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REPORT

OF THE

MEDICAL OFFICER OF HEALTH.

1910.

SECTION I.

The Local Government Board, in their circular of instructions to Medical Officers of Health, require—(*a*) A general account of influences and conditions injurious or dangerous to the health of the Burgh, and of the measures that, in his opinion, should be adopted for its improvement.

It has been customary in former years to preface this with a summary of the vital statistics of the year, and these are presented in the following Table:—

	Registrar General's Estimate.		Medical Officer's Estimate.
Population,[1]	884,520	...	796,409
Acreage,[2]	...	12,975	...
Persons per acre, ...	68	...	61
Number of Inhabited Houses, ...	...	164,397	...
Deaths—Number registered, ...	...	13,395	...
,, After correction for Institutions, &c., ...	...	12,471	...
Births—Number registered, ...	...	22,222	...
,, After correction, ...	...	22,014	...
Death-rate per 1,000 living—All causes, ...	15·1	...	15·7
Birth-rate per 1,000 living, ...	25·1	...	27·6
Deaths under One Year—Registered, ...	...	2,694	...
,, ,, —After correction, ...	...	2,624	...
Deaths ,, ,, ,, per 1,000 births, ...	121	...	119

Death-rate per 1,000 living from—[3]		
Zymotic diseases, ...		1·68
Tuberculous diseases—		
(*a*) Phthisis, ...	1·30	2·18
(*b*) Others, ...	0·88	
Diseases of respiratory system, ...	1·35	2·84
Pneumonia, ...	1·49	
Diseases of circulatory system, ...		1·59
Diseases of nervous system, ...		1·28
Malignant diseases (cancer, &c.), ...		0·89
Septic diseases, ...		0·23
Violence, ...		0·47
Premature births, ...		0·57
All other causes, ...		3·93
All causes, ...		15·66

[1] See remarks which follow on disparity of these estimates of population, and the consequent need for caution in accepting the rates calculated thereon.

[2] Includes 179 acres added in terms of the Glasgow Corporation Act, 1909.

[3] On Medical Officer's estimate of population.

POPULATION.

A preliminary Return of the 1911 Census, which has been issued by the Registrar-General for Scotland, shows that the population of Glasgow, including persons on board ships in the Harbour, on the night of Sunday, 2nd April, was 784,455.

At the beginning of the year the Registrar-General estimated the mid-year population at 897,178. The corresponding estimate for the year 1910 was 884,520, as compared with the local estimate of 796,409. These figures illustrate the greater accuracy which may be obtained by basing annual estimates of population during inter-censal years on the ascertained number of inhabited houses, but the causes of the discrepancy between the local estimate and the actual enumeration will be considered more in detail when the results of the recent census are available. The comparison is more fully shown in the following Table:—

REGISTRAR-GENERAL'S ESTIMATE OF POPULATION.

Estimate to the middle of 1911, ...	897,178
Deduct one-quarter of increase for year to represent difference between this and 31st March, ...	3,418
	893,760
Census population, including shipping, ...	784,455
Excess of estimate over enumerated population, ...	109,305

ESTIMATE BASED ON INHABITED HOUSES.

Estimate to middle of 1910, ...	796,409
Estimated decrease to 31st March, 1911 (taken as three-quarters of previous year), ...	3,000
	793,409
Census population, including shipping, ...	784,455
Excess of estimate over Census, ...	8,854

It is unnecessary here to refer further to the census figures, as these will be analysed and made the subject of a special report later. All the case and death rates for Wards shown throughout the following Tables have been calculated on the population at mid-summer, 1910, as estimated from the number of inhabited houses, and as the difference between this estimate and the enumerated population is only about 1 per cent., the figures given fairly indicate the true rates. Wherever reference is made to the Registrar-General's rates, these have been taken from the annual summary for the year 1910, which was published before the census figures were available, and in consequence, can only be used with the greatest reserve.

As in former years, I include the details on which the estimate of the 1910 population, based on the inhabited houses, was framed:—

(A) *Number of Inhabited Houses.*

Through the courtesy of the City Assessor, I have been supplied with a return of the inhabited houses within the area of the city as at 1st June, 1910, and on this basis the estimate of the population for the current year has been prepared.

The inhabited houses now number 164,397, which is a decrease of 818 as compared with the corresponding number for 1909. Of the total, 124,666 are within, and 39,731 are beyond, the parliamentary boundary.

Within this boundary, which fairly corresponds with that of the city as constituted prior to the extension of 1891, the number of inhabited houses has undergone a continuous and progressive decrease since 1903—a decrease which, in the seven years which have elapsed, now amounts to 6,767 houses.

This depopulation of the central portion of a growing city has its parallel in the experience of cities elsewhere; but in the present year there is for the first time an indication that the outward movement of population is affecting a wider zone.

From the extension of the city in 1891, the number of houses inhabited in the area beyond the Parliamentary boundary showed annual increases which were sometimes considerable, and suggested that the outflow from the older area was being arrested in the nearer suburbs. In 1907 a shrinkage in the volume of this suburban increase declared itself, and became more marked in the two years which followed. In the present year, however, a decrease has occurred, the number of inhabited houses in the area of the city beyond the Parliamentary boundary being 91 fewer than last year.

The changes here indicated may be followed in more detail in the following table, which, for purposes of strict comparison, excludes the houses in Kinning Park:—

GLASGOW.—Inhabited Houses WITHIN and BEYOND Parliamentary Burgh in Several Years (excluding Kinning Park).

Year.	Within.			Beyond.		
	No.	Difference.		No.	Difference.	
		+	−		+	−
1897, ...	125,475	...	...	23,482	...	...
1898, ...	127,276	1,801	...	24,897	1,415	...
1899, ...	129,071	1,795	...	26,425	1,528	...
1900, ...	129,647	576	...	27,732	1,307	...
1901, ...	130,962	1,315	...	29,026	1,294	...
1902, ...	131,339	377	...	29,908	882	...
1903, ...	131,433	94	...	31,010	1,102	...
1904, ...	130,626	...	807	32,376	1,366	...
1905, ...	129,209	...	1,417	33,679	1,303	...
1906, ...	128,608	...	601	34,900	1,221	...
1907, ...	128,344	...	264	35,790	890	...
1908, ...	126,521	...	1,823	36,510	720	...
1909, ...	125,368	...	1,153	37,176	666	...
1910, ...	124,666	...	702	37,085	...	91

(B) *Estimate of Population based on Inhabited Houses.*

Estimating the population inhabiting these houses by the usual method, and adding thereto 22,726 persons ascertained by special census to be resident in institutions, and 1,241 persons resident on shipping in the harbour, the total population of Glasgow at midsummer, 1910, may be stated as 796,409, which is 4,001 less than last year's estimate, and lower than that of the Registrar-General by 88,000.

For several years prior to 1907, a gradual shrinking of the rate of increase of the population was recorded, but an actual decrease began in 1908, so that the population as now estimated is 10,392 below the estimate for 1907.

As formerly observed, this reduction in numbers does not represent the total loss to population during these years; there has to be added the loss of natural increase, *i.e.*, the excess of births over deaths. During the past three years this amounted to 26,338, so that the actual loss to the population from these two sources alone during the three years may be stated as 36,730.

Institutional Population.—This population, as ascertained by special census, numbered 22,726, as compared with 22,867 in 1909 and 21,146 in 1908.

Ward Populations.—Appendix Table I. gives the number of the inhabited houses and estimated population in each Ward. Within the Parliamentary area eight of the Wards show slight increases. The other Wards, with the exception of Dennistoun, Exchange, Blythswood, and Broomielaw, where the decreases are small, show considerable reductions. Beyond the Parliamentary area increases are shown in Kelvinside and Langside only, while in Govanhill, Pollokshields, and Maryhill, decreases fall to be recorded.

Kinning Park.—The number of inhabited houses in Kinning Park is 2,646, a decrease of 25 compared with 1909, while the estimate of population is 12,621, a decrease of 121.

(C) *Population as Estimated by the Registrar-General.*

The Registrar-General estimates the population of Glasgow in the middle of 1910 as 884,505 persons, an increase on his estimate for the year 1909 of 12,484. This estimate is based on the assumption that the rate of increase of 1·4 per cent. as recorded during the intercensal period 1891-1901, is maintained, but, when compared with the decrease of 4,001 already shown, represents a divergence in the estimates for the year alone of 16,485. The gross difference now, however, between the Registrar-General's estimate of the population and my own amounts to 88,096, and represents a difference in death-rates calculated thereon of almost 2 per thousand.

Before occasion arises to make another estimate of the population the census will have been taken, and these discrepancies, for the time being at least, corrected.

	Registrar-General's Estimate.	Medical Officer's Estimate.
Population, 1909, ...	872,021	800,410
„ 1910.	884,505	796,409
Increase or *decrease*, ...	+ 12,484	- *4,001*
Percentage increase or *decrease*, ...	+ 1·4	- *0·5*

The following table shows the number of inhabited houses *within* and *beyond* the Parliamentary burgh, including Kinning Park.

Year.	Municipal Area *within* Parliamentary Burgh.	Municipal Area *beyond* Parliamentary Burgh.		
		Less Kinning Park.	Kinning Park.	Including Kinning Park.
1905, ...	129,209	33,679	2,878	36,557
1906, ...	128,608	34,900	2,798	37,698
1907, ...	128,344	35,790	2,760	38,550
1908, ...	126,521	36,510	2,731	39,241
1909, ...	125,368	37,176	2,671	39,847
1910, ...	124,666	37,085	2,646	39,731

UNOCCUPIED HOUSES.

Through the courtesy of the City Assessor, I am able to include a statement of the houses which were found unoccupied during the course of the Survey made by his Department during the month of June, 1910. The details for each Ward will be found in Table II. of the Appendix. The total for the City, classified according to size, for several years, has been as follows:—

NUMBER OF UNOCCUPIED HOUSES, CLASSIFIED ACCORDING TO NUMBER OF APARTMENTS.

	1908.	1909.	1910.
One apartment, ...	3,989	3,451	3,615
Two apartments, ...	8,080	8,665	10,048
Three ,, ...	2,842	2,906	3,484
Four ,, ...	959	1,034	1,221
Five ,, ...	1,220	1,230	1,347
	17,090	17,286	19,715

LININGS GRANTED BY DEAN OF GUILD COURT.

In Table III. of the Appendix a comparative statement of the linings for new houses granted by the Dean of Guild during the year ending 31st August, 1910, which has been supplied me by the Master of Works, is reproduced. Altogether, linings were granted in respect of 1,300 houses, varying from one to six apartments, as compared with 1,167 in the preceding year.

ACREAGE.

The acreage, number of inhabited houses, and estimated population in each of the Wards, with the increase or decrease in population compared with the census year, is contained in Appendix Table IV. The area of the city was added to in September, 1909, by the inclusion, in terms of the Glasgow Corporation Act, 1909, of 179 acres. This area lies to the south-west of Pollokshields Ward, and has been included therein. The area of the city is, therefore, increased from 12,796 to 12,975 acres.

TEMPERATURE AND RAINFALL.

In the past year, according to Professor Becker, the days on which rain fell numbered 191, and the amount collected was equal to 39·41 inches, or 0·65 more than the average of 42 years. There were 276 days on which bright sunshine was recorded, and snow fell on 21 days.

The mean temperature exceeded the average of 42 years in the months of February, March, May, June, August, September, October, and December.

Appendix Table V., compiled from the information supplied by Professor Becker, shows the mean temperature and rainfall for each month, with the *plus* and *minus* differences compared with the average of 42 years.

MARRIAGES.

In 1910, 6,854 marriages were registered in Glasgow, as compared with 6,399 in 1909. These represent rates per thousand persons living of 7·7 and 7·3 respectively. Although the rate for the present year shows a slight increase on that of the previous year, both are considerably lower than the rates recorded in the earlier years of the decade. It should be observed, however, that these rates are based on the population estimates of the Registrar-General, and must, therefore, be regarded as lower, by about 1 per 1,000, than the census returns warrant.

For a series of years the marriage-rate per 100,000 living has been as follows:—

1870, ...	980*	1896-1900, ...	989
1871-75, ...	992	1901-06, ...	909
1876-80, ...	901	1907, ...	885
1881-85, ...	937	1908, ...	819
1886-90, ...	884	1909, ...	734
1891-95, ...	895	1910, ...	774

* From the Registrar-General's Annual Reports.

The practice of stating the marriage-rate in relation to the total number of persons living is not without error, and in particular it fails to reflect accurately the true rate of decrease when this is accompanied by a shrinking of the proportion of the population under or over the usual marriage ages. This shrinking is, we know, in fact occurring in the earlier years of life, and in the following Table, which is constructed on lines similar to that contained in the Report of the Registrar-General for England for 1903, page vi., it is shown that when the marriage-rate is calculated on the population at all ages a decrease of 23·0 per cent. only is shown during the last forty years; whereas when it is calculated on the unmarried and widowed female population over 15 years of age the reduction amounts to 25·0 per cent.

GLASGOW.—MEAN ANNUAL MARRIAGE-RATES.*

	Calculated on Total Population at All Ages.		Calculated on the Unmarried Females and Widows aged 15 years and upwards.	
	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.
1870-72	10·0	100	54·7	100
1880-82	8·8	88	50·7	93
1890-92	9·5	95	46·5	85
1900-02	9·6	96	50·9	93
1910	7·7	77	41·2	75

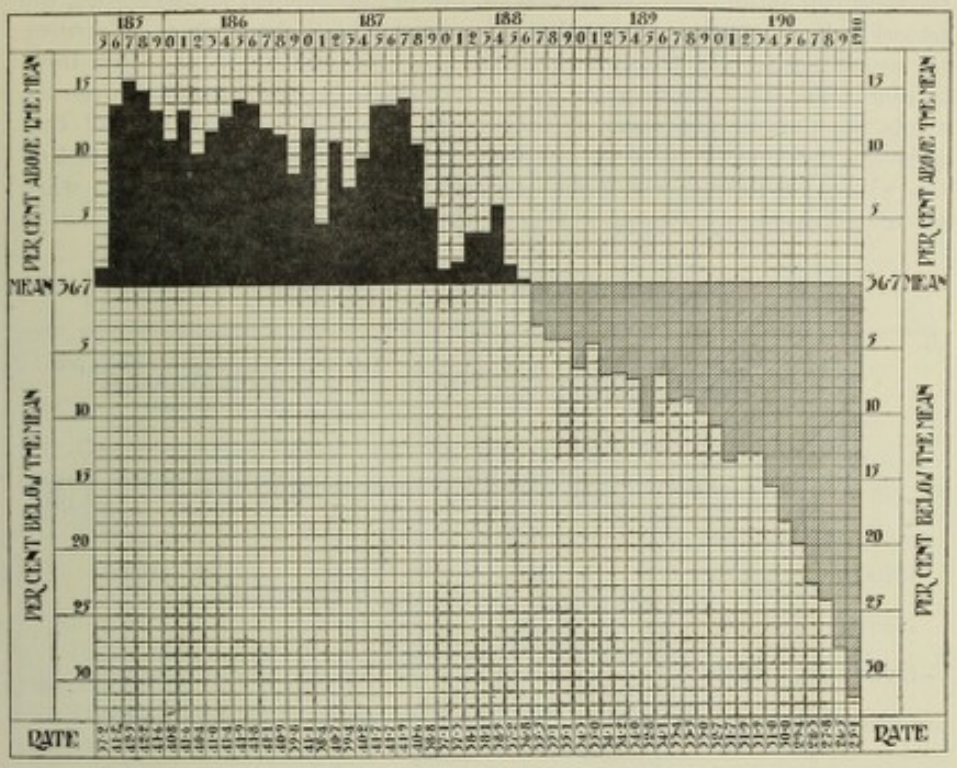
* From the Registrar-General's Annual Reports.

BIRTHS.

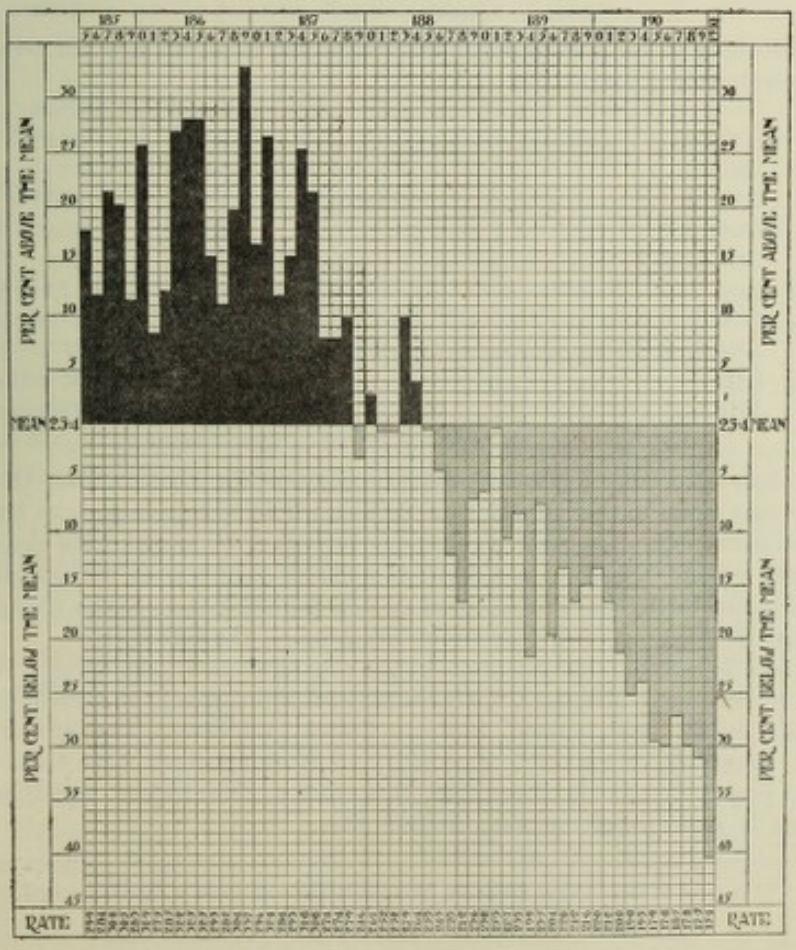
22,222 births were registered in Glasgow during the year 1910, and after deducting those not belonging to Glasgow, although born within the municipal area, and adding those born beyond the municipal area but belonging to Glasgow, there remain 22,014 births properly belonging to the City. This represents a birth-rate of 27·642 per thousand persons living, calculated on the Medical Officer's estimate of the population, as compared with 23,140 births, representing a birth-rate of 28·738 in 1909. The birth-rate is the lowest recorded, and represents a fall in the rate equal to 1,096 per million compared with 1909.

In the Report for last year there was inserted a Chart showing the birth-rate of the City in each year since 1855 (as recorded by the Registrar-General). The Chart is repeated for the present year, and shows the variation of the birth-rate in relation to the mean of the years 1855-1910.

BIRTH-RATE. 1855-1910



DEATH-RATE. 1855-1910



As with the marriage-rate so it is with the birth-rate when calculated over the total population, and a correction similar to that adopted in calculating the former is here introduced, save that the amended birth-rates are calculated on the number of females living between the ages of 15 and 45 years. Again there is illustration that the decrease shown in calculating the birth-rate over the whole population falls short of that which is actually occurring, and that although it is now 39 per cent. below the rate for 1870-72, when calculated on the whole population, the actual reduction amounts to 44 per cent. when calculated on the number of women at child-bearing ages.

GLASGOW.—MEAN ANNUAL BIRTH-RATE.*

	Calculated as a proportion per 1,000 on Total Population at All Ages.		Calculated as a proportion per 1,000 on the Number of Women aged 15-45 years.	
	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.
1870-72	40·9	100	173·5	100
1880-82	35·9	88	150·7	86
1890-92	35·2	86	125·6	72
1900-02	32·1	79	124·2	72
1910	25·1	61	97·2	56

Returning to the usual method of stating these rates, we have the following for several periods since 1871:—*

	Glasgow.	Scotland.
1871-80, ...	36·6	34·9
1881-90, ...	36·5	32·4
1891-95, ...	33·9	30·7
1896-1900, ...	33·1	30·0
1901-1905, ...	31·3	28·9
1906, ...	29·4	27·9
1907, ...	28·3	27·0
1908, ...	27·8	27·2
1909, ...	26·5	26·4
1910, ...	25·1	25·2

While from these figures it would appear that the birth-rate for Glasgow is now only equal to that for the country as a whole, the discrepancies between the estimated and the actual populations in both groups make the results of doubtful value. Based on the Medical Officer's estimate of the population, and adjusted births, the rate is equal to 27·6 per thousand persons living, and this may be taken as a fairly accurate indication of the actual rate.

There is considerable variation in the rate throughout the several Wards. In Hutchesontown, Mile-end, Springburn, and Dalmarnock, it exceeds 35 per thousand in the order named, while in Calton, Whitevale, Cowlairs, Blackfriars, Anderston, Govanhill, Maryhill, and Kinning Park it is between 30 and 35 per thousand. In Townhead, Broomielaw, Cowcaddens, and Kingston the rate is in excess of the mean for the city.

* The rates in these Tables are taken from the Registrar-General's Annual Reports.

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

	1900-1909.	1910.
Glasgow, ...	**30·1**	**25·1**
Edinburgh, ...	23·5	19·6
Dundee, ...	28·0	26·3
Aberdeen, ...	28·8	23·1
London, ...	27·1	23·6
Liverpool, ...	33·0	30·1
Manchester, ...	30·2	27·1
Birmingham, ...	30·2	26·3

The number of births and the rate in each Ward, together with the corresponding rates for several former years, are shown in Table VI. in the Appendix.

DEATHS — ALL CAUSES.

13,395 deaths from all causes were registered in Glasgow during the year 1910.

These are subject to correction for deaths occurring in institutions and for extra-mural deaths, as follows:—

From all deaths registered as occurring within the City, ...	13,395
Deduct deaths occurring in Glasgow, chiefly in Institutions, of persons whose usual residence was beyond the City boundary,	1,084
	12,311
Add deaths of Glasgow citizens, chiefly in Govan Poorhouse, ...	160
Deaths properly belonging to Glasgow, ...	12,471

On the Medical Officer's estimate of the population, this represents a death-rate of 15·66 per thousand living. This rate is much lower than any rate hitherto recorded, the previous lowest having been 17·58 in 1906.

On the Registrar-General's estimate of population and uncorrected deaths, the death-rate is 15·1 per thousand, as compared with 17·5 for 1909.

For several periods the death-rate from all causes, *calculated on the inhabited house estimate of the population and on the deaths corrected*, has been as follows:—

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

1881-1890, ...	24·22
1891-1900, ...	21·53
1901-05, ...	18·97
1906, ...	17·58
1907, ...	18·35
1908, ...	18·00
1909, ...	17·95
1910, ...	15·66

In order to compare these rates with those of other towns, we must revert to the deaths as registered, and to the Registrar-General's estimate of the population, and in the following Table the rates are given for several of the large towns in England and Scotland:—

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

	1900-1909.	1910.
Glasgow, ...	**19·1**	**15·1**
Edinburgh, ...	16·9	14·0
Dundee, ...	19·3	19·7
Aberdeen, ...	16·4	12·1
London, ...	16·0	12·7
Liverpool, ...	21·1	17·7
Manchester.	20·0	16·1
Birmingham, ...	17·9	13·7

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 each year since 1904.

GLASGOW.—QUARTERLY DEATH-RATE, 1904-1910.

	1904.	1905.	1906.	1907.	1908.	1909.	Mean. 1904-1909.	1910.
First Quarter, -	21·5	19·5	19·1	21·4	23·0	19·9	20·7	17·2
Second ,, -	18·8	18·5	18·3	20·1	17·1	16·6	18·2	15·5
Third ,, -	16·6	15·1	15·3	14·3	14·6	12·6	14·7	13·2
Fourth ,, -	20·1	18·4	18·6	18·2	16·3	21·0	18·8	14·7
Year, -	19·3	17·8	17·8	18·5	17·8	17·5	18·1	15·1

A chart, showing the death-rate in each year since 1855 in relation to the mean of the period 1855-1910, will be found facing page 6.

WARD DEATH-RATES.

In Table VII. of the Appendix the deaths and death-rates for each of the several Wards are given for 1910, and for comparison the corresponding rates since 1903.

On the average rates for these years it is now possible, with some degree of accuracy, to grade the Wards in relation to the mean for the City, and I select for illustration eight in which the rate is *continuously* in excess. These are as follows:—

Ward.	Average Death-rate per 1,000. 1903-10.	Ward.	Average Death-rate per 1,000. 1903-10.
Broomielaw, ...	23·5	Mile-end, ...	20·8
Cowcaddens, ...	22·3	Hutchesontown, ...	19·9
Calton, ...	22·2	Dalmarnock, ...	19·9
Blackfriars, ...	21·5	Whitevale, ...	19·1
	City, =	17·8	

As indicated in former Reports, some division of the Wards for statistical purposes will ultimately be required, in order that the true density of small areas, together with other factors expressing unhealthiness, may be more accurately defined. Provision will be made in regard to such areas when the Census information is tabulated for local purposes.

As illustrating the differences which exist in the death-rates of selected areas, as compared with Wards as a whole, it is of interest to continue the record of the deaths in the old Sanitary Districts of Brownfield and Cowcaddens, which respectively form parts of the Broomielaw and Cowcaddens Wards. The figures in the annexed statement include the population and deaths occurring in institutions and shipping.

BROWNFIELD AND COWCADDENS.

NUMBER OF INHABITED HOUSES, ESTIMATED POPULATION, DEATHS, AND DEATH-RATES IN OLD SANITARY DISTRICTS OF BROWNFIELD AND COWCADDENS, NOS. 13 AND 16.

OLD SANITARY DISTRICTS.		Number of Houses.	Persons per House at Census, 1901.	Population, including Institutions.	Number of Deaths.	Death-rate per 1,000.
Brownfield,	1901	696	5·218	3,924	144	40·4
	1902	670	...	3,768	112	32·5
	1903	596	...	3,321	103	33·6
	1904	553	...	3,237	67	20·7
	1905	543	...	3,179	66	20·8
	1906	537	...	3,102	80	25·8
	1907	537	...	3,125	95	30·4
	1908	507	...	2,880	84	29·2
	1909	454	...	2,652	71	26·8
	1910	434	...	2,594	67	25·8
Cowcaddens,	1901	3,651	4·568	18,206	586	33·4
	1902	3,969	...	18,824	499	27·9
	1903	3,878	...	18,589	533	28·7
	1904	3,717	...	18,129	521	29·2
	1905	3,591	...	17,536	410	23·4
	1906	3,435	...	16,351	450	27·5
	1907	3,418	...	16,600	460	27·7
	1908	3,295	...	15,030	406	27·1
	1909	3,215	...	15,461	430	27·8
	1910	3,263	...	15,820	340	21·5

DEATHS OF NON-RESIDENTS.

Last year the Local Government Board issued amended instructions regarding transference to the place of usual residence of the deaths of persons occurring elsewhere. In accordance therewith, 619 deaths were accepted as belonging to Glasgow, but these do not appear among the Glasgow deaths as published by the Registrar-General, and are not included by the Medical

Officer in calculating the death-rate. There is nothing equivalent to them in past local records, and in many cases absence of information as to the interval elapsing between the time when residence in Glasgow ceased and when death occurred impairs any statistical value these transfers might have. Details are contained in Appendix Table XII., where it will be seen that 12 of these deaths are ascribed to common infectious diseases, 5 to influenza, 31 to pneumonia, and 42 to violence—almost one-sixth of these, that is, which on the most superficial scrutiny may be set down to causes which are distinctly local in their origin, and have nothing whatever to do with the conditions under which these persons lived while resident in Glasgow.

CAUSES OF DEATH.

In Appendix Table XIII. the death-rates from several causes in 1909 and 1910 are compared, on the basis of the Medical Officer's estimate of the population and corrected deaths.

As formerly stated, the rate from all causes is the lowest on record, and is 2,293 per million lower than the preceding year. Fully one-half of this decrease occurs in respiratory diseases, the rate for which in 1910 was 2,843 per million, as compared with 4,033 per million in 1909, in which year, however, the rate was unusually heavy. The rate for the principal zymotic diseases as a class is lower by 562 per million, and for tuberculous diseases by 232 per million. Lower rates are also recorded for diseases of the nervous and circulatory systems, and also from "all causes" (unclassified).

Among the diseases comprised in the zymotic group, whooping-cough showed a reduction of 677 per million, and there were minor decreases in diphtheria, scarlet fever, typhus fever, enteric fever, and cerebro-spinal fever. On the other hand, measles and diarrhœa showed increases of 170 and 72 per million respectively.

Among tuberculous diseases the death-rate from phthisis was lower by 112 per million, and for the other tuberculous diseases 120 per million.

Among respiratory diseases the rate for pneumonia was less by 552 per million, and from other respiratory diseases by 638 per million.

AGE DISTRIBUTION OF DEATHS FROM SEVERAL AND ALL CAUSES.

Appendix Table XIV. shows the deaths from all causes at several age periods. Of the total deaths occurring, 21 per cent. were of infants under one year, while 36 per cent. were of children under five years. Among infants under one year the proportion is the same as in the preceding year, but at ages under five years the proportion is somewhat less, the deaths in this group forming 36·4 per cent. of the total deaths, as compared with 38·1 in 1909.

Notwithstanding the considerable reduction in the death-rate from diseases of the respiratory system, previously referred to, the number of deaths from these causes still forms a large proportion of the total. Including influenza, these number 2,319, and there were also 1,033 deaths from phthisis. These numbers are considerably less than the numbers recorded in the previous year, but they are more than double the total deaths occurring from all the diseases in the principal zymotic class, and, in the Wards in which they are excessive, indicate more accurately than the zymotic rate the conditions which adversely affect the health of the inhabitants.

INFANTILE MORTALITY.

2,624 deaths of infants under one year occurred during 1910, which is equal to a death-rate of 119 per thousand births. This is 12 per thousand below the rate for last year, and is the lowest yet recorded.

Of these deaths, 2,276 were of legitimate and 348 of illegitimate children, representing rates of 111 and 233 respectively per thousand births of each class. For several years the death-rate for each class has been as follows:—

DEATH-RATE PER 1000 BIRTHS.

	Legitimate.		Illegitimate.	
1899, ...	143		286	
1900, ...	145		286	
1901, ...	141	137	269	276
1902, ...	126		244	
1903, ...	132		298	
1904, ...	131		342	
1905, ...	122		263	
1906, ...	122	124	244	263
1907, ...	122		229	
1908, ...	129		238	
1909, ...	124		214	
1910, ...	111		233	

In each class, therefore, there is evidence of improvement when compared over a series of years. It is a reasonable expectation that still further reduction will result from the increased facilities for supervision which the provisions of the Notification of Births Act and of the Children Act afford.

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

Average of 5 years, 1886-90, = 143 per 1,000 births.
„ 1891-95, = 146 „
„ 1896-1900, = 151 „
„ 1901-1905, = 139 „
1906, = 131 „
1907, = 129 „
1908, = 136 „
1909, = 131 „
1910, = 119 „

Compared with several large towns the infantile mortality in 1900-1909 and in 1910 is as follows:—*

	1900-1909.	1910.
Glasgow, ...	**139**	**121**
Edinburgh, ...	128	111
Dundee, ...	156	170
Aberdeen, ...	130	112
Paisley, ...	113	114
Greenock, ...	121	129
London, ...	133	103
Liverpool, ...	165	140
Manchester, ...	165	131
Birmingham, ...	165	134

* From Registrar-General's Annual Reports.

In 1910 the infantile death-rate for Glasgow was exceeded by that of Dundee and Greenock among the principal towns in Scotland, and among the English towns quoted by those for Liverpool, Manchester, and Birmingham.

In the accompanying chart the infantile death-rate in each year since 1855 is expressed as a percentage above or below the mean for the whole period 1855-1910.

Considerable variation in the rate occurs in the several Wards of the City, and the mean of several years is necessary to obtain an approximately accurate rate where the number of births occurring annually is small. Details for each Ward for the years 1903-1910 will be found in Appendix Table XV., and a comparison of the rates shown in this Table with the death-rates from "All Causes" in Appendix Table VII. shows that most of the Wards with death-rates from all causes in excess of the mean for the City present also the highest infantile death-rates. For convenience of reference these rates for the present year are shown in the Table which follows:—

GLASGOW, 1910.—GENERAL DEATH-RATE AND INFANTILE MORTALITY RATE COMPARED.

Wards.	Death-rate for all Causes.	Wards.	Infantile Mortality.
Broomielaw, ..	19·5	Cowcaddens, ...	150
Calton, ...	19·3	Kinning Park, ...	148
Mile-end, ...	18·9	Blackfriars, ...	147
Kinning Park, ...	18·9	Dalmarnock, ...	144
Cowcaddens, ...	18·0	Broomielaw, ...	141
Dalmarnock, ...	18·0	Kingston, ...	140
Blackfriars, ...	17·8	Gorbals, ...	136
Anderston, ...	17·7	Calton, ...	135
Hutchesontown, ...	16·9	Whitevale, ...	130

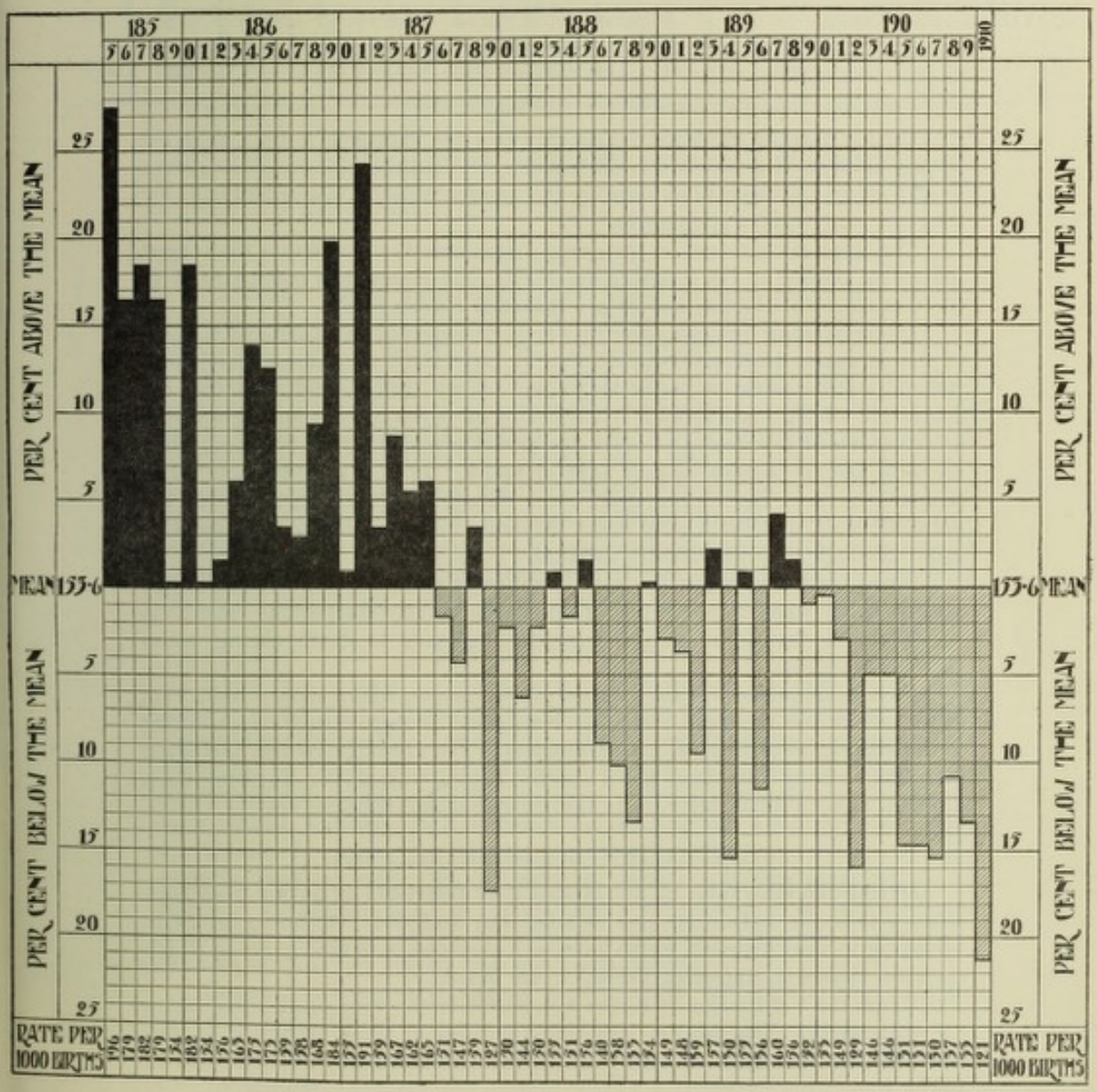
Details of the causes of death among infants during 1910 are contained in Appendix Tables XVI. and XVII., but for convenience of reference the group death-rates for a number of years have been summarised in that which follows:—

GLASGOW.—INFANTILE MORTALITY.—DEATH-RATES IN GROUPS PER THOUSAND BIRTHS FOR THE YEARS 1903-10, AND AVERAGE RATE, 1903-09.

