strict supervision, and a satisfactory sanitary standard was maintained.

Female Visitations.—The dirty houses discovered by the Female Inspectors in the course of house-to-house visiting are detailed in the appended table. This work has important educative value. Healthy living is impossible if cleanliness within the house is not observed, but, unfortunately, this is not universally recognised, and pressure has in many cases to be brought to bear on careless and thoughtless tenants.

It will be noticed that the three Wards—Cowcaddens, Woodside, and Provan—which give the worst results in the table dealing with general nuisances, maintain their unsatisfactory record in this table also :—

Ward	Number of Dirty Houses discovered
VIII (Provan),	215
IX (Cowlairs),	15
X (Springburn),	36
XI (Townhead),	113
XVII (Cowcaddens),	235
XVIII (Woodside),	215
XIX (Ruchill),	55
XX (North Kelvin),	35
XXI (Maryhill),	78
Whole Division,	997

Rats and Mice (Destruction) Act, 1919.—During the year a survey of the whole Division was made, and a list of rat-infested premises prepared. Speaking generally, we find that occupiers of rat-infested business premises are anxious to do what they can to exterminate the rats, but a real cure for the evil is, in many cases, beyond their means.

In the case of dwelling-houses, it seems hopeless to expect tenants to deal adequately with the rat nuisance.

Notices were issued, in terms of the Act, in connection with a grain store and a grocer's shop. In both cases the alterations required, in order to render the premises rat-proof, entailed a considerable expenditure, and the work, though not yet completed, is well in hand.

Repression of Flies.—From the beginning of June till the end of September, the dung-pits in connection with the stables in the Division were sprayed once a week with cyllin, and during the four months 3,471 disinfections were carried out by the two men employed on the work.

This campaign for the suppression of the fly nuisance probably owes much of its success to the frequent removal of the manure from the dung-pits, and in the great majority of cases this was done weekly during the summer months. Occupiers of stables generally are to be commended for their co-operation with the department in the carrying through of this work.

Water Supply.—Notices were issued with regard to 578 properties in which the cisterns for dietetic water supply were found in a foul or uncovered condition.

The supply to a great part of the Springburn district is pumped, and cisterns are installed in the attics of a large number of tenements. A yearly cleansing of these cisterns is desirable, but there is meantime no specific power by which this could be enforced.

The committee which was appointed to consider the question of the applicability to existing buildings of—among others—Bye-law 78 of the Building Regulations Act, 1900, has not yet reported.

The details of other branches of the work, which do not call for special comment, are given in the general statement of the work of the Division.

Northern Division,
23 Montrose Street,
Glasgow, 26th April, 1922.

J. H. PATTERSON,
Divisional Sanitary Inspector

EASTERN DIVISION.

Battle Burn, Tollcross. — The question of covering over the Battle Burn has been before the Health Committee on various occasions since 1913, but proceedings were delayed owing to the war. However, during the year this has now been accomplished, the portion referred to extending from Easterhill Street to Main Street, Tollcross. Two fireclay pipes have been laid in the bed of the burn in juxtaposition, the one being 2 feet and the other 1 foot 6 inches in diameter, and suitably covered over.

This part of the burn, especially during the summer months, was the source of serious nuisance, particularly to those living in close proximity to Causewayside Street, Graham Street, John Street, and Tollcross Public School. All sorts of *débris* were thrown into the bed of the burn, filling it up and obstructing the flow.

Under the Boundaries Act, 1912, the Corporation came under an obligation to cover over the burn. The expense incurred amounted to £4,688 1s., and falls to be charged to the Public Health Department. However, although the expense has been considerable, the money has been well spent, as not only has this long-standing nuisance been effectively dealt with, but the amenity of the surroundings has been greatly enhanced.

Offensive Trades.—During the year two additional licences were granted—one for tallow melting and another for soap boiling. There was also an application made for extension of premises in connection with tallow melting, which was also granted. There are now 43 offensive trades in the Division.

It will be remembered that towards the end of 1920 an application was made for a licence for tallow melting, and, after due consideration, the Corporation refused it. The applicant, however, appealed to the Ministry of Health, who, after receiving a report from their Commissioner, sustained the appeal and granted the licence.

All the premises have been kept under regular supervision during the year. 805 inspections have been made of them, with the view to enforcing the strict observance of the bye-laws. On the whole, the businesses are well conducted, and no complaints have been made by the public during the year, except in one instance, which might be said to be a sequel to the coal strike which occurred during the months of May and June.

The premises referred to were licensed for bone boiling, the bones being degreased by the benzine process. The bones are collected daily by motor vans, &c., from butchers' shops, restaurants, marine stores, &c. In the early weeks of the coal strike the works had to be closed down for want of coal, and the degreasing of the bones could not be carried on, with the result that a very serious "fly nuisance" developed on the premises. The firm continued to take in raw material, and dumped it on vacant ground immediately to the north of the works. It was a matter for consideration whether it was more desirable to adopt this method or leave the bones to accumulate in multitudinous shops, &c., all over the city.

In all about 500 tons were deposited at the works, and, with the prevailing hot weather, a plague of flies developed. The walls of the premises, as well as the adjoining buildings, were literally covered with flies. Spraying with various disinfectants was tried to mitigate the nuisance, but only with partial success. In the interval considerable quantities of the bones were railed to the country, where the firm own works of the same nature, but it was only after the settlement of the coal strike, and the plant was again put into action, and the large accumulations of bones were dealt with, that the "fly nuisance" abated.

Common Lodging-houses.—There are 11 common lodging-houses in the Division —5 for females and 6 for males. As these have been the subject-matter for special reports during the year, they do not call for further remark here, other than to emphasise the urgency of amending the law which fixes the maximum charge per night at 6d.

Rag Flock Act. — 28 samples of rag flock were procured during the year. 26 conformed to sample, while 2 were not in conformity. Proceedings were taken in 1 case, when the respondent pled guilty and was fined £7.

"Rag flock" is not used nearly so much for upholstering as in former years, owing to the fact that so many other varieties of flock and other "substitutes" are now in use, especially in the cheaper grades of upholstery. Such substitutes cannot be dealt with under the Act as it now stands, and steps should be taken to amend the Act, in order to put an end to this anomaly.

Female Visitations.—It will be observed that for the year under review there is a considerable shrinkage of this work. One Inspector was off duty through illness for a long time, and eventually retired on pension. Another left the service and emigrated to Canada. Ultimately, an Inspector was transferred from the Central Division, and a second lady was appointed in November.

There is a great amount of useful work in the Eastern Division which falls to be dealt with by the lady Inspectors, and I would urge the necessity of appointing a third, as already approved.

There are 42 schools in the Division. The Calton Ward has also been added, and from the prevailing class of tenant and type of property which obtains all over the Division it will be readily conceded that only by regular and sustained visitation a higher standard of cleanliness can be looked for.

Theatres, Music Halls, Cinemas, &c.—At the request of the Ministry of Health, a survey of all the places of amusement was made during the year. The principal points noted were—(1) Methods of ventilation and heating; (2) lavatory accommodation provided for patrons and employees; and (3) sanitary conditions of the premises generally.

There are 34 places of amusement in the Division. These were all inspected and reported upon.

Underground Stations.—Special surveys were made of these during the year. There are 4 underground stations within the Division, 3 being in connection with the Caledonian Railway—(1) Bridgeton Cross; (2) Dalmarnock Road; (3) Glasgow Green (Binnie Place). The other underground station is at Bellgrove Street, on the North British Railway system.

The buildings are all of modern construction, and in a good state of repair. The waiting-rooms and lavatories are well lighted and ventilated, and at time of inspection were found clean and satisfactory.

Complaint of the Dirty Condition of Railway Carriages on the North British Underground Railway.—On the 18th March, 1921, I instructed the Inspector for the District to make an inspection of both the ingoing and outgoing trains at Bridgeton Cross Station with reference to the alleged insanitary condition of the railway carriages. The following is the Inspector's report:—

"*Bridgeton Cross Station.*—This is a station terminus on the street level, consisting of four passenger platforms.

"I inspected the following trains:—

10.48 a.m. to Milngavie.
11.40 a.m. to Helensburgh.
12.17 a.m. to Milngavie.
1.26 p.m. to Balloch.
3.17 p.m. to Milngavie.

"All these trains, outside and inside, floors, windows, cushions, &c., were clean. Between 11 a.m. and 3.30 p.m. I inspected seven arriving trains, and found them quite clean, with the exception of some of the cushions, which were dusty-looking, and the floors, particularly the smoking compartments, were covered with spent matches, cigarette ends, &c.—which, of course, is not exceptional in railway carriages.

"I interviewed the Stationmaster, who informed me that there were 54 carriage cleaners and 3 forewomen—57 in all. The carriages are cleaned daily—the outsides and insides washed, floors washed with disinfectant, and the cushions cleaned with an electric vacuum cleaner."

JOHN DONALDSON,
Divisional Sanitary Inspector.

Eastern Division,
37 High Street,
Glasgow, 12th April, 1922.

SOUTH-EASTERN DIVISION.

Housing.—The demand for housing accommodation is still far from being met, and consequently procedure with the demolition or reconstruction of uninhabitable houses cannot yet be made. A considerable amount of repair work has, however, been accomplished under the Housing and Public Health Acts.

Increase of Rent and Mortgage Interest (Restrictions) Act.—41 applications for certificates under this Act were received during the year, and in 30 cases certificates were granted, 11 being refused. Two of the latter were from tenants in Woodville Gardens, where flooding similar to that of last year, but to a much lesser extent, caused by the overflowing of the River Cart, again occurred. In all cases where certificates were granted because of remedial defects action was taken to have the necessary repairs carried out.

Nuisances.—Careful investigations have been made into all complaints received, and regular and systematic inspection of the district has been carried out for the detection of nuisances. It is found that the majority of property owners and factors are ready to co-operate with the department by speedily removing all nuisances brought to their notice, but in one or two instances dilatoriness is shown,

and in these cases legal proceedings are necessary. In the 8 instances which required such action during the year, the nuisances were removed before the cases were called in court.

Complaints are from time to time received regarding smells or fumes arising from trade processes—the businesses concerned not being within the definition of "Offensive Trades," nor, in some instances at least, such as might be brought within that definition. Some of these businesses, such as fish curing and other food preparing premises, motor garages, and tyre repairing works, &c., have been established in back courts behind and in close proximity to tenements of dwelling-houses or in shops immediately under dwelling-houses where, notwithstanding that the best means available may be adopted to abate the nuisance, the situation prevents an entire remedy. Another business giving rise to nuisance, and one that is peculiar to this particular Division, is the slaughtering of fowls by the Jewish method, which in many instances is carried on in the basements of the retail shops. These require constant supervision to ensure their being kept in a reasonably sanitary condition, but here again the situation is objectionable. One other instance may be mentioned. A manufacturer of rennet (on a small scale) started business in an ordinary shop in a tenement, and complaints of smells were immediately received from householders. In this case the nuisance was so serious that the business was discontinued on the representation of this department.

It is suggested that an amendment or strengthening of the law should be made, to enable the Local Authority to make regulations prohibiting the establishment or carrying on within a specified distance of dwelling-houses or other occupied premises of these and other businesses which are likely to cause nuisance.

Football Grounds.—An inspection of the sanitary accommodation provided at the various football grounds was made, when it was found that, although adequate provision has been made in each case for players and club officials, the accommodation for spectators left much to be desired. Negotiations for an improvement in this direction are meantime being carried through.

Jenny's Burn.—In the early part of the year complaints were received regarding the condition of that portion of Jenny's Burn where it emerges from underneath Rutherglen Road and enters Richmond Park. At that point the burn is crossed by a sewer the under side of which just dipped below the surface of the water, thus holding up all floating matter and more or less impeding the flow, the water in consequence becoming offensive and giving rise to smells. A weir further down the burn also tended to impede the flow and to raise the water level above the under side of the sewer. A sample of water was procured and submitted for analysis, when it was found to be sewage polluted. It was ascertained that this pollution was caused, not by any leakage from the sewer already referred to, but by another sewer which discharged directly into the burn at a point considerably further up at Calder Street. This sewage is now being filtered before reaching the burn, and a by-pass has been made at the weir to lower the water level and thus permit floating matter to pass under the obstructing sewer.

Drainage.—The smoke test was applied on 541 occasions to the drainage systems of 337 properties, of which 120 were new buildings. At 181 of these, defects were found, which were afterwards made good. At a school the old drains were entirely removed and a new system provided.

Cleansing of Closes and Stairs.—The enforcing of the bye-laws for the cleansing of closes and stairs was duly carried out. In most cases a warning is sufficient to bring careless tenants to a sense of their duty, but whenever that is found to be ineffective, cards fixing the tenants' rotation are served. In 9 instances only were court proceedings necessary, and in 7 of these fines, amounting in all to 77s. 6d., were imposed. In one case accused was admonished, while in the remaining case, accused having failed to appear, a warrant was granted for her apprehension.

All staircases found to be in need of limewashing were duly reported to the Corporation, and subsequently the factors were notified to have the necessary work carried out.

Court proceedings were instituted against a firm of house factors who failed to remove an accumulation of refuse from the roof of an outhouse. On pleading guilty, a fine of four guineas was imposed, and the refuse was removed.

Domestic Cleanliness.—The female inspectors have again been untiring in their efforts to effect personal and domestic cleanliness. The schools have been regularly visited for the detection of verminous and dirty children. Much improvement has been effected in many instances, but some parents seem to be incapable of continued effort for the well-being of their children, and these require constant supervision.

Systematic visitation is also necessary in the case of the dirty housewife who, like the neglectful parent, is also incapable of continued effort except under compulsion. In each of two cases where police court proceedings were instituted a fine of £2 was imposed. In this matter, however, the most difficult persons to deal with are individuals who live alone and are defective physically and often mentally. Only by the exercise of much tact and patience can improvement be effected in

such cases. These individuals should really be in an institution, but they are usually quick to resent any suggestion of this. In two instances, however, removal to an institution was consented to after much persuasion. In another case an old woman who required personal cleansing consented to go to the Reception House, where she was bathed and had her hair cleaned, while her clothing was sent to the disinfecting station at Belvidere for treatment.

Scavenging.—Back courts are now swept and ashbins emptied regularly, but in some localities the improvement is somewhat nullified by various causes. The tenant who is too careless to deposit the household refuse in the bins, and simply throws it down within the shelter, but rarely within the bin; the children who play among the bins and throw the refuse out; and the rag-gatherer, who in his search among the refuse rakes it out, all add their quota to the unsatisfactory conditions.

Common Lodging-Houses. — There are two lodging-houses for males in this Division, and both are well managed.

Houses Let in Lodgings and Ticketed Houses.—There is still considerable overcrowding, which cannot be remedied so long as the housing shortage prevails.

Farmed-out Houses.—The farmed-out houses, of which there are 207 on the register, have been regularly inspected, and all contraventions of the bye-laws dealt with. Proceedings have been instituted against one keeper for failing to provide the necessary fittings and fixtures and furniture and furnishings. These proceedings were still pending at the end of the year.*

Factory and Workshop Act, 1901.—There are now 661 workshops on the register, 70 having been measured and registered during the year, while 39 were removed from the register. To these, 1,275 visits of inspection were made, and 47 notices to cleanse or effect repairs were served.

The homes of outworkers were also kept under supervision to ensure cleanliness and prevent work being done should infectious disease occur among the occupants.

Tents and Vans.—The vans of travelling show people visiting the district throughout the year were inspected on arrival, and were kept under supervision during their stay. No action was necessary, the vans without exception being clean and free from overcrowding, while privy pans were provided, and all refuse was removed by the Cleansing Department.

DUNCAN THOMSON.
Divisional Sanitary Inspector.

South-Eastern Division.
37 High Street,
Glasgow, 3rd March, 1922.

SOUTH-WESTERN DIVISION.

House Drainage. — The smoke test was applied where there was reason to believe that the drainage or plumber work was defective.