MALES.

CAUSES OF DEATH.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	Average 1903-09.	1910.
I. Immaturity, ...	50	51	46	47	42	47	44	**47**	42
II. Diseases of Respiratory System, ...	37	35	35	28	26	32	33	**32**	24
III. Diseases of Digestive System,	23	24	25	28	19	28	17	**23**	21
IV. Diseases of Nervous System,	16	16	16	14	11	10	12	**14**	9
V. Tuberculous Diseases, ...	7	6	6	6	6	6	7	**6**	7
VI. Infectious Diseases, ...	15	14	16	12	23	19	19	**17**	14
VII. Suffocation, ...	2	1	1	2	2	1	2	**2**	1
VIII. All other Causes, ...	8	8	4	6	6	5	9	**7**	10
All Causes, ...	158	155	149	143	135	148	143	**147**	128

INFANTILE MORTALITY. 1855-1910.



FEMALES.

CAUSES OF DEATH.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	Average 1903-09.	1910.
I. Immaturity, ...	41	43	34	36	37	36	37	38	35
II. Diseases of Respiratory System, ...	28	31	24	24	22	25	26	26	19
III. Diseases of Digestive System,	19	24	17	22	18	21	14	19	19
IV. Diseases of Nervous System,	13	12	11	12	8	8	11	11	7
V. Tuberculous Diseases, ...	4	5	5	5	5	5	5	5	7
VI. Infectious Diseases, ...	16	14	16	13	24	17	18	17	12
VII. Suffocation, ...	2	1	1	2	2	2	1	2	1
VIII. All other Causes, ...	3	4	4	4	5	7	7	5	10
All Causes, ...	126	134	112	118	121	121	119	122	110

On the basis of the eight years for which the deaths have been analysed in this manner, it is possible to discuss the relationship of the various groups to each other, and the column showing the average rates for the years 1903-1909 affords a ready means of doing so.

The diseases contained in the group "Immaturity" constitute the largest individual portion of the infantile death-rate, and represent a mean rate of 47 per thousand male births, and 38 per thousand female births.

Under existing circumstances this must be regarded as an irreducible part of the infantile death-rate—irreducible at least until the causes which prejudicially affect gestation are better known. It will be observed, also, that the death-rate among male infants is uniformly in excess of that among females, a feature which is reflected at every age period save from 25 to 35 years, when the rate among females exceeds that of males. It is a suggestion of these comparisons that the higher death-rates obtaining among adult males are sex differences, and not wholly due to exposure and the exigencies of employment to which they are usually ascribed.

These conditions affect the rate in different forms of employment in the same sex, but when both are placed under the strictly comparable conditions which obtain during infancy, the greater tendency to death among males becomes manifest.

Next in frequency are the diseases of respiration, which show a mean rate of 32 and 26 per thousand male and female births respectively. In contrast to the experience of English Cities, diseases of the digestive system, including diarrhœa, occupy the third place in the Table, whereas in England these diseases, next to immaturity, form the most frequent cause of death.

NOTIFICATION OF BIRTHS ACT, 1907.

During the year 1910, 22,222 infants were registered as having been born alive within the City. In this number are included 208 births properly belonging to other districts, which have been excluded from the figures on which the rates shown in Appendix Table VI. are based.

Under the Notification of Births Act, 22,845 births were notified, including 878 still births. The ratio of live births notified to those registered is thus 98·8 per cent., as compared with 97·8 per cent. in 1909, and 83·9 per cent. in 1908.

While this result may be regarded as satisfactory, it has to be explained that in 1,131 cases notification had not been made in terms of the Act, and a notice was in each case issued directing attention to the omission. In response to these notices, 999 notifications were subsequently received, and are included in the figures already quoted. The provisions of the Act were thus voluntarily complied with in 93·8 per cent. of the births, and the remaining 5 per cent. as the result of the action taken. 132 other births were not found at the addresses from which they had been registered.

NATURE OF ATTENDANCE AT BIRTH.

Appendix Table XIX. shows that, of the 22,845 live and still births notified, 10,399, or 45·5 per cent., were attended medically, either at home or in institutions, while 12,446, or 54·5 per cent. had no medical attention. These ratios are approximately the same as in the two previous years.

The number of births attended medically varies greatly in the several Wards, the maximum of 93·6 per cent. being reached in Langside, and the minimum of 20·3 per cent. in Broomielaw. In fifteen out of the twenty-six Wards the proportion of births not medically attended exceeded the mean of 54·5 for the City, two Wards having rates under 60 per cent., nine between 60 and 70 per cent., while in Blackfriars, Calton, Cowcaddens, and Broomielaw the rates exceeded 70 per cent. in the order named.

Until the advantages of a Midwives Act have been extended to Scotland, and an official register of midwives prepared, it will not be possible to distinguish accurately between the births attended by certified and uncertified women. Excluding midwives belonging to the Maternity Institutions and Associations in the City, however, a list of 240 names has been prepared, mostly from information contained in the notification cards, which shows that 108 certified, and 132 uncertified, are in more or less regular practice.

STILL-BIRTHS.

As already stated, the number of still births recorded during the year was 878, which is equal to 4 per cent. of the live births notified, as compared with 3·9 per cent. and 2·9 per cent. in the two preceding years.

Excluding the still-births in institutions, and comparing only those occurring at home, the percentage to births medically attended is equal to 3·6, and in births non-medically attended to 3·4. In the preceding year the proportions were 3·5 and 3·1 per cent. respectively. While there is every reason to believe that medical men are notifying the still-births occurring under their care, many midwives are still in ignorance of the fact that such births should be notified, and until some system of registration of still-births is instituted, we shall probably always lose a proportion of the numbers actually occurring. The Ward details are shown in Appendix Table XX.

INFANT VISITATION.

Under the scheme of infant visitation, a female inspector visits every house in which a birth has occurred, provided we have not been informed that a medical practitioner is in attendance. 13,293 enquiry cards were accordingly issued to the female inspectors during the year. Of these, 20 proved to be duplicate notifications, while 853 were not visited for various reasons—principally because, although the notification did not bear that a medical practitioner was in attendance, the district was not of a character which suggested that visitation was necessary. 85 had removed from the address given before the inspector called, while in 160 others doctors were found to be in attendance. There thus remained 12,175 children not medically attended at birth who received at least one official visit after notification.

Certain information in regard to these latter children is shown in the following summary:—

	Number.	Per Cent.
Males, ...	6,175	50·7
Females, ...	6,000	49·3
	12,175	
Legitimate, ...	11,536	94·7
Illegitimate, ...	639	5·3
	12,175	
Born at Full Term, ...	11,595	95·2
Premature births, ...	580	4·8
	12,175	

Condition of Infant at Birth.

	Number.	Per Cent.
Well nourished, ...	10,230	84·0
Fairly nourished, ...	1,107	9·1
Badly nourished, ...	379	3·1
	11,716	
Still-born, ...	459	3·8
	12,175	

Nature of Feeding at First Visit.

Breast, ...	10,868	95·0
Artificial, ...	575	5·0
	11,443	
Still-born, ...	459	
Dead at First Visit, ...	273	
	12,175	

Of the children visited, 84·0 per cent. were well nourished, 9·1 per cent. were only fair, while 3·1 per cent. were badly nourished. 3·8 per cent. of the total were still births.

273 children were found to have died before the inspector visited, but of the 11,443 found alive at first visit 95·0 per cent. were being breast fed, while for the remainder the problem of artificial feeding had already begun.

Practically one-third of the deaths occurring in Glasgow among children under one year are due to immaturity, a condition of things which after-care can do little to remedy.

GLASGOW INFANT HEALTH VISITORS' ASSOCIATION.

Of the babies born during 1909, 2,537 were reported to the Infant Health Visitors' Association to be kept under observation during the first year of life. The last of these children attained the age of one year by the end of 1910, so that it is possible to summarise the results, and these are shown in the following Table for the several Wards in which visitation was carried on:—

Wards.	Year old.	Removed.	Dead.	No Information.	Ceased to be Visited.	Visits Unnecessary.	Visits Resented.	Total.
1	105	66	22	7	17	5	...	222
2	62	90	24	8	14	2	...	200
3	78	130	40	1	...	33	...	282
4	29	37	9	...	...	7	...	82
5	1	...	...	4	...	...	...	5
6	62	40	21	3	...	5	...	131
8	43	38	9	18	8	3	...	119
9	4	9	2	2	1	...	...	18
9A	25	25	10	8	1	3	...	72
10	2	...	...	...	...	...	...	2
12	27	18	4	2	1	5	...	57
13	57	24	26	4	8	12	...	131
14	52	30	18	...	2	...	1	103
16	171	139	55	...	1	6	2	374
17	60	37	17	...	2	1	...	117
18	23	22	5	2	...	7	...	59
19	78	65	23	2	...	2	...	170
20	24	27	10	153	19	1	...	234
24	1	...	...	...	...	...	...	1
25	48	35	9	31	6	1	2	132
26	...	...	...	26	...	...	...	26
	952	832	304	271	80	93	5	2,537

The difficulty of keeping these infants under continuous observation is illustrated by the large proportion under the heading "Removed," of whom there were no less than 832. In 449 other cases the child was either not visited at all—principally because of the lack of visitors to undertake the work—or visitation was discontinued after a short interval.

The above Table may be summarised shortly as follows:—

Attained the age of one year, ...	952
Died during first year, ...	304
Removed, ...	832
Visits discontinued, ...	178
No information, ...	271
	2,537

It is thus only possible to deal definitely with the children who have lived throughout one year, or who died within the same period. Together, these numbered 1,256, and, calculating in the usual way, there resulted among them a death-rate of 242 per thousand, as compared with an average for the City as a whole of 131 in the year 1909, and 119 in the year 1910.

This rate is considerably in excess of the rates prevailing generally in the Wards in which visitation is being conducted, but it must be remembered that the children are selected for visitation because of the presence of unsatisfactory conditions, which produce these high death-rates.

2,473 of the children born during 1910 were reported to the Voluntary Visitors, but in regard to these the results will not be available until the end of the current year.

The following Table shows, also, the nature of the feeding of the 2,537 children referred to above, so far as this information was available. The figures given under the respective columns indicate the last information available as to feeding:—

	– 3 Months.	– 6 Months.	– 9 Months.	– 12 Months.	12 Months +	No Information.	Total.
Year old—							
Breast only, ...	1	6	14	60	149	...	230
Breast and Artificial Food,	...	1	9	60	341	...	411
Artificial Food only, ...	1	1	5	31	255	...	293
No Information, ...	...	...	...	...	...	18	18
Removed—							
Breast only, ...	100	150	77	28	2	...	357
Breast and Artificial Food,	17	40	44	29	2	...	132
Artificial Food only, ...	13	24	19	20	2	...	78
No Information, ...	...	...	...	...	...	265	265
Dead—							
Breast only, ...	25	25	15	13	1	...	79
Breast and Artificial Food,	5	17	10	13	1	...	46
Artificial Food only, ...	6	19	19	12	1	...	57
No Information, ...	...	...	...	...	...	122	122
No Information, ...	...	...	...	...	...	271	271
Visits discontinued—							
Breast only, ...	30	41	25	13	...	...	109
Breast and Artificial Food,	2	11	14	9	...	...	36
Artificial Food only, ...	1	9	1	6	...	...	17
No information, ...	...	...	...	...	...	11	11
Visits discontinued at request—							
Breast only, ...	1	2	1	...	...	...	4
No Information, ...	...	...	...	...	...	1	1
	202	346	253	294	754	688	2,537

INFANT MORTALITY IN RELATION TO THE INDUSTRIAL OCCUPATION OF WOMEN.

The practice, which has 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 is employed, was continued during last year, 1,608 having been intimated. Of these, 1,158 were in respect of legitimate births, and 450 in respect of illegitimate births.

CHILDREN ACT, 1908.

In the report for last year, reference was made to the existence in the City of a number of private lying-in houses. During 1910, births, numbering in all 192, were recorded in twelve of these. Most of these children are illegitimate, and immediately after birth are handed over to the care of foster-parents. All such births are reported to the Parish Authorities, who keep careful supervision over the children. The question arises, however, whether these houses should not be registered and put under supervision, either of the Public Health or the Poor Law Authorities.

Throughout the year, also, a number of cases where the children were being neglected by the parents, notwithstanding the efforts of the Health Visitors, were reported to the Parish Authorities for action under the Children Act. In a number of these cases the children were removed to the Parish Hospitals and the parents prosecuted.

INFANT CONSULTATIONS.

419 infant consultations were held at nine centres during the year, 933 children having attended 5,788 times, an average of 6·2 visits per child. During the year the consultation at Osborne Street was discontinued, in consequence of the closing of the Infants' Milk Depot, and one in the Sanitary Chambers opened in its place. A consultation was also begun in the Gorbals District, on the south side of the River.

The number of children attending in the previous year was 1,717, and the total number of visits 6,399, or an average of 3·7 visits per child. This small average attendance was to a great extent accounted for by the fact that many children were brought to the consultations only once in order to be approved for receiving a supply of milk from the Infants' Milk Depot. The number on the registers during the past year, as shown above, has fallen by almost one-half, but the number of visits per child has increased to an average of over six, a consolidation of the work of the infant consultations likely to be of much benefit to the children.

Details of the consultations, and the numbers attending each, during the year, are shown in the following Table:—

No. of Consultations	Place.	First Visit.	Subsequent Visits.	Total.	Average Visits per Child.
97	Cowcaddens, ...	204	966	1,170	5·7
50	Franklin Street, ...	150	794	944	6·3
37	Osborne Street, ...	115	574	689	6·0
50	Anderston, ...	124	673	797	6·4
37	Calton, ...	24	168	192	8·0
49	Garngad, ...	88	552	640	7·3
50	Mile-end, ...	176	764	940	5·3
35	Gorbals, ...	42	281	323	7·7
14	Sanitary Chambers, ...	10	83	93	9·3
419		933	4,855	5,788	6·2

INFANTS' MILK DEPOT.

In the Report for last year, a comparison was instituted of the weights of children attending the Infant Consultations, which suggested that the milk distributed from the Infants' Milk Depot was not better fitted to the needs of the children than the other methods of artificial feeding with which the Depot milk could be compared. After careful consideration, the Corporation resolved to discontinue the Infants' Milk Depot, and the distribution of milk ceased on 31st August.

The following summary of the work done during the eight months of the year is inserted, to complete the record of the Depot:—

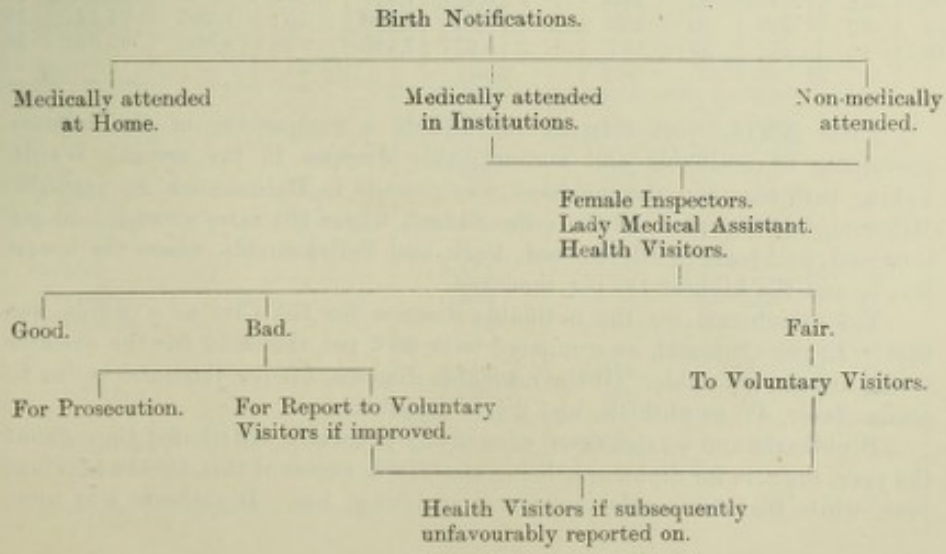
STATEMENT showing AVERAGE DAILY AMOUNT of MILK RECEIVED and AVERAGE NUMBER of BASKETS ISSUED from INFANTS' MILK DEPÔT from JANUARY to AUGUST, 1910.

MONTH.	Average daily number of gallons of Milk received.	Average daily number of Baskets issued by Depôt.	Average daily number of Baskets issued by Dairies and Branch Depôts.	Average daily total number of Baskets issued.	Number of Baskets not sold Returned.	Number of Baskets supplied Free.
January, -	67	9	245	254	25	24
February, -	74	12	271	283	22	61
March, -	75	19	275	294	38	52
April, -	79	19	288	307	29	77
May, - -	71	15	261	276	83	133
June, - -	61	11	234	245	94	81
July, - -	59	9	222	231	129	92
August, -	54	11	182	193	171	36

Following on the closing of the Infants' Milk Depot, two additional Health Visitors were added to the staff, in order that more careful home supervision of necessitous children might be exercised. The Health Visitors are trained nurses holding the Certificate of the Central Midwives Board, and their duties are to advise mothers as to the feeding, &c., of infants, and in such cases as require medical advice to urge that the children be brought to the Infant Consultations. The number of visits made by them during last year was 3,065. Visitation is now proceeding along well-defined lines, and much useful work is being accomplished.

The accompanying chart outlines the general scheme of work and the co-ordination between the work of the official staff and the Voluntary Visitors' Association.

SCHEME OF INFANT VISITATION.



SECTION II.

INFECTIOUS DISEASES.

During the year, 30,647 cases of infectious disease were registered and dealt with by the Department. This represents an attack rate equal to 38 per thousand of the population, which is 3 per thousand higher than in 1909. During the year, however, tubercle of the lung became compulsorily notifiable, and is responsible for 4·5 per thousand of the total rate, as compared with 1·5 per thousand in the previous year. Deducting this increase, resulting from the compulsory notification of phthisis, the rate for all other infectious diseases is practically the same as in 1909. Of the total cases registered, 9,464, or 31·5 per cent., were treated in hospital.

The varying rates of incidence in the several Wards are shown in Appendix Table XXII., but it must be remembered that these afford an accurate attack-rate only for those diseases which are notifiable under the Infectious Disease (Notification) Act. On the other hand, measles and whooping-cough are grouped with chickenpox, and a small number of cases of other diseases in the column "All others," and the rates given indicate only the cases known and dealt with. It may be further remarked that all the Ward rates in Table XXII., with the exception of that for phthisis, are calculated on populations which include the institutional population in each Ward. In the case of phthisis, however, the institutional cases and population have been excluded in calculating the Ward rates, although both are included when calculating the rate for the City as a whole.

The composition of the rate for the past eight years is shown in the following Table:—

GLASGOW.—CASE-RATE PER MILLION OF THE POPULATION FOR CERTAIN ZYMOTICS AND FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED, 1903-10.

YEAR.	Typhus Fever.	Enteric Fever.	Continued and Undefined.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Cerebro-Spinal Fever.	Phthisis.	All Others.	TOTAL.
1903,	41	1,207	22	138	373	2,597	926	...	216	15,560	21,080
1904,	34	800	39	113	1,108	2,003	824	...	998	14,875	20,794
1905,	67	569	37	137	5	1,235	924	...	1,659	20,379	25,013
1906,	12	483	76	148	4	1,721	1,580	255	1,648	17,819	23,746
1907,	6	583	36	151	1	2,180	1,510	1,237	1,619	18,945	26,268
1908,	16	741	25	149	2	3,491	1,590	300	1,531	25,223	33,068
1909,	32	707	20	135	...	5,510	2,306	101	1,483	24,841	35,135
1910,	19	427	29	142	1	5.277	2,435	58	4,508	25,586	38,482

Table XXII., just referred to, affords a comparison of the relative prevalence of notifiable and non-notifiable diseases in the several Wards. Taking both together, the incidence was greatest in Dalmarnock, Springburn, Mile-end, and Maryhill, in the order named, where the rates exceeded 50 per thousand, and least in Blythswood, Park, and Pollokshields, where the lowest was 9, and the highest 18, per thousand.

The attack-rate for the notifiable diseases for the City as a whole was barely 13 per thousand, as compared with 25·6 per thousand for the diseases which are not notifiable. Of the notifiable diseases, 5·3 per thousand is due to scarlet fever, 4·5 to phthisis, and 2·4 to diphtheria.

Diphtheria and scarlet fever were pretty generally distributed throughout the year, the rate for diphtheria being slightly in excess of that for the previous year, while that for scarlet fever was somewhat less. Diphtheria was most

prevalent in Springburn Ward, where the rate was 4·1 per thousand, as compared with 2·4 per thousand for the City, Hutchesontown being the Ward with the next highest incidence of 3·7 per thousand. Scarlet fever was most prevalent in Dalmarnock and Springburn Wards, where the rates exceeded 7 per thousand, the next highest Wards being Mile-end, Cowlairs, and Hutchesontown.

Enteric fever was less prevalent than in the previous year, having been 0·4 per thousand, as compared with 0·7. In Calton, Anderston, Hutchesontown, and Gorbals Wards, the rates are much in excess of the average for the City.

If reference be made to Table LVII. in the Appendix, the number of cases occurring and of those removed to hospital in each Ward will be found, while in Table LVIII. the seasonal distribution of the cases is stated.

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

The cost per 1,000 of the population for Notification Fees since 1891 has been as follows:—

GLASGOW.—AMOUNT PER 1,000 OF POPULATION OF FEES FOR CERTIFICATES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889, FOR SEVERAL PERIODS SINCE 1891.

Period.	Amount. £	s.	d.
1891-1900 (average), ...	1	2	4·3
1901-1905 („), ...	0	15	6·5
1906, ...	0	12	7·3
1907, ...	0	15	10·9
1908, ...	0	16	8·6
1909, ...	1	2	10
1910, ...	1	10	4

In order to show the cost of notification, together with the monthly variation in the number of notifications received, and the proportion which "public" and "private" cases form in the totals, the following Table is inserted:—

1910.	Private.	Public.	£	s.	d.
January, ...	775	218	107	15	6
February, ...	672	659	116	19	0
March, ...	594	433	95	18	0
April, ...	646	259	93	14	0
May, ...	653	355	99	7	6
June, ...	560	204	80	4	0
July, ...	460	150	65	0	0
August, ...	574	195	81	10	0
September, ...	784	215	108	15	0
October, ...	1,015	221	137	18	6
November, ...	839	204	115	1	6
December, ...	744	225	104	5	0
	8,316	3,338	1,206	8	0
1909, ...	7,036	689	913	19	0
Increase, ...	1,280	2,649	292	9	0
Decrease, ...	...	...	...		

The increase in numbers and cost as compared with the previous year is accounted for by the inclusion, as from 1st January, 1910, of pulmonary phthisis among the diseases which are compulsorily notifiable.

PRINCIPAL ZYMOTIC DISEASES.

1,340 deaths occurred during the year, from the principal zymotic diseases —smallpox, diphtheria, scarlet fever, typhus, enteric, undefined fever, cerebro-spinal fever, measles, whooping-cough, and diarrhœa. This represents an annual death-rate of 1·682 per thousand living, compared with 2·244 in 1909, a decrease of 562 deaths per million. The rate is the lowest recorded. In considering Appendix Table XIII., the diseases in connection with which this reduction has occurred have already been referred to.

The corresponding rates for several periods have been:—

1881-90, ...	3·600	per 1,000 living.
1891-1900, ...	3·282	,,
1901-1905, ...	2·660	,,
1906, ...	2·436	,,
1907, ...	3·300	,,
1908, ...	2·586	,,
1909, ...	2·244	,,
1910, ...	1·682	,,

In the following Table the rates for several towns are given on the basis of the Registrar-General's tabulation:—

PRINCIPAL ZYMOTIC DISEASES.

	Death-rate per 100,000. 1900-1909.	1910.
Glasgow, ...	**226**	**140**
Edinburgh, ...	145	79
Dundee, ...	155	263
Aberdeen, ...	144	40
London, ...	184	114
Liverpool, ...	296	228
Manchester, ...	252	179
Birmingham, ...	245	112

In comparing these figures it is to be noted that the Registrar-General for England includes smallpox, measles, scarlet fever, diphtheria, whooping-cough, "fever," and diarrhœa; whereas the Registrar-General for Scotland omits diarrhœa from his group, but adds influenza.

EXCESSIVE FATALITY FROM NON-NOTIFIABLE DISEASES.

The deaths and death-rates from the principal zymotic diseases for each Ward are given in Appendix Table XXIII., and for comparative purposes the corresponding rates since 1903.

In the following Table the fatality from several diseases of the notifiable and non-notifiable groups of the zymotic class are shown for the Wards where the mean rate for the City was exceeded.

From all diseases of the zymotic class, the death-rate was greatest in Dalmarnock, Mile-end, Whitevale, and Calton, where the rates were 2,971, 2,789, 2,457, and 2,334 per million respectively, as compared with 1,682 for the city as a whole. In Anderston, Hutchesontown, Blackfriars, Broomielaw, and Gorbals the rate was also considerably in excess of the City mean.

GLASGOW, 1910.—ZYMOTIC DEATH-RATE per MILLION in certain WARDS whose RATES EXCEED the MEAN RATE for the City.

MUNICIPAL WARDS.	Total Zymotics.	Smallpox.	Diphtheria.	Scarlet Fever.	Typhus Fever.	Enteric Fever.	Undefined Fever.	Cerebro-Spinal Fever.	Measles.	Whooping-cough.	Diarrhœa.	Total of Last Three Columns.
Dalmarnock, -	2,971	...	424	303	...	20	...	81	1,314	465	364	2,143
Mile-end, - -	2,789	...	340	408	...	23	...	68	816	567	567	1,950
Whitevale, -	2,457	...	287	287	...	96	...	...	766	606	415	1,787
Calton, - -	2,334	...	375	144	...	86	...	86	836	288	519	1,643
Anderston, -	2,297	...	283	247	...	177	...	71	1,060	212	247	1,519
Hutchesontown,	2,261	...	158	184	...	184	...	26	999	500	210	1,709
Blackfriars, -	2,218	...	252	101	...	50	...	...	1,109	252	454	1,815
Broomielaw, -	2,202	...	...	315	...	...	...	315	629	786	157	1,572
Gorbals, - -	2,010	...	540	180	30	150	...	30	750	180	150	1,080
Kingston, - -	1,900	...	153	153	...	92	...	...	950	276	276	1,502
Govanhill, - -	1,894	...	254	141	...	198	...	57	735	509	...	1,244
Springburn, -	1,856	...	376	287	22	22	...	22	729	221	177	1,127
Sandyford, -	1,841	...	251	42	...	209	...	84	795	418	42	1,255
Maryhill, - -	1,802	...	200	150	...	25	...	25	751	601	50	1,402
CITY, - -	1,682	...	240	177	2	70	...	38	662	291	202	1,155

It will be observed that the non-notifiable diseases—measles, whooping-cough, and diarrhœa—account for three-fourths of the death-rate from zymotic diseases, while measles alone gives a rate in excess of the total death-rate caused by all the infectious diseases which are notifiable.

Among the notifiable diseases, diphtheria was most fatal, the death-rate therefrom having been 240 per million, while the rates from scarlet fever, enteric fever, and cerebro-spinal fever were 177, 70, and 38 per million respectively.

In the autumn of 1909, measles became excessively prevalent in several of the Wards, particularly in Kinning Park, Cowcaddens, and Hutchesontown. The other Wards were not affected until after the beginning of 1910, and its incidence in the Wards, quoted in the above Table, is shown by the uniformly high fatality-rate. In Dalmarnock, Blackfriars, Anderston, and Hutchesontown, the rate was much in excess of the average for the City.

The death-rates from whooping-cough and diarrhœa are not excessive.

SMALLPOX.

On 22nd April, 1910, a case of smallpox, which had been imported from Russia, was removed to hospital, where recovery took place. The circumstances of the case are related in the following report made to the Committee on Health at the time:—

Extract from Minute of 27th April, 1910.

SMALLPOX.

On 22nd instant we removed to Belvidere a patient who had been admitted to the Western Infirmary two days previously from a ship which had just arrived from Baltic ports *via* Larne and Belfast.

Patient was admitted to the infirmary as suffering from pneumonia, but, on 21st instant, the eruption of smallpox appeared. On subsequent inquiry it was ascertained that he had sickened in Belfast on 18th instant, and this date coincided with an infection at Pernau, in the Baltic, where the vessel lay from 5th to 8th April.

Patient had been seen medically in Belfast and at Clydebank, but the crew were reported well when the ship passed the Boarding Station.

The vessel left Rothesay Dock at noon on 23rd instant, for Cronstadt, with all the other members of the crew on board. The twenty-four members of the crew were revaccinated, as well as the inmates and staff of the ward at the infirmary.

The Department also had under observation a body of transmigrants, mainly Russians, who had arrived in Glasgow from Hull, *en route* for America, and among whom a case of smallpox had occurred on the voyage from Libau to Hull. The action taken in regard to these was reported to the Committee on Health, as related in the following extracts:—

Extract from Minute of 23rd March, 1910.

SMALLPOX.

Since the fortnight ended a body of about 150 emigrants of mixed nationality, but mainly Russians, arrived in Glasgow from Hull, *en route* for America. A case of smallpox had developed during the passage from Libau to Hull, and while the patient and some relatives were detained at Hull, the other emigrants were entrained for Glasgow. On arrival these were visited and inspected, and 68, who had no recent history of vaccination or of previous smallpox attack, were revaccinated. In order to facilitate the transport arrangements of the shipping company in whose charge they were, they were accommodated in one of the Reception Houses pending their despatch to America.

Extract from Minute of 13th April, 1910.

SMALLPOX CONTACTS.

The emigrants referred to in my Report for the fortnight ending 19th March, having completed their term of observation, left the Reception House on the morning of April 2nd, in order to complete their voyage to America. During the closing days of the fortnight one of them sickened of measles, and was removed to hospital, the rash appearing on 23rd March—that is, on the seventh day after arrival at Hull. No case of measles is known to have occurred on board the vessel, and the period of sickening was quite within an infection obtained before leaving Russia on 12th March.

VACCINATION.

The following is a statement of the number and cost of vaccinations and re-vaccinations performed by the officers of the department, or on behalf of the Corporation, during the year 1910:—

	Primary.	Re-vaccinations.
At Office, ...	384	5
In Prisons, ...	1	810
,, Hospitals, ...	97	187
	482	1,002

Cost.	
1. Vaccinations of Prisoners, ...	£42 5 0
2. Cost of Lymph, ...	36 4 0
	£78 9 0

VACCINATION (SCOTLAND) ACT, 1907.

During the year, declarations of conscientious objection to vaccination were made in respect of 3,231 children, as compared with 2,653 in 1909, and 2,183 in 1908. The total number of declarations now made since the Act came into operation is 8,541.

The number of declarations made in the several Wards during 1910 is given in Appendix Table XXV. The maximum number recorded in one Ward was in Springburn, where 394 declarations were made. It will also be observed from the Table that, in each year since 1908, the number of declarations made in this Ward has been much in excess of any of the other Wards. In Mile-end 261 declarations were made, in Woodside 211, and in Govanhill 207. With the exception of Blythswood and Anderston, all the Wards show an increasing acceptance of the provisions of the Act.

For several years a Table, compiled from information contained in the Annual Reports of the Registrar-General regarding the vaccination of children born in the City, has been included in this Report. Similar information regarding children born during the year 1909 is contained in Appendix Table XXIV. For comparison the figures for several years are given below:—

GLASGOW.—TABLE SHOWING RESULTS OF PRIMARY VACCINATION OF CHILDREN BORN IN GLASGOW DURING SEVERAL YEARS.

Year.	Successfully Vaccinated.	Vaccination Postponed.	Insusceptible of Vaccination.	Died before Vaccination.	Statutory Declaration of Conscientious Objection.	Removed from District or otherwise unaccounted for.
	Per Cent.	*Per Cent.*	*Per Cent.*	*Per Cent.*	*Per Cent.*	*Per Cent.*
1902	84·2	0·8	0·9	10·6	—	3·5
1903	84·6	0·7	0·6	10·8	—	3·3
1904	83·4	1·2	0·7	11·0	—	3·7
1905	84·5	1·3	0·6	10·0	—	3·6
1906	82·9	0·8	0·5	10·6	0·2	5·0
1907	75·0	1·5	0·7	10·7	4·9	7·2
1908	69·5	1·7	0·8	10·8	9·2	8·0
1909	67·2	1·7	0·8	10·6	12·6	7·1

Of the children born in 1909, 67·2 per cent. only were successfully vaccinated, as compared with 69·5, 75·0, 82·9, and 84·5 per cent in the four preceding years. The proportion of statutory objections to vaccination was 12·6 per cent., as compared with 9·2 per cent. in 1908. The proportion who were lost trace of has been reduced from 8 per cent. in 1908 to 7·1 per cent. in 1909, this improvement being due to the vigorous action which is now being taken by the Glasgow Parish Authorities, who are instituting proceedings against defaulters when these can be found.

DIPHTHERIA.

1,939 cases of diphtheria and membranous croup were registered during the year, compared with 1,846 in 1909, and the number of deaths was 191, as against 222. These figures represent an attack-rate of 2,435 per million living, compared with 2,306 in 1909. In contrast with this increased attack-rate, however, the death-rate was 240 per million, compared with 277 for 1909. Of the total cases, 89·8 per cent. were treated in hospital. The morbidity-rate (that is the death-rate per 100 cases) was 9·8, as against 12 per cent. in 1909.

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

1881-90,	·280	per 1,000 living.
1891-1900,	·231	,,
1901-05,	·134	,,
1906,	·169	,,
1907,	·157	,,
1908,	·180	,,
1909,	·277	,,
1910,	·240	,,

Compared with several other towns during the ten years 1900-1909 and 1910, the death-rate per 100,000 is as follows:—

	1900-1909.	1910.
Glasgow,	**17**	**23**
Edinburgh,	15	17
Dundee,	17	41
Aberdeen,	12	20
Paisley,	20	17
Greenock,	19	19
London,	18	9
Liverpool.	22	13
Manchester,	19	14
Birmingham,	19	11

The rate for Glasgow in 1910 was in excess of all the towns quoted, with the exception of Dundee.

In the following Table, the number of cases and deaths are stated for a series of years, together with the attack-rate and death-rate, the proportion of cases treated in hospital, and the case-fatality rate in each year:—

DIPHTHERIA and MEMBRANOUS CROUP.