The drains of the houses being erected by the Corporation under their housing schemes are tested before they are covered, and the drains and plumber work tested immediately before the houses are occupied.

Scavenging. — The improvement in the cleansing of back-courts and in the removal of domestic refuse, noted last year, has been maintained.

Nuisances. — Nuisances were as numerous and varied as formerly. Choked traps, choked water-closets used in common, defective water-closet fittings, and broken eave gutters accounted for the greater portion of these.

In 6 cases legal proceedings were instituted against house factors who had failed to remove nuisances; 5 of these were against one house factor, who, notwithstanding that he had ultimately to pay Court expenses, refused to do anything until action had been taken against him in the Sheriff Court. The nuisances giving rise to these Court proceedings were such as ordinarily get immediate attention by house factors, so that there was no departure from the general practice, nor was there any issue involving a question of principle.

Factories and Workshops. — Towards the end of the year the supervision of bakehouse factories as regards cleanliness and sanitation was transferred to the Local Authority, and these now fall to be dealt with in the same way as "retail bakehouses."

* Since finished by case being withdrawn, owing to house-farmer retiring from business and the houses being let as private dwellings.

Common Lodging-houses.—Extensive alterations were carried out in a model lodging-house taken over by the Salvation Army in 1920. Among other improvements is the provision of a small vertical clothes chest or wardrobe and locker within the cubicle, which takes the place of the usual box and locker, the latter of which so often becomes the receptacle of stale and, it may be, decomposing food and rubbish.

None of the "models" is now included in the definition of a common lodging-house within the meaning of the Public Health Act—that is, a house where lodgers are housed at an amount not exceeding 6d. a night for each person. The nightly charges in these "models" are from 10d. to 1s. 1d., and it is submitted that, in view of these increased charges, which on account of higher costs generally are not likely to revert to their pre-war level, the definition referred to should be so modified as to include these "models." What appears to be required is a formula which will include existing common lodging-houses, as that term is generally understood, and any new premises of a similar nature, without reference to the amount payable per night—something analogous (but applicable to common lodging-houses) to the definition of a farmed-out house in Glasgow Corporation Order of 1918, which differs substantially from that in the Public Health Act.

A house-farmer was prosecuted on two occasions for failing to keep exhibited copies of certain bye-laws, and was fined in £2 2s.

From an analysis it is learned that 65 per cent. of the sub-tenants of farmed-out houses had been resident in farmed-out houses for not less than two years in 1920, as compared with 70 per cent. in 1921; 12 per cent. had had houses of their own in 1920, as compared with 10 per cent. in 1921; and 22 per cent. had come from lodgings in 1920, as against 20 per cent. in 1921.

The occupations of the sub-tenants during 1920 and 1921 were found to be:—

	1920	1921		1920	1921
Blacksmith, ...	1	1	Labourer—Shipyard, ...	7	9
Boilermaker, ...	2	2	Mechanic, ...	1	—
Boilerscaler, ...	2	2	Miner, ...	1	—
Caretaker, ...	2	2	Motor lorry driver, ...	1	—
Carter, ...	9	7	Painter.	1	2
Charwoman, ...	2	3	Professional athlete, ...	—	1
Crane driver.	1	—	Rag sorter, ...	2	2
Discharged soldier (unfit), ...	3	1	Railwayman, ...	2	—
Driller, ...	1	—	Riveter, ...	3	4
Dyer, ...	1	1	Sailmaker, ...	1	1
Engineer, ...	2	2	Sawyer, ...	—	1
Fireman, ...	1	6	Seaman, ...	1	2
Galvaniser, ...	—	1	Shipwright, ...	1	—
Hammerman, ...	1	2	Shoemaker, ...	1	1
Hawker, ...	1	1	Stager, ...	2	—
Holder-up, ...	2	1	Tailor, ...	1	1
Insurance Collector, ...	1	—	Tent maker, ...	1	—
Labourer—Dock, ...	36	31	Widow, ...	2	5
,, —Causewayers', ...	2	2	Window cleaner, ...	1	—
,, —Chemical Works,	1	—			
,, —Engineers', ...	2	1		121	125
,, —Foundry, ...	3	3	Houses unoccupied, ...	4	—
,, —General, ...	9	21			
,, —Masons', ...	5	4	Total, ...	125	125
,, —Mill, ...	—	1			
,, —Sawmill, ...	1	1			

The following examples of tenants are typical:—

Sawmill labourer, wife and four children; resident five years. Wife states ill-health and want of regular employment cause of family drifting to sub-lets. This house is often untidy and the children occasionally verminous.

Widow and her child; resident in house for three months; came from farmed-out house in the Gallowgate. The house is very clean and better furnished than the others in the tenement.

The following examples of tenants occupying the farmed-out houses are exceptional:—

Railwayman (shunter) from Edinburgh, where he and his wife and child had been in lodgings. Very clean house. This family appeared to be incomers among the residents of farmed-out houses.

Dock labourer; resident in the house for 11 months (in November, 1920); took up house here on marriage, there being no other house accommodation available.

Ticketed Houses.—The number of ticketed houses is 1,612, to which 5,441 night inspections were made, and 462 (nearly 8·5 per cent.) cases of overcrowding discovered. 458 tenants were warned by the Inspectors, and 4 brought before the Magistrate. 2 were admonished and 2 fined in small sums. Needless to say, it is only in the most aggravated cases that Court proceedings are resorted to.

In a report on "Overcrowding of Ticketed Houses and the Causes, from observations taken at night," by the Assistant Inspector, it is stated that—

"The main causes at the present time are lack of work, bad conditions in trade generally, and shortage of houses.

"Overcrowding may be due to the failure of the tenant to take advantage of the space available. For instance, families forced to remove from a single to a two-apartment house, and utilising one room only. In many cases the disused room is void of all furniture.

"A great many cases are due to the good nature of the tenant. Families on the move are accommodated, not for any pecuniary gain, but through kindness for their fellows in distress.

"Others overcrowd in order to gain money: not that, judging from appearances, they make good use of it. Lodgers are kept, not from necessity, but simply to have the house full. In most of these cases there is a husband working, and in many instances the lodgers are workmates.

"Houses are overcrowded where members (male or female) of a family have married during or since the war, and who begin married life in their parents' homes.

"Gross overcrowding sometimes is caused by a woman about to be confined sending, quite naturally, for her mother to attend to her. The attendant mother, however, brings along all the members of the family, her husband included, and in consequence, when the birth takes place, the infant has little chance, particularly when this occurs in a single-apartment house.

"The lazy, who cannot keep a house when they get one, usually under an assumed name, pay rent for a month or two, miss the next two, and so on, until they are put out and on the road again, to overcrowd some other person's house. They always get pity. I have found the same individuals in different districts of the city.

"Quarrelling causes overcrowding. This is by no means an uncommon cause. The husband, who may be the worse of drink and of a quarrelsome nature, puts his wife and family out, and leaves them to make the best of it.

"Before the early closing of the public-houses it was quite common to find strangers to a particular house lying on the floor intoxicated, having been escorted there by some member of the family. Overcrowding from this cause seldom occurs now."

Cleansing of Closes and Stairs.—The sweeping and washing of closes and stairs—a subject which gave rise to a good deal of discussion recently—has hitherto been, and still is, accepted by the tenants as a duty which falls to be carried out by the tenants using the closes and stairs, and in no instance has this principle been questioned by a tenant in this Division, nor has there been any suggestion by the tenants of hardship in their being called upon to share equally the task of keeping them clean.

During the year, 43,308 inspections were made with regard to the enforcement of the bye-laws, and rotation notices, on which are entered the dates on which the "turns" for cleansing fall due, were served upon 1,811 tenants. On each of these notices, as a rule, the rotation for a year is entered.

16 tenants were proceeded against in the Police Courts for contraventions of the bye-laws. 3 were found guilty and admonished, 12 were fined in sums ranging from 2s. 6d. to £2 2s., and in 1 case the charge was not proved. The amount of fines imposed and recovered was £7 17s.

It has to be borne in mind that it is only in a very small proportion of tenement property that regular supervision is necessary. In the average tenement there rarely is a complaint, and, while the absence of complaints is no proof that the bye-laws are being complied with, general observation goes to show that the closes and stairs are cleaned in proper rotation, and the fact that an occasional complaint is lodged is usually, though not always, evidence of some tenant failing to fall into line with neighbours with a higher sense of cleanliness.

Cleansing of Houses and Clothing.—House-to-house visitation, principally by the lady Inspectors, is carried out to impress on tenants the advantages of cleanliness and ventilation, and to advise mothers on sanitary matters generally. School children are also inspected, and action taken where the children are verminous or their clothing filthy. The lady Inspectors report that in many cases the mothers of children in a verminous condition are pleased to get a visit and be advised as to the best method of keeping the children clean and free from vermin, but that lazy mothers require constant supervision, which results, even in such cases, in an improvement in the children. They also state that, owing to the industrial distress, in house-to-house visitation and inspection of children tact and greater consideration are necessary, and also that there are not now "the awful conditions of squalor and dirt to contend with that we had a few years ago."

One householder was prosecuted for keeping her house of four apartments in a filthy condition, and was admonished.

Sanitary Accommodation at Football Fields.—Football fields and other places were inspected with regard to sanitary accommodation. At one football field, water-closet and urinal accommodation have been provided, and at other two the work is in process of being carried out. At one of the latter very extensive alterations, including the provision of sanitary conveniences and lavatory accommodation for both sexes, will be proceeded with shortly.

JAMES REID,
Divisional Sanitary Inspector.

Town Hall, Govan,
Glasgow, 18th February, 1922.

RATS AND MICE (DESTRUCTION) ACT, 1919.

With a view to ascertaining the places within the city where rats were prevalent a survey was undertaken, and the following table summarises briefly the information obtained by the Inspectors as to the number of rat-infested premises in the city:—

SUMMARY SHOWING NUMBER OF RAT-INFESTED PREMISES IN THE CITY.

Houses—	
Referred to singly,	179
In groups,	183
Single Tenements,	45
Tenement Cellars and Basements,	17
Shops—	
Butchers,	53
Bakers (including Bakehouses),	76
Grocers and Provision Merchants,	88
Restaurants, Hotels, Tea Rooms, and Fish Restaurants,	96
Fruiterers,	33
Dairies,	22
Public Houses,	14
Confectioners,	20
Fishmongers,	26
Others,	47
Farms,	9
Stables,	137
Piggeries,	15
Rag and Metal Stores,	15
Contractors' Premises,	23
Offensive Trades,	31
Breweries and Distilleries,	9
Factories and Workshops,	74
Stores and Yards,	64
Offices and Warehouses,	13
Grain Stores,	23
Railway Stations (passenger and goods),	10
Others,	31

Also Banks of Clyde within area of Wards 2, 3, and 26; Canal Banks—Wards 8, 17, and 24; Molendinar Burn; Banks of River Cart—Wards 33, 34, and 37; and Caledonian Railway Embankment—Wards 35 and 37.

While in rural districts it may be possible to organise periodic campaigns for the destruction of rats, such a campaign for the whole area of the city would be both difficult and non-productive. The summary shows that they are to be found in association with butchers', bakers', and grocers' shops, restaurants, and stables, and such places as provide a food supply, and so long as food-stuffs are left about indiscriminately, and the structure of buildings permits access and facilities for rat runs inside plaster, little good can be accomplished. The basis of any organised attack on rats in cities must therefore be the creation of rat-proof buildings, and the survey was made with a view to securing, where possible and reasonable, that adequate steps might be taken to exclude rats from buildings.

Under the Act it is provided that occupiers will be called upon to take the necessary measures, but it is only in the case of large establishments that any effective results could be looked for, as the occupiers of houses in tenements or small shops and stores would not be able to take the necessary action. While the occupiers of certain large establishments have been called upon, and have as a rule co-operated with the department in adopting any measures suggested, the practice of the department when dealing with properties has rather been to inquire as to the presence of rats, and to ask the owners to take such steps as might be deemed necessary to render the buildings rat-proof. In this way a considerable amount of work has been accomplished.

Since the survey was completed the Committee on Health have also had the matter under consideration, and by their instructions the annexed leaflet on "The Destruction of Rats and the Making of Buildings Rat-Proof" was amended and re-issued to owners and occupiers of premises where the presence of rats had been established.

THE DESTRUCTION OF RATS AND THE MAKING OF BUILDINGS RAT-PROOF.

The Committee on Health invite the careful attention of owners and occupiers to the following Memorandum, and their co-operation in the measures suggested for dealing with rats:—

If rats are disturbed and displaced from their usual sources of food supply, they must migrate in search of other supplies. A campaign for their reduction must therefore be general if it is to be effective.

With this object the committee invite the co-operation of the citizens in their effort—

(1) To destroy rats on a large scale;

(2) To exclude them from dwellings, warehouses, and places of business generally, and to break up their nests and feeding places.

Strict watch should be kept for the appearance of rats in places not previously infested by them.

Rats gain access to buildings chiefly—

(1) By burrowing through the earth below wooden flooring;

(2) Along the course of drain and other pipes led through main walls in holes which are too large; and

(3) By badly fitting doors, doors broken at the foot, and other openings on ground floors.

This is to be met—

(1) By cementing or asphalting earthen basements where these are burrowed;

(2) By filling up holes or cavities in basement walls, or loosely fitting spaces through which drain or other pipes pass, with brick and cement packing;

(3) By re-fitting doorways, protecting the foot, if necessary, with sheet-iron; and by wire-netting openings in basements which cannot otherwise be dealt with. Rat-runs in buildings should be discovered and destroyed.

(4) Old drains emerging from buildings should be cut off and sealed up.

It is useless to stop rat-holes in a house and leave the means of access to the tenement still open. Rats over-run a building behind the plaster and woodwork, in the casing of pipes, and below flooring, but they gain access at the basement.

Rat-infested premises may be dangerous to the health of the tenants, and a menace to their neighbours. Landlords are requested to inquire into the presence of rats in their properties, and to take action on the above or on similar lines.

Food.—Rats are attracted to buildings in search of food. All food-stuffs should be kept in metal receptacles, and care should be taken to cover them at night with tight-fitting lids.

Ashpits, collections of garbage, stable-yards, &c., afford food; lumber heaps or disused structures are suitable for nesting.

Owners are reminded that ashpits in bad repair may be dealt with under Section 58 of the Glasgow Building Regulations Act, 1900.

There is much unnecessary pollution of back courts by tenants throwing over windows domestic refuse. Household refuse should, as far as possible, be burned by the householder. What cannot be burned should be placed carefully in the ashpit or bin.

The Local Authority rely on the willing co-operation of landlords and householders in these directions, and tenants will forward the work by informing the Public Health Department of premises which are rat-infested.

DESTRUCTION OF RATS.

Trapping is the most generally serviceable form of rat destruction. Hunting with dog, ferret, or mongoose is practicable, but they can rarely follow the rat into its burrow.

Poisoning, especially by the more rapid forms, such as strychnine, arsenic, or phosphorus paste, should not be used in tenement houses, or in places to which domestic animals have access.

Barium carbonate baits are suitable in such cases, and have a retarding effect on putrefaction of the carcases.

Hot Tar is sometimes useful in outside premises for compelling rats to leave their burrows.

The discovery and destruction of rat-runs is important. Rats must have frequent recourse to water, and their runs in most houses begin in the vicinity of the water-closet.

Systematic destruction should be done nightly by means of cage or break-back wooden traps. When one form fails, another should be tried.

The *most attractive Baits* are ham, raw meat, cabbage leaves, red herring (roasted), corn, and nuts. It is useful to sprinkle a few drops of aniseed oil over every bait. Untouched baits should be removed daily.

Gloves should be worn when handling traps. Immersion in boiling water, or exposure to steam, deodorises them rapidly.

N.B.—Shipowners should take every opportunity of destroying rats on board ship.

A. K. CHALMERS,
Medical Officer of Health.

Public Health Office,
Glasgow, March, 1922.

Reference is also made under the section of the Report dealing with the work of the Port Local Authority as to the steps to be taken for dealing with rats on ships.