Year.	Cases.			Deaths.			Case-mortality per cent.
	Number.	Rate per Million.	Per Cent. treated in Hospital.	Number.	Rate per Million.	Per Cent. occurring in Hospital.	
1891	465	822	16·1	131	232	23·7	28·2
1892	575	861	14·1	195	292	15·9	33·9
1893	828	1,228	19·0	246	365	25·6	29·7
1894	967	1,414	26·1	290	424	30·0	30·0
1895	654	944	28·4	137	198	19·0	21·0
1896	601	854	31·6	116	165	30·2	19·3
1897	462	647	32·9	127	178	30·7	27·5
1898	433	592	59·6	113	154	47·8	26·0
1899	465	622	52·3	109	146	31·2	23·5
1900	540	715	59·4	125	165	44·0	23·1
1901	563	739	57·2	115	151	44·4	20·4
1902	617	794	60·1	105	135	61·9	17·0
1903	724	926	71·1	103	132	68·9	14·3
1904	647	824	69·9	91	116	57·1	14·1
1905	726	924	80·0	107	136	75·7	14·7
1906	1,270	1,580	86·5	136	169	83·1	10·7
1907	1,218	1,510	85·6	127	157	87·4	10·4
1908	1,274	1,590	84·6	144	180	86·1	11·3
1909	1,846	2,306	88·5	222	277	86·5	12·0
1910	1,939	2,435	89·8	191	240	95·3	9·8

The increased prevalence of this disease, which began in 1906, is still being maintained, although the case fatality-rate is lower for the past year than at any period since the introduction of anti-toxin treatment.

The distribution of the disease, and its relative fatality throughout the several Wards are shown in Appendix Table XXVI. For purposes of comparison the death-rates are also given since 1903.

The mean attack-rate for the city as a whole was 2,435 per million, and this was exceeded in nine Wards. Relatively, the disease was most prevalent in Springburn, Hutchesontown, Cowlairs, and Townhead, where the attack-rate was 4,094, 3,733, 3,210, and 3,080 per million respectively. Other Wards in which the average rate was exceeded were—Maryhill, Dalmarnock, Blackfriars, Sandyford, and Mile-end, in the order named.

Excluding Exchange Ward, in which there were only two cases and one death, the disease was relatively most fatal in Gorbals, where it reached a rate of 540 per million, as compared with 240 for the city. It was next most fatal in Dalmarnock Ward, where the rate was 424 per million, and in Springburn, Calton, Cowcaddens, Mile-end, and Woodside, in all of which Wards the rate exceeded 300 per million. But Hutchesontown, with the second highest attack-rate, has a death-rate of only 158 per million, while in Cowcaddens an attack-rate of 1,584 per million is accompanied by a death-rate of 373.

The following Table shows the number of cases treated at home and in hospital in each year since 1891, as well as the deaths occurring in each group, and the case-mortality per cent. The mortality among cases treated in hospital remains fairly uniform notwithstanding the continued increase in the number of cases dealt with. On the other hand, there is very considerable fluctuation

in the mortality of cases treated at home, the rate for the present year being 4·6 per cent., as against 14·2 per cent. in the preceding year. This low fatality, as compared with that in hospital cases, is accounted for by the fact that the cases treated at home were in most instances recognised only as the result of bacteriological enquiry consequent on the occurrence of previous cases in families, and in which evidence of clinical symptoms was only elicited on careful enquiry being made after the result of the bacterial enquiry was known.

GLASGOW.—DIPHTHERIA and MEMBRANOUS CROUP.

YEAR	TREATED AT HOME.			TREATED IN HOSPITAL.		
	Cases.	Deaths.	Case-mortality per cent.	Cases.	Deaths.	Case-mortality per cent.
1891	390	100	25·6	75	31	41·3
1892	494	183	37·0	81	12	14·8
1893	671	183	27·3	157	63	40·1
1894	715	203	28·4	252	87	34·5
1895	468	111	23·7	186	26	13·9
1896	411	81	19·7	190	35	18·4
1897	310	88	28·4	152	39	25·6
1898	175	59	33·7	258	54	20·9
1899	222	75	33·8	243	34	14·0
1900	219	70	32·0	321	55	17·1
1901	241	64	26·5	322	51	15·8
1902	246	40	16·3	371	65	17·5
1903	209	32	15·3	515	71	13·8
1904	195	38	19·5	452	53	11·7
1905	145	26	17·9	581	81	13·9
1906	172	23	13·4	1,098	113	10·3
1907	175	16	9·2	1,043	111	10·6
1908	196	20	10·2	1,078	124	11·5
1909	212	30	14·2	1,634	192	11·8
1910	197	9	4·6	1,742	182	10·4

The protective value of the early administration of antitoxin is well illustrated in the following Table, which has reference to the 1,742 cases admitted to hospital during the year 1910, among whom 162 deaths occurred, including those taking place in the early months of 1911:—

TABLE SHOWING NUMBER OF CASES OF DIPHTHERIA ADMITTED TO HOSPITAL ON EACH DAY OF ILLNESS, WITH THE NUMBER OF DEATHS AND CASE-MORTALITY PER CENT. IN EACH GROUP.

Number of Days since Sickness began.	Number of Cases.	Number of Deaths.	Case-Mortality per Cent.
1 day	373	8	2·1
2 days	366	31	8·5
3 „	359	52	14·5
4 „	218	20	9·2
5 „	138	19	13·8
6 „	105	13	12·3
7 „	57	6	10·5
Over 7 „	126	13	10·3
	1,742	162	9·3

Reference has already been made to the continued prevalence of the disease, and the following extract from the fortnightly reports to the Committee on Health illustrates a grouping of cases in a limited area:—

Extract from Minute of 22nd June, 1910.

DIPHTHERIA.

On several occasions I have drawn attention to the sustained prevalence of scarlet fever and diphtheria during recent months.

The lowest number of cases of diphtheria registered in any week of the present year occurred in that which ended 14th May, and the increase which has occurred since then has been associated with certain groupings of the disease both on the South-Side and in the Eastern District of the City. But while in the Eastern District cases have been distributed over a wide area in Mile-end Ward, the incidence in the South-Side has tended to concentrate in the neighbourhood of Fauldhouse Street and Wolseley Street.

In Hutchesontown, together with the eastern portion of Govanhill and the south-side portion of Blackfriars, the cases occurring between 14th May and 20th June numbered 31. These were distributed among 18 families, and while 19 of them were clinically recognisable as diphtheria, no fewer than 12 were ascertained only after bacteriological examination.

Attention to this group was first arrested by the occurrence of six cases in four households, which were found to be associated with sore throat in other members of the affected families, and also among some neighbouring families. On swabs being obtained from the throats of 31 persons in twelve neighbouring households, in four only of which diphtheria was known to have been present, one family only was added to the list of invaded households, although several bacterial cases were recognised among the families where the disease was also clinically present.

So great a part, indeed, had contact played in the distribution of the disease from the sick to the healthy, that 15 affected persons were found in five households, and two of these contributed no fewer than 10 cases.

It is satisfactory to record that since the swabbing enquiry, above alluded to, no further cases have occurred in this neighbourhood.

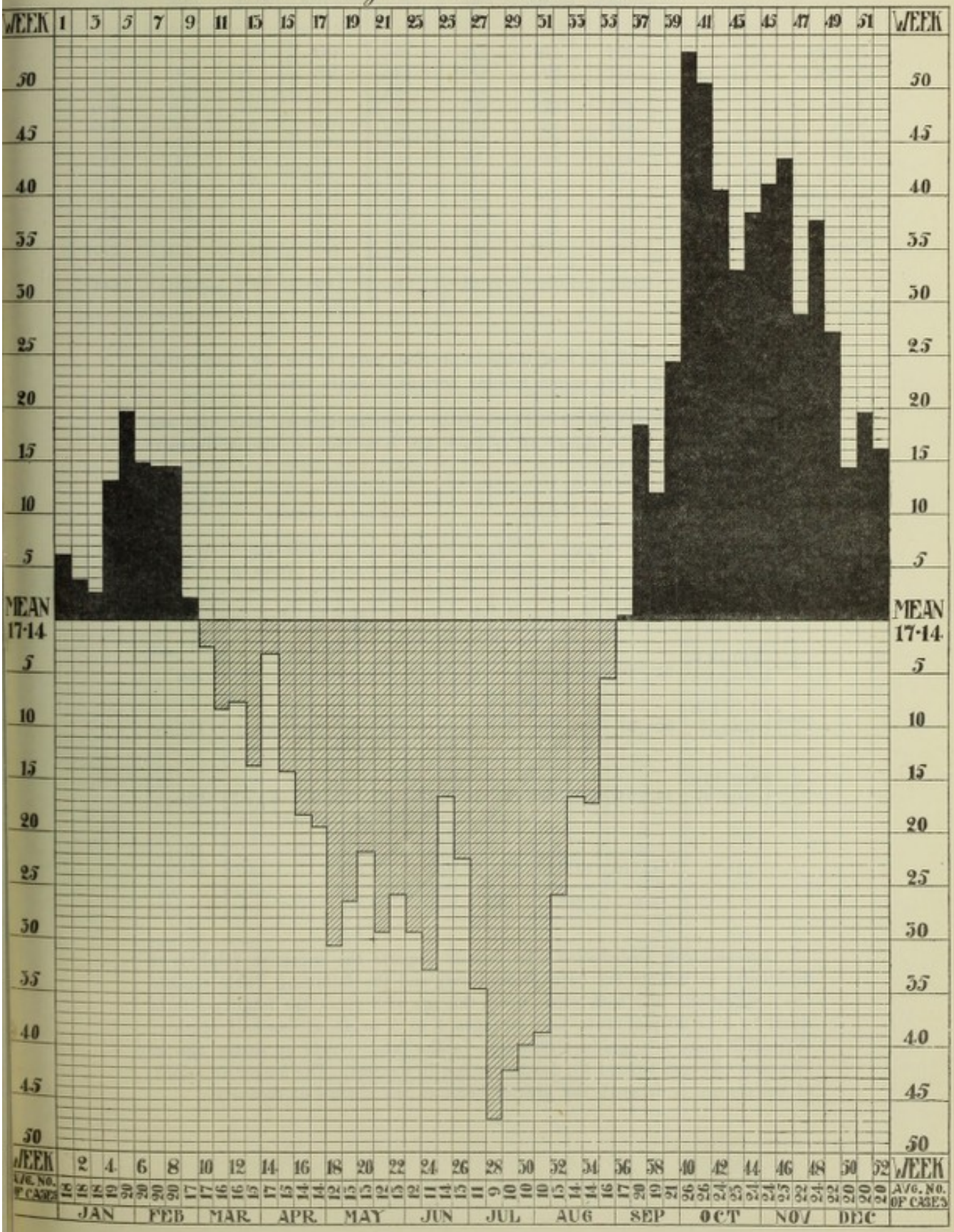
SEASONAL PREVALENCE.

A chart has been prepared, and is here inserted, showing the weekly fluctuations in case-prevalence throughout the year. It would appear to suggest two periods of the year when the disease is above the usual level, but it is to be interpreted rather as meaning that in the seventh month of the year the disease reaches its minimum prevalence, and that from this period it rapidly increases until the maximum is reached about the end of the third quarter. Thereafter the incidence is a decreasing one, but maintains itself above the average for the whole year until the beginning of February. Between February and August the prevalence is below the average.

The following Table shows the seasonal prevalence of the disease over an extended period. It is most prevalent during the autumn and early winter, and continues, although with less severity, throughout the spring. This is followed by a comparative quiescence during the summer. The reduction in the number of cases registered in summer, and the increase in autumn, has elsewhere been cited in illustration of the influence of schools in the spread of the disease, but there is a striking absence of groupings of cases in individual schools, and the relative uniformity in the seasonal distribution suggests that the movement is due to other causes.

DIPHTHERIA AND MEMBRANOUS CROUP

Weekly cases for eighteen years, 1893-1910, expressed as a percentage above and below the mean.



GLASGOW.—DIPHTHERIA and MEMBRANOUS CROUP.—NUMBER OF CASES REGISTERED and ANNUAL CASE-RATE per 100,000 LIVING for each MONTH for the PERIODS 1890-1900, 1901-1908, 1909, and 1910.

MONTH.	CASES.				ANNUAL CASE-RATE.			
	1890-1900.	1901-08.	1909.	1910.	1890-1900.	1901-08.	1909.	1910.
January, ...	652	648	119	153	103	121	175	226
February, ...	611	590	152	136	108	122	248	223
March, ...	586	556	145	135	93	110	213	200
April, ...	461	527	129	131	75	102	196	200
May, ...	444	457	100	101	70	85	147	149
June, ...	377	412	112	156	62	80	170	238
July, ...	300	338	96	114	47	63	141	169
August, ...	478	454	151	121	76	85	222	179
September, ...	608	594	225	193	100	115	342	295
October, ...	711	833	252	280	113	156	371	414
November, ...	698	857	184	232	114	166	280	355
December, ...	649	773	181	187	103	144	266	277
Year, ...	6,575	7,039	1,846	1,939	89	112	231	243

The analysis which has been made in previous years of the age distribution of cases before and after school holiday periods is again inserted:—

GLASGOW, 1910.—DIPHTHERIA.—CASES NOTIFIED between May 19th and Sept. 27th, 1910, ARRANGED to SHOW the INFLUENCE of SCHOOL HOLIDAYS on CASE-INCIDENCE.

PERIODS.	Cases Notified.						Increase or Decrease.						TOTAL.
	Age, 0—5.		Age, 5—14.		Age, 14 and up.		Age, 0—5.		Age, 5—14.		Age, 14 and up.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1st. {May 19 to June 30,	39	46	34	52	14	21	...	...	...	...	...	...	206
2nd. {July 1 to Aug. 15,	50	27	34	37	9	21	+11	−19	...	−15	−5	...	178
								−8		−15		−5	
3rd. {Aug. 16 to Sept. 27	40	43	31	59	4	24	−10	+16	−3	+22	−5	+3	201
								+6		+19		−2	
	129	116	99	148	27	66							585
	245		247		93								

Age and Sex Distribution.—In former Reports the excessive fatality of diphtheria in infants has been pointed out, and the following Table repeats the illustration. For both sexes, up to the age of 3 years, the fatality-rate is equal to over 20 per cent., and for ages 4 to 5 to about one-half of this; thereafter there is a gradual reduction in the fatality-rate up to the age of 15 years. At ages beyond 15, deaths are few in number. The longer an attack of the disease is delayed, the greater becomes the chance of recovery.

GLASGOW, 1910.—DIPHTHERIA and MEMBRANOUS CROUP.—AGE and SEX DISTRIBUTION of CASES and DEATHS, with CASE-MORTALITY.

AGE.	Cases.		Deaths.		Case-mortality per cent.	
	Male.	Female.	Male.	Female.	Male.	Female.
Under 1	45	22	10	5	22·2	22·7
2	105	70	26	17	24·8	24·3
3	95	74	12	17	12·6	23·0
4	106	115	11	19	10·4	16·5
5	85	115	15	9	17·6	7·8
6	56	89	6	9	10·7	10·1
10	219	235	14	13	6·4	5·5
15	87	135	3	2	3·4	1·5
20	28	47	...	...	...	...
25	37	76	1	...	2·7	...
35	20	34	...	...	...	...
45	6	18	...	1		5·6
55	3	13	...	1	...	7.7
65	2	2	...	...	...	...
All Ages,	894	1,045	98	93	11·0	8·9
	1,939		191		9·8	

Relation of Croup to Diphtheria.—The gradual shrinkage of croup as a cause of death, and its inclusion among true cases of diphtheria, is illustrated in the following Table, which shows the deaths and death-rates from diphtheria and croup separately and together for the period of sixteen years. By referring to former Reports the decrease over a longer period may be followed:—

GLASGOW.—DEATHS and DEATH-RATES *per Million* from DIPHTHERIA and CROUP from 1895 to 1910.*

Year.	Deaths.			Death-rate per Million.		
	Diphtheria.	Croup.	Diphtheria and Croup.	Diphtheria.	Croup.	Diphtheria and Croup.
1895	112	73	185	161	105	266
1896	83	54	137	118	76	194
1897	97	48	145	136	67	203
1898	103	29	132	142	40	182
1899	106	17	123	145	23	168
1900	130	19	149	175	25	200
1901	110	13	123	144	17	161
1902	106	21	127	137	27	164
1903	105	13	118	133	17	150
1904	95	9	104	119	11	130
1905	110	11	121	136	14	150
1906	147	9	156	176	11	187
1907	131	6	137	155	7	162
1908	156	3	159	180	3	182
1909	230	3	233	264	3	267
1910	202	3	205	228	3	231

* Registrar-General's Annual Reports.

ENTERIC FEVER.

340 cases of enteric fever were registered during 1910, of which 325, or 95·6 per cent., were treated in hospital. The number of deaths from the disease was 56, representing a death-rate of 0·070 per 1,000 living. The case-rate for the year was 427 per million living, compared with 707 in 1909, and the case-fatality rate was 16·5, compared with 16·4 per cent.

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

1881-90, ...	·230 per 1,000.
1891-1900, ...	·215 „
1901-1905, ...	·155 „
1906, ...	·102 „
1907, ...	·114 „
1908, ...	·090 „
1909, ...	·116 „
1910, ...	·070 „

The following Table gives the attack-rate and death-rate per million and the case-mortality for each year since 1891, together with the proportion of cases removed to hospital:—

GLASGOW.—ENTERIC FEVER, 1891-1910.

Year.	Cases.			Deaths.			Case-mortality per cent.
	Number.	Rate per Million.	Per cent. treated in Hospital.	Number.	Rate per Million.	Per cent. occurring in Hospital.	
1891	784	1,386	59·8	123	218	69·9	15·7
1892	590	884	58·3	101	151	67·3	17·1
1893	703	1,043	60·9	120	178	68·3	17·1
1894	810	1,184	72·2	151	221	76·2	18·6
1895	797	1,150	74·5	122	176	73·0	15·3
1896	691	982	71·1	145	206	72·4	21·0
1897	905	1,265	74·6	174	243	78·8	19·2
1898	1,212	1,657	86·6	228	312	86·0	18·8
1899	1,080	1,445	89·4	178	238	84·3	18·4
1900	1,013	1,340	85·1	158	209	85·4	15·6
1901	1,257	1,650	85·1	210	275	80·1	16·7
1902	698	899	90·7	110	142	88·2	15·8
1903	944	1,207	92·2	142	182	91·5	15·1
1904	628	800	91·6	84	107	89·3	13·4
1905	447	569	90·8	53	67	84·9	11·9
1906	388	483	92·5	82	102	87·8	21·1
1907	470	583	92·3	92	114	88·0	19·6
1908	594	741	87·7	72	90	86·1	12·1
1909	566	707	96·5	93	116	88·2	16·4
1910	340	427	95·6	56	70	100·0	16·5

For comparison with other towns the following particulars are given:—

DEATH-RATE PER 100,000 FROM ENTERIC FEVER IN CERTAIN LARGE TOWNS OF SCOTLAND AND ENGLAND FOR SEVERAL PERIODS.*

	1900-1909.	1910.
Glasgow, ...	**14**	**6**
Edinburgh, ...	6	2
Dundee, ...	7	3
Aberdeen, ...	4	1
Paisley, ...	15	5
Greenock, ...	19	22
London, ...	8	4
Liverpool, ...	17	4
Manchester, ...	12	9
Birmingham, ...	13	4

* Registrar General's Annual Report.

Among the towns quoted, the rate for Glasgow in 1910 was exceeded in Greenock and Manchester.

The Ward distribution of the cases and deaths is shown in Appendix Table XXVII. The attack-rate of 427 per million for the City is the lowest recorded, the previous best having been 483 per million in 1906, although the death-rate of 70 per million is in excess of that for 1905, when it fell to 67 per million.

Relatively, the disease was most prevalent in the Hutchesontown District, where the attack-rate was equal to 1,104 per million, as compared with 427 for the City. The disease was next most prevalent in Kinning Park, where the rate was 951 per million, and in Calton, Gorbals, and Anderston, with rates of 763, 731, and 704 respectively.

The average death-rate for the year of 70 per million was exceeded in nine Wards, the greatest fatality having occurred in Sandyford, Govanhill, Hutchesontown, Anderston, and Gorbals, where the rates were 209, 198, 184, 177, and 150 per million respectively.

The attention of the Local Authority was on several occasions throughout the year directed to the occurrence of cases of the disease in special circumstances, and extracts from the reports to the Committee on Health, describing these circumstances, are appended hereto:—

CASES ASSOCIATED WITH MUSSELS.

Extract from Minute of 8th June, 1910.

In former years attention has been directed to the occurrence of enteric fever after the consumption of shellfish by persons on holiday at coast towns. The first instance which has come to notice during the present year occurred during the fortnight, when a girl, ten years of age, who had just returned to the City after a month's residence in Saltcoats, sickened of the disease. All the children in this family ate mussels both raw and cooked, but only one case of fever has resulted. The attention of the Medical Officer of Saltcoats was directed to the matter.

Extract from Minute of 14th September, 1910.

On 16th ultimo a case of enteric fever was removed to hospital from an address in the Eastern District. Patient had been on holiday during July at Campbeltown, and it was ascertained that while there he had been eating shellfish, principally mussels, gathered locally. This information was communicated to the Medical Officer of the district, and he now informs me that, having directed the attention of the Local Authority to the matter, they have agreed to put up permanent notices warning people against eating these shellfish.

OUTBREAKS ASSOCIATED WITH "MISSED" CASES.

Extract from Minute of 28th September, 1910.

A series of cases of enteric fever has occurred in a court in East Cumberland Street, affecting ultimately six families, comprising 17 adults and 24 children, of whom 2 adults and 13 children developed the disease. In two others, although no clinical symptoms occurred, the blood was ascertained to be "positive" to a Widal reaction.

The cases were distributed from January till August, and their continuance over so long a period is related to three cases in separate families, which were "missed," in the sense that the nature of the symptoms was not suspected until subsequent development of the disease in other members of their families led to special enquiry. Ultimately a boy was discovered whose illness ante-dated all the others, but the nature of which was not at the time recognised.

The whole circumstances have been made the subject of a special report by Drs. Wright and MacGregor.

REPORT BY DRS. WRIGHT AND MACGREGOR.

The first of the series to be notified was C. F., æt. 7 years, who sickened on March 8th. The nature of the illness was not recognised until March 29th, when the child was removed to Belvidere Hospital. Twenty-one days after her removal a sister (J. F., æt. 3 years) sickened (April 19th), and was removed on April 26th.

The house occupied by the F. family is a two-apartment one, situated at the east corner of the basement of Block B, and opens directly on to the courtyard.

It was found later that another child (J. F., æt. 5) had been staying with a relative at Lightburn in December of last year, and while there had contracted measles. His mother states that he took diarrhœa "out of the measles," which persisted from the middle of January till about the third week of February, after which he slowly recovered. This child returned from Lightburn in the middle of January. The Widal reaction proving "positive," he was removed to the Reception House on August 23rd. Absence of B. Typhosus from urine and fæces was reported on September 2nd, and again on September 21st.

It is, therefore, likely that this child was suffering from enteric fever on its return from Lightburn, and was the source of infection of the first case in this series.

The Widal reactions in the case of Mrs. F. and H. F. (æt. 11) were "negative," and "positive" on two occasions in the case of J. F. (æt. 9). None of these three had any symptoms of illness whatever. J. F. was removed to the Reception House (September 5th). Urine and fæces "negative" as regards B. Typhosus. Dismissed 19th September.

Thus of the F. family of two adults and five children, three of the children contracted enteric fever, unrecognised in one of them, while a fourth was infected without manifesting clinical symptoms.

In addition, several other families residing in same court were attacked. The first of these was family S., all of whose members—two adults and four children—sickened in close succession, one of them (D. S., æt. 33) dying in hospital.

In this family the first recognised cases (though apparently not the first infected case) were those of Mrs. S. (æt. 31) and M. S. (æt. 4), who appear to have sickened simultaneously on June 12th (removed to hospital June 22nd). Subsequently on June 27th there were removed to hospital B. (æt. 6) and J. (æt. 1½), the former sickening on or about June 6th.

It would appear that J., though only now removed, had been ill for some considerable time, having had diarrhœa since about May 16th. This child thus had been ill about 26 days prior to the date when the mother took ill, and was probably the means of introducing the infection among the S. family. His Widal reaction was "positive."

D. S. (father) sickened on June 30th, while J.—the only remaining child—was sent to Muirkirk, and was admitted to the hospital there with enteric fever on July 5th, having sickened on or about June 26th.

It is possible that the infection was directly transferred from the F. family to the S. family by means of the child J. in the following manner:—The girl—C. F.—as stated above, had been ill for about three weeks at home with unrecognised enteric fever. During this time Mrs. S. was a constant visitor to the infected house, and during these visits she always brought her child with her, who was thus repeatedly exposed to infection.

Thus, of the S. family five members contracted clinical enteric fever, the source of infection being an indefinite and unrecognised attack in a child aged 1½ years.

The house occupied by this family was a two-apartment dwelling, situated at the west corner of the basement of Block B. These families did not use the same water-closet.

From subsequent inquiries it would appear that one of the children of a third family (J. W., æt. 3) had been attacked about the middle or end of June with what seems to have been also enteric fever (symptoms—diarrhœa, malaise, abdominal pains), his Widal reaction proving now "positive."

The urine and fæces of this child were examined on September 2nd, and on September 9th with " negative " result. He had never been ill enough to require medical attention, and was in fact running about during most of the period when he had diarrhœa.

This family lived in one of the basement houses in the middle of Block C, on the opposite side of the court. Their house was dirty, they were careless in their habits, and there seems to have been an indiscrimate use of the water-closets of the basement houses.

Two other children, J. (æt. 4) and J. (æt. $1\frac{10}{12}$), sickening about the end of August, were removed to Belvidere on September 5th with enteric fever. The parents and a child ($\frac{8}{12}$ yrs.) escaped infection.

In association with these cases on the South-Side of the court, there sickened on August 9th E. S. (æt. 4). Four other children, aged 7, 9, 11, 13 years, were unaffected, their Widal reactions proving " negative."

A further case in a family occupying a house on the top flat occurred in Block B, where the original infection appeared, A. A. (æt. 7) sickening on July 1st, and being removed 11 days later. Three other children were unaffected, and had " negative " results.

On September 7th a note was received from Mrs. J., 35 M'Neil Street, S.S., who had been resident at 105 East Cumberland Street in one of the basement houses of Block C, to the effect that two of her children were suffering from diarrhœa.

On visiting the house it was found that J. J.* (æt. 4) had sickened at the previous address with headache and diarrhœa, malaise, and loss of appetite with abdominal pains. He was removed to Belvidere, as was also S. (æt. 8), who had had diarrhœa since September 4th. The Widal reactions in these cases were, however, " negative," and their illnesses were not considered to be enteric fever at the hospital.

On examining the other members of the family, the Widal reaction in the case of Mrs. J. alone proved " positive," although all were examined on two occasions. In her case there was no evidence that she had recently had an attack of recognisable enteric fever. Her urine and fæces were examined with " negative " result.

Extract from Minute of 23rd November, 1910.

On October 20th a case of enteric fever, which had sickened on October 10th, was notified in a house in Hydepark Street, Cranstonhill, and on enquiry being made into the source of infection, it was ascertained that three other children of the family had sickened on September 19th and October 1st and 5th. In each case the illness appeared to have lasted about a week, and the symptoms were mainly diarrhœal. Although the children were confined to bed, no medical attendant had been asked to see them. In one of them, however, the temperature was still elevated, and in all, on the blood being examined, definite evidence of enteric fever was found.

In addition to the four members of the family forming the above cases, there were five others including the parents, and in the course of the nine days following October 20th four of them sickened, so that eight of a household of nine contracted the disease, while the ninth had a history of enteric fever two years ago.

The water-closet here was used in common by three other families, but no further cases have developed.

Death-rate in "Hospital" and Home Cases Compared.

The following Table is again introduced to continue the contrast in fatality between cases treated at home and in hospital. From 1901 till 1909 the hospital death-rate was continuously below that of the home cases. The number of cases so treated has been a gradually reducing one, and the recovery of the 15 cases treated at home in 1910 must be regarded as quite exceptional.

* It may be stated that the blood of this child gave a positive paratyphoid agglutination reaction.

GLASGOW.—ENTERIC FEVER.

YEAR.	TREATED AT HOME.			TREATED IN HOSPITAL.		
	Cases.	Deaths.	Case-mortality per cent.	Cases.	Deaths.	Case-mortality per cent.
1891	315	37	11·8	469	86	18·3
1892	246	33	13·4	344	68	19·8
1893	275	38	13·8	428	82	19·2
1894	225	36	16·0	585	115	19·7
1895	203	33	16·3	594	89	15·0
1896	200	40	20·0	491	105	21·4
1897	230	37	16·1	675	137	20·3
1898	162	32	19·8	1,050	196	18·7
1899	114	28	24·6	966	150	15·5
1900	151	23	15·2	862	135	15·7
1901	187	42	22·5	1,070	168	15·7
1902	65	13	20·0	633	97	15·3
1903	73	12	16·2	871	130	14·9
1904	53	14	26·4	575	70	12·2
1905	41	8	19·5	406	45	11·1
1906	29	10	34·5	359	72	20·1
1907	36	11	30·6	434	81	18·7
1908	73	10	13·7	521	62	11·9
1909	20	11	55·0	546	82	15·0
1910	15	...	...	325	56	17·2

Two charts have been prepared, one of which is to be found facing this page, and which shows the weekly variation in the notifications of enteric fever in each of the past thirteen years; and the other is inserted in the section of the report dealing with diarrhœa. Both charts, however, may be considered together. The diarrhœa chart shows first the variation in the incidence of diarrhœa in a city where the water supply is from a river, and from an upland lake, while the influence of a water carriage system of sewage is also seen in the later years.

The year 1910 represents the minimum which has been attained in enteric fever, and while other influences have no doubt contributed, the low incidence during 1910 and the preceding years is greatly due to the fact that a water carriage system of sewage is now almost universal in the City.

CEREBRO-SPINAL FEVER.

The diminution in the number of cases of this disease which was recorded last year has happily continued. The number of cases registered during 1910 was 46, giving a case-rate of 58 per million living, as against 81 recorded in 1909, and a case-rate of 101 per million.

There was likewise a marked diminution in the number of deaths, these having numbered 30, as against 48 in the preceding year, with a resulting rate of 38 per million, compared with 60 in 1909.

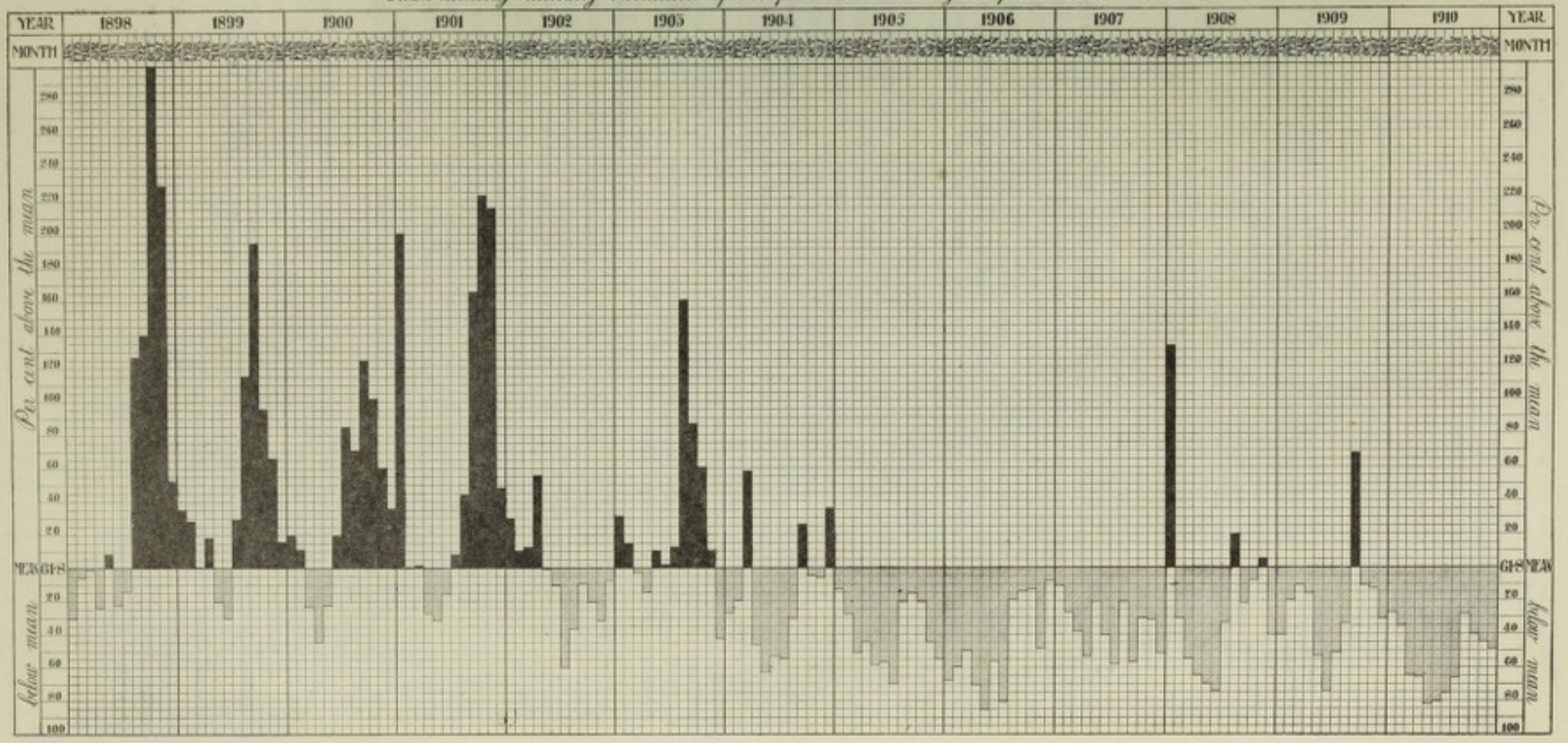
Table No. XXVIII. in the Appendix shows the distribution of the cases and the incidence of the deaths throughout the various Wards.

TYPHUS FEVER.

15 cases of typhus fever were registered in 1910, and 2 deaths occurred. All the cases were removed to hospital. The case-rate was 19, the death-rate 2 per million living, and the case-fatality-rate 13·3 per cent.

ENTERIC FEVER

Chart showing monthly variations of Notifications in each year from 1898 to 1910



The death-rate for the several periods is as follows:—

1881-90, ...	·040 per 1,000 living.
1891-1900, ...	·016 ,,
1901-1905, ...	·011 ,,
1906, ...	·002 ,,
1907, ...	·002 ,,
1908, ...	·001 ,,
1909, ...	·004 ,,
1910, ...	·002 ,,

Compared with other large towns, the death-rate in the ten years, 1900-1909, and in 1910, per 100,000 living, was as follows:—

	1900-1909.	1910.
Glasgow, ...	**0·9** ...	—
Edinburgh, ...	0·2 ...	—
Dundee.	1·1 ...	—
Aberdeen, ...	1·0 ...	—
Paisley, ...	0·1 ...	—
Greenock, ...	0·9 ...	—

Appendix Table XXIX. shows that five cases each were registered during the year in Cowcaddens and Gorbals Wards, two in Mile-end Ward, and one each in Springburn, Townhead, and Blackfriars. One case proved fatal out of the five occurring in Gorbals Ward, while the case from Springburn Ward also died. The circumstances under which all these cases occurred were reported to the Committee on Health at the time, as per the following extracts:—

Extract from Minute of 13th April, 1910.

No cases of typhus fever was known to have occurred in the City during January or February, but late in March several cases came under observation, and all save the last were admitted to hospital under certificates of enteric fever.

The first patient was admitted to Ruchill, where his symptoms were recognised as those of typhus fever. Patient was a newsboy, who sold papers in the neighbourhood of Cowcaddens and New City Road. Both parents are deaf, and the mother a deaf-mute, but no suggestion of the disease has occurred in others similarly affected in the City, so that the probabilities are that patient's infection was obtained outside his own household, and in the pursuance of his ordinary work. He lived in a two-apartment house, where his father and mother lodged with others physically affected like themselves.

A group of cases occurred in a family of aliens residing in Hospital Street. This family consisted of 6 adults and 5 children, residing in a three-apartment house, and the cases which fell to be dealt with occurred in the father and three children, aged respectively 13, 15, 16. The father, who was the first of the group to be seen, sickened on 18th March, and the children in succession on 22nd and 25th. The nature of the symptoms arrested attention on admission to hospital, and were recognised as due to typhus fever. Subsequently it was found that another boy of the family, aged 12, had sickened between 18th and 22nd February, of an illness which lasted for fully ten days, and had been associated with marked headache. At the time this illness was regarded by the doctor as due to influenza, but the later illnesses suggest that it was of the same nature as those occurring in the other members removed to hospital.

Still a third illustration occurred in another family living in Rose Street. The patient here was a boy of 14 years, forming one of eight persons—4 adults and 4 children—occupying a two-apartment house, which was slovenly kept. Although the parents of this family denied all knowledge of the Hospital Street family, the children would appear to have been acquainted, although no contact between them could be ascertained.

One of the contacts with the Hospital Street group sickened of the disease while under observation, and was removed to hospital. Her sickness began on the tenth day after the last exposure to infection.

Extract from Minute of 24th August, 1910.

On 1st instant a patient was removed from an address in Petershill Road suffering from typhus fever, she having sickened on 23rd July. Patient had been on holiday at Fort-William from the 16th to 23rd July, sickening on the evening of the latter date. This sickening, however, is consistent with infection in Glasgow before she went on holiday. No source of infection has been ascertained.

All immediate contacts were removed to the Reception House, and the others kept under observation at home, but no further case has occurred.

Extract from Minute of 28th September, 1910.

On 18th instant a case was removed to hospital from the Cowcaddens district certified as "doubtful enteric fever," which the following day proved to be typhus fever. The house was one of two apartments, and the family consisted of six adults and one child. The immediate contacts were at once removed to the Reception House, and on 20th instant the father of the first patient sickened, and was also removed to hospital. Enquiries have not elicited any probable source of infection, but the house was in a very dirty condition, and has been cleaned out and sprayed and whitewashed.

Extract from Minute of 12th October, 1910.

In the report for last fortnight reference was made to the occurrence of a case of typhus fever in the Cowcaddens district, and to the removal to hospital from the Reception House of the father of the first patient. Since then two other members of the family have also sickened of the disease, and have been removed to hospital.

Extract from Minute of 14th December, 1910.

On 9th instant a case of typhus fever was removed to Belvidere Hospital from Mile-end Ward, the patient being a lad, 19 years of age, occupied as a brass-foundry labourer with a Govan firm. All the immediate contacts were removed to the Reception House, and others are being kept under observation at home.

No source of infection has been found in the City, and I am informed by the Govan authorities that all the employees at the place where patient was employed are in good health.

SCARLET FEVER.

The number of cases of scarlet fever notified during 1910 was 4,203, representing an attack-rate of 5·3 of the population living. 3,843 of the cases, or 91·4 per cent., were treated in hospital. The deaths numbered 141, representing a death-rate of 177 per million living, and a case-fatality-rate of 3·4 per cent.

The decrease in the death-rate from the disease since 1881 may be seen in the following Table:—

Average of 10 years,	1881-90,	... ...	·490	per 1,000 living.
„ 10 „	1891-1900,	... ...	·295	„
„ 5 „	1901-1905,	... ...	·111	„
	1906,	... ...	·062	„
	1907,	... ...	·056	„
	1908,	... .	·111	„
	1909,	... ...	·197	„
	1910,	... ...	·177	„

Compared with other large towns, the death-rate for several periods has been as follows:—

	Death-rate per 100,000. 1900-1909.	1910.
Glasgow, ...	13	17
Edinburgh, ...	10	12
Dundee, ...	8	18
Aberdeen, ...	7	3
Paisley, ...	18	11
Greenock, ...	22	21
London, ...	11	4
Liverpool, ...	28	22
Manchester, ...	19	11
Birmingham, ...	21	14

The number of cases registered, with the proportion treated in hospital, the proportion of deaths occurring there, and the case-mortality for each year since 1891, are stated in the following Table:—

SCARLET FEVER.

Year.	Cases.			Deaths.			
	Number.	Rate per Million.	Per cent. treated in Hospital.	Number.	Rate per Million.	Per cent. occurring in Hospital.	Case-mortality. per cent.
1891	3,045	5,383	62·8	201	355	69·2	6·6
1892	4,844	7,257	62·7	301	451	63·5	6·2
1893	4,027	5,973	70·9	267	396	68·9	6·6
1894	3,930	5,701	73·7	210	307	70·0	5·3
1895	3,502	5,051	75·5	184	265	76·6	5·3
1896	2,728	3,879	78·9	143	203	82·5	5·2
1897	2,955	4,130	75·5	130	182	77·7	4·4
1898	3,620	4,947	82·3	190	260	76·3	5·2
1899	4,728	6,327	83·8	205	274	71·7	4·3
1900	4,162	5,508	85·7	210	278	77·6	5·0
1901	3,317	4,355	84·3	131	172	80·1	3·9
1902	2,509	3,229	85·3	113	145	77·9	4·5
1903	2,031	2,597	85·3	82	105	79·2	4·0
1904	1,573	2,003	83·2	69	88	85·5	4·4
1905	970	1,235	87·1	35	45	97·1	3·6
1906	1,382	1,721	87·8	50	62	84·0	3·6
1907	1,759	2,180	89·0	45	56	97·8	2·6
1908	2,797	3,491	91.4	89	111	95·5	3·2
1909	4,410	5,510	91·8	158	197	89·2	3·5
1910	4,203	5,277	91·4	141	177	89·4	3·4

The increased prevalence of scarlet fever, which began in 1906, has continued throughout 1910, although with a slightly lessened severity than in the preceding year, the attack-rate having been 5,277 per million, as compared with 5,510.

The Ward incidence of the disease is shown in Appendix Table XXX., from which it will be seen that cases occurred in all the Wards. Relatively, the disease was most prevalent in Dalmarnock, Springburn, Mile-end, Cowlairs, and Hutchesontown, where the attack-rates were 7,523, 7,224, 6,728, 6,651, and 6,099 per million, as compared with an average rate for the City as a whole of 5,277. The mean attack-rate for the City was also exceeded in Maryhill and in Calton.

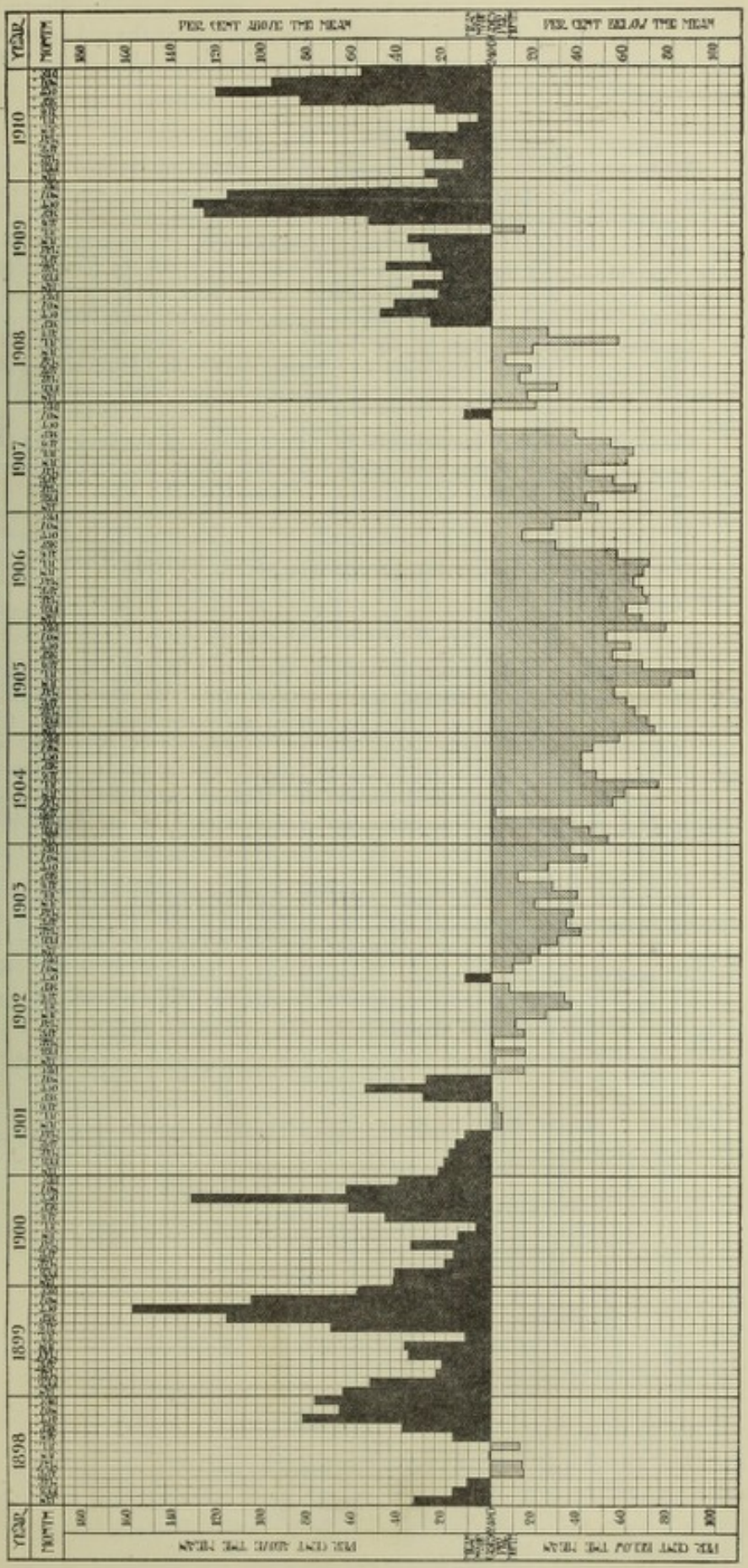
The maximum fatality occurred in Dalmarnock, Broomielaw, and Mile-end, where the death-rate equalled 408, 315, and 303 per million, as compared with 177 for the City. Next in severity came Whitevale and Springburn Wards, with death-rates of 287 per million, and Townhead and Anderston, where the rates were 273 per million and 247 per million respectively.

The chart which faces shows the incidence of the disease during the past thirteen years, and appears to indicate that the decennial period of maximum prevalence has been reached in the past two years, and that we may now look for a gradual diminution in the number of cases. This view is confirmed by a survey of the figures for the first five months of this year, during which period about 350 fewer cases have been registered than at the same period in the two years preceding.

Reference was made in the Report for last year to the mildness of the cases, many of which escaped recognition in their earlier stages until other members of the family became infected and were notified. Similar conditions prevailed throughout the present year, and not infrequently several members

SCARLET FEVER

CHART SHOWING MONTHLY VARIATIONS OF NOTIFICATIONS IN EACH YEAR FROM 1898 TO 1910.



of the same family were removed to hospital at one time. A similar illustration of association with milder cases having occurred in one of the public schools, the circumstances were reported on to the Committee on Health, in the following terms:—

Extract from Minute of 22nd June, 1910.

On the afternoon of the 16th instant, at the request of the headmistress of Martyrs' School, Townhead, who was suspicious of the existence of scarlet fever in certain scholars of the Infant Department, all attending the same class-room were examined, and eight children in whom slight desquamation was present were placed under observation. Of these, two were retained at home under the family medical attendant, and six were removed to hospital.

In none of the cases was there a definite history of scarlet fever, although, with the exception of three members of one family, the others had been absent from school for periods varying from eight to nineteen days with ill-defined symptoms of varying severity. These absences had occurred between 20th April and 19th May.

A case of scarlet fever had occurred in a child attending the same class-room, who, however, had been absent from school from 29th April, and was admitted to the Royal Infirmary the same day, sickening of scarlet on 2nd May.

The following extract from the minutes of the Committee on Health relates the circumstances attending the prosecution of an individual for exposing himself in a public place while suffering from the disease:—

Extract from Minute of 10th August, 1910.

The Town-Clerk reported that he had, on the report of and after conference with the Medical Officer of Health, taken proceedings in the Sheriff Court, by complaint at the instance of the Local Authority, under the Public Health (Scotland) Act, 1897, against a male adult, who had, on 5th and 6th May last, while suffering from scarlet fever, wilfully exposed himself, without taking proper precautions against spreading the said disease, and that the respondent had, on 8th July, pleaded guilty to the said offence, and had been fined by the Sheriff in the sum of £1.

The following Table shows the number of cases treated at home and in hospital in each year since 1891, and the number of deaths occurring in each group. The case-mortality among hospital cases is fractionally under the rate for 1909, and the same as for 1908. Cases treated at home are relatively few in number, and the rates in these circumstances, as the Table shows, are liable to fluctuation, and are apt to mislead:—

GLASGOW.—SCARLET FEVER.

YEAR.	TREATED AT HOME.			TREATED IN HOSPITAL.		
	Cases.	Deaths.	Case-mortality per cent.	Cases.	Deaths.	Case-mortality per cent.
1891	1,133	62	5·5	1,912	139	7·3
1892	1,807	110	6·1	3,037	191	6·3
1893	1,172	83	7·1	2,855	184	6·4
1894	1,034	63	6·1	2,896	147	5·1
1895	858	43	5·0	2,644	141	5·3
1896	576	25	4·3	2,152	118	5·5
1897	724	29	4·0	2,231	101	4·5
1898	640	45	7·0	2,980	145	4·9
1899	764	58	7·6	3,964	147	3·7
1900	594	47	7·9	3,568	163	4·6
1901	522	26	5·0	2,795	105	3·8
1902	369	25	6·8	2,140	88	4·1
1903	297	17	5·7	1,734	65	3·8
1904	265	13	4·9	1,308	56	4·3
1905	125	1	0·8	845	34	4·0
1906	168	8	4·8	1,214	42	3·5
1907	193	1	0·5	1,566	44	2·8
1908	240	4	1·7	2,557	85	3·3
1909	363	17	4·7	4,047	141	3·5
1910	360	15	4·2	3,843	126	3·3

"RETURN" CASES.

During the year, 120 "return" cases occurred in 97 families, subsequent to the return of earlier cases from hospital. This represents a rate of 3·2 per cent. on the dismissals. The average residence in hospital of the earlier cases was 56 days, the maximum was 101 days, and the minimum 19.

The following Table shows the distribution of the cases throughout the three weeks subsequent to dismissal of the first case:—

GLASGOW, 1910.—SCARLET FEVER.—RETURN CASES.—DAYS ELAPSING BETWEEN RETURN OF EARLIER AND SICKENING OF SUBSEQUENT CASES.

FIRST WEEK.		SECOND WEEK.		THIRD WEEK.	
Days Elapsing.	No. Cases.	Days Elapsing.	No. Cases.	Days Elapsing.	No. Cases.
1	3	8	5	15	3
2	4	9	8	16	...
3	9	10	5	17	6
4	8	11	11	18	3
5	6	12	8	19	2
6	9	13	1	20	3
7	8	14	3	21 and over	15
	47		41		32

"SECONDARY" CASES.

101 "secondary" cases occurred in households after disinfection had been carried out for a previous case. Of the total, 65 occurred within one week, 30 others within 14 days, and 6 at periods under 21 days.

GLASGOW, 1910.—SCARLET FEVER.—SECONDARY CASES occurring in HOUSEHOLD after DISINFECTION.

FIRST WEEK.		SECOND WEEK.		THIRD WEEK.	
Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.
1	15	8	2	15	1
2	15	9	7	16	...
3	13	10	4	17	1
4	9	11	5	18	...
5	6	12	3	19	...
6	4	13	5	20	1
7	3	14	4	21 and over	3
	65		30		6

EFFECT OF SCHOOL HOLIDAYS ON THE OCCURRENCE OF CASES.

The apparent effect of school holidays in reducing the number of cases was referred to when dealing with diphtheria, and a similar Table is here introduced for scarlet fever. While there was a reduction in the number of cases during the six weeks the schools were closed, there was a very marked increase during the following six weeks. This was most marked at school ages, 5-14. As pointed out when dealing with the diphtheria cases, however, this may not be wholly due to school influence, but may be associated with the autumnal prevalence which is characteristic of this disease. If reference be made to the chart facing page 42, it will be seen that the disease reached its minimum incidence during the month of July, while in September it reached a point not far short of the maximum incidence of the year.

GLASGOW, 1910.—SCARLET FEVER.—CASES NOTIFIED between May 19th and Sept. 27th, 1910, ARRANGED to SHOW the INFLUENCE of SCHOOL HOLIDAYS on CASE-INCIDENCE.

PERIODS.	Cases Notified.						Increase or Decrease.						TOTAL.
	Age, 0—5.		Age, 5—14.		Age, 14 and up.		Age, 0—5.		Age, 5—14.		Age, 14 and up.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1st. May 19 to June 30,	58	53	105	141	25	38	...	...	...	...	...	...	420
2nd. July 1 to Aug. 15,	43	65	113	124	12	20	−15	+12	+8	−17	−13	−18	377
								−3		−9		−31	
3rd. Aug. 16 to Sept. 27	76	64	147	208	34	33	+43	−1	+34	+84	+22	+13	562
								+42		+118		+35	
	177	182	365	473	71	91							
	359		838		162								1,359

MEASLES.

14,579 cases were registered in 1910, as compared with 10,915 in 1909, and 527 deaths occurred, representing a death-rate of ·662 per 1,000 of the estimated population living. Of the total deaths, 29·4 per cent. occurred in hospital, and 94·1 per cent. of the fatal attacks were in children under 5 years of age.

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

1881-90,	·680	per 1,000 living.
1891-1900,	·784	,,
1901-1905,	·512	,,
1906,	·492	,,
1907,	·496	,,
1908,	1·028	,,
1909,	·492	,,
1910,	·662	,,

The following Table shows the death-rate per 100,000 for several large towns for the ten years 1900-1909, and for 1910:—

	1900-1909.	1910.
Glasgow,	**56**	**61**
Edinburgh,	31	34
Dundee,	39	170
Aberdeen,	36	2
Paisley,	47	37
Greenock,	39	131
London,	43	41
Liverpool,	50	60
Manchester,	55	40
Birmingham,	44	7

The following Table shows the total deaths, the number occurring in hospital, and their proportion to the total deaths from the disease for several years.

MEASLES.

Year.	Deaths.		Death-rate per Million.	Percentage of Total Deaths occurring in Hospital.
	Total Number.	Number occurring in Hospital.		
1895	329	46	475	14·0
1896	819	126	1,164	15·4
1897	586	73	819	12·5
1898	539	89	737	16·5
1899	544	95	828	17·5
1900	461	81	610	17·6
1901	499	89	655	17·8
1902	266	33	342	12·4
1903	346	73	442	21·1
1904	328	54	418	16·5
1905	551	159	701	28·9
1906	395	108	492	27·3
1907	400	158	496	39·5
1908	824	224	1.028	27·2
1909	394	68	492	17·3
1910	527	155	662	29·4

Measles became epidemic towards the end of 1909, but by the close of the year only Kinning Park, Cowcaddens, and Hutchesontown Wards had been affected. The maximum prevalence occurred during the month of January, although the epidemic continued until February and March, by which time all the Wards had become affected. The disease is not notifiable in the City, so that the only reliable basis of comparison is the deaths registered. These numbered 527, and were equal to a death-rate of 662 per million for the city as a whole. Relatively, the disease was most fatal in Dalmarnock Ward, where the deaths equalled 1,314 per million, and next in severity came Blackfriars, Exchange, and Anderston, with rates of 1,109, 1,086, and 1,060 per million respectively. In Hutchesontown the rate was 999 per million, and in Kingston 950, while in Calton and Mile-end it exceeded 800 per million, and in Whitevale, Springburn, Cowlairs, Gorbals, Govanhill, and Maryhill, it exceeded 700 per million.

It was the intention to have made special enquiry into the incidence of the epidemic, but the difficulty of making any reliable estimate of the housing and age distribution of the population, pending the publication of the census results, has prevented this being carried to a completion.

Further reference is made to the influence of Hospital treatment on the death-rate from measles on page 74.

WHOOPING-COUGH.

The deaths from whooping-cough during 1910 numbered 232, which is equal to a death-rate of 291 per million living. The death-rate from the disease for several periods has been as follows:—

1881-1890,	1·150	per 1,000 living.
1891-1900,	·879	,,
1901-1905,	·802	,,
1906,	·498	,,
1907,	1·081	,,
1908,	·656	,,
1909,	·968	,,
1910,	·291	,,

In comparison with other large towns, the rate per 100,000 for the ten years 1900-1909 and 1910 was as follows:—

	1900-1909.	1910.
Glasgow,	**81**	**27**
Edinburgh,	42	9
Dundee,	48	29
Aberdeen,	48	10
Paisley,	52	6
Greenock,	59	51
London,	33	28
Liverpool,	45	58
Manchester,	40	56
Birmingham,	44	37

The Ward distribution of the disease is shown in Appendix Table XXXII.

The total deaths, deaths occurring in hospital, and the proportion which these form to the total deaths in each year since 1895, are shown in the following Table:—

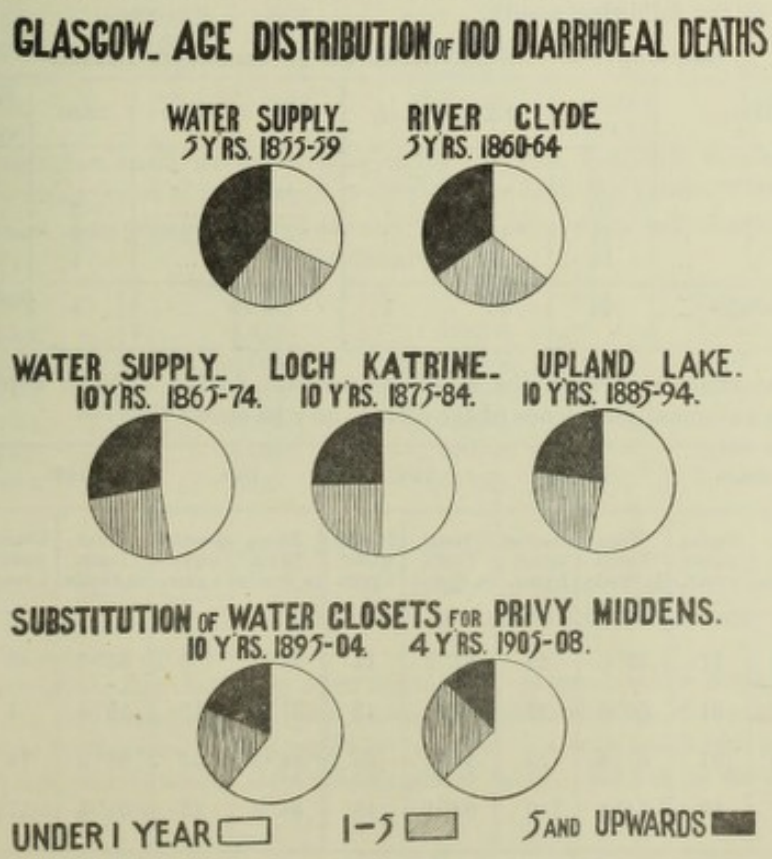
WHOOPING-COUGH.

Year.	Deaths.		Death-rate per Million.	Percentage of Deaths occurring in Hospital.
	Total Number.	Number occurring in Hospital.		
1895	614	48	886	7·8
1896	643	68	914	10·6
1897	842	80	1,177	9·5
1898	703	86	961	12·2
1899	323	23	432	7·1
1900	694	67	918	9·7
1901	850	72	1,116	8·5
1902	466	59	600	12·7
1903	604	71	772	11·7
1904	574	96	731	16 7
1905	621	100	791	16·1
1906	400	94	498	23 5
1907	872	231	1,081	26·5
1908	526	131	656	24·9
1909	775	188	968	24·3
1910	232	74	291	31·9

The influence of Hospital treatment on the death-rate from whooping-cough is further referred to on page 74.

DIARRHŒAL DISEASES.

The deaths registered as due to diarrhœal diseases in 1910 numbered 161, representing a death-rate of 202 per million living.



For several periods this rate has been—

1881-1890,	·700	per 1,000 living.
1891-1900,	·843	„
1901-1905,	·849	„
1906,	·933	„
1907,	·547	„
1908,	·327	„
1909,	·130	„
1910,	·161	„

In the report for 1900 attention was drawn to the inclusion of several forms of gastro-intestinal catarrh among the diarrhœal diseases—an addition which, to a large extent, affects the value of decennial comparisons.

On the basis of the Registrar-General's returns, the death-rate of Glasgow may be compared with several other towns:—

	Death-rate per 100,000.* 1900-1909.	1910.
Glasgow,	**35**	**27**
Edinburgh,	22	9
Dundee,	63	74
Aberdeen,	29	13
Paisley,	37	33
Greenock,	38	26
London,	67	28
Liverpool,	132	71
Manchester,	106	49
Birmingham,	104	39

* Compiled from Registrar-General's Annual Report.

Age-Incidence of Diarrhœal Deaths.

The tendency of the disease towards increased prevalence in the third quarter of the year and its special incidence at ages 1-5 at this period is illustrated by the figures in the first of the subjoined Tables, while the special influence of a maintained high level of mean temperature during the summer months is illustrated by the excessive fatality during August. The average range of temperature during July seems largely to affect the prevalence of the disease in the following month.

Glasgow, 1910.—AGE-INCIDENCE of Diarrhœal Deaths.

1910.	Under 1 year.	1-5.	5-15.	15-20.	20-25	25-60	60 years and upwards.
1st Quarter,	3	...	..	...	...	..	1
2nd „	10	5	1	...	...	2	...
3rd „	64	42	...	...	...	1	4
4th „	15	9	...	1	...	1	2
Totals,	92	56	1	1	...	4	7

The relation between the mean temperature during June to September and the autumnal prevalence of the disease may be shown thus:—

	1905.		1906.		1907.		1908.		1909.		1910.	
	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.	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,	56°·9	17	57°·0	26	51°·2	17	55°·2	3	53°·7	3	55°·7	4
July,	59°·3	31	56°·5	33	56°·1	15	57°·8	13	55°·5	1	56°·5	6
August,	55°·8	101	57°·9	73	54°·2	28	56°·2	53	56°·8	18	57°·0	31
September,	52°·7	52	54°·4	140	54°·1	48	54°·2	23	51°·4	17	53°·8	27

The Ward distribution of the deaths is shown in Appendix Table XXXIII.

TUBERCULOUS DISEASES.

Phthisis.

Tubercle of the lung or pulmonary phthisis became compulsorily notifiable in Glasgow on 1st January, 1910, and during the year 3,205 primary notifications were received, of which 1,308 were from practitioners in private practice, and 1,897 from practitioners in public practice. Other 385 cases were registered on information contained in the hospital admission and dismissal sheets of the Glasgow and Govan Parish Councils and from the death registers, making in all a total of 3,590 cases for the year, which is equal to an attack rate of 4,508 per million.

The deaths registered during the same period numbered 1,033, representing a death-rate of 1,297 per million persons living, which rate is the lowest hitherto recorded in Glasgow.

The notifications and deaths registered during 1910 are being made the subject of a special report to the Committee on Health, which will be issued saparately later.

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

1881-90,	... ...	2·680 per 1,000 living.
1891-1900,	... ...	2·015 ,,
1901-1905,	... ...	1·626 ,,
1906,	... ...	1·513 ,,
1907,	... ...	1·562 ,,
1908,	... ...	1·417 ,,
1909,	... ...	1·409 ,,
1910,	... ...	1·297 ,,

In several towns in Scotland the rate for the ten years, 1900-1909, and for 1910, has been—

Phthisis Death-rate per 100,000 in certain Scotch Towns for the Ten Years, 1900-1909, and for 1910.

	1900-1909.	1910.		1900-1909.	1910.
Glasgow, ...	**165**	**122**	Aberdeen, ...	130	94
Edinburgh, ...	144	97	Paisley, ...	143	110
Dundee, ...	177	152	Greenock, ...	144	119

The reduction which has taken place in the phthisis death-rate in Glasgow during the whole period of registration is shown in the following Table:—

Death-rate from Phthisis in the several Quinquennia since the beginning of Registration.

Years.	Death-rate per Million.	Years.	Death-rate per Million.
1855-9, ...	3,742	1885-9, ...	2,601
1860-4, ...	4,094	1890-4, ...	2,315
1865-9, ...	3,972	1895-9, ...	2,014
1870-4, ...	3,908	1900-4, ...	1,712
1875-9, ...	3,644	1905-9, ...	1,468
1880-4, ...	3,140	1910, ...	1,297

WARD DEATH-RATES.

Appendix Table XXXIV. shows the number of cases registered and the deaths occurring in each of the Wards, as well as the case-rate for the year 1910, and the death-rate since 1903.

In view of the fact that many cases notified had occurred before notification was adopted, and, indeed, were at that time in an advanced stage of the disease, the case-rate for the present year cannot be regarded as a true attack-rate in the several Wards, but it affords some information as to the districts in which the disease is most prevalent.

A more reliable indication of the incidence of the disease is obtained by a consideration of the average death-rates for each Ward, and in the following Table the average rate for the period 1903-1910 is shown, the Wards being arranged relatively to their position above and below the mean rate for the city. Approximately, the case-rate calculated on the numbers registered during 1910 follows the same groupings as the average death-rate, so that when the irregularities incidental to the introduction of notification are eliminated and only occurring cases are being notified, the attack-rate will afford a reliable means of observing the prevalence of the disease in the several Wards.

On the basis of the average death-rate the disease is considerably in excess in Calton, Blackfriars, Cowcaddens, Broomielaw, and Mile-end Wards; while the rate in Whitevale and Kingston Wards is also in excess of the City mean.

GLASGOW, 1903-1910.—TABLE SHOWING AVERAGE DEATH-RATE FOR EACH WARD COMPARED WITH THAT FOR THE CITY.

Ward.	Death-rate per Million.	Ward.	Death-rate per Million.
Calton, ...	1,939	Townhead, ...	1,331
Blackfriars, ...	1,926	Sandyford, ...	1,227
Cowcaddens, ...	1,797	Govanhill, ...	1,154
Broomielaw, ...	1,663	Cowlairs, ...	1,148
Mile-end, ...	1,601	Woodside, ...	1,138
Whitevale, ...	1,526	Maryhill, ...	1,129
Kingston, ...	1,501	Exchange, ...	1,127
CITY, ...	**1,486**	Dennistoun, ...	903
Hutchesontown, ...	1,481	Blythswood, ...	694
Springburn, ...	1,479	Park, ...	630
Kinning Park, ...	1,474	Langside, ...	605
Anderston, ...	1,394	Pollokshields, ...	504
Gorbals, ...	1,388	Kelvinside, ...	291
Dalmarnock, ...	1,331		

OTHER FORMS OF TUBERCULOUS DISEASE.

The following Table contains the deaths and death-rates of the several forms of tuberculous diseases taken from the Registrar-General's classification:—

GLASGOW.—TUBERCULOUS DISEASES.—DEATHS and DEATH-RATES per MILLION for the FIFTEEN YEARS, 1894-1910.*

Year.	Deaths.					Death-rate per Million.				
	Tubercular Meningitis.	Other Forms of Tuberculosis.	Tuberculous Diseases (Not Phthisis).	Phthisis.	All Tuberculous Diseases.	Tubercular Meningitis.	Other Forms of Tuberculosis.	Other Tuberculous Diseases (Not Phthisis).	Phthisis.	All Tuberculous Diseases.
1894	229	354	583	1,560	2,143	333	515	848	2,271	3,119
1895	229	398	627	1,584	2,211	329	572	901	2,276	3,177
1896	246	327	573	1,342	1,915	349	464	813	1,903	2,716
1897	266	341	607	1,434	2,041	372	477	849	2,006	2,855
1898	260	341	601	1,415	2,016	359	471	830	1,953	2,783
1899	240	406	646	1,454	2,100	327	553	880	1,981	2,861
1900	252	387	639	1,478	2,117	339	520	859	1,987	2,846
1901	238	458	696	1,392	2,088	311	599	910	1,821	2,731
1902	241	393	634	1,356	1,990	311	507	818	1,748	2,566
1903	235	424	659	1,342	2,001	299	539	838	1,705	2,543
1904	258	451	709	1,378	2,087	323	565	888	1,726	2,614
1905	245	409	654	1,233	1,887	302	505	807	1,522	2,329
1906	307	405	712	1,295	2,007	367	485	852	1,550	2,402
1907	390	446	836	1,314	2,150	460	526	986	1,550	2,536
1908	310	429	739	1,173	1,912	361	499	860	1,364	2,224
1909	297	419	716	1,178	1,894	341	480	821	1,351	2,172
1910	273	366	639	1,070	1,709	309	413	722	1,210	1,932

* From Registrar-General's annual reports.

Since the present classification of the "other forms" of tuberculous disease was introduced by the Registrar-General in 1883, a decrease in the death-rate therefrom amounting to 33·8 per cent., has occurred.

GLASGOW, 1883-1910.—DEATH-RATES PER MILLION FROM TUBERCULOUS DISEASES IN SEVERAL PERIODS, 1883-1910.

	AVERAGE ANNUAL DEATH-RATE.					Per cent. decrease in 28 years.
	1883-88.	1889-94.	1895-1900.	1901-1906.	1910.	
I. Phthisis, ...	2,849	2,319	2,018	1,679	1,210	57·5
II. Tubercular Meningitis,	405	387	346	319	309	
III. Other forms of Tuberculosis, ...	685	497	510	533	413	33·8
	1,090	884	856	852	722	
All Tuberculous Diseases,	3,939	3,203	2,874	2,531	1,932	50·9

The deaths and death-rates from diseases of the tuberculous class other than phthisis for the several Wards, with the corresponding rates for 1903-1909, are shown in Appendix Table No. XXXV. As in the case of phthisis, there is considerable fluctuation in the rates for individual Wards from year to year, but it again falls to be observed that there is no relation between the incidence of phthisis and of the other forms of tubercle. The Wards with the highest phthisis death-rates preserve a fair correspondence with those in which the general death-rate is excessive, but no parallel can be drawn between the distribution of other tuberculous diseases and phthisis itself.

In order to obtain a wider view of the incidence of these other forms of tubercle, the following Table has been prepared, showing the average of the rates for the past eight years. On this average, Mile-end and Dalmarnock show excessive rates, while Calton, Whitevale, Townhead, and Kinning Park are also considerably in excess of the City mean.

GLASGOW, 1903-1910.—TABLE SHOWING AVERAGE RATE FOR EACH WARD COMPARED WITH MEAN FOR THE CITY.

Ward.	Death-rate per Million.	Ward.	Death-rate per Million.
Mile-end, ...	1,461	Exchange, ...	1,059
Dalmarnock, ...	1,428	Blackfriars, ...	1,019
Calton, ...	1,360	Govanhill, ...	1,013
Whitevale, ...	1,344	Gorbals, ...	947
Townhead, ...	1,323	Sandyford, ...	937
Kinning Park, ...	1,285	Maryhill, ...	898
Springburn, ...	1,233	Dennistoun, ...	884
Hutchesontown, ...	1,216	Woodside, ...	771
Anderston, ...	1,200	Blythswood, ...	494
Cowlairs, ...	1,187	Langside, ...	453
Cowcaddens, ...	1,186	Park, ...	320
Broomielaw, ...	1,158	Pollokshields, ...	312
Kingston, ...	1,142	Kelvinside, ...	276
City, ...	**1,064**		

TUBERCLE IN MILK.