THE RAG FLOCK ACT, 1911.

The following Memorandum was submitted to the Committee, and thereafter forwarded to the Board and Ministry of Health:—

Some recent prosecutions under this Act have brought into prominence certain aspects of its operations which deserve consideration. The prosecutions were originally four in number. In two the seller pleaded warranty, and a subsequent prosecution of the original seller resulted in a fine; the third of the original cases pled guilty; the fourth case was dismissed on the ground that it had not been proved that the material sold was "rag flock within the meaning of the Act."

By regulations made under the Act, rag flock is assumed to be free from gross impurity when the amount of chlorine present in the sample does not exceed 30 parts per 100,000, whereas in the foregoing samples, and in the order stated, the amounts were 42, 227, and 80 respectively.

In contrast with this I am able, through the courtesy of Messrs. Gunn, Eastfield Works, Rutherglen, to supply the following chlorine content of flock obtained:—

(1) From old material—that is, from material obtained from disused articles of clothing (with which the Act was assumed only to deal); and

(2) Flock obtained from new material (with which the Act was not supposed to deal) :—

OLD MATERIALS.

	Mixed Rags	Linsey Cloth	Thick Linsey Cloth
	270	280	188
	584	92	516
	328	260	460
	452	300	560
	460	244	580
	324	—	1,328
	124	1,176	964
	340		560
	664		—
	272		5,156
	3,818		
Average chlorine per 100,000 parts of flock,... ...	382	235	644

NEW MATERIALS.

	Caddis	White Cotton Waste	White Cotton Flocks
	40	36	136
	92	28	
	72	40	
	80	—	
	76	104	
	60		
	104		
	80		
	56		
	660		
Average chlorine per 100,000 parts of flock,... ...	73	35	

Wool Shoddy, ... 132 Cartridge Threads, ... —?

The importance of Messrs. Gunn's results lies, I think, in the demonstration that flock made from material which has not been in use as clothing may show on analysis higher amounts of chlorine than is permissible in flock obtained from material which has been in such use. Further, so far as I have seen, no supplementary test is applied to show whether the chlorine has been derived from inorganic sources and is not harmful.

In this fourth case above referred to, the prosecution failed because it had not been established that the material from which the sample of flock had been taken was "rag flock within the meaning of the Act." Two points, therefore, emerge for consideration :—

(1) The source of the chlorine in the material, whether it is from human pollution (urine, sweat, &c.), or from inorganic sources and so innocuous; and

(2) What is "flock manufactured from rags within the meaning of the Act"?

Historical Note.—The transference of disease by second-hand or disused clothing and by rag flock made from cast-off clothing received some special attention from the Local Government Board (England) in 1885, when Dr. Parsons reported on the methods then in vogue. His conclusions were as follows :—

"(1) Rag flock is a material used for stuffing articles of bedding and furniture.

"It is made by tearing up rags, usually of mixed cotton and woollen nature.

"The rags from which the inferior qualities of flock are made are commonly very dirty, and do not, as a rule, undergo any process of purification beyond the removal of the dust.

"(2) Flock makers and others exposed to rag dust suffer, especially at first, from symptoms produced by the inhalation of dust. They do not, however, appear often to contract infectious disease.

"A few cases were heard of in which persons working among woollen rags, or handling rag dust used as manure, had contracted smallpox or other infectious disease, possibly from infectious matter contained therein.

"No cases of infectious disease attributed to the use of infected rag flock were heard of among upholsterers or the general public.

"Workers among woollen rags appear to incur less danger than cutters of cotton and linen rags at paper mills, probably owing to the fact that woollen rags consist mainly of articles which do not come into close contact with the body.

"(3) The following precautionary measures are available:—

"(*a*) Vaccination and revaccination of rag workers.

"(*b*) Ventilation, cleanliness, and avoidance of dust in rag factories.

"(*c*) Disinfection or purification of rags, preferably in the bale. The best disinfectant for the purpose is heat, in the form of superheated steam or hot moist air."

At intervals thereafter considerable attention was given to the condition of flock used in upholstery, bedding, &c. (Fyfe, 1904; Warburton, L.G.B. Report, 1909; Farrar and others, L.G.B. Report, 1910), until in 1911 the Rag Flock Act, 1911, was passed. The purpose of the Act was to render unlawful the sale or possession for sale of "flock manufactured from rags," unless such flock conformed to a standard of cleanliness to be prescribed by regulation of the Local Government Board. In June, 1913, the Local Government Board (Scotland) issued regulations fixing this standard by a chlorine equivalent, and prescribing 30 parts of chlorine per 100,000 as a standard which was not to be exceeded.

Definition of Flock.—So far no one seems seriously to have queried the precise meaning of the term "rags" in the Rag Flock Act. The phrase there used is "flock manufactured from rags." Parsons' phrase was "rag flock," and the tenor of the passages from his report formerly quoted, as well as of the report itself, suggests rags obtained from disused clothing. So early as the year following the introduction of the Act this question was in the Courts for consideration. In the most fully reported prosecution I have read in trade journals, the leading decision was given by Mr. Justice Darling on 18th November, and is quoted in "The Cabinetmaker" of 22nd November, 1913.

It was an appeal against the decision given by Mr. Clarke Hall on 21st May of that year, and was brought by Mr. Joseph Taylor Cooper on behalf of the Bedding and Allied Trades Association, Ltd. The ground of the appeal was that the Magistrate at the original hearing held that fragments of gunny bag, &c., did not come within the definition of "rag" as laid down by the Act, and dismissed the summons. Evidence for the prosecution had shown that the amount of chlorine contained in the flock composing the cushions varied from 173 parts per 100,000 to 93, whereas the Act prescribes that the amount of soluble chlorine should not exceed 30 parts. For the defence it had been argued that the contents of the cushions were not "rag" flock, but flock made from carpet cuttings and jute ravellings, and that these articles did not come within the definition of "rag" as laid down by Webster and other authorities. The Magistrate before whom the case had originally come accepted this view, and the summons was dismissed.

On appeal, however, Mr. Justice Darling is reported to have said:—"It is contended that the refusal of the Magistrate to convict was quite right, because it is stated that the flock consisted of jute refuse, such refuse being composed partly of waste fluff. On that no question arises. It may be struck out altogether." It was further alleged that the flock had been obtained "partly from cuttings woven from jute fabric cut away as waste in the process of manufacture; no part had been otherwise used nor had any part been washed," and it was further contended that these were not "rags" within the meaning of the statute. "We are asked," continues Mr. Justice Darling, "to say that within the meaning of this statute nothing is rag, however dirty it may be, however much it may fail to pass the test laid down—it is not a rag unless it is in the state in which it is because it has been cut from a garment or torn from a garment, or, say, from a sheet which has become foul because of its association and contact with the human body. I think it is enough to say that the statute gives you no indication that this is the meaning we are bound to put upon the word 'rag' as used in the statute. It seems to me that if the Legislature had intended that it would very plainly have said so."

Mr. Justice Darling, in concluding, found that the Magistrate ought to have convicted, and that, therefore, the Court should indicate its opinion in that sense.

Mr. Justice Avory held that same opinion, and said:—"It is part of the argument that the tests which have been laid down by the Local Government Board do not carry out the object with which it is said this Act was passed, because it is said that the detection of chlorine in any flock or rags does not necessarily prove that it has been subjected to animal pollution at all. If so, the regulations of the Local Government Board do not carry out the object with which this Act was passed. If anyone else recognises that this is so, then that might be a reason for the regulations of the Local Government Board being altered; but I think we must assume

that these regulations of Local Government Board do carry out, and are intended to carry out, the object of this Act. The only regulation that is before us is a regulation which says that if a certain proportion of soluble chlorine is found in this flock, then it shall be deemed not to comply with the standard of cleanliness required by the Act of Parliament. In this case the analysis proves that this flock did not comply with the Act, and I myself can find nowhere in the Act any justification for saying that it is to be limited to a certain kind of pollution, such as has been described by the learned counsel. If it were to be so limited, it is obvious that these regulations of the Local Government Board are perfectly inapplicable. As I have said, I think we must assume that the case is proved as soon as we can show that flock which has been manufactured from rags, in the ordinary sense of the word, is polluted in the manner which is aimed at by these regulations. I think, therefore, the Magistrate was wrong."

It may here be noted that in the fourth prosecution referred to at the beginning of this Report (and which failed on the ground that the material from which the sample had been taken was not "rag flock within the meaning of the Act," although it contained 80 parts of chlorine in place of the standard of 30), the sample had been taken in error by the inspector from a flock which the agent informs me was not "rag flock" in the sense that it had been obtained from new material.

The Objectionable Features in Rag Flock.

Apart from vermin, which is not here in question, the standary of impurity has been fixed in relation to the proportion of chlorine present. It does not of itself aim also at determining the source of the chlorine—*i.e.*, whether it has been derived from a previous manufacturing process or from human pollution. And so we find, as in Prosecution No. 4, a flock which contains more than double the permissible amount of chlorine outside the scope of the Act.

This of itself suggests that, as chlorine in excess may be present in flock which does not come within the Act, some supplementary test which would indicate its probable origin might be considered, as also the need for making clearer what "flock manufactured from rags" exactly means.

It is of use to note that the records of the factory whence the samples containing 42 and 227 parts of chlorine respectively were obtained, have a record of water used in washing such flock averaging 400 gallons per cwt. of flock, reaching in some cases to 900.

A. K. CHALMERS.

Public Health Office,
Glasgow, 9th February, 1921.

Subsequent to the action described in the foregoing notes, a good deal of inquiry was made into the occurrence of chlorine in flocks not made from rags, many of which, it is now quite clear, contain high percentages of chlorine and, in one or two cases, of ammonia. All of them were forwarded to the Corporation Chemist, who on 1st June, 1922, submitted the table which follows. It is worthy of note that two of them on washing yielded a dirty brown solution, which "putrefied after two days, with moulds on the surface."

It should be added that, in the opinion of one of the largest users of flock formerly, the only way out of the difficulty created by the Rag Flock Act is to prohibit the use of flocks of any sort, and compel the substitution of fibre.

Another suggestion is that the Act would be improved by deleting the qualification "manufactured from rags," so that all classes of flock might be reached, and the sale of such as yield putrescible solutions become impossible.

ANALYSIS BY MR. HARRIS OF FLOCK, NOT "RAG FLOCK" AS UNDERSTOOD BY THE ACT, YET WITH EXCESSIVE CHLORINE AND AMMONIA IN SAME.

All results in parts per 100,000.

	Designation	Chlorine	Ammonia NH_3	Solids in Suspension Volatile	Solids in Suspension Mineral	Solids in Suspension Total	Solids in Solution Volatile	Solids in Solution Mineral	Solids in Solution Total	
1.	Cotton Flock, -	125	1·4	1,275	595	1,870	2,020	1,110	3,130	Solution very dirty and opalescent.
2.	Mill Puff, - -	33	1·0	1,385	250	1,635	600	1,270	1,870	Dirty.
3.	Raw Cotton Waste,	60	5·0	1,025	435	1,460	1,730	1,820	3,550	Brownish and turbid.
4.	Hemp Cadis, - -	16	7·6	1,640	495	2,135	1,630	420	2,050	Slightly brown, turbid.
5.	Cotton Flock Pips,	87	2·4	1,320	415	1,735	2,120	1,330	3,450	Turbid and dirty.
6.	Mill Puff, - -	91	20·0	603	372	975	2,543	1,957	4,500	Dirty brown, putrefied after 2 days with moulds on surface.
7.	Mill Puff, - -	93	21·2	207	630	837	1,493	1,577	3,070	Similar to above.
8A.	Kopak, - - -	8	4·0	—	—	—	262	215	477	Clear light brown.
8B.	Mill Puff, - -	11·5	0·7	—	—	—	222	805	1,027	Clear.
8C.	Mill Puff, - -	97·0	0·6	217	160	377	1,270	980	2,250	Colourless.
9.	Mill Puff, - -	140·0	0·9	105	190	295	1,380	880	2,260	Colourless filtrate.
10.	Cadis, - - -	42·0	0·5	210	12	222	695	280	975	Colourless.

1st June, 1922.

The general position of the question may be thus stated:—

The Rag Flock Act and subsequent decisions would seem—

(1) To exclude from its provisions all mill products, mill fluff, &c., which have not been devoted to commercial or industrial or clothing purposes; but

(2) To include as the source of rag flock anything which has been worn, or used domestically or in the habitations of man, or for industrial or commercial purposes, such as gunny bags, &c.*

It has been suggested that the only way out of the difficulty created by the Rag Flock Act is to prohibit the use altogether of flocks of any sort, and compel the use of some sort of fibre. It would appear that, on sorting out the nature of the material from which rags are made, three groups form, viz.:—

(1) The best (probably this means with most linen) are sold to the paper-maker;

(2) The next best, or shoddy, go to the manufacturer of clothing, especially where wool is present; and

(3) The poorest are shipped to America for making into roofing felt.

It is stated that the total volume of rag flock handled in the year in Scotland might be put at about 3,000 lbs., the cost at present being £22 per ton, while recently it was over £50. If this may be taken as representing a seventh proportion of the population of England and Scotland, the volume of this trade of the United Kingdom would seem to be rather under £500,000.

A. K. CHALMERS, M.D.,
Medical Officer of Health.

Public Health Department,
Sanitary Chambers,
Glasgow, 27th June, 1922.

*It was noted, however, that the chlorine present in the material obtained from Class 2 above might, after washing, be exceeded by the chlorine present in Group 1 above, the reason being that, where any material was present in Class 1 which had been bleached, chlorine from the bleaching powder might quite well remain in the texture, so that it would be an advantage were the source of the chlorine present in either case determined by making an estimate of the ammonia present. In this, however, there seem to be certain chemical difficulties, as there is also a mechanical one, because of the silting quality of the flock, which comes from the tearing of the rags (the devil).

APPENDIX.