During the year 1910, 675 samples of milk were received from the Veterinary Surgeon for examination for tubercle. Of these, 466 were from country byres, 163 from town byres, and 46 from byres from which milk is supplied to the City Fever Hospitals.

Of the samples from country byres, 6, or 1·29 per cent., were found to be tuberculous, while 2, or 1·23 per cent. from town byres were also affected. Both rates are considerably below those of former years, but it would probably be erroneous to assume that this indicates a sudden and striking reduction in the prevalence of tuberculosis among cattle.

In marked contrast with both groups is the absence of tubercle in samples from the byres supplying milk to the Hospitals. As formerly stated, these herds are subjected to the tuberculin test, and the result obtained during the past two years is highly satisfactory.

Distributing the samples among the counties where the farms are situated, the incidence of tubercle shows considerable variation. Including the samples drawn from the herds supplying milk to the Hospitals, 506 samples, including 7 duplicates, were drawn from animals in five adjacent counties, while 169 additional samples were drawn from animals in town byres. The 8 positive samples were drawn from separate animals. Over all, therefore, positive results were obtained in 1·18 per cent. of the samples tested, although this varies from nothing in Ayrshire to 2 out of 52 in Dumbartonshire:—

County.	Number of Byres.	Number of Primary Samples.	Number of Duplicate Samples.	Total.	Number Positive.	Per Cent. Positive.
Ayr, - -	36	59	2	61	...	...
Dumbarton, -	26	52	...	52	2	3·84
Lanark, -	92	207	2	209	1	0·47
Renfrew, -	77	126	2	128	2	1·56
Stirling, -	38	55	1	56	1	1·78
	269	499	7	506	6	1·18
Town Byres, -	41	169	...	169	2	1·18

Continuing the comparison of previous years, and excluding the samples drawn from herds supplying milk to the Hospitals, the comparison over a number of years may be shown as follows:—

Where Samples taken.	Number of Samples.	Number found Tuberculous.	Percentage.
	Year 1907.		
Railway Stations, ...	163	7	4·3
	Year 1908.		
Country Byres, ...	417	18	4·3
Town Byres, ...	108	5	4·6
Byres from which Hospital Milk obtained, ...	174	4	2·3
	Year 1909.		
Country Byres, ...	423	24	5·7
Town Byres, ...	122	4	3·3
Byres from which Hospital Milk supplied, ...	47	...	...
	Year 1910.		
Country Byres, ...	466	6	1·29
Town Byres, ...	163	2	1·23
Byres from which Hospital milk supplied, ...	46	...	...

DISEASES OF ORGANS OF RESPIRATION.

The Registrar-General in 1901 withdrew pneumonia from this group of diseases, and constituted it a separate entry among the general diseases. This is in consonance with the view now prevailing that pneumonia is a systemic infection, with a limited range of infectivity. In 1906 the Local Government Board adopted the Registrar-General's arrangement, and it was introduced into these reports for the first time in that year. In order, however, to obtain a figure for diseases of respiration comparable with those of former years, pneumonia must be added to those now remaining under the original classification.

With this explanation, the deaths from respiratory diseases, including croup, but excluding pneumonia, numbered 1,075, giving a rate of 1,349 per million. The deaths from pneumonia numbered 1,190, representing a death-rate of 1,494 per million. From both causes together the deaths numbered 2,265, and represented a death-rate per million of 2,843, compared with 4,033 in 1909, in which year, however, the rate was excessive. The death-rate from respiratory diseases for several periods per thousand of the population living has been:—

1881-90, ...	5·870	
1891-1900, ...	4·993	
1900, ...	4·979	
1901, ...	4·335	
1902, ...	4·836	
1903, ...	3·927	
1904, ...	4·036	
1905, ...	3·569	
1906—Pneumonia,	1·657	
Other Diseases of Respiration,	1·770	3·427
1907—Pneumonia,	1·934	
Other Diseases of Respiration,	1·676	3·610
1908—Pneumonia,	1·860	
Other Diseases of Respiration,	1·741	3·601
1909—Pneumonia,	2·046	
Other Diseases of Respiration,	1·987	4·033
1910—Pneumonia,	1·494	
Other Diseases of Respiration,	1·349	2·843

The Ward distribution of the deaths from diseases of the respiratory system (including pneumonia) is shown in Appendix Table XXXVI., which contains, for convenience of reference, a column showing the combined death-rate from diseases of respiration and from pneumonia for 1910, as well as the total rate since 1903.

Taking the average rates for the years 1903-1910, the position of the several Wards in relation to the average rate for the City may be seen from the following Table:—

GLASGOW, 1903-1910.—TABLE SHOWING AVERAGE RATE FOR EACH WARD COMPARED WITH MEAN FOR THE CITY.

Ward.	Death-rate per Million.	Ward.	Death-rate per Million.
Broomielaw, ...	5,514	**City,**	**3,631**
Blackfriars, ...	5,349	Sandyford, ...	3,542
Cowcaddens, ...	5,328	Maryhill, ...	3,237
Hutchesontown, ...	4,821	Exchange, ...	3,172
Calton, ...	4,766	Woodside, ...	3,073
Kinning Park, ...	4,380	Cowlairs, ...	3,033
Mile-end, ...	4,227	Govanhill, ...	2,843
Gorbals, ...	4,192	Dennistoun, ...	2,049
Dalmarnock, ...	4,114	Blythswood, ...	1,987
Townhead, ...	3,839	Park, ...	1,812
Anderston, ...	3,705	Langside, ...	1,375
Whitevale, ...	3,694	Pollokshields, ...	1,066
Kingston, ...	3,657	Kelvinside, ...	975
Springburn, ...	3,649		

PNEUMONIA.

The deaths and death-rates from pneumonia in the several Wards, with corresponding rates for each year since 1906, are shown in Appendix Table XXXVII., the rate for the year being the lowest recorded since the disease was separately classified.

The highest relative death-rate was recorded in Hutchesontown Ward, where it was equal to 2,918 per million persons living, as compared with 1,494 for the City as a whole. The rate was next highest in Blackfriars, Cowcaddens, and Gorbals, where the rates were 2,621, 2,209, and 2,041 per million respectively.

The following Table shows the variations in the death-rate in several periods since 1856:—

GLASGOW.—PNEUMONIA.—DEATHS AND DEATH-RATES PER MILLION IN SEVERAL QUINQUENNIAL PERIODS, 1855-1910. Compiled from the Detailed Annual Reports of the Registrar-General, except 1909 to 1910, which are taken from the Annual Summary.

PERIOD.	Population.	No. of Deaths.		Total.	Average Death-rate per Million.	
		Male.	Female.			
1856-1860, ...	...	...	...	...	1,576	
1861-1865, ...	...	...	...	...	1,370	
1866-1870, ...	...	...	...	...	1,312	
1871-1875, ...	...	...	...	...	1,536	
1876-1880, ...	...	...	...	...	1,409	
1881-1885, ...	...	...	...	...	1,949	
1886-1890, ...	...	...	...	...	1,724	
1891-1895, ...	...	...	...	...	2,056	
1896-1900, ...	...	...	...	...	2,029	
1901, ...	764,467	898	626	1,524	1,994	
1902, ...	775,601	1,125	723	1,848	2,383	
1903, ...	786,897	970	708	1,678	2,132	2,180
1904, ...	798,357	969	837	1,806	2,262	
1905, ...	809,986	979	746	1,725	2,130	
1906, ...	835,625	959	714	1,673	2,002	
1907, ...	847,584	998	777	1,775	2,098	
1908, ...	859,715	969	729	1,698	1,975	
1909, ...	872,021	...	...	1,875	2,150	
1910, ...	884,520	...	...	1,375	1,570	

NOTE.—For the annual numbers and rates before 1901 see Medical Officer's Annual Report for 1906, page 127.

PUERPERAL FEVER.

From the Table which follows, it will be observed that the case-rate from puerperal fever per thousand births, viewed over a number of years, is apparently increasing, although the case-mortality-rate shows a tendency to fall, more especially since 1906. This contrast would seem to suggest that the greater supervision of infant lives has led to the inclusion of a larger proportion of the puerperal fever cases occurring.

The death-rate from erysipelas also shows a slight decrease.

PUERPERAL FEVER.—ERYSIPELAS.

Year.	Puerperal Fever.								Erysipelas.	
	No of Cases Notified.	Case-rate per 1,000 Births.		Case-mortality per Cent.		Death-rate per Million Living.		Death-rate per Million Living.	
1891	80	4·0		75·0		105		115	
1892	63	2·8		68·3		64		84	
1893	73	3·1	3·2	63·1	64·1	68	70	75	85
1894	64	2·8		54·7		51		83	
1895	74	3·2		59·5		63		69	
1896	105	4·4		53·3		79		55	
1897	62	2·6		54·8		48		49	
1898	71	2·9	3·3	53·5	61·4	52	68	40	44
1899	83	3·4		72·3		82		45	
1900	78	3·2		74·3		78		32	
1901	71	2·9		83·1		71		60	
1902	90	3·6		55·5		51		51	
1903	108	4·3	3·8	63·9	64·8	53	60	44	48
1904	89	3·6		66·3		53		53	
1905	108	4·5		55·5		74		33	
1906	119	4·8		48·7		69		62	
1907	122	5·1		48·2		70		44	
1908	119	5·0	4.9	47·9	52.3	66	70	29	41
1909	108	4·7		60·2		74		38	
1910	113	5·1		56.6		72		34	

The Rates quoted above are based on data obtained from the Registrar-General's Reports.

INCIDENCE OF PUERPERAL FEVER IN RELATION TO NATURE OF ATTENDANCE AT BIRTH.

The operation of the Notification of Births Act now enables us to review the incidence of puerperal fever in some detail. Of the 113 cases of the disease registered last year, 31 had been under medical care from the beginning, while 82 were attended by mid-wives at the onset of labour, although in 19 of these medical assistance was subsequently obtained.

Placed in relation to the nature of the attendance, the incidence of the cases is of some importance, and may be shown as follows:—

Attended by	Births.	Cases.	Rate per thousand Births.
Doctors, ...	10,399	31	3·0
Midwives, ...	12,446	82	6·6
	22,845	113	4·9

Before accepting these rates as final, and more particularly before accepting the greater relative incidence of puerperal fever in cases attended by midwives as resulting from defective technique, it is necessary to remember that the midwives' practice is more frequently among the poorer classes and in the smaller houses, and that these are factors which, while incapable of express statement, must be taken into account when considering the difference in the incidence.

We still await the advantage which England derives from the Act of 1902, which places the midwives under regular medical supervision.

The distribution of the cases throughout the Wards, and the nature of the attendance, are shown in Appendix Table XXXVIII.

Interval elapsing between Confinement and the Development of Puerperal Fever.—Here also there is a difference which is worthy of notice. Of the 31 cases medically attended, no fewer than 25 occurred within the five days immediately following labour, whereas of the 82 cases attended by midwives the proportion during a similar period was 52, or 63 per cent. This contrast is on too limited a basis to be of final value, but it is worth the attention of practitioners generally, and particularly of those practising midwifery. A Table showing the details follows:—

GLASGOW, 1910.—TABLE SHOWING NUMBER OF DAYS ELAPSING BETWEEN CONFINEMENT AND DATE OF SICKENING FROM PUERPERAL FEVER.

How Attended.	Days									Total.
	1	2	3	4	5	6	7	–15	15+	
Doctor, ...	6	4	7	2	6	...	...	5	1	31
			25					6		
Nurse	12	6	15	12	7	6	4	13	7	82
			52				30			
										113

The following tables also show the dates of sickening of those cases which ended fatally, the periods of sickening of these cases, and the number of days elapsing from the date of sickening till death:—

PUERPERAL DEATHS.

GLASGOW, 1910.—TABLE SHOWING NUMBER OF DAYS ELAPSING BETWEEN DATE OF CONFINEMENT AND DATE OF SICKENING.

How Attended.	Days.									Total.
	1	2	3	4	5	6	7	–15	15+	
Doctor, ...	2	3	3	1	3	...	2	2	...	16
Nurse, ...	5	4	5	5	...	3	...	3	...	25
	7	7	8	6	3	3	2	5	...	41

GLASGOW, 1910.—TABLE SHOWING NUMBER OF DAYS ELAPSING BETWEEN DATE OF SICKENING AND DATE OF DEATH.

How Attended.	Days.									Total.
	1	2	3	4	5	6	7	–15	15+	
Doctor, ...	...	...	2	...	1	2	...	5	6	16
Nurse, ...	1	1	2	5	1	2	...	8	5	25
	1	1	4	5	2	4	...	13	11	41

UNCERTIFIED DEATHS AND DEATHS WITHOUT MEDICAL ATTENDANCE.

In Appendix Tables XXXIX. and XL. the total deaths occurring during the 10 years, 1891-1900, and 1901-10, are stated, with the number and proportion uncertified and dying without medical attendance at all ages and under and over five years, together with a comparison of the proportions as affecting legitimate and illegitimate children under 1 and 5 years respectively, and in Table LIX. of Appendix the numbers occurring in each class in the several Wards are given. Appendix Table LX. gives corresponding information regarding the deaths occurring among members of Friendly Societies.

Certification.—At all ages, 1·2 per cent. of the deaths were uncertified, and 0·9 per cent. had no medical attendance. Under 5 years, however, 1·3 per cent. were uncertified, and 2·0 per cent. had no medical attendance. The greatest contrast is furnished by deaths occurring under 1 year. Among legitimate infants the proportion of these uncertified was 1·5 per cent., while among illegitimates it was 3·5 per cent. Of the legitimate children dying under one year, 42·8 per cent. were insured, a decrease of 1·1 per cent. from last year, while among illegitimates the proportion is only 12·1 per cent., which represents a decrease of 1·4 per cent.

In the subjoined figures a comparison is established between the proportion of deaths uncertified in 1909 and 1910:—

NUMBER AND PROPORTION OF UNCERTIFIED DEATHS IN TOTAL DEATHS REGISTERED IN 1909 AND 1910.

	Under 5 Years.		Above 5 Years.		All Ages.	
	1909.	1910.	1909.	1910.	1909.	1910.
Total deaths, ...	5,474	4,543	8,895	7,928	14,369	12,471
Not certified, ...	75	60	97	88	172	148
Percentage, ...	1·4	1·3	1·1	1·1	1·2	1·2

RABIES.

During the year the police reported, under the Rabies Order, 1897, the Dogs Order, 1906, and the Importation of Dogs Order, 1901, that 146 persons had been bitten by dogs, in 9 of whom the injury inflicted was classified as "severe," while the remaining 137 were of a more or less trifling character.

The greatest number occurred in the month of May, and the lowest in November.

The numbers occurring in each month, as well as their character, are shown in the following Tabulation:—

Months.	Severe.	Trifling.	Total.	
January, ...	2	10	12	
February, ...	1	7	8	34
March, ...	2	12	14	
April, ...	...	12	12	
May, ...	...	20	20	48
June, ...	1	15	16	
July, ...	1	14	15	
August, ...	...	10	10	39
September, ...	1	13	14	
October, ...	...	11	11	
November, ...	...	6	6	25
December, ...	1	7	8	
YEAR, ...	9	137	146	

GLANDERS.

Five intimations of the occurrence of this disease among horses stabled in the City reached me during the year, but in no instance did illness occur among attendants, who in each case were kept under observation for a definite period.

ANTHRAX.

Intimation of the occurrence of anthrax in animals reached me during the year, as follows:—

26th January,	...	Bullock, ...	Moore Street Slaughter-house.
11th February,	...	Cow, ...	Eaglesham.
16th February,	...	Horse, ...	Kennedy Street Slaughter-house.
4th March, ...	...	Do., ...	Mavisbank Quay.
8th April, ...	...	Cow, ...	Pollokshaws.
25th April, ...	...	Do., ...	West Stirlingshire.
4th July, ...	...	Do., ...	Newton Farm.
23rd August,	...	Do., ...	Stanhope Street.
27th October,	...	Bullock, ...	Moore Street Slaughter-house.
27th October,	...	Cow, ...	Do., do.
22nd November,	...	Do., ...	Newton Farm.
21st December,	...	Bullock, ...	Moore Street Slaughter-house.
25th December,	...	Cow, ...	Rothesay.

All the contacts with the above animals were kept under observation during the probable period of incubation of the disease, but in no case did any illness arise.

Throughout the year, however, the Department had occasion to deal with three cases in human beings, and the circumstances attending the illnesses are described in the following Report:—

Extract from Minute of 23rd February, 1910.

On 14th instant a patient was admitted to Ruchill Hospital from the Western Infirmary, to which institution he had been admitted two days previously suffering from anthrax. Patient came from the neighbourhood of Kilwinning, where he had been employed on a farm, on which I subsequently learned from the Medical Officer of Health of Ayrshire two cows had died from anthrax on 9th current.

The illness in this patient's case was localised on the left arm. On admission to the infirmary the affected area was excised, and anti-toxin administered in hospital. It is satisfactory to add that he is recovering

Extract from Report of 13th April, 1910.

A second case of anthrax falls to be reported as having occurred during the present year. Clinically the nature of the illness was definite, although effort to recover the organism has failed. In the earlier case the patient had been admitted to a Glasgow Hospital from Kilwinning; the present infection occurred in the person of a worker residing in Glasgow.

On 24th March a brushmaker was admitted to Ruchill Hospital suffering from a malignant pustule on the side of his neck. It would appear that on 14th March a boil had appeared on the right side of his neck, but it occasioned him so little discomfort that he was able to follow his employment till 21st March, when he commenced to feel seriously ill, and had vomiting at intervals with some shortness of breath.

Patient had been employed as a bass brushmaker (bass being a foreign grass), and worked with three others similarly occupied at a table in a room, where also some workers in hair were engaged. Patient's disease in hospital rapidly progressed, and ended fatally with internal lesions on 1st April. In view of the rapid development in hospital and of the interval between the first appearance of the boil and the

supervention of serious symptoms, it is likely that the boil on its first appearance was of a simple character, but that at some subsequent period, antecedent to 21st March, had been inoculated with the organism of anthrax.

The use of hair in the workroom referred to readily suggests itself as the source of infection, but the patient had not himself worked with hair for several months, whereas five others of his fellow-workers were constantly employed therewith. On the assumption that infection was obtained from this source, the custom of individual workers became important as possibly affording an explanation of the incidence of the disease in this particular worker. These were enquired into, and it was ascertained that deceased was in the habit of keeping the material with which he worked and his apron in a movable open box, which usually stood against the partition behind his own bench, and distant about 3 feet from the nearest hair-worker. Deceased was the only one who made a practice of so keeping his apron, the others hanging them on nails when not in use.

The floor of the premises was swept daily, so that any dust derived from small quantities of infected hair would most likely be carried off in the process of daily cleansing. The box, however, in which deceased kept his apron was an exception to this. It was not swept daily, and, as a matter of fact, the bottom contained a considerable quantity of dust, among which fragments of undyed hair have been recognised. Here then an opportunity would seem to have been afforded of retaining the dust until some suitable occasion would present itself, on which inoculation might occur, and the occasion would appear to have been supplied by the appearance of the boil on deceased's neck, as his hands and nails might readily enough become carriers of the dust which his apron had opportunity of picking up every time it was deposited in the box in question.

The hair, in addition to being derived from home sources, consisted also of hair from Siberia, Russia, Italy, India, and China. All of it was undyed.

It fell to be noted in the present instance that no provision for washing the hands or cleansing the nails existed in the premises, although this introduction is now, I understand, being considered.

The original papule or boil appeared on March 14th, the sickness and vomiting supervened on March 21st; he was admitted to hospital on March 24th, and died on April 1st.

The definite character of the clinical symptoms as observed in hospital is worthy of note, as bacteriological examination failed to recover the organism, either from the patient's tissues or from the hair samples.

Dr. Buchanan's report on the investigation is as follows:—

LABORATORY REPORT.

(*a*) The specimens received on March 24th from A. S., æt. 36, have been submitted to bacteriological examination, with the following results:—

Material on swab from open surface of pustule.—Microscopic and cultural examination showed the presence of streptococci.

Fluid from vesicle.—Microscopic and cultural examination showed the presence of staphylococci.

A guinea-pig was inoculated intraperitoneally with some of the fluid with negative result.

No trace of B. anthracis was found in either specimen.

(*b*) The following samples of the material handled by patient were received on March 25, and were submitted to bacteriological examination:—

(1) Bahi bass.
(2) African bass dyed black.
(3) African bass dyed brown.

Cultural examination of these samples showed the presence of bacillus subtilis but no trace of bacillus anthracis.

(*c*) The following samples of dust and hair were received on March 30th, and were submitted to bacteriological examination :—

Dust—one sample.

Hair—nine samples, namely :

1. Drafted horse hair (foreign).
2. 4½ grey Petersburg 2nds.
3. 4 grey extras, either Siberian or Polish.
4. China bristles
5. Indian or Calcutta bristles.
6. Drafted horse hair.
7. Drafted all-English horse hair.
8. Drafted horse hair.
9. Drafted horse hair.

Cultural examination showed the presence of bacilli of the B. subtilis type but no trace of B. anthracis. Guinea-pigs were inocculated with 1cc. of the washings of each sample with negative results.

(*d*) A portion of patient's spleen was received on April 2nd, and submitted to bacteriological examination, with the following result :—

Microscopic and cultural examination showed the presence of the following organism :—

1. Streptococci.
2. A large gram positive anærobic bacillus (B ærogenes capsulatus).
3. A small gram negative bacillus (Coliform bacillus).

Two guinea-pigs were inoculated. (1) Subcutaneously and (2) intraperitoneally.

Guinea-pig (1) died within 48 hours, and the streptococcus and coliform bacillus were recovered from the tissues. Guinea-pig (2) died of acute peritonitis within 72 hours, and the streptococcus and coliform bacillus were recovered from the peritoneal exudate.

The morbid products from the patient, and the samples of dust, hair, and bass from his surroundings have thus failed to yield any trace of the bacillus anthracis.

The following notes from the Hospital Ward Journal record the clinical condition of patient :—

HOSPITAL REPORT.

Admitted.—March 24th, 1910—

History.—Patient had a large swelling on right side of neck on March 21st, accompanied with sickness, fainted twice the following day. He has not been sleeping well.

Malignant pustule on right side of neck just below and in front of angle of jaw, oedema extends over right side of face and neck and downwards over the chest to slightly below the transverse nipple line.

Heart.—Normal.

Lungs.—Normal.

Abdomen.—Seems normal, tongue furred.

Three hours after admission, excised the pustule and the surrounding skin for about one inch.

March 30th, 1910.—Temperature came down on the morning after the excision, but rose again on the 26th; since then it has been running high. Pulse rapid—120. Patient vomiting. On 28th, complains of acute abdominal pain, abdomen distended, fluid in flanks, spleen slightly enlarged; 30th, fluid increased in abdomen, patient no better.

Sclavos Serum given on 24th, 20, cc intravenously.
26th, 30, cc
27th, 40, cc
28th, 30, cc
29th, 30, cc
30th, 40, cc

Extract from Minute of 14th December, 1910.

On 19th ultimo a case of anthrax was removed from the Western Infirmary Dispensary to Ruchill Hospital. On inquiry it was ascertained that the patient had been employed as a scavenger by the Parish Council of Stevenston, and had on 3rd November assisted at the dressing and burial of the carcase of a bullock, which had died there.

Immediately on admission to hospital the affected pustule was excised, and anti-anthrax serum given. The patient is now convalescent.

Towards the end of the year, information was received from a firm of Hide Factors in the City that a butcher had died at Tarbolton, in Ayrshire, consequent on handling a carcase of an animal dead of Anthrax, the hide of which was in their possession. The following extract from the Report to the Committee on Health shows the action taken thereanent.

Extract from Minute of 28th December, 1910.

On 12th instant information was received from a firm of hide factors in the City that they had been informed that a butcher at Tarbolton, in Ayrshire, had died of anthrax after having skinned an ox, the hide of which was in their possession. The hide was taken possession of and destroyed, a piece being detained for examination, and from which the bacillus anthracis was subsequently recovered.

On enquiry at the Medical Officer of Health for Ayrshire it was ascertained that the animal was suspected of having died from "black leg," and it was only on the occurrence of the human case that the true cause of death became known.

In connection with all the instances of the disease, both in animals and in human beings, full enquiry was made, through the Local Medical Officers of Health, as to a possible source of infection of the animals, and while in most instances suspicion has been directed against feeding stuffs, only in one instance was any record obtained of definite infection through that source.

On enquiry at Dr. M'Donald, County Medical Officer of Health, Ayr, regarding the source of infection of the patient admitted to Ruchill Hospital on 14th February (see extract of Minute of 23rd February), he replied that China bean meal had formed part of the feeding stuffs of the infected animal, and that a sample of this meal which had been examined in the County Laboratory had been found to contain the bacillus anthracis.

Repeated samples of peas and other feeding from the food supply of the herds supplying milk to the Epidemic Hospitals have been examined within recent months, but the result has been negative in each case.

PTOMAINE POISONING.

On three occasions during the year the attention of the Department was directed to cases of alleged ptomaine poisoning associated with mince meat, sausages, and black pudding. In all, three male and two female adults were affected, and one of the former died.

In the first two instances the absence of material for bacteriological examination prevented full enquiry being made into all the circumstances. In the last instance, however, material was available, and the following is a record of the illnesses and the laboratory results:—

About 7.30 p.m., on the evening of 6th November, A. M'L. and his wife, residing in Springburn, were seized with vomiting, abdominal cholic, and diarrhœa, and on the family medical attendant being called in, he advised removal to the Royal Infirmary, where the illnesses were diagnosed as ptomaine poisoning.

On enquiry it was ascertained that they partook of sausages and eggs for breakfast, potatoes for dinner, and plain tea, and later ice-cream, A. M'L. falling ill about 7.30 p.m., and his wife between 1 and 2 a.m. the following morning. Two children in the family, aged seven and five years, also partook of the various meals mentioned above, but did not suffer in any way. No samples of the meat consumed were obtained, but the Bacillus of Gaertner was recovered from the fæces and gastric contents from both patients.

BACTERIOLOGICAL LABORATORY.

During the year, 4,929 specimens of morbid products were forwarded to the Laboratory, as compared with 4,655 in 1909. The specimens were submitted by 472 medical practitioners. Of these, 393 (accounting for 4,030 specimens) were in general practice within the municipal boundary, 9 (accounting for 16 specimens) were resident outwith the boundary, 65 (accounting for 346 specimens) were acting for public institutions, and 5 (accounting for 167 specimens) were connected with the Public Health Department.

It thus appears that about 95 per cent. of the medical practitioners engaged in general practice within the City availed themselves of the Laboratory for bacteriological diagnosis during the year, the average number of specimens received from each practitioner being about 9.

Dr. Buchanan tabulates the results of these examinations in the following manner, the figures for 1908 and 1909 being introduced for comparison:—

TABLE SHOWING THE NUMBER OF SPECIMENS RECEIVED FROM MEDICAL PRACTITIONERS OF GLASGOW FOR BACTERIOLOGICAL DIAGNOSIS DURING THE YEAR 1910, COMPARED WITH 1908 AND 1909.

Month.	Diphtheria.			Enteric Fever.			Tuberculosis.			Total.		
	1908.	1909.	1910.	1908.	1909.	1910.	1908.	1909.	1910.	1908.	1909.	1910.
January,	128	172	184	203	55	64	125	97	146	456	324	394
February,	154	223	177	75	80	70	126	119	139	355	422	386
March,	164	188	177	65	90	78	127	152	167	356	430	422
April,	131	190	149	33	56	45	101	130	162	265	376	356
May,	88	144	182	40	48	42	122	150	164	250	342	388
June,	87	202	187	36	54	34	100	127	160	223	383	381
July,	78	138	157	41	44	38	63	69	91	182	251	286
August.	80	188	164	72	48	54	83	95	101	235	331	319
September,	126	223	190	71	110	88	95	99	127	292	432	405
October,	213	336	353	79	84	79	92	104	150	384	524	582
November,	240	270	299	76	86	84	122	115	157	438	471	540
December,	205	185	267	72	69	51	120	115	152	397	369	470
Total.	1,694	2,459	2,486	863	824	727	1,276	1,372	1,716	3,833	4,655	4,929
Positive result obtained in	29%	28·3%	31·7%	36·2%	27·4%	26·1%	33·9%	34·6%	33·3%	32·3%	30·07%	31·4%

It will be observed from the foregoing Table that the specimens (4929) received from the Medical Practitioners of the City for the bacteriological diagnosis of diphtheria, enteric fever, and tuberculosis continue to increase in number. Diphtheria specimens show a slight increase of 27, enteric fever a decrease of 97, and tuberculosis an increase of 344. The increase is therefore mainly in specimens from suspected cases of tuberculosis, and is attributable to the introduction of compulsory notification at the beginning of the year.

It will also be observed that a positive diagnosis was obtained in an average of about one-third of the specimens submitted from the suspected cases of all three diseases.

TABLE SHOWING THE TOTAL NUMBER OF SPECIMENS FROM SUSPECTED CASES OF DIPHTHERIA, ENTERIC FEVER, AND TUBERCULOSIS ANNUALLY SENT TO THE LABORATORY FOR BACTERIOLOGICAL DIAGNOSIS BY THE MEDICAL PRACTITIONERS OF GLASGOW SINCE THE INAUGURATION OF THIS WORK ON 1ST JANUARY, 1900.

Year.	Diphtheria.	Enteric Fever.	Tuberculosis.	Total.
1900, - -	353	543	351	1,247
1901, - -	438	1,048	565	2,051
1902, - -	712	807	847	2,366
1903, - -	997	1,014	932	2,943
1904, - -	928	853	1,010	2,791
1905, - -	980	771	1,024	2,775
1906, - -	1,357	663	1,212	3,232
1907, - -	1,357	613	1,238	3,208
1908, - -	1,694	863	1,276	3,833
1909, - -	2,459	824	1,372	4,655
1910, - -	2,486	727	1,716	4,929
TOTALS, - -	13,761	8,726	11,543	34,030

In addition to the routine bacteriological examination of those specimens from the medical practitioners of the City, 1,067 have also been examined from diphtheria contacts, and 523 from patients attending the tuberculosis dispensaries. These are detailed in the two following tables respectively:—

(1) DIPHTHERIA CONTACTS.

The systematic bacteriological examination of all persons in more or less intimate contact with cases of diphtheria (commenced in March, 1906), has been continued as far as possible. During the year, the number of such contacts subjected to this method of examination amounted to 1,067, and the diphtheria bacillus was found in 122, or 11·4 per cent.

These positive contacts comprise two distinct groups—(1) persons having no clinical signs of diphtheria, and though not definitely ill, showing on careful inspection some departure from normal health locally (throat or nose), or constitutionally (anæmia or disturbance of pulse and temperature), and (2) persons showing no departure from perfect health either locally or constitutionally.

Year.	Diphtheria Contacts Examined.	Percentage Positive.
1906 (10 months)	322	10·5
1907	692	6·9
1908	841	9·2
1909	909	10·7
1910	1,067	11·4

(2) TUBERCULOSIS DISPENSARIES.

In addition to the Bellefield Dispensary which has been established in the Sanitary Chambers since the beginning of 1906, five Tuberculosis Dispensaries were instituted in the early part of the year in different parts of the City. These institutions collectively have yielded 523 specimens of sputum

for microscopical examination. The bacillus tuberculosis was found in 42 per cent., which is about 10 per cent. more than in the routine specimens submitted from general practice.

Month.	Broad Street.			Duke Street.			Oakbank.			St. Vincent Street.			Nicholson Street.			Bellefield (Sanitary Chambers).			Total.		
	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.
January,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	6	18	12	6	18
February,	—	—	—	—	—	—	1	—	1	—	—	—	1	—	1	24	10	34	26	10	36
March.	5	11	16	—	2	2	1	2	3	—	1	1	1	2	3	7	7	14	14	25	39
April,	1	10	11	1	1	2	3	12	15	2	3	5	2	4	6	9	7	16	18	37	55
May,	2	9	11	—	1	1	1	5	6	—	1	1	—	1	1	9	4	13	12	21	33
June,	5	7	12	1	—	1	1	5	6	2	3	5	1	8	9	11	6	17	21	29	50
July,	3	6	9	—	—	—	2	1	3	3	6	9	3	3	6	5	4	9	16	20	36
August,	2	6	8	3	2	5	1	4	5	—	3	3	3	4	7	9	8	17	18	27	45
September,	5	7	12	—	—	—	1	8	9	—	—	—	3	3	6	—	—	—	9	18	27
October,	1	7	8	1	—	1	1	2	3	1	3	4	3	4	7	10	5	15	17	21	38
November,	6	12	18	—	4	4	6	9	15	4	7	11	2	12	14	12	5	17	30	49	79
December,	4	11	15	2	1	3	1	—	1	3	7	10	—	11	11	18	9	27	28	39	67
Totals,	34	86	120	8	11	19	19	48	67	15	34	49	19	52	71	126	71	197	221	302	523

INVESTIGATIONS.

In addition to the above specimens tabulated, 1,426 of a miscellaneous nature were investigated for the Medical Officer of Health, the Sanitary Inspector, the Veterinary Surgeon, Medical Practitioners within the City, and the Water and Tramways Departments. These may be summarised as follows:—

Medical Officer of Health—

(a) *Health Department—*

Enteric Fever—Serum Reaction (38), Search for Bacillus Typhosus in Blood (1), Urine (22), Fæces (19), ...	80	
Diphtheria—Cultures (2), Suspected Cats (6), ...	8	
Anthrax—Search for Bacillus Anthracis in Tissue (5), in Fluid, Swab, and Hair (12), Hide (1), Feeding-stuffs (28),	46	
Plague—Pus from Suspected Case, ...	1	
Cholera—Dejecta from Suspected Case, ...	1	
Sore Throat Outbreak—Swabs, Milk, Udder Lesions, ...	33	
Ophthalmia—Eye Discharges for Koch-Weekes Bacillus, ...	11	
Favus—Mice, ...	6	
Bacterial Diagnosis—Cerebro-spinal Fluid (4), Urine (4), Pus (1), ...	9	
Food Poisoning—Food Stuffs (20), Blood, Dejecta, and Morbid Products (8), ...	28	
Shellfish—Sewage contamination (2 lots Mussels), ...	2	
Poisoning—Dog, ...	1	
Water—Insect (1), Bacterial Analyses (17), ...	18	
	—	244

(b) *Hospitals—*

Belvidere—

Enteric Fever—Serum reaction (13), Search for Bacillus Typhosus in Urine (1), ...	14	
Diphtheria—Cultures, ...	27	
Bacterial Diagnosis—Urine, ...	1	
	—	42
Carry forward, ...		286

Brought forward, ...		286
Ruchill—		
Enteric Fever—Serum reaction (1), Search for Bacillus Typhosus in Urine (3), ...	4	
Diphtheria—Cultures, ...	6	
Anthrax—Tissues, ...	3	
Bacterial Diagnosis—Urine (6), Fæces (1), ...	7	
	—	20
(c) *Bellefield Sanatorium—*		
Tuberculosis—Sputum (114), Opsonic (117), ...		231
Sanitary Inspector—		
Milk—Bacterial Diagnosis, ...	2	
Fish—Parasite, ...	1	
Water—Insects, ...	2	
	—	5
Veterinary Surgeon—		
Milk from Country Cows with Disease of the Udder, ...	506	
Milk from Town Cows with Disease of the Udder, ...	169	
Tuberculosis—Swabs, Tissues, ...	13	
Anthrax—Feeding Stuffs (peas), ...	8	
Bacterial Diagnosis—Stomach Tissue, ...	1	
	—	697
Medical Practitioners—		
Enteric Fever—Search for Bacillus Typhosus in Urine and Fæces, ...	4	
Tuberculosis—Search for Bacillus Tuberculosis in Urine, ...	29	
Bacterial Diagnosis—Urine and Fæces (80), Pus (29), Sputum (1), Cerebro-Spinal Fluid (3), Synovial Fluid (1), Appendicitis (2), Mucous Colitis (1), Catgut (2), ...	119	
Puerperal Fever—Pus for Bacterial Diagnosis, ...	3	
Paratyphoid Fever—Blood for Bacillus Paratyphosus, ...	1	
Anthrax—Pus for Bacillus Anthracis, ...	1	
Actinomycosis—Pus, Tissue, Sputum, ...	9	
Syphilis—Blood for Wassermann Test, ...	4	
Cancer—Tissues, ...	2	
Bilharzia Hæmatobia—Urine, ...	12	
	—	184
Water Department—		
Water for Organism, ...	1	
	—	1
Tramways Department—		
Disinfectants, ...	2	
	—	2
Total, ...		1,426

EXAMINATION OF RATS IN RELATION TO PLAGUE, 1910.