TABLE 1.—GLASGOW, 1921.—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, -	30,989	281	...	31,270	887	35
2. Parkhead, - -	35,677	1,095	...	36,772	883	42
3. Dalmarnock, -	41,179	...	...	41,179	288	143
4. Calton, - -	36,601	2,375	...	38,976	333	117
5. Mile-end. - -	26,068	106	...	26,174	191	137
6. Whitevale, - -	24,922	377	...	25,299	176	144
7. Dennistoun, -	23,737	340	...	24,077	280	86
8. Provan, - -	28,359	...	...	28,359	973	29
9. Cowlairs, - -	25,542	2,833	...	28,375	456	62
10. Springburn, -	17,001	...	...	17,001	760	22
11. Townhead, - -	28,485	1,435	...	29,920	175	171
12. Exchange, - -	18,651	2,447	23	21,121	289	73
13. Blythswood, -	15,245	2,421	57	17,723	242	73
14. Anderston, - -	28,630	927	764	30,321	422	72
15. Sandyford, - -	23,961	431	1	24,393	152	160
16. Park, - - -	23,379	...	...	23,379	272	86
17. Cowcaddens, -	42,865	1,466	16	44,347	488	91
18. Woodside, - -	36,962	703	...	37,665	170	222
19. Ruchill. - -	24,369	1,138	3	25,510	767	33
20. North Kelvin, -	25,157	144	...	25,301	146	173
21. Maryhill, - -	22,920	884	...	23,804	915	37
22. Kelvinside, -	22,510	633	...	23,143	1,127	21
23. Partick (East), -	30,446	1,427	...	31,873	268	119
24. ,, (West), -	28,703	...	17	28,720	357	80
25. Whiteinch, -	29,656	452	...	30,108	1,266	24
26. Hutchesontown, -	40,801	15	...	40,816	378	108
27. Gorbals, - -	51,471	743	...	52,214	252	207
28. Kingston, - -	33,649	314	200	34,163	285	120
29. Kinning Park, -	36,907	493	522	37,922	379	100
30. Govan, - -	35,993	357	94	36,444	529	69
31. Fairfield. - -	28,660	1,709	10	30,379	1,205	25
32. Pollokshields, -	19,059	950	...	20,009	1,673	12
33. Camphill, - -	22,568	...	...	22,568	366	62
34. Pollokshaws, -	18,462	...	...	18,462	343	54
35. Govanhill, - -	32,134	137	...	32,271	290	111
36. Langside, - -	18,509	637	...	19,146	430	44
37. Cathcart, - -	15,796	...	...	15,796	770	21
CITY, - -	1,046,023	27,270	1,707	1,075,000	19,183	56

TABLE II.—GLASGOW, 1921.—INHABITED AND UNOCCUPIED HOUSES IN EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES.				Empty Houses.
	1920.	1921.	Decrease.	Increase.	
1. Shettleston and Tollcross, -	6,796	6,805	...	9	3
2. Parkhead, - - -	7,685	7,890	...	205	1
3. Dalmarnock, - - -	9,163	9,172	...	9	3
4. Calton, - - - -	8,371	8,383	...	12	3
5. Mile-end, - - - -	5,817	5,823	...	6	8
6. Whitevale, - - -	5,529	5,546	...	17	1
7. Dennistoun, - - -	5,700	5,696	4	...	4
8. Provan, - - - -	6,623	6,631	..	8	4
9. Cowlairs, - - - -	5,626	5,640	...	14	...
10. Springburn, - - -	3,740	3,755	...	15	2
11. Townhead, - - -	6,525	6,499	26	...	1
12. Exchange, - - -	4,004	4,012	...	8	...
13. Blythswood, - - -	3,080	3,054	26	...	3
14. Anderston, - - -	6,478	6,461	17	...	5
15. Sandyford, - - -	5,327	5,309	18	...	3
16. Park, - - - -	5,199	5,190	9	...	10
17. Cowcaddens, - - -	9,408	9,513	...	105	1
18. Woodside, - - -	8,561	8,557	4	...	3
19. Ruchill, - - -	5,457	5,492	...	35	1
20. North Kelvin, - - -	5,745	5,748	...	3	2
21. Maryhill, - - - -	5,195	5,210	...	15	4
22. Kelvinside, - - -	5,195	5,198	...	3	33
23. Partick (East), - - -	6,899	6,890	9	...	2
24. ,, (West), - -	6,488	6,494	...	6	3
25. Whiteinch, - - -	6,248	6,258	...	10	2
26. Hutchesontown, - -	9,330	9,328	2	...	...
27. Gorbals, - - - -	11,263	11,262	1	...	1
28. Kingston, - - - -	7,370	7,365	5	...	...
29. Kinning Park, - - -	8,259	8,296	...	37	11
30. Govan, - - -	7,751	7,758	...	7	2
31. Fairfield, - - - -	6,357	6,356	1	...	2
32. Pollokshields, - - -	4,225	4,231	...	6	14
33. Camphill, - - - -	5,497	5,483	14	...	5
34. Pollokshaws, - - -	4,406	4,439	...	33	...
35. Govanhill, - - -	7,297	7,376	...	79	1
36. Langside, - - - -	4,711	4,692	19	...	3
37. Cathcart, - - - -	3,709	3,725	...	16	2
CITY, - - -	235,034	235,537	...	503	143

TABLE III.—GLASGOW.—LININGS GRANTED BY DEAN OF GUILD COURT IN YEARS FROM 1914 TO 1921 IN RESPECT OF HOUSES.

Year ending 31st August.	No. of Apartments.						Total.
	1.	2.	3.	4.	5.	6.	
1914, ...	15	108	116	25	46	63	373
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

TABLE IV.—ABSTRACT OF METEOROLOGICAL OBSERVATIONS TAKEN AT SPRINGBURN PUBLIC PARK.

Months. 1921.	Temperature.				Rainfall.		
	Highest Temperature in Shade.	Lowest Temperature in Shade.	Mean Temperature for Month.	Departure from Average of 36 Years.	No. of Days it fell.	Amount Collected, in inches.	Departure from average of 36 Years.
January, ...	53	26	39·5		30	6·61	
February, ...	51	27	39·0		14	1·16	
March, ...	53	22	37·5		28	5·59	
April, ...	73	27	50·0		13	0·98	
May, ...	72	28	50·0		20	2·11	
June, ...	81	40	60·5		10	0·48	
July, ...	82	44	63·0		21	3·97	
August, ...	72	39	55·5		26	6·23	
September, ...	72	40	56·0		17	2·01	
October, ...	77	26	51·1		26	5·06	
November, ...	55	25	40·0		17	3·28	
December, ...	53	28	40·5		27	5·74	
Total, ...	...	...	...		249	43·23	
1914, ...	78	23	48·6	+1·6	221	36·25	−2·52
1915, ...	75	17	46·9	−0·1	192	30·94	−6·94
1916, ...	79	28	47·7	+0·6	234	44·22	+6·50
1917, ...	74	20	46·7	−0·6	194	36·67	−0·51
1918, ...	78	10	47·5	+0·2	237	41·36	+4·18
1919, ...	75	12	46·2	−1·1	186	30·93	−6·25
1920, ...	75	26	48·1	+0·9	230	43·88	+6·70

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 1921, AND NUMBER AND PERCENTAGE OF ILLEGITIMATE BIRTHS.

MUNICIPAL WARDS.	Births. 1921.	Illegitimate Births		Birth-rate 1921.	Average Birth-Rates for 1916-20 in Old Wards partly incorporated in New Wards.		
		No.	% total Births.				
1. Shettleston and Tollcross, -	990	51	5·2	31,947	29,860	18,991	27,529
2. Parkhead, -	1,134	70	6·2	31,785	30,671	29,860	27,529
3. Dalmarnock, -	1,545	84	5·4	37,519	30,671	—	—
4. Calton, - -	1,227	87	7·1	33,524	27,770	—	—
5. Mile-end, -	1,025	77	7·5	39,320	29,860	—	—
6. Whitevale, -	774	56	7·2	31,057	26,939	27,529	—
7. Dennistoun, -	435	16	3·7	18,326	18,991	—	—
8. Provan, - -	980	49	5·0	34,557	18,991	29,389	—
9. Cowlairs, -	630	28	4·4	24,665	29,389	26,507	—
10. Springburn, -	436	24	5·5	25,646	29,389	26,507	—
11. Townhead, -	718	74	10·3	25,206	18,991	23,869	14,621
12. Exchange, -	633	77	12·2	33,939	26,939	24,849	14,621
13. Blythswood, -	435	58	13·3	28,534	14,621	14,599	20,091
14. Anderston, -	924	64	6·9	32,274	27,806	28,808	—
15. Sandyford, -	639	41	6·4	26,668	22,068	—	—
16. Park, - -	324	25	7·7	13,859	12,419	—	—
17. Cowcaddens, -	1,478	112	7·6	34,480	26,507	23,869	20,091
18. Woodside, -	1,113	98	8·8	30,112	20,091	23,126	—
19. Ruchill, - -	801	37	4·6	32,870	26,507	23,126	24,804
20. North Kelvin, -	541	29	5·4	21,505	23,126	24,804	—
21. Maryhill, -	720	31	4·3	31,414	24,804	—	—
22. Kelvinside, -	272	22	8·1	12,084	11,350	22,899	18,842
23. Partick (East),	805	51	6·3	26,440	12,419	22,899	27,323
24. ,, (West),	775	32	4·1	27,001	27,323	24,145	—
25. Whiteinch, -	641	33	5·1	21,615	11,350	24,145	18,842
26. Hutchesontown,	1,454	54	3·7	35,636	29,676	24,331	—
27. Gorbals, - -	1,651	142	8·6	32,076	24,849	29,676	23,089
28. Kingston, -	1,129	95	8·4	33,552	24,437	30,074	—
29. Kinning Park, -	1,141	79	6·9	30,916	24,437	30,074	27,381
30. Govan, - -	1,211	55	4·5	33,645	27,381	29,666	31,822
31. Fairfield, - -	840	34	4·0	21,728	31,822	27,200	—
32. Pollokshields, -	199	19	9·5	10,441	24,437	8,375	30,074
33. Camphill, -	345	24	7·0	15,287	24,437	15,103	8,375
34. Pollokshaws, -	465	22	4·7	25,187	15,103	8,375	21,918
35. Govanhill, -	688	31	4·5	21,410	23,089	24,331	15,103
36. Langside, -	279	11	3·9	15,074	24,331	15,103	—
37. Cathcart, - -	237	4	1·7	15,004	16,471	—	—
Institutions, &c.,	76	22	—	—	—	—	—
CITY, - -	29,710	1,918	6·5	27,637	24,009	—	—

TABLE VI.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* IN EACH MUNICIPAL WARD, FOR THE YEAR 1921, AND RATES.

MUNICIPAL WARDS.	1921.		Death-rates for 1916-20 for Old Wards partly incorporated in New Wards.		
	Deaths.	Death-rate.			
1. Shettleston and Tollcross,	415	13,391	16,349	11,334	12,951
2. Parkhead,	506	14,183	15,588	16,349	12,951
3. Dalmarnock,	633	15,372	15,588	—	—
4. Calton,	646	17,650	17,618	—	—
5. Mile-end,	464	17,800	16,349	—	—
6. Whitevale,	390	15,649	16,434	12,951	—
7. Dennistoun,	250	10,532	11,334	—	—
8. Provan,	419	14,775	11,334	14,235	—
9. Cowlairs,	243	9,514	14,235	13,440	—
10. Springburn,	174	10,235	14,235	13,440	—
11. Townhead,	398	13,972	11,334	15,885	14,496
12. Exchange,	308	16,514	16,434	18,902	14,496
13. Blythswood,	274	17,973	14,496	11,337	18,615
14. Anderston,	486	16,975	19,758	16,784	—
15. Sandyford,	376	15,692	16,654	—	—
16. Park,	249	10,651	12,841	—	—
17. Cowcaddens,	676	17,870	13,440	15,885	18,615
18. Woodside,	565	15,286	18,615	13,782	—
19. Ruchill,	274	11,244	13,440	13,782	12,591
20. North Kelvin,	242	9,620	13,782	12,591	—
21. Maryhill,	291	12,696	12,591	—	—
22. Kelvinside,	199	8,841	9,705	13,586	10,246
23. Partick (East),	406	13,335	12,841	13,586	13,207
24. ,, (West),	286	9,964	13,207	12,422	—
25. Whiteinch,	311	10,487	9,705	12,422	10,246
26. Hutchesontown,	616	15,098	17,067	12,840	—
27. Gorbals,	872	16,942	18,902	17,067	15,317
28. Kingston,	529	15,721	16,640	16,443	—
29. Kinning Park,	516	13,981	16,640	16,443	15,573
30. Govan,	543	15,086	15,573	16,465	16,230
31. Fairfield,	328	8,484	16,230	13,136	—
32. Pollokshields,	222	11,648	10,957	16,640	16,443
33. Camphill,	212	9,394	16,640	10,808	10,957
34. Pollokshaws,	231	12,512	10,808	10,957	12,855
35. Govanhill,	337	10,487	15,317	12,840	10,808
36. Langside,	203	10,968	12,840	10,808	—
37. Cathcart,	134	8,483	9,928	—	—
Institutions, &c.,	648	—	—	—	—
CITY,	14,872	13,834	14,819	—	—
+ Inward Transfers,	15,625	14,535	—	—	—

TABLE VII.—GLASGOW.—NUMBER OF OUTWARD AND INWARD TRANSFER DEATHS FOR THE YEARS 1919-1921.

CAUSE OF DEATH.	OUTWARD TRANSFERS.			INWARD TRANSFERS.		
	1919.	1920.	1921.	1919.	1920.	1921.
1. Enteric Fever, ...	...	1	2	...	1	...
2. Typhus Fever, ...	...	...	...	...	...	...
3. Smallpox, ...	...	...	...	...	44	8
4. Measles, ...	...	...	...	...	...	...
5. Scarlet Fever, ...	...	2	3	...	...	...
6. Whooping-cough, ...	...	...	3	2	...	...
7. Diphtheria and M. Croup, ...	...	3	2	...	1	...
8. Croup, ...	...	...	...	...	...	...
9. Influenza, ...	71	3	...	31	4	2
10. Erysipelas, ...	...	3	3	...	...	...
11. Septicæmia, ...	6	4	14	...	3	4
11A Other Septic Diseases, ...	4	5	12	1	...	3
12. Pulmonary Tuberculosis, ...	41	20	16	116	135	91
13. Tuberculous Meningitis, ...	6	10	13	3	5	2
14. Abdominal Tuberculosis, ...	13	16	13	15	9	10
15. Other Tuberculous Diseases,	24	14	14	20	9	19
16. Cancer (Malignant Disease),	183	189	156	33	29	34
17. Rheumatic Fever, ...	3	4	1	...	4	1
18. Alcoholism, ...	...	1	...	...	1	4
19. Cerebro-Spinal Fever, ...	...	2	1	...	...	1
20. Meningitis (not Tuberculous),	13	7	8	3	7	5
21. Cerebral Hæmorrhage (Apopl.)	24	13	19	78	85	39
22. Other Nervous Diseases, ...	41	40	47	157	131	177
23. Organic Heart Diseases, ...	69	47	50	96	103	62
24. Other Circulatory Diseases,	29	32	33	20	19	14
25. Bronchitis, ...	20	13	7	35	28	27
26. Pneumonia (all forms), ...	106	65	39	56	59	74
27. Other Respiratory Diseases,	20	18	18	7	12	7
28. Diarrhœa and Enteritis, ...	26	21	29	31	15	10
29. Appendicitis and Typhlitis,	69	69	87	...	1	4
30. Cirrhosis of the Liver, ...	5	4	5	1	...	3
31. Other Digestive Diseases, ...	103	156	165	21	19	10
32. Nephritis and Bright's Disease,	28	34	37	18	16	12
33. Puerperal Fever, ...	4	10	10	1	...	1
34. Other Accidents and Diseases of Pregnancy and Parturition,	18	30	30	1	4	2
35. Congenital Debility and Malformation, including Premature Birth, ...	47	67	61	8	7	8
36. Violence, ...	176	136	124	61	72	47
37. Unknown, ...	...	1	2	...	...	5
38. All other causes, ...	159	177	155	117	69	67
Totals, ...	1,308	1,217	1,179	932	892	753

TABLE VIII.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* FROM DIFFERENT CAUSES, FOR THE YEAR 1921, AND RATES FOR SEVERAL PERIODS SINCE 1903.

Cause of Death.	Average Annual Death-Rate per Million.					Deaths.
	1903-05.	1906-10.	1911-15.	1916-20.	1921.	1921.
1. Enteric Fever, ...	119	99	57	23	16	17
2. Typhus Fever, ...	11	2	3	5	1	1
3. Smallpox, ...	39	...	...	20	7	8
4. Measles, ...	521	634	595	388	102	110
5. Scarlet Fever, ...	79	121	171	60	50	54
6. Whooping-cough.... ...	765	700	667	398	642	690
7. Diphtheria & Mem. Croup,	128	205	182	144	120	129
8. Croup, ...	64	54	16	3	5	5
9. Influenza,...	*	*	79	769	193	208
10. Erysipelas, ...	*	*	54	34	61	66
11. Septicæmia, ...	157	181	83	34	54	58
11A Other Septic Diseases, ...				24	47	50
12. Pulmonary Tuberculosis,...	1,564	1,440	1,348	1,190	1,007	1,083
13. Tuberculous Meningitis, ...	1,159	1,008	281	200	150	161
14. Abdominal Tuberculosis,			194	159	97	104
15. Other Tuberculous Diseases,			180	162	143	154
16. Cancer (Malignant Disease),	686	803	958	1,029	1,175	1,263
17. Rheumatic Fever. ...	*	*	57	45	41	44
18. Alcoholism, ...	*	*	*	24	25	27
19. Cerebro-Spinal Fever, ...	1,662	264	54	50	49	53
20. Meningitis (not Tuberculous), ...		1,430	204	156	129	139
21. Cerebral Hæmorrhage (Apoplexy), ...			771	763	740	795
22. Other Nervous Diseases,...			710	686	761	818
23. Organic Heart Diseases,...	1,581	1,662	1,774	1,197	1,178	1,266
24. Other Circulatory Diseases,				365	492	529
25. Bronchitis, ...	3,827	†	1,201	980	828	890
26. Pneumonia (all forms), ...		1,798	1,656	1,690	1,372	1,475
27. Other Respiratory Diseases,		1,651	301	242	188	202
28. Diarrhœa and Enteritis, ...	824	429	722	520	662	712
29. Appendicitis and Typhlitis,	*	*	626	89	100	107
30. Cirrhosis of the Liver, ...	*	*		35	39	42
31. Other Digestive Diseases,	*	*		448	433	466
32. Nephritis and Bright's Disease, ...	*	*	*	514	390	419
33. Puerperal Fever, ...	*	*	64	56	68	73
34. Other Accidents and Diseases of Pregnancy and Parturition, ...	*	*	*	90	98	105
35. Congenital Debility and Malformation, including Premature Birth, ...	*	*	*	989	1,073	1,154
36. Violence, ...	548	528	620	569	531	571
37. Unknown.	*	*	*	23	22	24
38. All other Causes,... ...	4,555	4,603	3,496	1,460	1,445	1,553
Total, ...	18,289	17,612	17,124	15,633	14,534	15,625

* Included in "All Other Causes."