During the year 1910, fifty-two rats and two mice were brought to the Laboratory and examined for Plague, with negative results.

The following Table gives the numbers examined in relation to the places from which they were obtained, and in comparison with the previous year.

Year.	From the City.	From Shipboard.	From Docks.	Total.	Plague Infected.
1910	16	29	7	52	—
1909	407	170	—	577	—

EXAMINATION OF LOCH KATRINE WATER AS DRAWN FROM LABORATORY TAP DURING 1910.

Month.	Average No. of Bacteria in 1cc. as estimated in gelatine plate at 20°C.	Bacillus Coli present (+) or absent (–) in			Other bacilli of the Coli family present (+) or absent (–) in		
		10cc.	5cc.	1cc.	10cc.	5cc.	1cc.
January.	105	+	+	—	+	+	—
February.	51	—	—	—	+	—	—
March,	53	+	—	—	—	—	—
April,	41	+	+	—	+	+	—
May,	19·5	—	—	—	+	+	—
June,	40·5	—	—	—	+	—	—
July,	29·6	—	—	—	+	+	+
August,	37·5	—	—	—	+	+	+
September,	22	—	—	—	+	+	+
October,	39·2	—	—	—	+	+	—
November,	30·5	—	—	—	+	+	+
December,	47·5	+	+	—	+	+	+

Bacillus Enteritidis Sporogenes was absent in 10cc. and Streptococci in 50cc. throughout the year.

HOSPITALS AND RECEPTION-HOUSES.

AN ACCOUNT OF THE HOSPITAL ACCOMMODATION AVAILABLE FOR PERSONS SUFFERING FROM INFECTIOUS DISEASE (INCLUDING THE MEANS PROVIDED FOR THE CONVEYANCE OF SUCH PERSONS, AND OF THE HOUSES OF RECEPTION, WITH OBSERVATIONS ON THE FURNISHING, MAINTENANCE, ADMINISTRATION, AND ADEQUACY OF SUCH ACCOMMODATION, &c.).

(a) *Hospitals.*—Table LXI. of Appendix contains a statement of the number of beds available for epidemic disease at various periods since 1865, with the relative proportion per thousand of the population.

In compliance with an instruction of the Corporation, the following Report was prepared on the requirements of the City in regard to the accommodation for the treatment of infectious disease, and the existing accommodation available:—

MEMORANDUM ON HOSPITALS.

CONTENTS.

MEMORANDUM ON HOSPITALS.

INTRODUCTION.

The following memorandum is prepared in compliance with the instruction of the Corporation, as contained in the minute of the Committee on Health of 22nd November, 1909 (Print No. 4, page 238), that the Medical Officer of Health should report on—

(*a*) the requirements of the city in regard to the accommodation for the treatment of infectious disease, and

(*b*) the existing accommodation available.

Since the extension of the city boundaries in 1891, the total number of beds provided by the Corporation for the treatment of infectious disease has been increased from 660 to 1,152.

440 of these beds were provided at Ruchill Hospital, which was opened in 1900 as part of a definite policy of hospital extension, but there were three separate occasions, apart from this, when the existing accommodation was extended to meet the epidemic requirements of the moment.

The first of these additions was made in 1892, when 80 beds were added to Parliamentary Road Hospital, to meet the requirements of scarlet fever. In 1901, 70 beds were added to the smallpox accommodation at Belvidere during the pressure of an epidemic, while a combined prevalence of scarlet fever, diphtheria, and measles, towards the close of 1909, led to the addition of 102 beds at Ruchill. The total number of beds thus accounted for is 1,352, but 200, which had been available at Parliamentary Road Hospital were lost by its demolition in 1906, and the accommodation now existing consists of 610 beds at Belvidere (including smallpox) and 542 at Ruchill.

A more detailed consideration is desirable, however, if we are to appreciate the present requirements of hospital accommodation in relation to the decrease which has taken place in the group of diseases for which it was originally provided.

The hospital policy of the Corporation was formulated in the presence of recurring epidemics of the major infectious diseases. Typhus fever was so constant and dominant a factor among these that its impress still remains in the form of our hospital wards. In the interval, these diseases have to a large extent given way administratively to the infectious diseases of childhood, although we still use the term hospital accommodation much in the same sense as formerly when used in relation to the isolation of typhus fever and smallpox.

Since 1876, when the Royal Infirmary finally closed its wards against the treatment of infectious disease, the sole provision therefor within the Municipal area has been undertaken by the Corporation.*

In that year the population of the city was 502,000, and the total beds provided numbered 500, which were equally divided between the original Municipal Hospital at Parliamentary Road and Belvidere (Fever) Hospital. Two years later (1878) the accommodation at Parliamentary Road was reduced to 120 beds, while 150 beds were added by the opening of the Smallpox Hospital at Belvidere, thus bringing the total accommodation to 520 beds. Meanwhile, the population had increased to 507,000.

Further additions to the Fever Wards at Belvidere were made in 1881 (120 beds), and again in 1887 (20 beds), so that the total accommodation in this latter year was 660 beds, of which 390 were in Belvidere Fever Hospital, 150 in Belvidere Smallpox Hospital, and 120 in Parliamentary Road. The population had now increased to 543,000, and the ratio of beds to population from 10 per 10,000 in 1876 to 12 in 1887.

The next change occurred in 1893. The hospital at Parliamentary Road had been held in reserve from 1878 till 1890, when it was re-opened for measles and whooping-cough, to which influenza was added in 1892. In 1893 an excessive prevalence of scarlet fever led to the hurried erection of 80 additional beds here, and the decision to erect a new hospital at Ruchill. During the subsequent years of this decade the total

* The only exception to this is afforded by erysipelas, certain cases of which are sometimes, for convenience, treated elsewhere.

available accommodation was thus 740 beds, for a population which, in the middle of the decade, closely approached 700,000.

In the Autumn of 1900 Ruchill (440 beds) was opened, so that the total bed accommodation was raised to 1,180, and the ratio of beds to population to 16 per 10,000.

This ratio had been exceeded in 1870, but at that time 274 of the 774 beds then available for a population of 474,000 were provided in the Royal Infirmary, and in the hospitals of the Barony and of Govan Parishes, and the number of beds fell short by only 74 of the available accommodation (1,254 beds) provided to meet the worst typhus fever epidemic of last century (1847).

When the Royal Commission on the Provision of Hospital Accommodation for the Metropolis reported in 1882, they recommended a combined provision for smallpox and fever of 13 beds per 10,000 of the population, but stipulated that it should be capable of rapid expansion to 15 during times of smallpox pressure—the proportion of accommodation for this disease being respectively 5 and 7 in the aggregates quoted. In a report by the Medical Officer of Health submitted to the Corporation in December, 1882, the aggregate provision for Glasgow was placed at from 13 to 14.

According to these ratios, the existing accommodation in 1901 should have proved ample when the epidemic of smallpox broke over the city in that year, but the first effect of the outbreak was to compel the hurried erection of 5 additional wards within the area of the smallpox hospital, and ultimately to render partial evacuation of the fever hospital an administrative necessity, at a time when the added pavilions had increased the available beds to a number never formerly reached in Glasgow, viz., 1,265, and the ratio of the aggregate provision to 17 beds per 10,000 of the population.

At this date (1901) the permanent smallpox accommodation was equal to almost 2 (1·9) per 10,000 of the population, which the added 70 emergency beds raised to barely 3 (2·87), yet this fell considerably short of the requirement in the spring of that year.

At that period, when the maximum demand for smallpox accommodation occurred, the largest number of smallpox patients under treatment at one time was 498, but, with added cases of other diseases, which unavoidably accrue under these circumstances, the total under treatment was 514, which is equal to a demand of 6·7 beds per ten thousand of the population at that time. The requirements, therefore, amounted to fully twice the accommodation provided within the smallpox hospital itself, and could be met only by utilising fever hospital beds.

On the passing of the smallpox epidemic, Parliamentary Road Hospital was closed against patients, in November, 1901, but was used at intervals subsequently as a reception-house for smallpox contacts. Finally, it was removed in April, 1906, and and thus brought to an end an agitation, which had its origin in the suspicion of spreading disease, which had arisen when it was being used as a smallpox hospital in the seventies.

The removal of these 200 beds at Parliamentary Road reduced the available accommodation to 1,065, or the equivalent of 13 beds per 10,000 of population.*

Finally, towards the close of 1909, a combined pressure of scarlet fever, diphtheria, and measles determined the erection of three pavilions at Ruchill, each with accommodation for 34 beds, or a total addition of 102 to the accommodation there, which now reaches 542.

The aggregate accommodation in the city now stands at 1,152, distributed in the following way:—

	Beds.	Per 10,000 of Population.
In Fever Hospitals—Belvidere,	390	—
Ruchill,	542	—
Total Fever Beds,	932	10·54
In Smallpox Hospital—Belvidere,	220	2·48
Total Beds,	1,152	13·02

* This does not take into account a further reduction in the accommodation equal to 13 beds, constantly occupied, which arose from Glasgow's share in Knightswood Hospital being acquired by Partick, nor to the added requirements which accrued owing to the annexation of Kinning Park, whose isolation requirements had previously been supplied at Shieldhall Hospital.

We have thus a total accommodation of 13 beds per 10,000 of the population, barely 3 of which are nominally available for smallpox. The inadequacy of this provision during epidemic pressure has been already seen, and experience has also shown that, long before these beds are fully occupied, the safety of the patients in the adjacent fever wards becomes imperilled—only patients with recent effective vaccination can be admitted, and when the disease becomes epidemic the fever beds practically cease to be available in any substantial number for the diseases for which they are intended.

COMPARATIVE STATEMENT OF FACILITIES FOR ISOLATION.

Extent of Accommodation.—In the whole range of sanitary administration, few of the details differ so widely as the extent of the isolation accommodation provided by the several Local Authorities. This may arise less from divergent views as to the value of isolation than from differences in the circumstances which affect the home life of the people in the presence of infectious disease. Years ago it was demonstrated § that the population inhabiting the Peabody Trust Buildings in London had a lower incidence of all classes of fatal disease, save one, than the surrounding populations. The exception was supplied by infectious diseases, and the explanation lay in the increased facilities for the spread of infection which the system of block buildings afforded. Our Scottish system of flatted tenements has much in common with the Peabody Buildings, and whooping-cough or measles "on the stair" implies an element of risk to the children of the other houses thereon, which has little parallel in the self-contained lodgings in which so large a portion of the population of an English industrial town is housed.

These structural differences influence practice, because they hinder or facilitate home isolation. In another respect also the policy of a Local Authority may be influenced by local conditions, for in some towns it is still the practice to treat some cases of infectious disease in Poor Law or General Hospitals.

Notwithstanding the effect which these considerations will have on the extent of accommodation provided by different Local Authorities, a comparison of the bed accommodation provided by several of the large towns is useful.

Town.	Population.	Fever Beds.		Smallpox Beds.		Total.	
		No.	Rate per 1,000.	No.	Rate per 1,000.	No.	Rate per 1,000.
London, - -	4,795,757	7,078	1·48	2,040	·42	9,118	1·9
Liverpool, - -	753,203	1,075	1·39	160	·21	1,235	1·6
Leeds, - - -	477,107	474	1·00	184	·40	658	1·4
Glasgow, - -	884,505	932	1·05	220	·25	1,152	1·3
Birmingham, -	563,629	545	1·00	120	·21	665	1·2
Sheffield, - -	463,222	480	1·03	40	·07	520	1·1
Manchester, - -	649,251	508	·81	50	·09	558	·9
Edinburgh, - -	360,548	*554	1·54	48	·13	602	1·67
Dundee, - -	170,206	125	·74	20	·12	145	·86
Aberdeen, - -	185,703	†182	·98	...	...	182	·98

* This excludes 46 beds for the treatment of pulmonary phthisis.

† Exclusive of children's cots, but including extension of 55 beds at present being carried out.

The Metropolitan Asylums Board thus exceeds the maximum aggregate accommodation contemplated by the Commission already referred to by quite 26 per cent., so that the provision now is equal to 19 beds per 10,000 of its population. For corresponding units of population Edinburgh provides almost 17 beds; Liverpool, 16; Leeds, 14; while Glasgow comes fifth on the list, with a ratio of 13 beds.

§ See Newsholme, Trans., Royal Statistical Society, 1891.

CHANGES IN CHARACTER OF DISEASES REQUIRING ISOLATION.

Before considering the demands which have from time to time been made on this accommodation, it is well to have regard to the changes which have occurred in the diseases accommodated, for, as has been observed, not only the policy of hospital provision in last century, but to some extent the details of hospital structure, were dominated by the one illustration of infectious disease, which, from its magnitude, practically shut out all others from the view of the administration.

To appreciate these changes in detail, the following Table may be of some assistance:—

TABLE showing the proportion of several diseases in every 100 admissions to the Fever Hospitals of Glasgow in several periods during the years 1865-80 and 1892-09. The Table has been prepared by selecting the Maximum and Minimum in each of the periods from a Return showing the number of admissions for each year.

Hospital Years Ending May 31st.	Typhus Fever.		Enteric Fever.		Relapsing Fever.		Scarlet Fever.		Diphtheria.		Measles.		Whooping-cough.	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
*1865-70	81	91	4	7	·8	...	·4	3·7	...	...	...	·3	...	...
1871-76	18	39	1	24	10	78	...	49	...	...	·1	7	...	...
1876-80	10	31	25	29	...	...	13	34	...	...	7	16	1	6
†1892-95	·6	2·7	5	14	...	...	42	60	1·5	5	8	20	4	8
1896-1900	·3	1·5	11	17	...	...	40	55	3·4	3·7	9	30	3	10
1901-05	·4	1·4	10	15	...	...	22	53	4	9	7	29	5	21
†1906-09	·06	·86	5	7	...	...	22	39	12	17	8	40	6	20

*6 Years. †4 Years.

In the construction of this table, smallpox has been left entirely aside, because of the essentially epidemic character of its major prevalences and the long intervals—almost 30 years—which separate them.

What will chiefly arrest attention in the Table is the change in the character of the diseases, for which the hospitals are now to a considerable extent utilised.

When hospital accommodation was undertaken by the Corporation, the deaths from typhus fever alone numbered several hundreds annually, and in the first year quoted they reached 1,177 in a population of 428,000, while the average annual death-rate was equal to 1,576 per million.

Scarlet fever in the sixties almost equalled typhus in its malignity, and even in the first quinquennium of the seventies had a death-rate equal to 1,379 per million, as compared with 73 in recent years.

Whooping-cough was almost as fatal as scarlet fever, while the death-rate from measles exceeded that from diphtheria.

Enteric fever had an average annual death-rate of 492 per million, compared with 98 in recent years.

Yet the whole hospital administration was dominated by the demand for accommodation for typhus fever—in the best years it supplied 4 out of every 5 admissions, in the worst 9 out of every 10. In contrast with this, the maximum admissions in any year of the last decade have not reached 1 per cent., and have fallen below 1 in 1,000.

The change is even greater than is here indicated, for in the earlier years of the table only about one-half of the total deaths from typhus fever occurred in hospital, while under notification every known case is removed.

Coincidently with this reduction in the demand for accommodation for typhus fever, the other infectious diseases come into prominence in the hospital record, and so, in the early seventies, 49 per cent. of the admissions in one year were from scarlet fever, and 16 per cent. from measles. Accommodation is only found for whooping-cough in the later years of this decade, the number reaching 6 per cent. of the total admissions in one year.

After an interval of 10 years, the complexion of the table alters. Occasional cases of diphtheria had been admitted to Belvidere from 1876, but it was not until 1889 that the proportion of deaths from this disease occurring in hospital exceeded 10 per cent. of the total deaths occurring therefrom in the city. This proportion has now risen to 87 per cent.

The introduction of the Infectious Disease (Notification) Act, in the following year, revealed the extent of the disease, and supplied definite data regarding its excessive fatality, with the result that an increasing proportion of cases was removed to hospital.

EFFECT OF NOTIFICATION ON THE PROPORTION OF CASES REMOVED TO HOSPITAL.

The foregoing analysis is limited to the relative volume of the several diseases treated in hospital. It tells nothing of the proportion which these formed of the total cases occurring in the city.

To arrive at this in the pre-notification period, recourse must be had to the proportion which the deaths in hospitals formed of the total deaths occurring from particular diseases.

In the twenty years which preceded notification this had been already increasing. Of enteric fever deaths, the proportion occurring in hospital rose from 7 to 30 per cent. during the seventies decade, and reached 58 per cent. in 1890.

Of scarlet fever deaths, less than 1 per cent. occurred in hospital in 1870, but reached 23 per cent. in 1880 and 64 per cent. in 1889.

Diphtheria, as we have seen, only began to be regarded as a disease for hospital treatment in the eighties, and for the first time in 1889 the proportion of deaths in hospital reached 14 per cent. of the total.

Notification, as was anticipated in the discussions which preceded its introduction, somewhat accelerated the rate at which the practice of removal was increasing, and made it possible to state the removals in relation to the total number of cases occurring.

Thus, 65 per cent. of the cases of enteric fever notified in the five years 1891-6 (the Act was introduced in 1890) were removed to hospital, 81 per cent. in 1896-1900, and 90 in 1901-6; of scarlet fever in the same periods the proportions removed were 69, 81, and 85 per cent.; and of diphtheria 21, 47, and 68 per cent.

The evidence, however, is scarcely so uniform or conclusive regarding a second anticipation which was advanced as to the possible result of increased isolation in ultimately reducing the total volume of disease occurring. The reduced prevalence of enteric fever might be appealed to as illustrating this, for the attack-rate per million in the three quinquennia following 1891 was in succession 1,129, 1,338, and 1,025, while for the four years 1906-9 it was only 629. But the attack-rate of scarlet fever, which fell in succession from 5,873 per million in the quinquennium 1891-6 to 4,958 in the next, and to 2,684 in the period 1901-5, rose to 3,226 in the four years 1906-9; while that of diphtheria rose from 686 in 1896-1900 to 841 in 1901-5, and the average of the last four years (1906-9) is 1,767, as compared with 1,054 in the years 1891-5.

Whatever part, therefore, we are inclined to ascribe to hospital isolation *per se* in contributing to the reduced prevalence of enteric fever, it is obvious that its function with regard to scarlet fever and diphtheria is less simple.*

The whole value of hospital isolation, however, is not, I think, to be expressed in terms of the reduced prevalence of particular diseases. May it be regarded as contributing to a reduced fatality-rate? This may in part be determined by a comparison of the deaths per 100 persons attacked. On this point the behaviour of enteric fever differs again from the others. Systematic hospital isolation has been accompanied with a marked reduction in the prevalence of this disease, but there is no corresponding reduction in its fatality-rate among persons attacked. On the other

* The argument here purposely leaves out of account the effect of other forces acting contemporaneously with hospital isolation in the reduction of Enteric Fever, as, for example, the progressive introduction of water-closets and the abolition of privy-middens.

hand, the case-fatality of scarlet fever has fallen from 6 per cent. in 1891-5 to 3 per cent. in 1906-8, although in recent years, as has been shown, the prevalence of the disease has tended towards increase. Again, the fatality-rate of diphtheria has fallen from almost 29 per cent. in the years 1891-5 to an average of 11 per cent. in the last three years, but here the introduction of treatment by anti-toxin completely overwhelms in its effects any conclusion that might have been based on the practice of hospital removal. These remarks are based on the following table:—

GLASGOW.—Case Mortality per cent. in certain Diseases for several periods.

Period.	Enteric Fever.	Scarlet Fever.	Diphtheria.
1891-95, - -	16·8	6·0	28·6
1896-1900, - -	18·6	4·8	23·9
1901-05, - -	14·6	4·1	16·1
1906, - - -	21·1	3·6	10·7
1907, - - -	19·6 } 17·6	2·6 } 3·1	10·4 } 10·8
1908, - - -	12·1	3·2	11·3

THE NON-NOTIFIABLE DISEASES.

The effect of a policy of isolation on the volume of the non-notifiable diseases can only be partially suggested through a halting inference from the changes in the death-rate which they occasion.

In the actual number of admissions, and in the proportion which these form of the total admissions to hospital, whooping-cough and measles have undergone so great an increase as practically to alter the whole complexion of the hospital returns. Typhus and enteric fever are diseases of adolescence and adult life. Scarlet fever, and to an even greater extent, measles and whooping-cough, are essentially diseases of childhood. Practically three out of every four admissions for these causes are of young children.

In many places little or no effort is made to provide them with hospital accommodation. The general and children's hospitals exclude them because they are infectious; many Local Authorities make little, and some no provision to accommodate them, on the assumption that hospital isolation has little effect on their prevalence.

The practice in Glasgow being somewhat different from this, can it be shown to have produced any result either in lessened incidence or in lowered mortality?

In the first place, what relation exists between the increased admissions and the known volume of the disease at any given time?

This we may summarise in several periods for the last nineteen years:—

Year.	Average Annual Number		Percentage Treated in Hospital.
	Registered.	Treated in Hospital.	
	MEASLES.		
1891-1895, - -	5,781	716	12
1896-1900, - -	8,536	986	12
1901-1905, - -	9,258	1,042	11
1906-1909, - -	11,501	1,355	11
	WHOOPING COUGH.		
1891-1895, - -	1,142	324	28
1896-1900, - -	1,924	374	19
1901-1905, - -	1,843	444	24
1906-1909, - -	3,644	894	25

The last column in the table supplies the answer to our question. The proportion of known cases of measles removed to hospital in the past twenty years has remained wonderfully uniform, considering that the average number of cases coming under supervision annually has been doubled. It suggests an almost mechanical adherence to the standard of selection for removal to hospital originally adopted, when the reduced demand for typhus fever accommodation permitted attention to be directed to the other infectious diseases. In whooping-cough the proportion removed is rather less than formerly, but the numbers dealt with have been trebled.

When we turn to the death-rate from these two diseases for evidence of the effect of this, in conjunction with the increased supervision of the home cases with which it is associated, the two diseases afford something of a contrast. Whooping-cough has shown a continuous decline. In the early quinquennia of registration the deaths from whooping-cough usually out-numbered those from typhus; in the decade 1885-94 its death-rate was equal to 1,066 per million; in that of 1895-1904 it was 825; in the four years 1905-8 it fell to 757.

The decline in the death-rate from measles is less marked. The rate is now lower than in the earlier years of registration, but the average annual death-rate during the 20 years ended 1904 was only 13 per cent. lower than during the 30 years ending 1884, while the reduction in whooping-cough over the same periods reached almost 35 per cent.

These remarks are based on the following summary:—

Decennial Death Rates—Measles and Whooping-Cough.

Period.	*Death Rate per Million.	Percentage Decrease in Crude Mortality in 20 years.
	MEASLES.	
1855-1864, - -	898	...
1865-1874, - -	857	...
1875-1884, - -	651	27·5
1885-1894, - -	777	...
1895-1904, - -	617	5·2
1905-1908, - -	679	...
1899-1908, - - (Average 10 years)	601	...
	WHOOPING-COUGH.	
1855-1864,	1,647	...
1865-1874, - -	1,359	...
1875-1884, - -	1,328	19·3
1885-1894, - -	1,066	...
1895-1904, - -	825	37·9
1905-1908, - -	757	...
1899-1908, - - (Average 10 years)	755	...

* These rates would be subject to adjustment were the relatively smaller proportion of children living at each year under 5 taken into account.

But in order to bring out the value of this comparison it is necessary to ascertain the movement of these diseases in Scotland apart from Glasgow during the same periods, and the following death-rates are stated per 100,000 of the population for Scotland, exclusive of Glasgow:—

	Whooping Cough.	Measles.
1855-1864,	54	36
1865-1874,	49 (52)	31 (32)
1875-1884,	52	28
1885-1894,	49 (46)	39 (37)
1895-1904,	42	34

Here we seem to have thrown into broad relief the effect of sanitary control, including hospital isolation in selected cases.

In the 50 years under review *the death-rate from whooping-cough in Glasgow has been reduced by 35 per cent., while in the rest of Scotland the reduction only amounts to 12 per cent. In measles we have witnessed a reduction of 13 per cent. in Glasgow, while in Scotland otherwise the average annual rate in the 20 years ending 1904 was 16 per cent. higher than in the 30 years which preceded.* This would seem to suggest that increasing urbanisation of the population in these years has exposed an increasing number of children to the dangers of infection.

THE FUTURE POLICY WITH REGARD TO PROVIDING HOSPITAL ACCOMMODATION FOR WHOOPING-COUGH AND MEASLES.

In view of the results just noted, it may seem unnecessary to ask whether the policy of the Corporation in dealing with these diseases should be changed.

The Notification Act distinguishes between certain diseases which must be notified and others which may be included by special resolution of the Local Authority.

This distinction does not extend to the preventive clauses of the Public Health Act, but it explains to some extent the variations in their application by the several Local Authorities. Moreover, the epithet "dangerous" had been applied by the Public Health (England) Act of 1875 to the diseases which were ultimately made compulsorily notifiable, and to these alone the clauses of the Infectious Disease (Prevention) Act of England (1890) were made applicable.

The legal provisions for dealing with these diseases, however, concern us less at the moment than the circumstances and setting in which they occur. If these seem to foster prevalence, our duty is to deal with them. The following comparisons, I think, suggest some fundamental differences in the problem of their control.

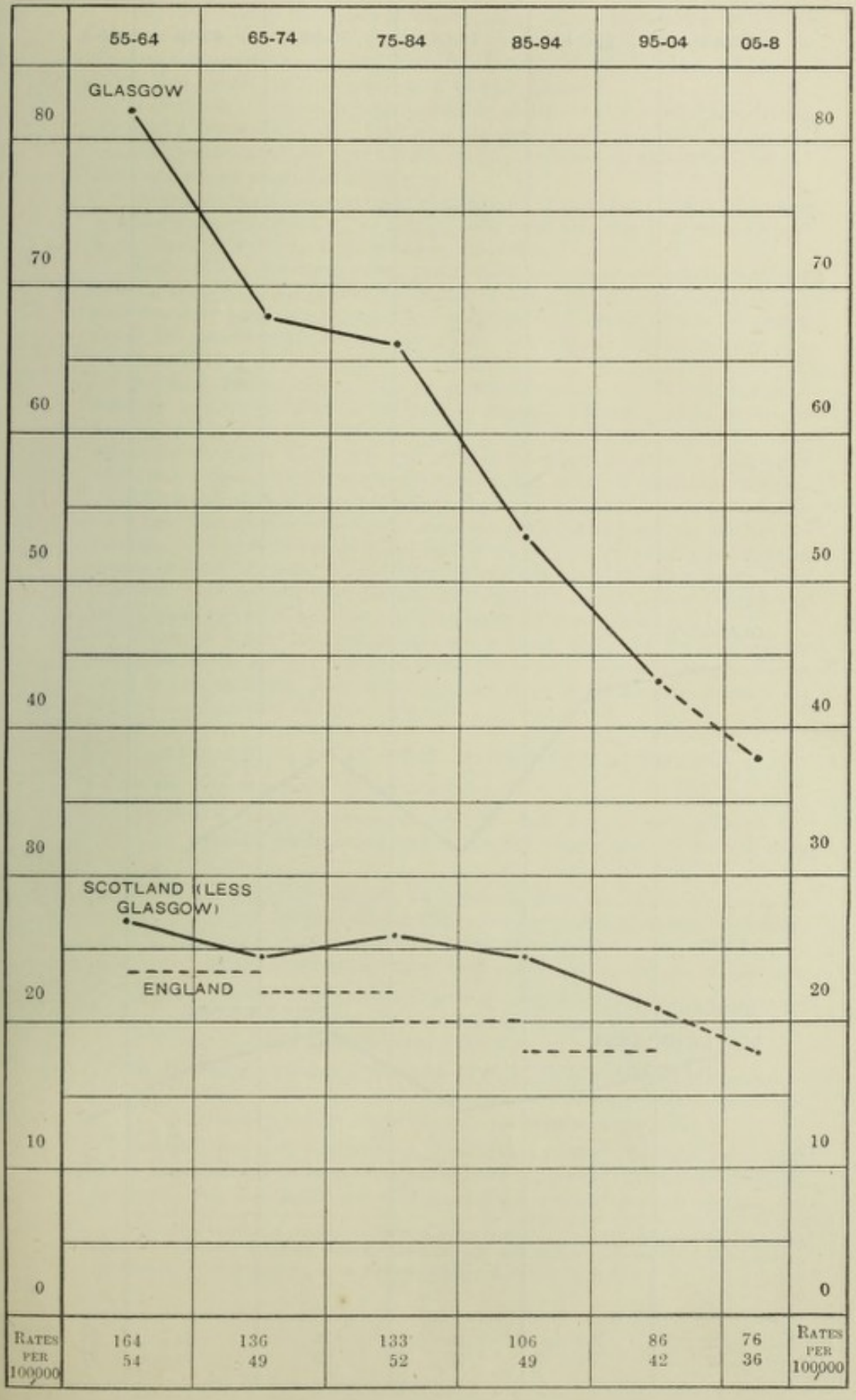
Average Death-rate per 100,000 from Several Causes, 1898-1907:—

1898-1907.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Whooping-cough.	Measles.
Liverpool,	27	25	21	48	49
Manchester,	17	18	14	44	61
Birmingham,	19	21	17	44	41
Glasgow,	**15**	**15**	**18**	**80**	**57**

Here we have the death-rates from several infectious diseases per 100,000 of the population of Glasgow and several towns in England, with which it is fairly comparable in point of population and industrial pursuits. Among the major infectious diseases, our death-rate is lower than all in scarlet fever and diphtheria, and lower

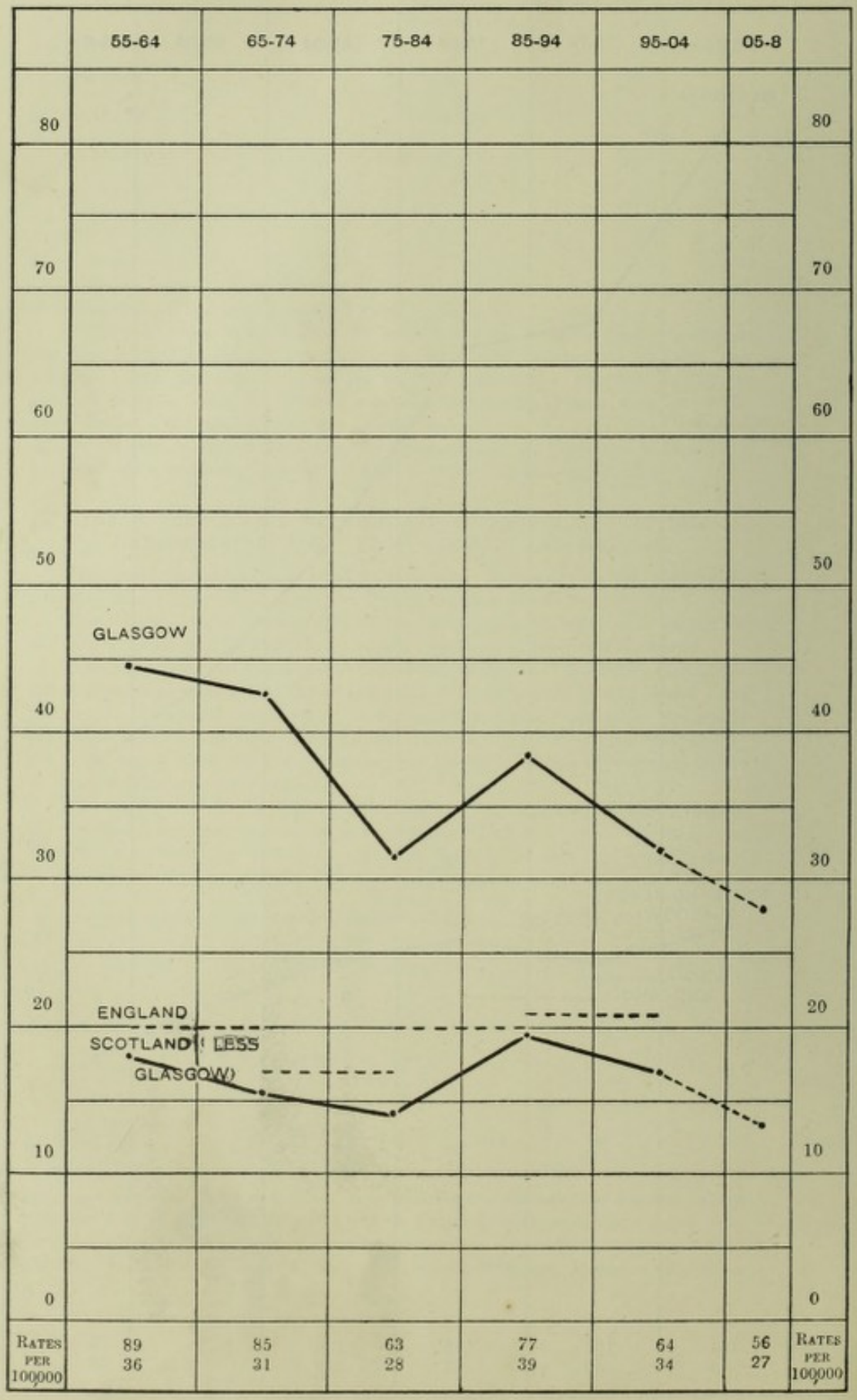
WHOOPING-COUGH.

DEATH-RATE PER 100,000 IN SEVERAL PERIODS ($\frac{1}{2}$ SCALE).



MEASLES.

DEATH-RATE PER 100,000 IN SEVERAL PERIODS (½ Scale).



than Liverpool in enteric fever. But our deaths from whooping-cough are as 5 to 3 compared with Liverpool, which has the highest rate of the English towns quoted, while Manchester alone has a greater death-rate from measles.

Moreover, the death-rate from whooping-cough in England and Wales is lower than the rate for Scotland.

As both diseases tend towards death through lung complications, a marked difference in the temperature of the winter months might suggest an explanation, but the mean temperature from October to March in Liverpool is 41·7; in Manchester, 43·55; and in Birmingham, 42·9; compared with 43·0 for Glasgow.

Nor will the presence of a larger proportion of children at susceptible ages explain the greater prevalence of these diseases in Glasgow, for the birth-rate in Liverpool exceeded that of Glasgow by 2 per 1,000 in the period referred to, while Manchester and Birmingham have rates equal to our own.

Indeed, the one striking contrast which remains is that of our custom of housing in flatted tenements, repeating on a large scale, as it were, the illustration afforded by the Peabody Buildings Enquiry already referred to.*

Considering the prolonged period during which whooping-cough remains infectious after its recognition, the removal to hospital of any considerable proportion of such cases should diminish, to a corresponding extent, the total amount of infection present among the general population at a given time, and suggests hospital isolation as a factor in reducing its prevalence.

But there are other aspects which are equally important. Outside the Corporation hospitals no provision exists for the hospital treatment of such cases as require it. And the final argument for the provision lies, I think, in the fact that hospital treatment does materially lessen the severity and obviates the danger of many of the sequelæ which attend both whooping-cough and measles, and which, if untreated, may permanently impair some of those who survive the attack. Defects in hearing and sight are serious hindrances to efficiency in school and adult life, and underfed children are particularly prone to develop affections both of the eyes and ears during an attack of measles or whooping-cough. So also it may be said with regard to certain forms of lung affections, which, although not immediately fatal, may impair organic function and form the starting point for disease of these organs in later years.

If hospital isolation may reasonably claim to lessen these risks, it must inevitably tend to reduce the sum of the physical inefficiency to which they contribute, and in so doing to have established itself as an important factor in the sanitary control of the original diseases from which these risks arise.

THE AMOUNT OF HOSPITAL ACCOMMODATION REQUIRED.

In the previous pages it has been shown:—

(1) That the major infectious diseases for which hospital accommodation was originally provided now usually form less than a third of the total cases treated.

(2) That, coincidently with this, an increasing proportion of the admissions are of young children suffering from whooping-cough and measles whose home circumstances are unsuitable for efficient treatment, and for whom no hospital accommodation exists outside that provided by the Corporation.

(3) That, in the circumstances referred to, hospital isolation in measles and whooping-cough lessens the risk of complications which may permanently impair future usefulness even where they are not immediately fatal.

(4) That there is evidence of the value of hospital isolation as part of the sanitary control of these diseases in the contrasted movement of their death-rates in Glasgow and the rest of Scotland, as shown on pages 7 and 8.

Emerging from these considerations, there arises a question which affects the nature of the accommodation to be provided rather than its extent. Typhus, enteric fever, diphtheria, &c., are illustrations of diseases which require constant attention and

* A similar contrast is afforded by Phthisis among females. The death-rate from Phthisis among females in Glasgow is higher than in Liverpool and Manchester, and for both sexes than in Birmingham. (See Annual Report of Medical Officer of Health, 1908, p. 107.)

continued nursing over several weeks. Scarlet fever in its present form, and measles, have usually a very short acute stage, and a prolonged period of convalescence in which they require attendance rather than nursing in the ordinary sense. The question resolves itself very much into the relative length of the acute and convalescent periods. In typhus fever these proportions were as 2 to 1, and consequently the original type of ward in our hospitals had 11 beds in the acute ward and 5 in the convalescent.

In scarlet fever the proportions are more nearly equal; while measles, save when accompanied by epidemic broncho-pneumonia, tends to produce, after the beginning of an outbreak, a large number of convalescents to a comparatively few acute cases.

The structural modification which these changes suggest is, therefore, in the nature of well-devised nursery or dormitory accommodation, to which patients might be drafted on passing the acute stage, such as is now, indeed, the practice in the Metropolitan Asylums Board Hospitals.

Fever Accommodation.

We may, however, approach the question of the accommodation required on the basis of the present unit of computation by comparing our existing accommodation with that provided elsewhere, and also as suggested by past local experience.

(1) Existing accommodation compared with certain large towns in which the provision of hospital accommodation exceeds that of Glasgow. The figures show the number of fever and smallpox beds required for the present population of Glasgow on the ratios of existing accommodation in the towns named.

	Number of Beds.		Total.	Shortage.
	Fever.	Smallpox.		
Edinburgh, - - -	1,353	115	1,468	316
London, - - - -	1,309	372	1,681	429
Liverpool, - - -	1,230	186	1,416	264
Leeds, - - - -	885	354	1,239	87

The last column in the table shows the number of beds required to be added to our existing accommodation to bring the total up to the ratios provided in the several towns named.

(2) On the basis of past local experience.

This we can only arrive at by treating the smallpox and fever accommodation together, because almost since the erection of the smallpox wards it has been the practice to utilise them to a varying extent for fever purposes, save only when smallpox was prevalent.

It is convenient also to retain the "adult" bed as a unit of calculation, but the use made of the equivalent space depends on several variables, especially the character of the disease, the age of the patient, and the freedom of ventilation. The experience of recent years shows that about one-third of the wards in use at any time are required for enteric fever and diphtheria, and in these diseases it is desirable to retain the original unit of space as far as practicable, irrespective of age. For the infectious diseases of children, however, not more, and frequently much less, than one-third of the patients are over 10 years of age, and here floor space affords a better criterion of accommodation than cubic space, especially in the older type of ward, where the practice was to include in the calculation of cubic space heights much above 12 or 14 feet from the floor—a fallacy which the pavilion roof tended much to emphasise.*

* For equal units of cubic space (2,000 feet) the floor space varies as follows :—

Belvidere—Brick Wards, - - - - - -	105 square feet.
Ruchill do., - - - - - -	145 do.
Ruchill—Wooden Huts, - - - - - -	155 do.
Belvidere do., - - - - - -	188 do.

In consequence of this, the nominal accommodation is considerably below that which is available, but the latter may be calculated by multiplying the nominal accommodation by 1·446, a factor which makes allowance for the variation in age incidence and nature of disease already alluded to. On this basis we may compare the periods of maximum pressure on the hospital requirements with the nominal and available accommodation during the past 20 years.

Year.	Maximum under Treatment at one time.	Total Adult Beds.	Available Beds.	Patients per 100 Adult Beds.
1892	1,044 (October)	660	954	158
1899	1,305 (October)	740	1,070	176
1901	1,392 (January)	1,250	1,870	111
1907	1,373 (December)	1,050	1,518	131
1908	1,408 (December)	1,050	1,518	134
1909	1,653 (November)	1,152	1,666	143
On reserving 25 beds for Smallpox,	1,653 (Nov., 1909)	1,127	1,630	147

From the last column in this table it is obvious that even where the smallpox accommodation is included for fever purposes the margin of free accommodation (2 per cent., or 23 beds in all) is too small for the satisfactory accommodation of diseases which are mutually infectious, and where beds are always liable to be thrown out of use temporarily because of cross infections occurring in individual wards.

Compared with other towns, our total accommodation at present falls short of the Edinburgh ratio for fever alone by 201 beds, of London by 157, and of Liverpool by 78.

These ratios no doubt express the differing needs for accommodation in the towns mentioned. The Metropolitan Asylums Board do not make provision for either whooping-cough or measles, while Liverpool sets apart for measles purposes 60 beds only.

It would, therefore, appear that our accommodation for infectious diseases, apart from smallpox, should not be at a lower ratio than 1·5 per 1,000 of the population, which means an addition of from 170 to 200 beds to our present accommodation, and this is the extent of the addition which I recommend.

Whether this additional accommodation should be provided by extending either of the present hospitals, or by securing a separate site for a third fever hospital, will require some consideration.

Obviously the primary requirement of a hospital is that it should be readily accessible to the population it is intended to serve. It should be within such radius that patients may be removed without risk, and that friends may make enquiry without excessive demand on the time at their command. From this point of view it cannot be said that either Ruchill or Belvidere is conveniently situated with regard to a considerable section of the population living south of the river.

The view that the added accommodation should be found in a third fever hospital is supported by other considerations.

One of these has reference to the relation between the beds already existing and the site which they occupy. In Belvidere the proportion of beds per acre is 19·67 (including smallpox beds), in Ruchill, 16·6. To the west of the Belvidere site the Health Committee own seven acres at present outside the boundary wall, but there is need for a house for the Physician-Superintendent (the present arrangement, by which he lives at some distance from the hospital, being objectionable, if regarded as more than temporary), and there is also need for added accommodation for nurses and for a laboratory which is at present accommodated in one of the wards.

No further extension of bed accommodation here can therefore be contemplated, save by the extension eastwards of the hospital area.

In Ruchill also the available area within the present boundary wall is pretty fully occupied, and extension of the accommodation for cleaners is already engaging the attention of the committee.

But there are 13¼ acres outside the boundary acquired by the Hospitals Committee in 1904.

If this is utilised for hospital purposes, it means not only the addition of wards, but of accommodation for the added staff—medical, nursing, and cleaners—which will be required for the increased number of patients, and the question whether there is any limit to efficient administration is sharply raised.

Consideration of this, however, falls outside the scope of the present memorandum, but has been made the subject of a supplementary note.

It must here be noted, however, that the accommodation at the sanitary washing-houses attached to both hospitals is already strained to breaking point, on the occasion of every recurring epidemic.

Smallpox Accommodation.

Meantime the most urgent demand is without doubt for smallpox accommodation, because of the proved unsuitability of the present smallpox hospital site.

The facts supporting this statement fall into two groups. In given circumstances the present hospital—

(*a*) Prevents full use of the beds in the fever hospital.

When any considerable number of cases of smallpox are under treatment, and long before the accommodation of the brick wards (150 beds) is fully taken up, the utility of the fever hospital is greatly impaired, and only those who are protected by recent vaccination can be admitted thereto with safety.

(*b*) Spreads disease in its neighbourhood.

When in full use the present hospital propagates the disease in its neighbourhood. This feature of smallpox was suspected with regard to Parliamentary Road Hospital when used for smallpox isolation in the early seventies, and was demonstrated as occurring around Belvidere in the outbreak of 1900-1901. During this outbreak the attack-rate for the city generally was 2 per 1,000 of the population. In the district lying mainly to the east of Bridgeton Cross it ranged from 6 to 10 per 1,000; 47 per cent. of all the cases occurring in Glasgow between April, 1900, and June, 1901, came from the Bridgeton and Dalmarnock areas, and when the disease recurred in the following year a similar proportion was rapidly established. The danger to populations living in proximity to a smallpox hospital is indeed so well recognised, that the Local Government Boards have prescribed the maximum density of the area within which a smallpox hospital may be situated; and the estate of Lethamhill, proposed by the Corporation in 1901 as a site for a smallpox hospital to replace that at Belvidere, was successfully objected to by the Lower Ward Committee of the Lanarkshire County Council, the Prison Commissioners, the General Board of Lunacy for Scotland, the Glasgow District Lunacy Board, and others.

The Number of Smallpox Beds required.

The practice of Local Authorities elsewhere is of little help in fixing the number of beds to be provided and held permanently in reserve against smallpox.

Explanation of this fact is to be found in the long intervals which elapse between epidemics of the disease on a major scale and in the total absence of cases during some of the years which intervene between even the smaller waves of prevalence which fill in the interval.

The Metropolitan Asylums Board, as we have seen, provides 42 beds per 100,000 of the four and three-quarter millions of the population which it serves; Leeds, with a population of 477,000, provides 40 beds per 100,000; Liverpool, with 760,000, provides 21 beds per 100,000; and Manchester, with 654,000, provides only 9 per 100,000. It cannot be said, therefore, that there is any standard of provision with regard to the number of beds, and the Corporation will probably find that past local experience is their best guide to what is required for the future.

Extent of Accommodation Formerly Provided.

During the past 40 years a permanent provision of 150 beds proved sufficient to meet all the requirements of the limited outbreaks of smallpox which occurred between the major prevalences of the early seventies and 1901.

The population of these years, however, was better protected by infantile vaccination than is now the case, owing to the operation of the Vaccination Act of 1907.

The proportion of children certified as successfully vaccinated in infancy reached on an average 86 per cent. during the eighties decade, and 84·5 per cent. during the nineties. As the result of the passing of the Vaccination (Scotland) Act of 1907, however, the proportion of the children successfully vaccinated fell to 75 per cent., the numbers exempted through conscientious objection on the part of the parents being 2,183 in 1908, and 2,653 in 1909.

We have seen that the permanent provision of smallpox beds existing in 1901 was equal to 1·9 per 10,000 of population, but that the demand at its maximum was equal to a requirement of 6·72.

On the existing population these ratios represent 168 beds as the permanent provision and 600 for epidemic periods. Making allowance for increase of population during the next 20 years, a present provision of 200 beds is required, but after a design which will admit of rapid extension to 600 beds when occasion arises.

This is the first and most urgent requirement of hospital extension, but before it is undertaken it will be desirable, I think, that the committee should obtain some reliable information regarding the more recent erections for sanatorium purposes, which are said to cost not more than £100 per bed, exclusive of site.

A. K. CHALMERS,
Medical Officer of Health.

Sanitary Chambers,
Glasgow, 5th April, 1910.

(b) *Reception-houses.*—During the year, 289 contacts with infectious disease were accommodated in the Reception-houses, the details being shown in the following Table:—

Diseases.	Baird Street	South York Street.	Total.
Smallpox.	146	...	146
Typhus Fever, ...	25	37	62
Enteric ,, ...	10	7	17
Scarlet ,, ...	15	8	23
Puerperal ,, ...	1	7	8
Chickenpox, ...	...	4	4
Measles, ...	12	12	24
Whooping-cough, ...	2	...	2
Others, ...	2	1	3
Total, ...	213	76	289

Removals by Public Conveyance of Persons Dead of Infectious Disease.

Fourteen permits were granted under the Glasgow Police (Amendment) Act, 1890, Section II., for the removal of the bodies of persons who had died from infectious disease. In each case the precautionary measures were adopted of requiring the body to be enclosed in a zinc shell, and the coffin to be sprayed with formaline.

Interments in Intramural Burying-grounds.

In accordance with the recommendation of the Corporation suspending the resolution of the Police Commissioners, of date 10th July, 1876, to permanently close the intramural burying-grounds as places of sepulchre, 11 permits were granted, 10 of which were for the High Church Burying Ground, and one for Gorbals.

Fresh-air Fortnight, Eastpark Cottage Home, and t.s. "Empress."

During the year the lists of children selected for admission to the Homes in connection with the Glasgow United Evangelistic Association were submitted by the convener of that organisation for inspection, and those children residing in tenements found to be infected were refused for the time being.

The homes of all children admitted to Eastpark Cottage Homes for Infirm Children were also visited and reported on, as were also the homes of boys belonging to Glasgow granted leave of absence from the training ship "Empress."

SECTION III.

GLASGOW PORT LOCAL AUTHORITY.

SUMMARY OF WORK DURING 1910.

2,183 vessels from foreign ports passed the Boarding Station at Greenock for the Customs Port of Glasgow during the year 1910. This represents an average of 6 vessels per watch of twenty-four hours. The greatest number of vessels boarded in any single watch was 15.

Of these vessels, 464 had called during the voyage at foreign ports which were infected within the meaning of the Cholera Order.

Table A shows the vessels classified under the following groups:—

Group "A" shows the *arrivals from foreign*, as understood by the officers of H.M. Customs.

Group "B" includes all vessels trading with *infected ports*, and reaching the Clyde direct or through home ports, but with foreign cargo on board.

Group "C" includes vessels from infected ports reaching the Clyde *light* or with out-going cargo on board.

Group "D" includes vessels from foreign non-infected ports reaching the Clyde direct or coastwise.

Vessels included under groups "B" and "C" totalled, during the year, 464, all of which were boarded under Article 8 of the Cholera Order; while the 1,719 vessels in Group "D" were from non-infected ports, and were boarded in order to ascertain whether infectious disease existed on board.

The Table shows further the number of arrivals in each month of the year in the several groups, as also the number of crews and passengers.

Table A.—Number of SHIPS ARRIVING from Foreign Ports—Year 1910.

Month.	(A) H.M. Customs.	From Infected Ports.						Total of B and C.			(D) From Non-Infected Ports (with or without Cargo).			Total.		
		(B) With Foreign Cargo.			(C) Light or with Outward Cargo.											
		Ships.	Crew.	Pass.	Ships.	Crew.	Pass.	Ships.	Crew.	Pass.	Ships.	Crew.	Pass.	Ships.	Crew.	Pass.
January,	91	18	1,509	1	18	934	...	36	2,443	1	125	3,461	413	161	5,904	414
February,	107	7	772	4	23	1,208	2	30	1,980	6	123	3,808	697	153	5,788	703
March,	117	13	942	3	23	1,155	...	36	2,097	3	161	4,785	662	197	6,882	665
April,	149	11	915	4	21	1,232	5	32	2,147	9	146	5,310	1,002	178	7,457	1,011
May,	126	10	913	2	27	1,430	2	37	2,343	4	144	5,314	1,665	181	7,657	1,669
June,	136	13	1,091	12	24	1,260	9	37	2,351	21	157	5,682	1,273	194	8,033	1,294
July,	123	16	1,059	20	13	672	8	29	1,731	28	151	5,898	4,624	180	7,629	4,652
August,	105	22	1,363	49	36	1,523	23	58	2,886	72	140	5,202	1,880	198	8,088	1,952
September,	144	18	1,483	101	24	1,081	7	42	2,564	108	140	5,462	755	182	8,026	863
October,	124	21	1,217	8	26	1,331	...	47	2,548	8	150	5,753	1,514	197	8,301	1,522
November,	114	14	896	1	24	1,267	74	38	2,163	75	137	5,135	1,383	175	7,298	1,458
December,	128	22	1,259	4	20	1,137	43	42	2,396	47	145	4,554	433	187	6,950	480
Total,	1,464	185	15,219	209	279	14,130	173	464	27,649	382	1,719	60,364	16,301	2,183	88,013	16,683

The following comparison is of interest as showing the yearly number of persons forming the crews and passengers:—

Year.	Ships.	Crews.	Passengers.	Registered Tonnage of Vessels Boarded.
1905, ...	2,010	75,468	13,156	3,365,302
1906, ...	2,063	79,773	17,822	3,562,703
1907, ...	1,997	80,212	21,744	3,661,807
1908, ...	2,096	81,050	22,917	3,814,630
1909, ...	2,081	82,037	16,826	3,908,700
1910, ...	2,183	88,013	16,683	3,940,291

In Table B particulars are given as to the nationality of the 2,183 ships shown in Table A and their crews.

On 1,641 British vessels there were 58,101 seamen of British nationality, with a proportion of European seamen, and 19,850 seamen of mixed nationality, mostly Asiatics.

On board the 487 vessels of foreign nationality were 9,481 foreign seamen.

TABLE B.—NATIONALITY OF SHIPS AND THEIR CREWS, 1910.

Nationality.	Ships.	Crews.
British, ...	1,641	58,101
Natives of India, ...	(On British Ships),	16,298
Chinese, ...	do.,	3,324
Malays, ...	do.,	76
Arabs, ...	do.,	95
West Africans, ...	do.,	12
West Indians, ...	do.,	4
Japanese, ...	do.,	4
Spaniards, ...	do.,	23
Greeks, ...	do.,	2
Germans, ...	do.,	12
Norwegians, ...	291	4,692
Swedish, ...	39	714
Spanish, ...	82	1,911
French, ...	46	1,038
German, ...	25	409
Austro-Hungarian, ...	17	452
Italian, ...	13	320
Russian, ...	10	186
Greek, ...	4	93
Danish, ...	11	173
Dutch, ...	4	74
Totals, ...	2,183	88,013

Table C shows the arrivals of Table A, grouped according to whether they arrive direct from foreign or coastwise, their nationality, registered tonnage, and motive power.

Vessels coming coastwise are usually in water-ballast or partly loaded with outgoing cargo, occasionally also with part inward cargo.

TABLE C.—NUMBER, CLASS, AND TONNAGE OF VESSELS BOARDED AT TAIL OF THE BANK, 1910.

Voyage.	Nationality.	Class.	No. of Vessels.	Registered Tonnage.
Direct, ...	British, ...	Steam, ...	780	1,445,315
		Sailing, ...	10	6,066
	Foreign, ...	Steam, ...	242	231,539
		Sailing, ...	27	35,111
Coastwise, ...	British, ...	Steam, ...	847	2,020,852
		Sailing, ...	4	3,439
	Foreign, ...	Steam, ...	260	181,994
		Sailing, ...	13	15,975
			2,183	3,9 40,291

DISEASES ON CLYDE-BOUND SHIPS.

The cases of infectious diseases noted during the year are shown in Table D.

They number in all 130, of which 96 were found on board vessels on arrival at the Boarding Station; while 34 had occurred at earlier periods of the voyage, and had either been landed at other ports or were convalescent.

The importance to Glasgow Port Local Authority of those cases landed at other ports, or which were convalescent on arrival, is on account of contacts, and the necessity for disinfection and surveillance.

Of the 96 cases found on arrival, 19 were removed to hospital in Glasgow.

Eight deaths are noted, all of which occurred at sea.

Certain details of some of these cases are given in the notes which follow.

TABLE D.—RETURN OF INFECTIOUS DISEASES ON BOARD SHIPS BOUND FOR THE PORT OF GLASGOW, 1910.

Diseases.	Total Number of Cases.	Cases Found on Arrival.	Cases Dealt with in other Ports.	Cases Sent to Hospital in Glasgow.	Deaths.
Enteric Fever, ...	10	6	4	6	...
Scarlet Fever, ...	2	2	...	2	...
Smallpox, ...	3	...	3	...	...
Measles, ...	9	9	...	2	...
Chicken-pox, ...	4	...	4	...	...
Typhus Fever, ...	1	...	1	...	...
Diarrhœa, ...	5	5	...	1	...
Diphtheria, ...	2	2	...	2	1
Erysipelas, ...	3	3	...	2	1
Parotitis, ...	2	2	...	...	...
Phthisis, ...	19	16	3	...	1
Beri-beri, ...	3	2	1	1	1
Trachoma, ...	21	21	...	...	...
Cases for Observation, ...	6	6	...	2	...
Plague, ...	3	...	3	...	...
Whooping cough, ...	6	6	...	...	...
German Measles, ...	1	1	...	1	...
Pneumonia, ...	5	4	1	...	1
Cholera, ...	6	...	6	...	1
Dysentery, ...	11	3	8	...	2
Influenza, ...	4	4	...	...	...
Others, ...	4	4	...	...	...
Totals, ...	130	96	34	19	8

TRACHOMA.

Of the 21 cases of trachoma observed at the Tail of the Bank, 19 were aliens and 2 of British nationality, all being emigrants rejected by the American and Canadian authorities because of the disease. Of the aliens, 5 returned to Glasgow, 4 to other places in Scotland, and one to England, where they had resided for some time prior to emigration. The remaining 9 aliens were returned by the Shipping Companies, in terms of the Aliens Act, 1905, to their countries of origin. Of the British emigrants, one returned to Liverpool and the other to Londonderry. The Glasgow cases were each inquired into by the Officers of the Public Health Department, while those proceeding to other addresses in this country were reported to the District Medical Officers.

TRACHOMA.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1910				
Feb. 20	S.S. "Caledonia"	New York	1	Rejected steerage male passenger. Returning to Denmark.
April 10	S.S. "Columbia"	,,	1	Rejected steerage male passenger. Returning to Hungaria.
April 25	S.S. "California"	,,	1	Rejected Jewish male passenger. Returning to his father's home in Glasgow.
May. 5	S.S. "Furnessia"	,,	1	Rejected Russian-Pole (male). Returning to Craigneuke, Motherwell.
May 28	S.S. "Cassandra"	Montreal	1	Rejected German female passenger. Returnto Glasgow for treatment.
June 20	S.S. "California"	New York	1	Rejected alien emigrant from Auchenleck, where he was a miner. Returning to Auchenleck.
July 8	S.S. "Ionian"	Montreal	1	Rejected male alien. Returning to Finland.
Aug. 3	S.S. "Siberian"	Philadelphia	2	Rejected alien. Mother with two children. Children suffering from Trachoma. Family proceeding to Syria.
,,	S.S. "Siberian"	,,	1	Rejected British emigrant. Proceeding to Liverpool.
Sept. 19	S S. "Furnessia"	New York	2	Rejected male and female Russian emigrants. Both returning to Russia.
,, 25	S.S. "Columbia"	,,	1	Rejected Irish female steerage passenger. Landed at Londonderry.
,,	S.S. "Columbia"	,,	1	Rejected alien emigrant. Worked for three years in Glasgow before emigrating. Returning to Shotts.
Oct. 16	S.S. "Cassandra"	Montreal	3	Rejected alien emigrants (males). One proceeding to Poland, and two returning to homes in Glasgow.
,, 29	S.S. "Mongolian"	Philadelphia	1	Rejected Russian-Pole emigrant from Liverpool. Returning.
Nov. 2	S.S. "Siberian"	Philadelphia	1	Rejected Assyrian female. Proceeding to her own country.
,, 7	S.S. "California"	New York	1	Rejected alien emigrant from Coatbridge. Returning thereto.
,, 23	S.S. "Cassandra"	Montreal	1	Rejected alien female emigrant from Glasgow. Returning to home in Glasgow.
			21	

PHTHISIS.

Nineteen cases of this disease were recorded during the year, 16 being found on board at Greenock, while three had been dealt with at other ports. Of the others, three were passengers returning voluntarily to their homes in this country after varying periods of residence in Canada or America; eight were deported emigrants of British nationality, three of whom were returning home to Glasgow, four to other places in Scotland, and one to Ireland; while one rejected alien was returned to Finland. The four remaining cases were members of ships crews, two of whom were of British nationality, and belonged to Glasgow; while the others were foreigners, one of whom returned to France and the other to India. The Medical Officers of the districts outwith the city, to which the British passengers were proceeding, were advised in each case.

PHTHISIS.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1910 Mar. 28	S.S. "California"	New York	1	Return, Irish female, steerage passenger. Landed at Moville. Isolated in ship's hospital.
April 17	Barque "Eugene Pergeline"	Tchio	1	Cook of barque. Returning to his home in France from Glasgow.
May 14	S.S. "Athenia"	Montreal	1	Return steerage passenger. British. Home in Paisley. Two years in Canada.
June 1	S.S. "Carthagenia"	Philadelphia	1	Rejected British emigrant. Isolated on board. Returning to his home in Glasgow.
,, 12	S.S. "Ionian"	Montreal	1	Member of crew (steward). Address, Glasgow.
July 2	S.S. "Cassandra"	,,	1	Member of crew (steward). Isolated on board. Home in Glasgow.
,, 8	S.S. "Saturnia"	,,	1	Rejected Scotch emigrant. Home in Glasgow.
,, 22	S.S. "Pomeron"	Savannah	1	Consular passenger. Died when vessel was in Manchester. Case dealt with by Port Local Authority.
Aug. 13	S.S. "Parisian"	Boston	1	Rejected Irish emigrant. Returning to Belfast.
,, 27	S.S. "Hesperian"	Montreal	1	Rejected Scotch emigrant. Returning to Shotts.
Sept. 18	S.S. "Pretorian"	,,	2	Deports, males. One an alien, proceeding to Finland, and one British, proceeding to home in Paisley.
,, 19	S.S. "Clan Lindsay"	Calcutta	1	Ship quarter-master (Lascar). Sent to Infirmary in Glasgow, thence home to India.
,, 25	S.S. "Columbia"	New York	1	Deported female Scotch emigrant. Four months in New York. Proceeding to home in Aberdeen. Isolated in ship's hospital.
Oct. 23	S.S. "Hesperian"	Philadelphia	2	One, a saloon passenger, returning voluntary to Aberdeenshire after one year in Canada. The other, rejected female, returning to home in Glasgow.
,, 30	S.S. "Ionian"	Montreal	1	Returning steerage British emigrant. Proceeding to home in Coupar Angus.
Nov. 21	S.S. "Hesperian"	,,	1	Deported British emigrant. Proceeding to Dundee.
Dec. 11	S.S. "Clan Maciver"	Calcutta	1	Lascar fireman. Removed to Hospital at Suez.
			19	

ENTERIC FEVER.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1910				
July 4	S.S. "City of Athens"	Calcutta and London	1	Fifth engineer. Removed to hospital in London. Ship disinfected by Port Local Authority.
" "	" "	"	1	A Lascar fireman. Removed to Belvidere Hospital, Glasgow, for observation.
" 10	S.S. "Caledonia"	New York	3	A lady saloon passenger, aged 66 years; the storekeeper, aged 35 years; and a steward aged 28. All removed to Belvidere Hospital. Disinfection of ship in Glasgow.
" 31	S.S. "Olympia"	Bombay	1	Master of vessel. Removed to hospital at Liverpool. Vessel disinfected by Liverpool Port Local Authority.
Aug. 4	S.S. "Dictator"	Pensacola	1	Second cook of vessel. Removed to hospital, Manchester. Vessel disinfected by Manchester Port Local Authority.
" 17	Barque "Bressard"	Tchio	1	Second mate. Removed to Belvidere Hospital on 30th August.
Sept. 16	S.S. "Rutherglen"	New Orleans	1	A seaman, aged 18 years. Removed to Belvidere Hospital, and vessel disinfected.
Dec. 5	S.S. "Hibernian"	Montreal	1	British fireman. Sent to Belvidere for observation, proved to be enteric. Vessel disinfected at Glasgow.
			10	

MEASLES.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1910				
Feb. 28	S.S. "California"	New York	1	Steerage passenger, age 3 years. Belvidere Hospital.
May 15	S.S. "Caledonia"	"	5	Second and steerage passengers, aged from 1 year to 6 years. Isolated in ship's hospital, and special cabins. Removed to Belvidere Hospital, Glasgow. Vessel disinfected.
June 1	S.S. "Carthagenian"	Philadelphia	1	An A.B. *convalescent.* Allowed to go to his home. Ship disinfected.
" 28	S.S. "Furnessia"	New York	3	Rejected steerage passengers, aged 1 year, 8 years, and 13 years. Isolated in ship's hospital and removed to Belvidere.
			10	

CHOLERA.

Throughout the year the Local Government Board issued weekly reports regarding the occurrence of Cholera in Europe and elsewhere, particularly as to the progress of the disease in Russia. These reports were of great value in directing the attention of the Boarding Medical Officers to ships arriving from infected areas, and in each case the crews were mustered and examined, and the condition of the water supply inquired into. The Port Local Authority considered reports from time to time as to the administrative measures adopted to prevent the importation or the occurrence of the disease in this country, and the following extract indicates particularly the measures taken in dealing with transmigrants:—

Extract from Minute of 24th August, 1910.

There was submitted a communication, of date 17th current, from the Secretary of the Local Government Board, impressing on all Local Authorities, and especially on seaboard Local Authorities, in view of the continued prevalence of cholera in Russia, the necessity for readiness and vigilance, and pointing out that special precautions should be observed with regard to vessels coming from North Russia and Black Sea ports, and also directing attention to the provisions of their Cholera Orders of 13th September, 1907, and referring to the terms of their circular of 13th October, 1908, in which the arrangements made by the Board for the bacteriological examination of material from suspected cases of cholera are set forth. The Town-Clerk reported that, on receipt of that communication, he had forwarded a copy thereof to the Medical Officer of Health for his information, guidance, and attention, and he read a letter, of date 19th current, from that official, stating that the progress of the disease in the Baltic and Black Sea ports is being closely watched, and that all vessels arriving in the harbour from infected ports are being kept under close observation.

The Medical Officer supplemented the foregoing report by stating that the Anchor Line Steamship Company have instructed their agent at Antwerp to detain all Russians booked by their line for a period of five days previous to their being shipped to Glasgow, and that that instruction applies to the sub-agents elsewhere on the Continent; that the Donaldson Line had instructed their agents to cease booking Russian transmigrants until further orders; and that the Allan Line book no Russians on their vessels and have not done so for some time.

PLAGUE.

No case of this disease came under notice during the year, but three ships were dealt with on which cases had occurred at earlier periods of the voyage. In addition, the crews of all vessels from infected areas were kept under daily observation while in port.

The attention of the authority was also directed to the occurrence of the disease in human beings and among rats in Suffolk. Vessels from home ports are not usually boarded at Greenock, but arrangements were made with the Customs Authorities that any arrival from the affected area would be notified. Only one such arrival has been reported since this arrangement was made, but there was no illness among the crew, and no rats were found on board. The matter is further referred to in the following extract from the minutes:—

Extract from Minute of 23rd November, 1910.

The occurrence of four cases of plague in human beings, and an outbreak of the disease among rats in Suffolk, suggested enquiry in regard to the movement of ships between the Clyde and ports on the Suffolk coast, as ships coming therefrom are not inspected in ordinary course at Greenock. From information I have received from the customs, it would appear that only an occasional vessel touching at these ports comes to the Clyde. No such arrival has, indeed, been recorded during the last six months, but I have arranged with the Customs Authorities that if any should arrive while the present conditions continue in Suffolk, they will communicate with me at once, so that enquiry may be made regarding the condition of any rats on board.

SANITARY CONDITION OF VESSELS.

Tables E and F explain themselves. In Table E, in the 338 British steamships, there are included 55 cattle ships; and in Table F these again appear under the heading "Accumulations of Manure." Table F summarises the work of sanitary inspection of vessels under a classification intended to group the defects and nuisances discovered in a manner fitted to make a yearly comparison of the work done, and of the progress attained.

TABLE E.—NUMBER AND NATIONALITY OF VESSELS IN WHICH DEFECTS WERE FOUND DURING THE YEAR 1910.

Nationality.	Defects Found on—	
	Steam.	Sailing.
British, ...	338	6
Norwegian, ...	71	4
Spanish, ...	19	...
Austrian, ...	3	...
Swedish, ...	4	...
Danish, ...	1	2
French, ...	3	10
German, ...	6	...
Italian, ...	3	1
Greek, ...	2	...
Russian, ...	4	1
Dutch, ...	1	...
Total, ...	455	24

TABLE F.—DEFECTS OR NUISANCES FOUND ON VESSELS (BRITISH AND FOREIGN), YEAR 1910.

(a) Due to Structural Defects.		(b) To Repairs Required.		(c) To Neglect.	
Nature and Site		Nature and Site.		Nature and Site.	
Forecastles.		*Forecastles.*		*Forecastles.*	
Insufficient heating,	1	Bogies broken,	5	Floors and woodwork dirty,	139
Do. lighting,	...	Ports leaking,	33	Ship's gear stored in bunks,	15
Do. ventilation,	5	Steam heater leaking,	7	Ventilators plugged,	9
Do. sleeping accommodation,	4	Overhead deck leaking,	24	Scuppers choked,	8
Anchor chains uncovered,	2	Doors off food lockers,	1	Repainting or lime-washing required,	7
Scuppers too high,	...	Floors broken,	3	Verminous,	6
No food lockers,	...	Bunks broken,	...	Food stored in bunks, &c.,	16
No doors on food lockers,	2	Ventilators broken,	...	Naked light used,	1
Danger of fire from bogie,	1	Doors on bulkheads broken,	2	Drinking water barrel in forecastle,	10
		Galley roof leaking,	1	Do. tanks uncovered,	25
		Hand rail broken,	1	Rat infested,	2
				Bilges uncleaned,	4
				Fore-peak—smelling forecastle,	1
Water-closets.		*Water-closets.*		*Water-closets.*	
Insufficient accommodation,	4	Seats broken,	7	Pan or trough choked or foul,	144
		Ports broken,	5	Ship's gear stored therein,	25
		Trough or pan broken,	6	Gear in bathroom,	21
		Flush tank defective,	...	Scuppers choked,	...
		Floor broken,	...	Limewashing or repainting required,	5
		Doors off,	...	Urinal choked,	...
		Urinal choked,	1	Discharge pipe leaking,	...
		Plug broken,	1		
		Effluent leaking,	1		
Decks.		*Decks.*		*Decks.*	
No proper galley,	...	Galley floor broken,	...	Accumulations of manure,	55
				Do. rubbish,	4
				Galley dirty,	8
				Bathroom, gear stored therein,	5
				Do., food do., do.,	1
				Drinking water tanks uncleaned,	...
				Bilges uncleaned,	...
				Bathroom dirty,	8
				Bathroom scuppers choked,	4
Total,	19		98		523

TABLE G—Inspection of Vessels.