† Included in "Other Respiratory Diseases."

TABLE IX.—GLASGOW, 1921.—DEATHS FROM DIFFERENT DISEASES IN SEXES AND AT SEVERAL AGE-PERIODS.

Disease.	Males.													Total Males.	Females.													Total Females.	Both Sexes.
	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+		-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+		
1. Enteric Fever, ...	—	—	—	1	2	2	2	—	—	2	—	—	—	9	—	—	—	—	—	1	1	2	3	1	—	—	—	8	17
2. Typhus Fever, ...	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
3. Smallpox, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Measles, ...	13	29	10	4	—	—	—	—	—	—	—	—	—	56	10	23	15	6	—	—	—	—	—	—	—	—	—	54	110
5. Scarlet Fever, ...	4	1	9	9	2	—	—	2	—	—	—	—	—	27	1	1	11	4	3	—	1	4	2	—	—	—	—	27	54
6. Whooping-cough, ...	160	138	32	6	—	—	—	—	—	—	—	—	—	336	151	143	50	10	—	—	—	—	—	—	—	—	—	354	690
7. Diphtheria and Membranous Croup, ...	11	16	17	10	2	1	1	—	—	1	—	—	—	59	7	14	21	22	3	—	—	1	1	1	—	—	—	70	129
8. Croup, ...	2	1	—	1	—	—	—	—	—	—	—	—	—	4	—	1	—	—	—	—	—	—	—	—	—	—	—	1	5
9. Influenza, ...	1	2	3	—	1	5	1	3	8	21	10	23	7	85	7	1	3	4	1	2	8	12	11	16	14	22	20	121	206
10. Erysipelas, ...	11	—	—	—	—	—	—	3	4	6	5	3	4	36	4	—	—	—	—	1	—	3	2	4	11	3	2	30	66
11. Septicaemia, ...	10	1	1	1	1	1	—	1	2	3	5	3	—	29	4	2	4	2	—	—	1	4	1	4	3	—	—	25	54
11A. Other Septic Diseases, ...	5	4	—	1	—	—	—	2	2	1	4	6	1	26	8	1	—	—	—	—	—	1	1	2	4	3	1	21	47
12. Pulmonary Tuberculosis, ...	6	8	3	14	14	61	59	110	99	95	48	16	—	533	4	5	6	11	17	62	60	121	84	61	18	8	2	459	992
13. Tuberculous Meningitis, ...	24	16	15	12	7	4	1	1	—	—	2	—	—	82	17	14	16	16	6	3	1	3	—	1	—	—	—	77	159
14. Abdominal Tuberculosis, ...	7	8	6	5	9	6	2	3	3	—	1	—	—	50	5	6	5	6	7	4	3	4	—	1	2	1	—	44	94
15. Other Tuberculous Diseases, ...	6	9	7	12	12	6	4	9	9	6	2	1	2	85	2	2	2	7	6	8	5	3	3	6	4	1	1	50	135
16. Cancer (Malignant Disease), ...	—	—	1	2	—	2	1	13	33	125	184	165	41	567	—	—	2	—	1	1	3	14	76	130	171	175	89	662	1,229
17. Rheumatic Fever, ...	—	—	1	2	3	1	2	2	2	2	1	1	—	17	—	—	—	2	4	6	4	4	2	3	—	1	—	26	43
18. Alcoholism, ...	—	—	—	—	—	—	—	1	3	6	2	—	—	12	—	—	—	—	—	—	—	1	4	3	3	—	—	11	23
19. Cerebro-Spinal Fever, ...	6	2	4	7	2	3	3	2	3	1	—	—	—	33	3	4	1	3	3	3	2	—	—	—	—	—	—	19	52
20. Meningitis (not Tubercular), ...	29	12	5	8	3	2	2	3	2	4	5	1	—	76	22	11	9	6	1	2	1	—	2	3	1	—	—	58	134
21. Cerebral Hæmorrhage (Apopl.),	1	1	—	—	—	1	1	4	11	39	89	125	69	341	—	—	—	—	—	—	1	6	14	53	99	140	102	415	756
22. Other Nervous Diseases, ...	74	21	6	9	6	8	2	18	27	47	53	64	23	358	53	20	7	4	3	5	8	9	21	33	46	32	42	283	641
23. Organic Heart Disease, ...	—	—	—	3	7	6	6	37	40	79	151	171	79	579	—	1	—	3	6	9	14	33	48	96	130	163	122	625	1,204
24. Other Circulatory Diseases, ...	2	1	1	3	2	1	4	9	25	46	73	78	53	298	2	—	—	2	4	2	2	15	12	18	40	57	63	217	515
25. Bronchitis, ...	89	30	6	1	1	3	—	1	15	55	68	116	55	440	77	8	8	4	1	4	1	7	17	22	57	94	123	423	863
26. Pneumonia (all forms), ...	222	114	48	13	4	15	17	35	79	81	106	57	19	810	144	120	45	18	2	5	13	38	35	33	51	46	41	591	1,401
27. Other Respiratory Diseases, ...	26	9	3	3	1	1	1	5	5	14	14	12	7	101	12	7	8	1	1	—	2	2	11	10	10	14	16	94	195
28. Diarrhœa and Enteritis, ...	266	69	8	3	—	—	2	4	4	8	11	12	6	393	189	45	13	7	3	—	4	6	2	8	6	15	11	309	702
29. Appendicitis and Typhilitis, ...	1	—	2	11	9	6	4	6	8	7	1	—	—	55	1	—	2	6	7	10	7	1	6	5	1	2	—	48	103
30. Cirrhosis of the Liver, ...	—	—	—	—	—	—	—	—	4	8	5	5	2	24	—	—	—	—	—	—	—	2	2	2	2	5	2	15	39
31. Other Digestive Diseases, ...	52	6	5	7	4	8	6	15	17	39	45	29	18	251	28	3	4	6	4	3	3	7	17	33	33	42	22	205	456
32. Nephritis and Bright's Disease,	7	—	5	3	3	6	4	12	25	43	61	33	14	216	1	1	2	1	4	4	7	14	18	32	56	40	11	191	407
33. Puerperal Fever, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	9	42	18	—	—	—	—	72	72
34. Other Accidents and Diseases of Pregnancy and Parturition,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	14	45	40	—	—	—	—	103	103
35. Congenital Debility and Malformation, including Premature Birth, ...	633	1	1	2	1	1	—	1	—	—	—	—	—	640	501	3	2	—	—	—	—	—	—	—	—	—	—	506	1,146
36. Violence, ...	20	16	18	26	13	20	19	30	48	62	54	28	16	370	12	10	16	16	5	1	4	14	8	15	20	16	17	154	524
37. Unknown, ...	4	—	—	—	—	—	—	2	1	1	1	1	—	10	3	—	1	—	—	1	—	2	—	1	—	—	1	9	19
38. All others, ...	84	11	19	9	6	7	7	21	39	73	116	144	186	722	65	13	8	2	10	8	13	24	68	63	87	124	279	764	1,486
All Causes, ...	1,776	526	236	188	115	177	151	355	519	875	1,117	1,094	602	7,731	1,333	459	261	169	102	152	192	444	529	660	869	1,004	967	7,141	14,872
Inward Transfer Deaths, ...	10	2	4	7	9	12	10	36	67	77	88	72	33	427	16	5	1	4	7	12	16	30	40	45	59	45	46	326	753
TOTAL, ...	1,786	528	240	195	124	189	161	391	586	952	1,205	1,166	635	8,158	1,349	464	262	173	109	164	208	474	569	705	928	1,049	1,013	7,467	15,625
Number per 1,000 dying in [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	45	59	68	63	478	1,000

IN INSTITUTIONS, NURSING HOMES, &c. TO THE CITY BUT WITH NO HOME ADDRESS.

No.	DISEASE.	Poor Law Institutions.	Model Lodging-houses.	General Hospitals.	Infectious Diseases Hospitals.	Homes for Old Men, Women, and Orphans, &c., Barracks, Asylums, Prisons, and Harbour.	Total.
17	1. Enteric Fever, ...	...	1	...	...	...	1
1	2. Typhus Fever, ...	...	...	...	...	...	...
...	3. Smallpox, ...	...	...	...	...	...	...
57	4. Measles, ...	...	...	...	1	...	1
50	5. Scarlet Fever, ...	...	...	...	2	1	3
297	6. Whooping-cough, ...	12	...	...	2	2	16
119	7. Diphtheria and Membranous Croup, ...	2	...	1	2	1	6
...	8. Croup, ...	...	...	...	...	...	...
35	9. Influenza, ...	1	2	...	1	5	9
54	10. Erysipelas, ...	...	1	...	3	...	4
41	11. Septicæmia, ...	1	1	...	...	...	2
30	11A Other Septic Diseases, ...	...	1	...	...	...	1
516	12. Pulmonary Tuberculosis, ...	7	42	1	1	9	60
63	13. Tuberculous Meningitis, ...	...	1	...	...	1	2
37	14. Abdominal Tuberculosis, ...	...	...	...	...	...	...
77	15. Other Tuberculous Diseases, ...	...	3	...	...	5	8
448	16. Cancer (Malignant Disease), ...	14	20	4	1	13	52
13	17. Rheumatic Fever, ...	...	2	...	...	...	2
7	18. Alcoholism, ...	...	...	...	...	1	1
45	19. Cerebro-spinal Fever, ...	...	...	...	...	...	...
49	20. Meningitis (not Tubercular), ...	...	3	1	...	...	4
210	21. Cerebral Hæmorrhage (Apoplexy), ...	5	23	1	...	7	36
260	22. Other Nervous Diseases, ...	7	19	...	...	8	34
339	23. Organic Heart Disease, ...	8	50	3	...	19	80
206	24. Other Circulatory Diseases, ...	4	17	1	...	11	33
135	25. Bronchitis, ...	10	23	1	...	4	38
580	26. Pneumonia (all forms), ...	4	35	5	1	7	52
41	27. Other Respiratory Diseases, ...	1	4	...	...	1	6
215	28. Diarrhœa and Enteritis, ...	1	5	1	...	3	10
92	29. Appendicitis and Typhlitis, ...	...	...	...	...	...	...
22	30. Cirrhosis of the Liver, ...	3	3	2	...	1	9
229	31. Other Digestive Diseases, ...	...	3	1	...	...	4
164	32. Nephritis and Bright's Disease, ...	2	12	...	...	1	15
67	33. Puerperal Fever, ...	...	...	...	...	...	...
72	34. Other Accidents and Diseases of Pregnancy and Parturition, ...	...	...	1	...	1	2
271	35. Congenital Debility and Malformation, including premature birth, ...	20	...	5	1	3	29
244	36. Violence, ...	1	11	2	...	11	25
3	37. Unknown,...	...	2	1	...	2	5
425	38. All others, ...	9	62	6	...	21	98
5,531	All Causes, ...	112	346	37	15	138	648

TABLE XII.—GLASGOW.—DEATHS UNDER 1 YEAR, AND DEATH-RATE PER 1,000 BIRTHS IN EACH MUNICIPAL WARD, FOR THE YEAR 1921, AND FOR PERIOD 1916-20.

MUNICIPAL WARDS.	1921.		Infant mortality rates for 1916-20 in Old Wards incorporated in New Wards.		
	DEATHS – 1 YEAR.	Death-rate per 1,000 Births.			
1. Shettleston and Tollcross, ...	93	94	127	77	101
2. Parkhead, ...	116	102	117	127	101
3. Dalmarnock, ...	175	113	117	...	...
4. Calton, ...	151	123	126	...	...
5. Mile-end, ...	139	136	127	...	...
6. Whitevale, ...	94	121	119	101	...
7. Dennistoun, ...	21	48	77	...	...
8. Provan, ...	124	126	77	111	...
9. Cowlairs, ...	41	65	111	102	...
10. Springburn, ...	36	83	111	102	...
11. Townhead, ...	79	110	77	123	128
12. Exchange, ...	73	115	119	153	128
13. Blythswood, ...	65	149	128	101	144
14. Anderston, ...	123	133	130	101	...
15. Sandyford, ...	78	122	117	...	...
16. Park, ...	30	93	84	...	...
17. Cowcaddens, ...	185	125	102	123	144
18. Woodside, ...	129	116	144	103	...
19. Ruchill, ...	55	69	102	103	95
20. North Kelvin, ...	49	91	103	95	...
21. Maryhill, ...	68	94	95	...	...
22. Kelvinside, ...	12	44	39	105	76
23. Partick East, ...	78	98	84	105	101
24. ,, West, ...	62	79	101	94	...
25. Whiteinch, ...	48	89	39	94	76
26. Hutchesontown, ...	160	110	125	97	...
27. Gorbals, ...	201	122	153	125	127
28. Kingston, ...	126	112	127	130	...
29. Kinning Park, ...	107	94	127	130	113
30. Govan, ...	125	103	113	122	123
31. Fairfield, ...	66	79	123	93	...
32. Pollokshields, ...	15	75	127	62	130
33. Camphill, ...	16	46	127	52	62
34. Pollokshaws, ...	41	88	52	62	89
35. Govanhill, ...	55	80	127	97	52
36. Langside, ...	14	50	97	52	...
37. Cathcart, ...	6	25	60	...	...
Institutions, &c., ...	53	...	...	...	...
CITY, ...	3,109	105	112	...	...
+ Inward Transfers, ...	3,135	105	...	...	...

TABLE XIII.—GLASGOW, 1921.—MALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

Cause of Death.	Age in Weeks.				Total.	Age in Months.											Total.	Group Totals.	Group Percentages.	Death-rate per 1,000 Male Births.
	-1	-2	-3	-4		-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12				
I. Immaturity, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	638	35·8	41
(a) Premature Birth, ...	236	34	23	17	310	11	2	1	...	1	1	...	...	...	...	...	326	...	...	...
(b) Congenital Malformations, ...	22	4	1	4	31	8	3	3	3	...	1	...	...	1	...	1	51	...	...	...
(c) Atelectasis, ...	5	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...
(d) Atrophy and Debility, ...	106	30	31	20	187	26	17	8	3	5	4	1	2	2	...	1	256	...	...	...
II. Diseases of Respiratory System,	8	11	9	9	37	26	31	28	20	18	31	27	31	24	28	36	337	337	19·0	22
III. Diseases of Digestive System,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	319	18·0	21
(a) Diarrhœal, ...	1	1	8	7	17	25	41	36	31	22	16	26	17	7	14	14	266	...	...	...
(b) Others, ...	1	3	4	1	9	9	9	3	7	2	5	1	4	1	1	2	53	...	...	...
IV. Diseases of Nervous System, ...	11	7	2	5	25	12	16	9	7	2	8	8	6	4	4	3	104	104	5·9	7
V. Tuberculous Diseases, ...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43	2·4	3
(a) Abdominal Tuberculosis, ...	...	...	...	...	...	...	...	1	...	1	1	1	...	1	...	2	7	...	...	...
(b) Tubercular Meningitis, ...	...	...	...	...	...	2	1	3	2	3	2	1	2	2	5	1	24	...	...	...
(c) Other Forms, ...	...	...	...	1	1	...	...	...	1	1	1	1	1	5	1	...	12	...	...	...
VI. Accidents of Birth.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23	1·3	2
(a) Injury, ...	15	3	...	1	19	...	1	...	...	...	...	...	...	...	...	...	20	...	...	...
(b) Umbilical Hæmorrhage, ...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
VII. Infectious Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	207	11·7	14
(a) Whooping-cough, ...	...	...	1	6	7	6	5	14	10	6	12	12	19	20	26	23	160	...	...	...
(b) Measles, ...	...	1	...	...	1	...	...	...	...	1	...	3	...	4	2	2	13	...	...	...
(c) Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	1	...	4	...	...	...
(d) Cerebro-Spinal Fever, ...	...	...	...	...	...	...	1	...	2	...	1	2	..	...	...	...	6	...	...	...
(e) Erysipelas, ...	...	1	...	2	3	4	1	...	2	...	1	...	...	...	...	...	11	...	...	...
(f) Diphtheria and Memb. Croup,	...	...	1	1	2	...	1	1	1	...	...	1	1	...	3	1	11	...	...	...
(g) Chicken-pox, ...	...	...	...	...	...	...	...	...	..	...	...	...	2	...	...	...	2	...	...	...
(h) Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...
VIII. Syphilis, ...	...	1	3	...	4	4	3	3	1	1	...	...	...	...	...	...	16	16	0·9	1
IX. Suffocation, ...	1	...	...	1	2	2	1	...	...	...	...	...	...	...	...	...	5	5	0·3	...
X. Other Violence, ...	6	1	...	3	10	2	1	...	...	...	1	...	...	1	...	...	15	15	0·8	1
XI. All Other Causes, ...	5	3	6	7	21	14	8	5	3	2	3	3	4	3	1	2	69	69	3·9	5
	420	100	89	85	694	151	142	115	93	67	88	87	90	75	86	88	1,776	1,776	100·0	117

TABLE XIV.—Glasgow, 1921.—FEMALE Infant Deaths at Given Ages and from Several Causes.

Cause of Death.	Age in Weeks.				Total.	Age in Months.											Total.	Group Totals.	Group Percentages.	Death-rate per 1,000 Female Births.
	-1	-2	-3	-4		-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12				
I. Immaturity, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	509	38·1	36
(a) Premature Birth, ...	163	37	16	11	227	11	7	...	1	1	...	...	...	...	...	...	247	...	...	...
(b) Congenital Malformations, ...	18	6	2	3	29	7	6	4	1	2	1	...	1	1	...	1	53	...	...	...
(c) Atelectasis, ...	6	...	2	...	8	...	...	...	...	...	...	...	...	...	...	...	8	...	...	...
(d) Atrophy and Debility, ...	79	25	23	15	142	28	13	7	5	3	1	...	...	1	1	...	201	...	...	...
II. Diseases of Respiratory System,	4	3	11	5	23	20	22	16	27	11	17	25	16	25	13	18	233	233	17·5	16
III. Diseases of Digestive System,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	218	16·4	15
(a) Diarrhœal, ...	...	2	2	3	7	19	20	28	17	18	17	20	8	13	14	8	189	...	...	...
(b) Others, ...	1	...	2	3	6	2	4	3	4	3	1	2	...	3	...	1	29	...	...	...
IV. Diseases of Nervous System, ...	4	5	4	1	14	9	7	5	4	3	3	5	4	8	8	5	75	75	5·6	5
V. Tuberculous Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	2·1	2
(a) Abdominal Tuberculosis, ...	...	...	...	...	...	1	...	1	...	...	1	1	...	...	1	...	5	...	...	...
(b) Tubercular Meningitis, ...	...	...	...	...	...	...	...	2	1	...	3	4	2	2	2	1	17	...	...	...
(c) Other Forms, ...	...	...	1	...	1	...	1	...	...	1	...	...	1	1	...	1	6	...	...	...
VI. Accidents of Birth, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	0·7	1
(a) Injury, ...	7	2	...	...	9	...	...	...	...	...	...	...	...	...	...	...	9	...	...	...
(b) Umbilical Hæmorrhage, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VII. Infectious Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	177	13·3	12
(a) Whooping-cough, ...	...	...	1	1	2	12	10	8	11	10	7	16	17	21	20	17	151	...	...	...
(b) Measles, ...	...	...	...	...	...	...	...	1	...	...	1	...	3	1	2	2	10	...	...	...
(c) Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...
(d) Cerebro-Spinal Fever, ...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	3	...	...	...
(e) Erysipelas, ...	...	...	1	1	2	1	...	...	...	...	...	1	...	...	...	...	4	...	...	...
(f) Diphtheria and Memb. Croup,	...	...	...	...	...	...	1	...	...	1	3	...	...	...	1	1	7	...	...	...
(g) Chicken-pox, ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
(h) Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VIII. Syphilis, ...	1	2	3	1	7	5	3	...	1	2	2	...	...	...	...	...	20	20	1·5	1
IX. Suffocation, ...	1	...	...	...	1	1	2	...	1	...	...	...	...	...	...	...	5	5	0·4	...
X. Other Violence,...	1	...	...	...	1	2	...	...	1	1	...	1	...	1	...	...	7	7	0·5	...
XI. All Other Causes, ...	9	...	7	1	17	10	3	2	2	2	5	2	3	2	1	3	52	52	3·9	4
	294	82	75	45	496	128	100	78	77	59	62	77	56	79	63	58	1,333	1,333	100·0	92

TABLE XV.—GLASGOW, 1919-1921.—ABSTRACT OF NOTIFICATIONS UNDER NOTIFICATION OF BIRTHS ACT, 1907, AND RESULTS OF VISITS.

	1919.	1920.	1921.
Total Number of Notifications, ...	27,328	33,982	31,140
Doctor at Home, ...	8,284	10,423	9,235
Doctor in Institution, ...	1,963	2,906	2,971
Maternity Hospital (Outdoor) Nurse, ...	2,143	3,173	3,352
Other Institutional Nurse, ...	604	537	577
Certified Midwife, ...	13,903	16,436	14,594
Others, ...	431	507	411
Total Cards issued, ...	19,044	23,559	21,905
Total Cards returned, ...	18,286	23,861	21,585
Full Information, ...	16,958	22,216	20,036
Doctor found in attendance, ...	167	177	116
Duplicates, ...	1	—	—
Wrong Address—Not Traced, ...	5	1	2
Others, ...	1,155	1,467	1,431

TABLE XVI.—GLASGOW, 1919-1921.—BIRTHS NOTIFIED SHOWING MEDICALLY AND NOT MEDICALLY ATTENDED.

	1919.	1920.	1921.
Notifications Received—*less Duplicates*—			
Total, ...	27,327	33,982	31,140
Live-births, ...	26,227	32,697	29,944
Still-births, ...	1,100	1,285	1,196
Per cent. Still-births to Total, ...	4·0	3·8	3·8
Medically attended—			
Total Births at Home, ...	8,284	10,423	9,235
In Institutions, ...	1,963	2,906	2,971
Total, ...	10,247	13,329	12,206
Per cent., ...	37·5	39·2	39·2
Still-births at Home, ...	318	382	358
Still-births in Institutions, ...	303	315	317
Not Medically attended—			
Maternity Hospital, Outdoor Nurse, ...	2,142	3,173	3,352
Other Institutional Nurses, ...	604	537	577
Certified Midwives, ...	13,903	16,436	14,594
Others, ...	431	507	411
Total, ...	17,080	20,653	18,934
Per cent., ...	62·5	60·8	60·8
Still-births.	479	588	521

TABLE XVII.—Glasgow, 1919-1921.—Cases of Infectious Disease Registered and Numbers Treated in Hospital.

TABLE XVIII.—Glasgow, 1914-1921.—Case-Rates *per Million* for Infectious Diseases.

1919		1920		1921			Case-Rates per Million.							
Hosp.	Home.	Hosp.	Home.	Hosp.	Home.		1914	1915	1916	1917	1918	1919	1920	1921
						A.—Notifiable—								
32	1	9	...	6	...	Fevers:—Typhus, ...	18	9	17	1	49	30	8	6
106	9	211	16	101	7	Enteric, ...	340	248	158	82	128	103	204	100
9	...	15	...	8	...	Continued and Undefined, ...	7	5	8	4	12	8	13	7
146	36	218	80	306	15	Puerperal, ...	206	175	178	148	151	163	267	299
6	..	530	2	20	...	Smallpox, ...	...	...	...	...	1	5	477	19
2,582	142	3,569	198	3,386	131	Scarlet Fever, ...	5,337	5,973	3,719	1,634	1,193	2,443	3,378	3,272
1,722	90	1,920	97	1,762	94	Diphtheria and Membranous Croup, ...	1,440	1,257	1,220	1,146	1,379	1,626	1,809	1,727
374	542	489	601	519	485	Erysipelas, ...	1,459	1,403	989	752	644	822	977	934
...	* 1	...	...	...	...	Cholera, ...	...	...	...	...	...	1	...	...
76	4	82	3	60	3	Cerebro-Spinal Fever, ...	45	167	131	75	67	72	76	59
107	624	75	712	76	847	Ophthalmia Neonatorum, ...	422	399	521	603	512	656	706	859
4	83	18	59	11	57	Trachoma, ...	37	110	65	84	46	78	69	63
2	...	52	11	18	9	Acute Encephalitis Lethargica, ...	...	..	...	...	...	2	56	25
21	9	1	2	1	1	Acute Polio-Encephalitis, ...	...	...	...	...	10	27	3	2
6	14	3	1	8	5	Acute Poliomyelitis, ...	...	...	...	...	18	18	4	12
230	778	1,440	2,590	1,490	1,828	Acute Primary Pneumonia, ...	...	..	...	...	...	904	3,614	3,087
...	...	267	233	179	95	Acute Influenzal Pneumonia, ...	...	...	...	...	...	...	448	255
87	1,341	34	1,030	6	60	Malaria, ...	...	...	...	...	...	1,281	954	61
13	104	10	71	28	18	Dysentery, ...	...	1	...	...	1	105	73	43
...	12	...	...	...	...	Trench Fever, ...	...	...	...	...	...	11	...	...
798	1,246	1,001	1,239	988	1,057	Pulmonary Tuberculosis, ...	2,284	2,169	2,285	2,435	2,258	1,834	2,009	1,902
291	916	396	789	308	833	Other Forms of Tuberculosis, ...	1,088	1,375	1,270	1,433	1,273	1,083	1,063	1,061
						B.—Not Notifiable—								
725	8,314	610	11,187	438	2,612	Measles, ...	9,624	12,592	9,529	11,729	7,756	8,107	10,577	2,837
62	114	42	240	139	351	German Measles, ...	140	108	436	982	358	158	253	456
454	6,255	177	2,494	801	9,947	Whooping-cough, ...	6,071	6,984	1,536	9,974	3,629	6,020	2,395	9,997
90	2,492	146	5,456	258	5,386	Chickenpox, ...	3,921	3,692	3,893	2,769	2,484	2,316	5,023	5,250
932	4	210	173	22	21	Influenza, ...	...	...	...	...	481	840	343	40
10	...	7	1	5	1	Mumps, ...	...	...	29	103	103	9	7	6
2	...	...	...	...	...	Cancrum Oris, ...	...	...	1	4	2	2	...	...
2[1]	...	7[2]	1[3]	37[4]	1[5]	Others, ...	1	...	2	5	1	2	7	35
8,889	23,131	11,539	27,286	10,981	23,864	Totals, ...	32,440	36,667	25,987	33,963	22,556	28,726	34,813	32,414

[1] Anthrax, 1; Cancer, 1. [2] Anthrax, 1; Osteomyelitis, 1; Vincent's Angina, 3; Neurasthenia, 1; Tonsilitis, 1. [3] Epidemic Enteritis, 1.
[4] Enteritis, 28; Scabies, 2; Laryngitis, 2; Vincent's Angina, 3; Noma, 1; Anthrax, 1. [5] Vincent's Angina, 1.
* British Cholera.

TABLE XIX.—GLASGOW.—STATUTORY DECLARATIONS OF CONSCIENTIOUS OBJECTION TO VACCINATION IN EACH WARD DURING 1921.

MUNICIPAL WARDS.	Conscientious Objections Lodged.	Percentage of Births Registered.
1. Shettleston and Tollcross, ...	158	16
2. Parkhead, ...	194	17
3. Dalmarnock, ...	240	16
4. Calton, ...	159	13
5. Mile-end, ...	107	10
6. Whitevale, ...	113	15
7. Dennistoun, ...	52	12
8. Provan, ...	188	19
9. Cowlairs, ...	192	30
10. Springburn, ...	127	29
11. Townhead, ...	111	15
12. Exchange, ...	86	14
13. Blythswood, ...	43	9
14. Anderston, ...	122	13
15. Sandyford, ...	62	10
16. Park, ...	32	10
17. Cowcaddens, ...	172	12
18. Woodside, ...	113	10
19. Ruchill, ...	144	18
20. North Kelvin, ...	71	14
21. Maryhill, ...	96	13
22. Kelvinside, ...	15	6
23. Partick (East), ...	116	14
24. ,, (West), ...	134	17
25. Whiteinch, ...	144	23
26. Hutchesontown, ...	282	19
27. Gorbals, ...	172	10
28. Kingston, ...	244	22
29. Kinning Park, ...	221	19
30. Govan, ...	306	25
31. Fairfield, ...	296	35
32. Pollokshields, ...	21	11
33. Camphill, ...	67	19
34. Pollokshaws, ...	163	35
35. Govanhill, ...	130	19
36. Langside, ...	46	16
37. Cathcart, ...	45	19
Institutions, &c., ...	8	11
City, ...	4,992	17

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.		Parliamentary Road.	Belvidere Fever.	Belvidere Small-pox.	Ruchill.	Shieldhall.	Knightswood.			
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[1]	100[2]	10[3]	1262	1106	1·1

[1] Also 272 beds for Tuberculosis.
[2] ,, 24 ,, ,,
[3] ,, 70 ,, ,,

* The City has also a part interest in Lightburn Hospital—about 7·8 beds.
,, ,, ,, Darnley ,, ,, 20 ,,

Institutional Accommodation patients suffering from tuberculosis:—

	Males.	Females.	Total.
(1) SANATORIA—			
Local Authority, Ochil Hills, ...	103	—	103
,, Bellefield, ...	—	52	52
Bridge of Weir, ...	17	48	65*
Dunblane, ...	4	4	8
Total beds in Sanatoria,	124	104	228
(2) HOSPITALS—			
Local Authority, Ruchill, ...	136	136	272
,, Knightswood,	80	—	80
,, Shieldhall, ...	24	—	24
,, Darnley, ...	9	9	18
,, Robroyston, ...	224	224	448
Lanfine Home, ...	14	11	25*
Total beds in Hospital, ...	487	380	967
(3) POOR LAW INSTITUTIONS, ...	148	60	208*
Total Institutional accommodation, ...	759	544	1,303

* The number is not fixed; these figures are based on an average experience of 12 months.

TABLE XXI.

City of Glasgow Fever and Smallpox Hospitals.

RETURN BY THE MEDICAL OFFICER OF HEALTH

Showing Number, Average Residence, and Cost of Treatment of Patients, 1921-1922.

ORDINARY NETT EXPENDITURE (as per Treasurer's Statement) excluding Interest and Sinking Fund Charges, and Revenue from treating Phthisis and Infectious Disease Patients from Rutherglen:—

Fever Hospital, Belvidere,	£70,882 19 4	
Fever Hospital, Ruchill,	103,014 13 10	
Fever Hospital, Shieldhall,	19,647 7 11	
Fever Hospital, Knightswood,	14,074 1 9	
Smallpox Hospital, Robroyston,	671 8 9	
Hospital (Tuberculosis) Robroyston,	48,679 14 11	
		£256,970 6 6

Average Daily Number of Patients in Fever Hospital, Belvidere,	505
Average Daily Number of Patients in Fever Hospital, Ruchill,	762
Average Daily Number of Patients in Fever Hospital, Shieldhall,	112
Average Daily Number of Patients in Fever Hospital, Knightswood,	77
Average Daily Number of Patients in Robroyston Hospital,	425
Average Daily Number of Patients in Hospitals,	1,881

	Belvidere Hospital.	Ruchill Hospital.	Shieldhall Hospital.	Knightswood Hospital.	Robroyston Hospital.	Total.
Patients remaining at 31st May, 1921,	608	815	78	79	331	1,911
Patients admitted during 1921-22,	5,079	5,517	908	376	942	12,822
Total under Treatment, 1921-1922,	5,687	6,332	986	455	1,273	14,733
Patients dismissed during 1921-1922,	5,244	5,637	871	374	744	12,870
Patients remaining at 31st May, 1922,	443	695	115	81	529	1,863

Average Residence of Patients dismissed, 1921-22, ... 46·70 days.

Average Daily Expenditure,	£777 0 5
Average Daily Cost per Patient,	0 8 3·1
Average Cost of Treatment per Patient,	19 5 10·0
Average Cost of Bed per Year,	150 15 7·6

*STATEMENT SHOWING PATIENTS CLASSIFIED AS TO DISEASE, AVERAGE RESIDENCE OF PATIENTS DISMISSED, AND AVERAGE COST AT THE DAILY RATE GIVEN ABOVE—

Disease.	No. Dismissed.	Average Residence.	Average Cost.
Typhus,	5	19·80 days.	£7 8 2
Smallpox,	—	— ,,	...
Enteric,	75	50·34 ,,	18 16 9
Anthrax,	—	— ,,	...
Puerperal,	242	24·85 ,,	9 6 0
Scarlet,	3,013	49·49 ,,	18 10 5
Diphtheria,	1,538	45·09 ,,	16 17 5
Polio-encephalitis,	10	119·60 ,,	44 15 1
Polio-myelitis,	6	58·50 ,,	21 17 8
Acute Primary Pneumonia and Influenzal Pneumonia,	1,629	24·50 ,,	9 3 4
Tropical Diseases,	59	28·86 ,,	10 16 0
Measles and German Measles,	2,521	24·50 ,,	9 3 4
Whooping-cough,	600	58·89 ,,	22 0 9
Other Infectious Diseases,	2,749	56·13 ,,	21 0 1
All other Diseases,	423	26·05 ,,	9 14 11
	12,870		

* Includes Phthisis, Erysipelas, Cerebro-Spinal Fever, Chickenpox, and Influenza.
† Includes Nursing Mothers, also Persons sent in by mistaken diagnosis.

TABLE XXII.—General Sanitary Operations.—(a) Food and Drugs, &c.

Year.	1921.	1920.	1919.
I. Milk Purveyors.			
Registered during year,	231	231	241
Removed from Register,	184	210	212
On Register at 31st Dec.,	1,355	1,308	1,287
Number of Inspections,	19,721	18,101	17,429
Contraventions of Orders or Regulations,	89	102	76
Prosecutions for same,	4	...	1
Repairs or Improvements effected,	62	56	28
II. Dealers in Ice Cream.			
Registered during the year,	145	114	100
Removed from Register,	128	97	121
On Register at 31st Dec.,	654	637	620
Number of Inspections,	9,427	9,579	7,627
Contraventions of Orders or Regulations,	92	101	82
Prosecutions for same,	5	1	1
Repairs or Improvements effected,	35	33	20
III. Byres for Milch Cows.			
Number of Dairy Byres as at 31st Dec.,	53	51	61
,, Cows licensed for,	1,024	1,008	1,141
Average number kept,	743	756	836
Number of Inspections,	541	628	748
Contraventions of Rules or Regulations,	17	24	29
Prosecutions for same,	...	...	1
Repairs or Improvements effected,	3	1	1
IV. Unwholesome Food.			
Number of Inspections,	11,732	11,261	9,808
,, Lots dealt with,	71	108	196
Nature of Food destroyed at Inspector's instance with Owner's consent—			
Condensed Milk,	20 tons. 16 lbs.	...	...
Eggs,	500	510	89,360
Egg Yolk and Pulp, (lbs.)	...	18,072	9
Egg Powder, ,,	..	...	...
Biscuits, ,,	...	957	...
Butter, ,,	...	98	12
Canned Food (various), ,,	8,935	8,749	22,176
Cheese, ,,	...	424	...
Cereals, ,,	...	127	1,820
Chocolate, ,,	20	624	210
Cured Meats, ,,	723	1,957	...
Flour, ,,	...	...	...
Fruit (Dried and Soft), ,,	15,410	20,441	86,645
Margarine, ,,	...	50	...
Pickles, ,,	...	20	23
Preserved Meat, ,,	...	...	9,906
Preserves, ,,	100	155	29
Vegetables, ,,	48,321	64,630	41,457
Game, ,,	...	...	118
Shell-Fish, ,,	...	...	448
Nuts, ,,	12,510	...	...
V. Food and Drugs and Margarine Acts.			
Samples examined by Inspectors,	...	...	...
Informal Samples analysed,	3,185	3,963	3,055
Statutory Samples analysed,	1,257	1,114	1,244
Statutory Samples found Non-genuine,	113	129	156
Proceedings instituted,	72	68	104
Fines and Expenses imposed,	£432 2/6	£367 11/	£441 15/6
Non-convictions,	18	8	16
Prosecutions for Margarine Offences,	3	6	10
Fines and Expenses imposed,	£5 3/6	£9 19/6	£20 3/
Non-convictions,	1	...	...
False Warranty (Butter),	...	...	1
Fines imposed,	...	...	£20
Obstruction,	...	1	1
Fines imposed,	...	£4 4/	£2 10/
VI. The Sale of Horse-Flesh Regulation Act, 1889.			
Number of premises in which Horse-flesh is sold,	...	4	7
Prosecutions for contravention of Act,	..	...	1
Fines imposed,	...	...	£10 10/

TABLE XXII.—(*Continued*).

Year.	1921.	1920.	1919.
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, ...	1,421,302	1,581,199	1,206,542
Number of Inspections of Fish Shops, Restaurants, and Hawkers' Barrows and Carts, ...	1,229	964	1,257
Number of Nuisances discovered therein, ...	...	...	...
Fish and Game destroyed with consent—			
Fresh Fish, ...	263,218	172,911	318,454
Cured Fish, ...	90,712	41,740	10,808
Shell Fish, ...	1,344	...	...
Crabs, ...	...	...	112
Oysters, ...	...	...	...
Lobsters, ...	81	...	26
Rabbits, ...	3,783	1,614	1,457
Game, ...	46	115	397
Poultry, ...	249	167	48

(*b*) Air Purification.

Year.	1921.	1920.	1919.
Smoke Prevention.			
Glasgow Police (Further Powers) Act, 1892, Sec. 31.			
Number of Inspections of Boiler and other Furnaces, ...	1,297	1,156	1,112
" Observations of Chimneys, ...	19,509	19,448	20,166
" Intimations of Excess Smoke given, ...	332	338	322
" Warning Notices to those contravening the Act, ...	18	44	24
" Prosecutions in Police Courts, ...	57	42	40
" Convictions, ...	57	42	39
" Amount of Fines imposed, ...	£105 17/	£62 7/6	£58 11/6
" Prosecutions withheld on receiving a promise from Offenders to improve the Furnace Plant, ...	9	10	12
" Prosecutions withheld on account of accidents to Furnace Plant, or, regular fireman temporarily off duty, ...	4	5	17
" New Steam Boilers installed to give increased power, ...	3	4	3
" Mechanical Stokers fitted to Steam Boiler Furnace,...	2	8	4
" Boiler Furnaces fitted with Smoke-preventing Appliances, ...	...	1	10
" Furnaces in which Anthracite Coke or other non-bituminous fuel has been substituted for ordinary Coal, ...	21	16	9
" Furnaces adapted for Smokeless Combustion of Oil Fuel, ...	8	5	...
" Steam Boilers replaced by Electric Motors (using Corporation power), ...	7	5	2
" New Chimneys erected or existing Chimneys heightened to give increased draught and carry gases higher, ...	3	5	9
" Improvements to Furnaces not coming under any of the above headings, ...	4	...	...
" Furnaces formerly Coal fired, reconstructed for use of Corporation gas, ...	4	3	...
Spraying Dungsteads, Ashpits and Privies.			
Total number of Dungsteads Sprayed from 8th June till 26th September, ...	14,884	15,938	18,239
Total Outlay for Wages, Plant, and Material, ...	£403 7/10	£414 10/3	£418 3/
Interments.			
For year ending 31st May.			
Total number of Applications granted for Interment of Unclaimed and other Bodies, ...	682	348	324
Total Expenditure, ...	£1,607 15/6	£558 2/3	£534 6/3
Payment of Costs recovered, ...	£245 19/3	£125 15/6	£109 1/3

TABLE XXII.—(c) SUMMARY OF OPERATIO

District.	EASTERN.							NORTHERN.							
Ward.	1	2	3	4	5	6	7	8	9	10	11	17	18	19	20
I. Nuisances.															
TOTAL INSPECTIONS made for discovery of Nuisances,	24509	30064	50332	41574	34356	16951	11231	23280	11966	11079	16524	22743	26102	19862	174
Nuisances discovered and recorded,	2150	2113	3859	3100	2267	1087	915	2539	1151	1255	1657	3100	2545	1250	13
Do. removed or remedied,	2115	1999	3775	2960	2212	1067	910	2319	1090	1197	1565	2984	2440	1170	12
Consisting of Accumulations of Garbage on Roofs, Courts, &c., or in Empty Houses or Cellars, or open wastage,	21	55	114	227	73	20	9	39	15	58	89	212	67	9	
Apartment, Lobby, or W.C. with insufficient light or ventilation,	...	...	...	...	1	1	...	...	...	...	...	3	...	...	
Animals or Poultry kept, so as to cause a nuisance,	...	1	...	...	2	—	...	...	...	1	...	1	1	...	
Bad Smells, or Diphtheria or Enteric Fever in Dwelling,	38	38	38	49	22	21	17	51	26	17	30	40	80	31	
Dwellings without Water Supply,	37	37	69	88	132	37	20	44	4	12	24	41	35	12	
Dead Animal Matter under Floor,	4	...	2	...	2	6	...	...	...	...	...	...	...	...	
Defective Window in Dwelling,	11	5	7	36	10	6	12	1	...	...	...	1	...	...	
Domestic Water Supply from Cistern in W.C.; or Cistern in Attic, foul and uncovered,	172	38	13	...	8	...	43	63	225	86	12	50	3	61	
Drains, Soil-pipes, Branches, &c., choked, defective or out of repair,	951	793	792	1109	442	473	353	836	435	391	463	985	820	536	4
External Walls of Dwellings, Stairs, Lobbies, or Closets filthy,	119	232	398	270	238	126	199	188	166	163	247	329	325	71	2
Internal Walls or Floors of House, or W.C., or Lobbies, or Stairs filthy,	106	108	944	189	377	100	12	397	38	70	250	467	358	108	
House Damp, or otherwise rendered unfit for habitation,	1	...	4	5	6	3	...	15	10	4	35	23	23	14	
Sink, or W.C., or Trap, choked or broken or out of repair,	429	353	832	553	688	174	101	456	115	221	171	481	410	175	2
Nuisances in Bakehouses,	1	1	..	1	1	...	2	5	...	1	7	5	5	...	
Roofs, Walls, or Ceilings of Dwellings broken or out of repair,	33	35	72	136	37	34	17	41	6	25	23	34	21	7	
Rhones, Pipes, or Gutters broken or out of repair,	7	46	160	110	50	21	35	11	8	11	32	6	37	6	
Smoky Vents, or Back Smoke, causing a nuisance,	7	9	24	39	13	12	9	29	15	20	13	10	13	7	
Sink accommodation defective, or new required,	...	...	2	1	2	...	...	...	...	...	...	...	...	...	
Water-Closet accommodation required,	...	1	1	...	...	...	...	1	...	...	...	...	...	...	
Water-Closet defective in construction,	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
Water-Closet accommodation in Workshops defective,	...	...	1	...	...	...	...	...	...	...	...	...	...	...	
Workshops filthy,	3	1	4	2	3	...	2	2	...	1	12	12	5	1	
Workshops overcrowded,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Workshops defective in ventilation or light,	1	..	...	2	2	...	...	...	...	...	...	1	...	...	
Waste of Water reported to the Engineer and remedied,	148	170	103	71	40	20	28	107	17	73	90	208	168	93	1
Complaints to Master of Works remedied,	26	76	195	72	63	13	48	33	10	43	67	75	58	39	
Reported to Procurator-Fiscal for prosecution before the Sheriff,	...	...	5	...	1	5	...	..	...	...	1	1	1	...	
Summoned before the Police Magistrates,	...	...	36	...	16	2	...	31	...	1	13	25	5	...	
Number of Rotation Cards for Cleansing of Common Stairs, Lobbies, and Water-Closets served on Tenants,	119	116	317	280	276	41	76	1144	24	67	203	957	383	3	
Pigstyes inspected for Licensing Court,	11	62	...	...	...	1	...	110	10	50	1	3	1	13	
II. Drain Testing.															
Total number of Applications of the test at different times,	69	148	104	66	54	63	67	275	75	47	100	114	110	74	
Number of new Applications for satisfaction of Dean of Guild Court,	5	94	3	6	1	4	3	142	4	3	...	18	3	4	
Number of old Tenements or Systems to which they were applied for the first time,	37	28	48	31	23	32	39	47	29	21	34	49	49	32	
Number of these found all right on first application of Test,	13	13	8	8	4	7	19	5	6	1	...	6	4	2	
Number found more or less defective on first application,	24	15	40	23	19	25	20	42	23	20	34	43	45	30	

NITARY SECTION FOR THE YEAR 1921.

CENTRAL.								SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1920.
13	14	15	16	22	23	24	25	26	27	33	34	35	36	37	28	29	30	31	32		
15692	31209	30834	16733	13453	27766	17208	21387	30319	47030	14866	14198	18802	17672	13653	43928	42510	41338	18171	11759	886606	813884
1131	3018	2932	793	631	2357	1185	1191	2514	3548	495	571	1097	601	489	4976	4630	5630	2316	1118	76518	68012
1116	3394	3017	805	587	2273	1142	1173	2470	3526	473	527	1068	595	495	4247	4445	5583	2182	1057	74058	65382
132	228	215	57	48	84	39	48	81	262	13	6	50	32	9	239	284	409	165	102	3791	2972
12	10	1	...	2	1	...	...	...	...	...	...	...	...	...	3	10	2	...	1	66	31
...	...	...	...	...	4	2	1	4	1	...	...	...	...	...	...	2	1	...	...	22	16
25	77	50	21	17	42	31	22	50	51	18	20	33	33	18	24	20	11	10	8	1177	1295
15	69	54	13	...	49	10	9	48	61	6	2	24	8	5	76	37	59	3	10	1228	1496
...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	8	1	...	3	4	34	12
1	127	2	...	2	4	3	11	5	17	1	2	7	2	1	45	47	86	35	13	734	366
...	33	...	9	...	8	16	2	...	...	...	...	1	16	...	...	...	1	...	20	972	40
303	824	751	260	225	597	371	492	1372	1317	227	305	556	259	304	1151	1248	1279	748	197	23762	24979
142	292	299	249	17	199	215	127	294	115	111	15	73	43	44	250	215	256	317	213	7232	5813
103	345	595	18	61	472	132	58	119	662	19	26	99	37	20	1025	553	1077	227	111	10457	8503
1	13	21	3	2	19	7	1	18	8	6	1	11	4	1	58	50	39	15	15	474	299
203	537	454	62	26	392	106	118	233	585	15	92	92	35	43	1040	994	1263	412	130	12866	11851
1	...	1	2	1	...	...	...	2	9	1	...	1	...	...	4	12	5	6	...	98	110
54	300	145	20	54	96	33	75	54	121	7	23	24	9	5	130	159	195	66	16	2458	1770
13	53	96	10	74	93	37	65	13	23	9	1	13	45	16	225	247	126	90	110	1971	1424
11	30	36	6	3	20	15	10	29	27	10	4	10	7	7	70	32	55	32	10	686	602
...	2	...	2	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	22	7
1	...	...	2	1	...	1	...	...	1	...	...	...	...	1	1	...	2	...	...	17	33
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	5	...	1	1	...	11	9
1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	13	28	43
23	20	21	7	5	17	3	3	1	22	4	.	7	1	1	15	17	13	13	25	397	398
1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...
...	1	3	...	...	...	...	...	...	6	...	...	1	..	...	3	2	2	...	1	27	31
57	305	180	40	41	131	105	97	102	176	23	25	56	54	12	429	473	436	114	76	4576	3236
17	128	90	23	7	45	15	33	45	61	3	5	10	10	8	168	226	302	59	43	2209	1170
1	...	...	...	...	...	...	...	...	5	...	1	1	1	...	3	3	...	...	...	32	27
8	7	11	...	.	...	...	...	1	11	1	...	...	...	...	1	4	12	...	...	189	100
155	162	477	54	173	130	44	19	7	515	63	23	101	97	17	695	375	561	127	114	8287	4966
...	...	...	...	6	...	...	15	...	...	...	7	...	3	9	..	...	6	2	...	404	272
57	122	79	40	46	59	35	81	122	95	16	94	70	44	100	29	42	47	90	41	2967	2906
5	4	4	10	12	3	4	31	32	1	...	43	11	2	31	5	1	17	86	76	718	319
21	58	41	17	19	28	20	22	53	49	12	17	32	32	22	21	20	7	11	13	1101	1277
2	8	9	7	7	1	5	5	3	5	5	1	7	10	5	3	1	2	...	5	194	360
19	50	32	10	12	27	15	17	50	44	7	16	25	22	17	18	19	5	11	8	907	917

TABLE XXII.—(c) SUMMARY OF OPERATIONS

District.	EASTERN.							NORTHERN.								
Ward.	1	2	3	4	5	6	7	8	9	10	11	17	18	19	20	[illegible]
III. Houses Let in Lodgings and Farmed-out Houses.																
Number Inspected, Measured, and Registered,	...	...	...	2	...	...	...	1	1	...	...	...	...	...	...	[illegible]
Number now on Register, — Houses Let in Lodgings,	1	2	4	2	...	...	...	6	4	4	4	7	4	...	...	[illegible]
Number now on Register, — Farmed-out Houses, ...	...	...	...	154	43	...	...	...	...	...	10	136	...	...	...	[illegible]
Number of Re-inspections by Day, ...	1	...	2	939	266	...	1	13	8	6	281	939	8	...	...	[illegible]
Do. do. by Night, ...	...	...	4	524	169	21	...	9	2	8	20	540	8	...	...	[illegible]
Do. of Keepers Summoned for Contravening Regulations, ...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	[illegible]
Do. do. Fined for same, ..	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	[illegible]
Amount of Fines, ...	...	...	...	...	...	.	...	...	60/-	...	...	...	...	...	...	[illegible]
IV. Female Visitations.																
Number of Houses visited, first time, ...	282	815	1480	1400	1989	1762	76	3189	199	477	1289	2270	2401	943	457	[illegible]
Number of Houses in which Lodgers were found, ...	12	42	54	51	122	130	6	139	12	22	77	218	178	38	40	[illegible]
Number of Houses and Bedding found Dirty, dealt with by statutory notice,	13	35	54	75	83	44	2	202	11	32	102	187	203	47	25	[illegible]
Number of Houses revisited, ...	22	41	55	89	101	68	3	450	17	47	202	368	369	72	48	[illegible]
Number of Houses found improved, ...	13	33	28	55	67	51	2	195	10	27	87	187	197	40	24	[illegible]
Number of Nuisances reported by Female Inspectors, ...	...	...	...	...	..	2	1	6	1	...	...	11	10	10	2	[illegible]
Number of Infectious Disease Cases reported,	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	[illegible]
Under the Glasgow Corporation (Police) Order, 1904, dealing with Filthy Houses and Dirty or Verminous Children:—																
Number of Visits to Schools, ...	32	19	92	50	88	6	19	60	11	39	96	155	89	18	...	[illegible]
Number of Children submitted for inspection, ...	510	313	2262	398	2335	32	117	1056	138	405	833	4020	991	252	...	[illegible]
Number of Children found Verminous,	24	11	136	49	87	1	3	656	100	262	593	2123	640	113	4	[illegible]
Number of Children found Dirty, ...	11	...	21	8	30	...	3	...	2	...	1	1	4	...	...	[illegible]
Number of Homes inspected, ...	52	107	406	327	249	112	10	496	136	115	301	1277	770	96	146	[illegible]
Number of Homes Re-inspected, ..	3	2	7	4	1	6	...	12	2	4	13	39	35	4	9	[illegible]
Number of Dirty Houses, ...	3	3	6	6	4	4	...	9	4	3	6	18	8	5	5	[illegible]
Number of Dirty Bedding, ...	2	...	3	5	1	1	...	4	...	1	5	30	4	3	5	[illegible]
Number of Notices served, ...	33	14	160	62	133	13	6	69	12	23	61	247	90	10	14	[illegible]
Number of Houses Cleaned in consequence, ...	3	1	...	4	1	3	...	8	2	2	6	20	8	4	6	[illegible]
Number of Bedding Cleaned in consequence, ...	3	...	...	5	1	2	...	2	...	1	2	24	3	1	3	[illegible]
Number of Bedding Cleaned at Sanitary Wash-house, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[illegible]
Number of Children Cleaned by Guardians, ...	15	6	85	14	103	...	2	50	6	10	46	207	64	2	...	[illegible]
Number of Children Cleaned by Officers, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	[illegible]
Number of Applicants supplied with Insecticide, ...	...	...	...	10	66	...	...	...	...	...	26	49	...	...	...	[illegible]
V. Factories, Workshops, and Home-workers' Dwellings.																
Total number of Workshops on the Registers at 31st December, ...	156	127	126	464	124	158	72	40	55	18	89	168	156	72	75	[illegible]
Total Inspections made, ...	172	105	295	301	415	160	137	179	124	134	334	450	365	244	242	[illegible]
Apartments Measured and Registered during the Year, ...	12	26	36	5	49	6	40	8	4	4	28	25	10	2	2	[illegible]
Number of Workshops found defective in Light or Ventilation, ...	...	...	...	...	1	...	...	...	...	...	..	1	...	...	1	[illegible]
Number found defective in Water-closet Accommodation, ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	[illegible]
Number requiring Limewashing, ...	5	1	5	3	4	...	3	2	...	1	12	12	5	1	2	[illegible]
Number of other Defects, ...	...	1	...	2	10	...	2	10	6	2	11	16	8	3	...	[illegible]
Number who carried out Improvements suggested by Inspector, ...	3	2	5	3	6	...	4	10	2	2	19	27	13	1	3	[illegible]

ARY SECTION FOR THE YEAR 1921—*Continued.*

CENTRAL.								SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1920.
13	14	15	16	22	23	24	25	26	27	33	34	35	36	37	28	29	30	31	32		
...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	3	1	...	...	...	29	12
8	3	9	...	...	5	...	10	...	34	...	...	...	...	...	7	...	4	...	...	144	137
7	70	...	...	...	29	...	...	...	207	...	...	...	...	...	15	69	...	...	...	1154	1347
65	325	40	...	...	150	...	39	...	1992	...	...	...	...	...	799	756	33	...	...	8768	6688
42	251	...	...	...	75	6	18	...	1260	...	...	...	...	...	99	...	...	...	...	4933	4704
1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	8	1
1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	5	1
3 3/-	£4 4/-	...	...	...	...	...	...	...	...	...	...	...	...	...	£2 2/-	...	...	...	...	£12 9/-	5/-
3688	2212	1105	54	1	4743	2192	609	1504	5732	...	144	266	...	...	2886	1541	2742	416	480	55410	52630
238	3	...	...	1	247	115	47	42	817	...	12	3	...	...	164	74	422	76	23	3614	4332
61	96	49	4	2	188	76	38	79	311	...	13	12	...	...	119	50	84	19	13	2474	2922
124	77	38	1	4	410	168	58	183	503	...	16	32	...	...	190	77	136	39	16	4361	4536
52	102	49	2	...	186	68	36	86	302	...	13	12	...	...	122	47	88	21	13	2346	2637
...	...	...	...	...	...	...	...	8	42	...	...	...	...	...	30	46	69	19	4	276	320
...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	1	...	3	...	...	9	6
3	59	60	19	...	...	...	...	75	160	...	54	56	...	...	56	79	101	48	4	1683	1619
10	1521	1184	396	...	...	...	...	1380	2409	...	910	796	...	...	1076	1904	1561	898	93	29289	23665
...	97	46	8	...	...	...	...	213	436	...	84	135	...	...	189	251	338	89	12	7334	5519
...	27	23	4	...	...	...	...	38	153	...	47	11	...	...	35	5	49	15	...	515	1036
324	645	494	87	...	...	...	...	221	495	...	135	45	...	...	509	530	580	211	18	9425	9104
2	12	9	4	...	...	...	...	12	5	...	1	2	...	...	8	6	13	7	...	229	337
3	9	8	4	...	...	...	...	4	4	...	...	...	...	...	6	2	17	1	...	148	172
3	11	8	4	...	...	...	...	1	3	...	...	2	...	...	3	7	14	...	...	123	173
6	144	85	20	...	...	...	...	256	596	...	131	148	...	...	233	265	418	105	12	3522	4084
2	7	9	4	...	...	...	...	4	2	...	...	...	...	...	14	2	3	...	...	118	122
2	8	7	4	...	...	...	...	1	1	...	...	2	...	...	1	4	8	...	...	85	125
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	119	63	13	...	...	...	...	250	581	...	124	146	...	...	207	306	330	145	9	3066	3752
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
...	...	...	1170		...	...	...	...	...	...	805		...	...	...	...	279		...	5969	1147
744	150	254	228	80	115	48	50	78	332	68	39	85	29	30	138	159	131	90	107	5289	5641
536	523	932	98	127	87	68	41	159	693	166	52	139	37	29	345	390	282	176	469	13223	21309
24	3	24	17	...	6	1	2	24	21	7	5	25	3	8	42	10	11	7	47	556	430
...	...	3	...	...	...	...	...	...	6	...	...	1	...	...	3	2	...	2	1	22	27
1	1	4	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	13	31	58
29	18	17	...	5	14	3	4	1	25	5	...	7	1	1	16	16	15	11	25	297	348
18	5	30	1	1	4	1	...	2	24	1	1	3	...	2	7	12	7	9	7	342	369
39	23	55	7	6	18	5	3	3	49	5	1	10	1	3	...	...	...	...	...	510	802

TABLE XXIV.—(c) SUMMARY OF OPERATIONS

District.	EASTERN.							NORTHERN.							
Ward.	1	2	3	4	5	6	7	8	9	10	11	17	18	19	20
V. Factories, &c.—*Continued.*															
Prosecutions, ...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...
Convictions, ...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...
Number found Overcrowded, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Number of Visits made under the Home-work Order, ...	17	20	33	25	20	21	25	13	20	21	31	31	38	8	2
Number of Premises found dirty and Intimations issued, ...	...	...	...	...	...	...	...	...	...	...	3	1	...	...	...
VI. Bakehouses.															
Number of Inspections for Cleanliness, &c.,	20	15	34	10	82	16	19	13	2	1	16	15	35	22	1
Number of Warnings issued for neglect of Cleanliness, ...	...	1	...	2	2	...	1	4	1	1	6	3	5	2	
VII. Rag Flock Act, 1911.															
Samples submitted for Analysis, ...	...	6	2	3	5	6	4	...	1	...	3	3	...	...	...
Certified not to conform to Standard, ...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
Proceedings instituted, ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Convictions, ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
VIII. Common Lodging-houses and Boarding-houses for Emigrants and Seamen.															
Common Lodging-houses Inspected, Measured, and Registered, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Number of Re-inspections by Day, ...	23	...	...	299	...	...	...	...	...	...	31	63	12	...	...
Do. do. by Night, ...	2	...	...	25	...	...	...	...	...	...	2	10	3	...	...
Do. Structural Defects found and remedied, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do. Intimations of Irregularities to Keepers, ...	...	...	...	10	...	...	...	...	...	...	1	8	2	...	...
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	...	...	...	...	...	...	2	4	1	...	...
With Accommodation for	402	...	...	2405	...	...	...	...	...	...	403½	953	675½	...	...
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	1300	393	67	1386	19	64	484	2579	1443	168	...
Total Number of Inspections for Detection of Overcrowding, ...	892	951	3352	5062	3832	976	268	2752	38	128	1032	5829	2944	265	...
Total Number of Cases of Overcrowding,	92	62	285	342	325	58	29	528	4	44	189	842	386	33	...
Total Number warned by Inspectors, ...	92	62	285	342	325	58	29	528	4	44	189	842	386	33	...
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	160	213	171	145	137	216	214	184	240	214	157	235	185	214	...
Number of Cases of Overcrowding in houses under 900 cubic feet of space, ...	...	3	8	27	9	...	...	15	...	1	10	17	1	...	...

Public Health Department,
Sanitary Chambers,
Glasgow, June, 1922.

TARY SECTION FOR THE YEAR 1921—*Continued.*

CENTRAL.								SOUTH-EASTERN.							SOUTH-WESTERN.					CITY.	1920.
13	14	15	16	22	23	24	25	26	27	33	34	35	36	37	28	29	30	31	32		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
152	11	5	...	3	31	25	20	19	54	...	...	4	16	2	30	26	18	3	24	794	763
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	1
1	...	7	...	...	...	...	...	6	42	2	30	11	8	8	41	25	46	26	10	632	435
1	...	...	...	...	...	...	...	2	12	1	...	2	...	...	3	4	1	3	1	80	71
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	3	1	...	...	...	39	75
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	3	13
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	4	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
263	34	24	...	...	13	...	13	...	24	...	...	...	...	...	228	235	136	...	...	1903	1120
55	9	2	...	...	2	...	2	...	1	...	...	...	...	...	2	1	...	...	...	158	77
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	3	9	...	...	1	...	1	...	3	...	...	...	...	...	7	13	5	...	...	152	53
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2	2
5	1	1	...	...	1	...	1	...	1	...	...	...	...	...	1	2	1	...	...	42	44
963	302	343	...	...	312	...	364	...	476½	...	...	...	...	...	450	947	407	...	...	10491½	11033
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
20	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	26	28
437	158	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53	...	...	...	648	562
716	176	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...	...	...	904	443
28	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25	...
538	1466	847	...	...	404	37	...	317	1797	...	...	...	...	...	849	78	578	...	107	19185	19020
2525	5866	2405	...	...	920	100	...	993	7775	...	...	...	...	...	3717	434	858	...	432	57895	57211
174	530	318	...	...	87	10	...	64	548	...	...	...	...	...	295	38	91	...	38	5519	5258
174	530	317	...	...	87	10	...	64	548	...	...	...	...	...	291	38	91	...	38	5514	5219
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	3	22
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	3	17
...	160	...	...	...	...	...	...	222	160	...	...	...	...	...	144	...	...	...	...	137	166
3	13	20	...	...	...	...	...	...	12	...	...	...	...	...	...	9	...	...	3	161	137

A. K. CHALMERS, M.D.
Medical Officer of Health.