	1906.		1907.		1908.		1909.		1910.	
	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.
(*a*) Carefully inspected, ...	686	21	893	27	544	15	555	12	509	22
(*b*) Partially inspected, ...	1,189	45	1,003	20	1,470	22	1,433	26	1,571	31
(*c*) Boarded but not inspected,	97	1	12	...	16	...	26	1	22	...
(*c*) Hailed, do.,	10	...	18	...	6	...	4	...	9	...
(*d*) Not boarded nor hailed, ...	14	...	24	...	23	...	21	3	19	...
	1,996	67	1,950	47	2,059	37	2,039	42	2,130	53
	67		47		37		42		53	
Total, ...	2,063		1,997		2,096		2,081		2,183	

(*a*) and (*b*)—Carefully and Partially Inspected—are dependent on whether the vessel goes to anchor, or goes straight on to Glasgow.
(*c*) and (*d*) are dependent on weather and other accidental circumstances.

The following statement, showing the cost of the Port Local Authority for the year ended 31st May, 1911, is taken from the Annual Abstract of Expenditure and Revenue prepared by the Treasurer:—

EXPENDITURE.

Boarding Station at Princes Pier, Greenock—				
Salary to Senior Assistant to Medical Officer,			£300 0 0	
Salary to Junior Assistant to Medical Officer,			260 0 0	
Fees (£26 2s.) and Expenses (£18 16s.) of *locum tenens* during holidays and sickness of Medical Assistants,			44 18 0	
Wages to Inspectors (two) of Ships and Crews,			215 10 8	
Insurance of Employees under Workmen's Compensation Acts,			1 5 6	
Wages (£17 12s.) and Board and Lodging Allowance (£7 1s. 8d.) to Inspectors relieving for holidays,			24 13 8	
Uniform Clothing for Medical Assistants (£11 1s. 11d.) and Inspectors (£10 2s. 3d.),			21 4 2	
Clyde Pilot Board—Contribution towards Upkeep of Steam Launch,			450 0 0	
Rent of Site for Boarding Station,			10 0 0	
Assessments (£13 1s.) and Insurance (£1 0s. 2d.),			14 1 2	
Heating (£9 15s. 7d.) and Lighting (£7 6s. 10d.),			17 2 5	
Furnishings, Fittings, &c.,			16 11 1	
Repairs to Boarding Station,			10 17 6	
General Post Office—Royalty for permission to use Telegraph Circuit between the Office and River Pilot Station,			0 1 0	
Office Cleaner's Wages,			23 8 0	£1,409 13 2
Glasgow Harbour—				
Wages to Inspectors (two) of Ships and Crews,			£246 13 4	
Wages to Inspectors appointed under Public Health (Regulations as to Food) Act, 1907,			257 5 4	
Insurance of Employees (Partial) under Workmen's Compensation Acts,			0 18 5	
Uniform Clothing for Inspectors,			13 3 9	
Disinfectants, Bait, &c.,			5 6 3	
Visits of Medical Officer to 21 Vessels to ascertain nature of cases of illness on board, at 42s.,			44 2 0	
Removal to Epidemic Hospitals and Treatment of 45 Seamen, at £8 12s. 6d. each,			388 2 6	
Maintenance of Contacts in Reception Houses,			4 1 0	
Interment Charges (nine cases), £9 9s., less 3s. 5d. found on body,			9 5 7	
Bacteriological Examinations at request of Medical Officer,			18 11 0	
Washing Clothing and Disinfecting Ships (39 at 15s. and 3 at 5s.),			30 0 0	
Expenses in connection with destruction of unsound fruit seized at Prince's Dock, and specially examining consignment of meat, &c.,			8 7 6	1,025 16 8
General and Administrative Charges—				
Salary to Medical Officer of Health,			£50 0 0	
Do. Sanitary Inspector,			50 0 0	
Do. to Clerk in Office of Medical Officer,			55 0 0	
Office of Sanitary Inspector (Proportion of Expense),			19 13 5	
Office of Clerk to Local Authority Do.,			30 0 0	
Office of Treasurer, Do.,			30 0 0	
Auditors' Fee,			10 10 0	
Stationery and Newspapers (£26 1s. 5d.), Printing (£17 0s. 1d.), and Advertising Audit (£1 7s. 7d.),			44 9 1	
Printing Minutes,			39 4 0	
Telegrams and Postages,			4 14 4	
Railway and other Travelling Expenses and Cab Hires,			38 4 0	
Corporation of Glasgow, Tramways Department—Tram-Car Checks,			3 19 4	
Expenses of Deputations attending in London Meetings of the Association of Port Sanitary Authorities,			48 8 9	
Expenses of Deputation attending in Elgin the Thirty-Sixth Annual Congress of the Sanitary Association of Scotland,			8 14 6	
Expenses of Deputation attending in London Conference convened by Lord Mayor re Destruction of Rats,			17 8 0	
Annual Subscription to Association of Port Sanitary Authorities,			3 3 0	
Corporation of Glasgow, Chemical Department—Fees for Analyses,			27 16 6	
Telephonic Communication—				
National Telephone Company—Exchange and Private Lines,	£20 15 0			
Trunk Dues of National Telephone Company and Glasgow Post Office Telephone Service,	7 12 6		28 7 6	
Sundry Petty Charges,			7 3 9	516 16 2
				£2,952 6 0

REVENUE.

Proportion effeiring to the Port Local Authority of the Port of Glasgow for the year to 15th May, 1910, of the contribution of £15,000 payable under the Local Taxation (Customs and Excise) Act, 1890, towards the cost of Medical Officers and Sanitary Inspectors in Scotland,			£29 14 4
Contributions under Article 6, Section IV., of Order—			
Local Authority of the Eastern District of the County of Dumbarton,			10 0 0
Local Authorities of the Burghs of Glasgow, Govan, and Partick, for the remainder (£2,912 11s. 8d.) of the Expenses incurred by the Port Local Authority, in proportion to the Annual Value of the whole Lands and Heritages within their respective Districts, viz.:—			
Glasgow, on £5,960,883			2,536 3 10
Govan, on 478,841			203 14 8
Partick, on 405,806			172 13 2
	£6,845,530		£2,952 6 0

FOREIGN MEAT REGULATIONS.

The following Table gives the total quantities of food material landed in the Port of Glasgow during the year 1910, a percentage of which was examined under the Foreign Meat Regulations:—

Beef.

Quarters,	30,744
Cuts,	171
„	4 barrels.
Rumps,	1,692 tierces.
Mess,	3,181 „
„	1,233 barrels.
Boneless,	21,615 boxes.
„	1,515 bags.

Veal.

Carcases,	17
Sides,	2
Quarters,	8

Mutton.

Carcases,	21,095
Legs,	13 sacks.

Pork.

Carcases,	239
Cuts,	100 barrels.
„	10 tierces.
Mess,	2,078 „

Sundries.

Ox kidneys,	503 boxes.
„ hearts,	2 „
„ cheeks,	3 barrels.
„ tripe,	155 bags.
„ tails.	1 sack.
Offal,	8 cases.
Cow udders,	66 tierces.
Lamb fry,	1 box.
Hams,	1 box.

Destroyed.

Beef,	13,044 lbs.
„ boneless,	412 boxes.
Mutton,	6,300 lbs.
Cow udders,	60½ tierces.
Hams,	1 box.

UNSOUND FOOD REGULATIONS.

The following Table shows the amount of food stuffs inspected during the year, and the amount destroyed:—

	No. of Packages.	Tons.	Cwts.	Qrs.	Lbs.	Examined.
MEAT—						
Fresh and frozen,	723	14	2	1	0	23
Preserved,	41,778	1,151	2	3	24	634
Sundries,	161	6	18	2	18	14
FRUIT—						
Fresh,	676,811	40,781	11	0	24	General.
Preserved—Dried,	58,935	1,358	2	1	7	822
Preserved—Tinned and bottled,	52,056	1,487	5	3	18	512
Nuts,	9,555	643	4	0	0	250
VEGETABLES—						
Fresh,	201,372	1,405 (389,644 bushels)	5	0	0	General.
Preserved—Tinned and dried,	13,325	618	19	1	0	152
PROVISIONS—						
Meal, flour, &c.,	1,091,492	80,404	7	3	0	General.
Butter, cheese, &c.,	120,560	5,905	10	2	0	1,913
Bacon, &c.,	43,855	10,320	10	1	0	978
FISH—						
Preserved and tinned,	12,244	339	2	0	20	249
SUNDRIES,	12,126	674	11	2	26	64
	2,334,993	145,110 (389,644 bushels.)	13	3	25	5,611

DESTROYED.

1 case pine apple, 135 cases oranges, 20 crates bananas, 35 bags onions, 2 packages apples, 90 cases fig pulp, 13 cases pomegranates, 2 barrels bream fish.

SECTION IV.

AN ACCOUNT OF THE HOUSE ACCOMMODATION OF THE LABOURING CLASSES IN THE BURGH AND OF ANY PROCEEDINGS UNDER THE HOUSING OF THE WORKING CLASSES ACTS OR OTHERWISE.

(*A*) GLASGOW POLICE (AMENDMENT) ACT, 1890, SECTION 32.

No action was taken under this section during the year 1910, all representations having been made under the Housing of the Working Classes Acts, 1890-1909.

It may be convenient, however, to summarise the work which has been done under the Local Act since its introduction. Representations were made under this section from 1890-1904, and again in 1909; action in the years 1905-1908 and in 1910 having been under the general Statutes. Altogether, 916 houses have been closed under the local Act as follows:—

1-Apartment, ...	613
2-Apartments, ...	282
3-Apartments, ...	11
4-Apartments and up, ...	10
Total, ...	916

(*B*) HOUSING OF THE WORKING CLASSES ACTS, 1890-1909.

During 1910 proceedings were taken under these Acts with regard to 167 houses, which were represented as unfit for human habitation in terms of Section 30 of the principal Act.

Of the houses represented, 90 were single apartments, 69 two-apartments, 7 three-apartments, and 1 four-apartments. 33 of the one-apartment and 25 of the two-apartment houses were unoccupied, but in the other houses there were 281 adults and 108 children—a total of 389 persons.

The following Table gives the Ward distribution, the number and size of the houses represented, and the number of persons affected.

STATEMENT of the NUMBER OF HOUSES and of the PERSONS affected in each WARD.

Ward.	Date.	Address.	Houses. Apartments. 1.	2.	3.	4.	Population. 1 Apt. Ad.	Ch.	2 Apts. Ad.	Ch.	3 Apts. Ad.	Ch.	4 Apts. Ad.	Ch.	Totals. Ad.	Ch.	Tl.
I.	12th Sept.,	39 Rumford Street, ...	(1) 2	...	...	...	4	...	...	...	...	...	...	...	4	...	4
	,,	39 Rumford Street, ...	2	...	...	...	4	...	...	...	...	...	...	...	4	...	4
			(1) 4	...	...	...	8	...	...	...	...	...	...	...	8	...	8
II.	20th Apr.,	332 Gallowgate, ...	(1) 5	...	...	...	7	...	...	...	...	...	...	...	7	...	7
	16th May,	29 Anderson Street, ...	...	1	...	...	...	...	2	3	...	...	...	...	2	3	5
	28th ,,	33-35 Green Street, ...	9	(2) 3	...	...	18	4	2	...	...	...	...	...	20	4	24
			(1) 14	(3) 4	...	...	25	4	4	3	...	...	...	...	29	7	36
III.	9th May,	41 William Street, ...	...	2	...	...	...	...	3	...	...	...	...	...	3	...	3
	12th Sept.,	130 East Wellington St,	...	2	...	...	...	...	5	1	...	...	...	...	5	1	6
			...	4	...	...	...	...	8	1	...	...	...	...	8	1	9
IV.	20th June,	38 Coalhill Street, ...	(1) 3	(1) 1	...	...	2	...	...	...	...	...	...	...	2	...	2
	,,	239 Gt. Eastern Road,	...	1	...	...	...	...	3	1	...	...	...	...	3	1	4
			(1) 3	(1) 2	...	...	2	...	3	1	...	...	...	...	5	1	6
IX.	20th Apr.,	13 Crown Street, ...	1	3	...	...	2	...	9	6	...	...	...	...	11	6	17
	23rd Sept.,	14 Rose Street, ...	1	3	7	...	2	1	12	4	45	26	...	...	59	31	90
			2	6	7	...	4	1	21	10	45	26	...	...	70	37	107
X.	20th June,	15-19 Dempster Street,	....	(3) 11	...	...	...	...	27	5	...	...	...	...	27	5	32
	,,	21-25 Dempster Street,	...	(8) 11	...	...	...	...	5	1	...	...	...	...	5	1	6
			..	(10) 22	...	...	...	...	32	6	....	...	...	...	32	6	38
XIV.	3rd Oct.,	14 School Wynd, ...	3	4	...	...	5	4	10	4	...	...	...	...	15	8	23
XVI.	23rd Sept.,	77 Stewart Street, ...	(14) 34	(3) 7	...	...	41	12	4	3	...	...	...	...	45	15	60
XIX.	12th Sept.,	95 Coburg Street, ...	...	(1) 3	...	1	...	...	5	2	...	...	7	1	12	3	15
XX.	20th Apr.,	76 Centre Street, ...	2	1	...	...	4	1	2	1	...	...	...	...	6	2	8
	9th May,	28 Cook Street, ...	(4) 9	3	...	...	10	2	7	3	...	...	...	...	17	5	22
	,,	34 Cook Street, ...	(4) 7	(2) 5	...	...	9	3	7	5	...	...	...	...	16	8	24
	,,	40 Cook Street, ...	(3) 7	(1) 5	...	...	9	4	7	11	...	...	...	...	16	15	31
			(11) 25	(3) 14	...	...	32	10	23	20	...	...	...	...	55	30	85
XXI.	3rd June,	480 South Wellington Street, ...	1	(3) 3	...	...	2	...	...	...	...	...	...	...	2	...	2
	6th ,,	Do.,	(4) 4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			(4) 5	(3) 3	...	...	2	...	...	...	...	...	...	...	2	...	2
		Summary.															
		Total, ...	90	69	7	1	...	...	...	...	...	...	...	...	...	...	...
		Empty, ...	33	25	...	...	...	...	...	...	...	...	...	...	...	...	...
		Occupied, ...	57	44	7	1	119	31	110	50	45	26	7	1	281	108	389

The small figures in brackets show the number of empty houses of each size at each address at the time of representation.

SUMMARY OF ACTION UNDER THE HOUSING OF THE WORKING CLASSES ACTS TO JUNE, 1911.

It will be convenient to divide a summary of the work done under the Housing Acts into two sections, the first summarising the position of the houses which had been represented prior to the introduction of the Housing and Town Planning Act with its amending procedure, and the other the houses represented during 1910.

All the houses represented were inspected during the month of June, 1911, and the following Table shows the position of those in the first group as at that date:—

SUMMARY OF REPRESENTATIONS UNDER THE HOUSING OF THE WORKING CLASSES ACT, 1890.

Year of Representation.	Total Represented.	Buildings Demolished.	Buildings Closed.	Converted into Business Premises.	Repaired.	Failed to obtain Closing Order.	Agreement to remove not carried out, and still occupied.	Pending.
1902	3	3	...	...	...	...	...	...
1903	32	20	4	1	1	1	...	5
1904	76	55	3	1	10	...	3	4
1905	100	37	12	7	16	1	2	25
1906	72	19	9	8	19	...	...	17
1907	40	6	8	...	8	...	...	17
Class totals,	323	141	36(1)	17(2)	54(3)	2	5	68(4)

(1) 1 of the buildings noted as closed in last year's report has since been demolished.

(2) 1 building formerly converted to business premises has also been demolished.

(3) In the "Repaired" column there are 23 tenements where (*a*) the alterations were to the satisfaction of the Medical Officer of Health, or (*b*) where the committee allowed certain repairs, or (*c*) where the repairs were more or less satisfactory and action ceased. The remaining 31 include (*a*) houses which are noted as having been repaired, and no opinion is expressed as to the merits, or (*b*) tenements originally in the pending list, which are reported as having had more or less recent repairs carried out.

(4) 1 property represented in 1905 and 1 in 1907 were demolished during the year. The remainder includes only those houses which are reported on as being in the same condition as when represented, and which will require to be re-represented before any further action can be taken.

In the following Table the information contained in the previous summary is shown in relation to the Wards affected:—

WARD SUMMARY OF RESULTS OF REPRESENTATIONS UNDER THE HOUSING OF THE WORKING CLASSES ACT, 1890.

Ward.	Total Represented.	Demolished.	Closed.	Business.	Repaired.	Pending.	Agreement not Carried Out.	Closing Order Failed.
1. Dalmarnock, ...	11	5	3	...	1	2	...	...
2. Calton, ...	62	36	4	1	8	12	1	...
3. Mile-end, ...	32	15	4	2	5	5	...	...
4. Whitevale, ...	20	10	1	1	3	5	...	...
5. Dennistoun, ...	8	1	4	...	2	1	...	...
6. Springburn, ...	2	...	2	...	...	...	...	...
7. Cowlairs, ...	2	...	...	2	...	...	...	...
8. Townhead, ...	10	3	2	1	2	2	...	...
9. Blackfriars,	10	6	1	..	2	...	1	...
9A. Blackfriars,	18	8	...	1	3	5	1	...
10. Exchange, ...	4	...	1	1		1	...	...
11. Blythswood ...	1	...	...	...	1	...	...	...
12. Broomielaw, ...	18	11	1	...	1	4	...	1
13. Anderston, ...	16	7	1	...	5	1	1	1
14. Sandyford, ...	8	4	...	...	1	2	1	...
15. Park, ...	1	...	1	...	...	...	...	...
16. Cowcaddens, ...	33	12	4	...	5	12	...	...
17. Woodside, ...	2	...	1	...	1	...	...	...
18. Hutchesontown, ...	4	2	...	...	2	...	...	...
19. Gorbals, ...	31	8	3	6	4	10	...	...
20. Kingston, ...	23	7	3	2	6	5	...	...
21. Govanhill, ...	2	1	...	...	...	1	...	...
22. Langside, ...	3	3	...	...	...	...	...	...
25. Maryhill, ...	2	1	...	...	1	...	...	...
	323	140	36	17	54	68	5	2

With the exception of the tenement at 77 Stewart Street, which is under appeal to the Court of Session, all the houses included in the 1910 representations have been closed and some of them demolished, as shown in the list which follows:—

TENEMENTS DEMOLISHED DURING 1910.

Ward.	Address.	Date of Representation.	Apartments.				Population.		
			One.	Two.	Three.	Four.	Adults.	Children.	Total.
1. Dalmarnock, ...	39 Rumford Street, ...	1910	2	...	...	...	4	...	4
3. Mile-end, ...	41 William Street, ...	,,	...	2	...	...	3	...	3
20. Kingston, ...	76 Centre Street, ...	,,	2	1	...	...	6	2	8
,, ...	28 Cook Street, ...	,,	9	3	...	...	17	5	22
,, ...	34 Cook Street, ...	,,	7	5	...	...	16	8	24
,, ...	40 Cook Street, ...	,,	7	5	...	...	16	15	31
			27	16	...	...	62	30	92

At 39 Rumford Street the backland was demolished, and the houses in the mid-land reoccupied.

Ninety families were displaced from the houses closed or demolished under the operations of the Act during the year, and in each case effort was made to follow the families to their new abode.

Three families were known to have left the City, while 19 others were lost sight of.

Of the 68 families remaining, the following summary indicates the result of the change:—

To Poorhouse (one woman and child), ...	1
From 1 apartment to 1 apartment (increased rent), ...	20
" " " (same rent), ...	8
" " " (diminished rent), ...	5
From 1 apartment to 2 apartments (increased rent), ...	7
From 2 apartments to 1 apartment (increased rent), ...	5
" " " (same rent), ...	1
" " " (diminished rent), ...	4
From 2 apartments to 2 apartments (increased rent), ...	13
" " " (same rent), ...	1
" " " (diminished rent), ...	1
From 3 apartments to 2 apartments (diminished rent), ...	1
From 4 apartments to 2 apartments (increased rent), ...	1
	68

Altogether, under the operation of the Housing of the Working Classes Acts, houses have been closed at December 31, 1910, as follows:—

1 apartment, ...	792
2 apartments, ...	710
3 "	31
4 "	6
	1,539

HOUSING, TOWN PLANNING, &c., ACT, 1909 (SECTION 35).

CERTIFICATION OF LODGING-HOUSES FOR WORKING CLASSES FOR EXEMPTION FROM INHABITED HOUSE DUTY.

Thirty-four applications for certificates to enable claim to be made for exemption from Inhabited House Duty, as provided for in Section 35 of the Housing, Town Planning, &c., Act, 1909, were received during the year. After inspection 14 certificates were declined, and 20 granted, 5 of these latter after alterations had been made to remove objections which had been taken.

A difficulty arises, however, in regard to those houses for which a certificate was refused, for while the keeper of the house may have complied with the Regulations under the Public Health Act governing the several classes of lodging-houses, other conditions were present which prevented the issue of a certificate under Clause 35.

The attention of the Committee on Health was directed to this anomaly in the accompanying Memorandum:—

Under Section 35 of the Housing, Town Planning, &c., Act, 1909, the assessment of the Inhabited House Duty of any house occupied for the sole purpose of letting lodgings to persons of the working classes, at a charge not exceeding 6d. per night, shall be discharged by the Commissioners, acting in the execution of the Act relating to the Inhabited House Duties, upon the production of a certificate to the effect that the house is solely constructed and used to afford suitable accommodation for the lodgers, and that due provision is made for their sanitary requirements.

The application of the phrase is rendered a little clearer by reference to Subsection 2 of Section 26 of the Customs and Inland Revenue Act, 1890, to which procedure under the above Section reverts, and where the conditions required are that the house for which the relaxation is sought affords suitable accommodation for the families or persons inhabiting it, and that due provision is made for their sanitary requirements. It is probable that in future a wider use may be made of this Clause, but at present three groups of houses require consideration in connection with it. These are:—

(1) Common Lodging-houses,
(2) " Farmed-out " houses, and
(3) Houses let in lodgings.

I have already had to consider several applications from the keepers of common lodging-houses, and one at least from the agents of the principal tenant of certain " farmed-out " houses, for certificates of exemption under the Clause. All of these, however, are subject to Regulation under the Public Health Act, and it is eminently desirable that the standard of regulation for administrative purposes should coincide with the standard of exemption from Inhabited House Duties.

In the only application which I have had for exempting a " farmed-out " house from the duties referred to, I declined, on the ground that the accommodation was not " suitable " within the meaning of the Clause, mainly because the inner apartment could only be entered by the family occupying it through another apartment occupied by a different family. This seems to me essentially unsuitable accommodation for separate families, and yet it is consistent with Regulation, and apparently also with the Public Health Act.

In a similar way, I have declined certificates to several common lodging-houses, on the ground that many of the cubicles were defective in light and ventilation, and would not now be permitted in certain towns elsewhere.

Similarly, also, I have had to take exception, in some cases, to the provision of washing-house, lavatory, and water-closet accommodation, and generally it is, I think, fairly accurate to state that many of the objections have arisen in the endeavour to convert to purposes of human occupation buildings which were not originally designed for that purpose.

It is obvious that the keeper of a common lodging-house has ground for complaint should he, while complying with the Regulations under the Public Health Act, fail to obtain the exemption from Inhabited House Duty provided under the Housing Act. On the other hand, I am unable, in many instances, to accept the existing conditions as reasonably complying with the requirements of Clause 35.

During the past year, I have declined 14 out of 34 applications, while 5 were granted on the completion of alterations to remove objections of the nature of those indicated.

These considerations suggest the need for revising existing regulations in order to bring the administrative requirements into line with the standard required for certification under Section 35. A time limit, within which existing houses could be brought up to the altered standard, would remove the objection, which applies to the sudden application of a new standard, while there would be no hardship in applying it to houses coming up for registration for the first time.

FARMED-OUT HOUSES.

Appendix Table XLII. shows the number of farmed-out houses in the City, and the number of persons occupying same, as ascertained by special census. The total number of such houses was 1,174, of which 692 were of one apartment and 482 of two apartments, as compared with 531 and 275 of each class at the date of the census in 1901.

The population inhabiting these houses numbered 3,254, of whom 1,252 adults and 329 children were found in one-apartment houses and 1,222 adults and 451 children in houses of two apartments.

HOUSES LET IN LODGINGS.

Closely associated with the farmed-out houses are those let in lodgings, the distinction between them being to a large extent a technical one. An enumeration of the number of persons living in houses let in lodgings was also taken, when 138 houses were found occupied by 384 families, consisting of 1,146 persons. The Ward distribution of the houses let in lodgings is shown in Appendix Table XLIII.

SECTION V.

OFFENSIVE TRADES.

Three applications, under Section 32 of the Public Health (Scotland) Act, 1897, for sanction to establish offensive trades, were considered by the Local Authority, one each in the Possilpark, St. Rollox, and Whitevale Districts. In the first case the application was subsequently withdrawn, as the business, as ascertained to be carried on, did not constitute an offensive trade.

The second application asked sanction to establish the business of a slaughterer of horses, and in connection therewith the following Report was submitted by the Medical Officer of Health and the Sanitary Inspector. The applicants having deleted the proposal to erect a *post-mortem* examination room, and provide for the separation of the killing, dressing, and packing rooms, the sanction of the Local Authority was granted, and the premises licenced, in terms of Section 33 of the Public Health Act, said licence to continue until Whitsunday, 1912:—

REPORT BY MEDICAL OFFICER AND SANITARY INSPECTOR ON APPLICATION BY MESSRS. GEMMILL BROTHERS, 32 BAIRD STREET.

The following report has been prepared and is submitted subject to the observation by the Medical Officer that he desires it to be read together with the accompanying note prepared by him on the policy of continuing in private slaughter-houses the preparation of horse flesh for human food.

The applicants at present occupy premises at 32 Baird Street, St. Rollox, as a collecting station for horses to be ultimately exported alive to the Continent for human food. The introduction of the Diseases of Animals Act, 1910, which established a veterinary inspection of all animals at the port of embarkation, has determined applicants to conduct the slaughtering of such animals before exportation, and the present application is to enable them to do so in their premises in Baird Street. The application does not specifically state that they wish to be recognised also as knackers, and it has been considered solely in relation to the work of horse-slaughtering for purposes of human food, which is included among the offensive trades defined in Section 32 of the Public Health Act, and as such requires the sanction of the Local Authority before being established. It is also specifically brought under the provision of Section 33 thereof for the purposes of annual licence.

Situation of Premises.—The premises are situated on the north side of Baird Street, along which they extend for a distance of about 130 feet, while the site is 90 feet deep. Baird Street Reception House is within 33 yards, and the nearest tenement house, which is situated in Black Street, is 40 yards distant from the nearest boundary, and on the east and west are slate and wood yards.

Extent of Business.—At present there is room for the stabling of about 30 horses, which represents the average weekly number exported, but several reasons will operate, we understand, towards reducing the number dealt with when the flesh instead of the live animal is to be exported, and the weekly number, in these circumstances, is not expected to average more than 12 to 14.

In the plan of the proposed alterations the north-east corner is shown as occupied by a slaughter-house, and the north-west corner by a *post-mortem* room, while between them there extends for the most part of the distance a space marked "stables," which are built of timber. Additional stabling is provided along the eastern boundary with a projection into the yard at right angles from the main line of this one.

Proposed Post-mortem Examination House.—We have had the use of this *post-mortem* room explained to us by the applicants. Their intention is to supply a place to which animals might be taken for *post-mortem* examination, and while we appreciate the importance of a provision of this sort, we do not think that its association with a place for the slaughter of animals for human food is desirable. We understand that in consequence applicants are prepared to withdraw this proposal.

Slaughter-house.—This is shown as consisting of a building occupying a space measuring 40 by 30 feet. It is suggested that this might serve the combined purpose of killing room, dressing room, and packing room. This accommodation we think quite inadequate, and in our opinion the room where the horse flesh is to be chilled or cooled, salted, and packed should be quite separate, although probably adjoining the killing room, which should be of no larger dimension than is necessary for the slaughter and dressing of one animal at a time. It will be necessary, therefore, to have the plan so altered as to show these requirements.

Apart from these major changes, the conditions specified in the regulations already in existence for the structure of the premises and the conduct of the business of horse slaughtering will require careful attention. The walls of the slaughter room, dressing room, and packing room should be formed of glazed brick internally, and the plans should be altered to show the situation of the various receptacles for the disposal of refuse and for the collection of blood, offal, garbage, &c., which are the necessary products of a business of this character. The room where the cooling and packing of the meat is to be carried out should also be shown.

Should the applicants formally withdraw their proposal to establish a *post-mortem* room in conjunction with the premises, and prepare new plans embodying the suggestions and amendments herein set forth, we are of opinion that no nuisance need be caused in the locality through the establishment of the business, and that, always subject to the Bye-laws laid down by the Local Authority for the conduct of the business of a slaughterer of horses, a licence may be granted to them.

(Signed) A. K. CHALMERS.
,, PETER FYFE.

Sanitary Chambers,
Glasgow, 25th October, 1910.

SUPPLEMENTARY NOTE BY MEDICAL OFFICER ON THE FOREGOING APPLICATION.

This is the first application which has been made since 1898 for permission to establish anew the business of a slaughterer of horses for human food. As such, therefore, it is, I believe, worthy of special consideration, because its approval *simpliciter* will confirm the Local Authority in a policy regarding the preparation of horse flesh for human food which may weaken their position ultimately with regard to the slaughter of cattle for like purposes.

Although the terms of the Public Health Act and the existing practice of sanctioning private slaughter-houses for the preparation of horse flesh for human food seem alike to require that the present application should be dealt with on its merits, I am distinctly of opinion that the principle which compels the slaughter of certain food animals in public abattoirs should be extended to those which are included within the trade of a slaughterer of horses. It is illegal in Glasgow to slaughter cattle anywhere save in the public abattoirs, and I believe that an expansion of the principle to cover the slaughter of horses for food purposes would ultimately be to the public advantage. I therefore suggest that the question be

considered with a view to enquiring whether the Markets Commissioners, during their present alterations, have facilities for setting apart a place for the slaughter of horses within the premises now being constructed at Moore Street. Were this accomplished in the first place, an alteration in the existing legislation might in time decide the transference of existing businesses towards the centre there provided.

(Signed) A. K. CHALMERS.

Sanitary Chambers,
Glasgow, 25th October, 1910.

The third application had reference to the establishment of a gut-cleaner's business in Sword Street, Whitevale, sanction for which was granted, subject to certain alterations on the premises being carried out to the satisfaction of the statutory officials.

A further application, under Section 32 of the Act for sanction of the Local Authority to extend premises in M'Farlane and Graeme Streets, where the business of a Hide Factor was being carried on, was also considered by the Local Authority, and no objection being lodged, the necessary sanction was granted.

SMELLS IN DENNISTOUN DISTRICT.

In the month of April, there was submitted a petition, signed by the householders resident in Dennistoun District, protesting against obnoxious smells alleged to be emanating from the Burnbank Oil and Tallow Works, situated in Coventry Drive, and in response to an instruction of the Committee on Health, the following Joint-Report by the Medical Officer of Health and the Sanitary Inspector was submitted:—

REPORT BY MEDICAL OFFICER OF HEALTH AND SANITARY INSPECTOR ON ALLEGED EFFLUVIUM NUISANCE EMANATING FROM THE WORKS OF HUGH COUPER, TALLOW MELTER, COVENTRY DRIVE.

From the letter of the Town-Clerk, dated 26th October last, we note that the instruction of the Committee to us is to report "on the removal of certain diseased meat from Couper's Works, which is alleged to be the cause of the smells complained of."

Early in the month of May, 1910, all the diseased box-meat, which had been placed in a large store on the east side of the works, was removed at the instance of the Sanitary Inspector, and the store thoroughly cleansed and limewashed. Since that time no offensive smells could arise from this source. Other alterations of an extensive nature were also made in these works during last summer, but it has become obvious that offensive smells are still felt in the area outside of these works, and therefore must have an origin other than that due to the storing of the box-meat.

In order to discover whether the existence of these offensive smells outside of the works was of frequent occurrence, a careful watch has been made by the Inspectors attached to the Department from the 1st of May last down to Saturday, the 19th of November, the Inspectors being instructed to pay surreptitious visits to these works on week-days, and also, if necessary, on Sundays. We append to this report a note * of the dates of these visits, along with the Inspector's report upon the direction of the wind on each occasion, and whether any smell was observed outside to the leeward of the works. From this it will be noted that, in all, the Inspectors made 107 observations at varied periods and at differing hours, and found smells of varying degree issuing outside of the works on 45 occasions. On 35 occasions the smells were noted as very slight and slight, and on 10 occasions they were characterised as strong.

We visited the vicinity of the works and the works themselves on Thursday, 16th November, 1910. A slight variable breeze was blowing from the north-west.

* Not reprinted.

Before inspecting the works we visited some of the tenants dwelling in Ardmore Street, whose houses were directly to the leeward; and from these tenants we obtained verbal evidence that the offensive smells were not so prevalent as they had been formerly. They stated that the smells were mostly felt during the summer time, when the weather was warmer.

We were also able to perceive a very slight odour coming on the wind now and again, but it could not be called in any way offensive.

We obtained evidence in one of the houses that the offensive smells complained of often arose during the night, and had been perceived between 11 and 12 midnight. We mention this, particularly as we afterwards discovered when in the works themselves that they are never in operation after five o'clock at night, when the men leave the premises. The smells, therefore, issuing in this district during the night when these works are closed suggest emissions from the sewers, and, in order to satisfy ourselves as to the state of the sewerage in this neighbourhood, we have received from the Master of Works a plan and description of the sewers in this area.

It will be observed from it that the large sewer, 3 feet by 2 feet 6 inches, which runs through the western portion of the Alexandra Park and takes the effluents from (*a*) Provan Gas-works, (*b*) the Chemical Works of Messrs. Brotherton & Co., Limited, and (*c*) the Chemical Works of Messrs. Alex. Hope, Jun., & Co., Limited, comes down Kennyhill Gardens and discharges into the main sewer, which is placed in the centre of the railway track of the City of Glasgow Union Railway.

It will be observed that the sewers draining Ardmore Street, Coventry Drive, Culloden Street, Crinan Street, and Staffa Street all communicate with this large sewer, and consequently are open to receive the naphthalene and other gases which were emitted from the Alexandra Park sewer, and which were so much complained of by the residenters in Kennyhill Gardens and Staffa Street. We have no doubt, therefore, that the complaints we have received of offensive odours in Ardmore Street, Culloden Street, and Coventry Drive have a similar origin, and are not connected with the Tallow Melting Works in question, the effluents from which, as will be observed from the plan, flow in an opposite direction, through the 4 feet barrel sewer which discharges into the Alexandra Parade sewer at Armadale Street—a considerable distance to the west.

On visiting the works themselves we at once felt the effluvium whenever we entered the yard, as it seems to cling to the walls, and is never absent inside a work of this description.

On making careful enquiry into the various processes, the following report may be taken to fairly represent what goes on :—

The first part of the process from which effluvia are likely to arise is during the discharge of the solid residue from the steam digesters, which are three in number. This is most likely to occur when the digesters are being emptied in the early morning, particularly if the material is discharged in a hot condition. We were assured, however, that the temperature is always lowered by the introduction of cold water to the digesters in sufficient quantity to reduce the temperature below that at which effluvia will arise; and while in theory this will be sufficient to remove the likelihood of any offensive smells arising, everything will depend upon the care with which the individual workman carries out his instructions. As will be seen from the Appendix, the Sub-Inspector, on visiting surreptitiously, reported on three occasions that the material was being taken out of one of these digesters in a steaming condition, viz., on 22nd September, 6th October, and 3rd November. The Inspector spoke to the occupier on each occasion, and, so far as we are aware, it has not occurred since the date last mentioned.

In our opinion, the most fruitful source of offensive effluvia, so far as these would affect persons outside of the works, arises in connection with the drying of the residue after it leaves the presses.

On the removal of the debris from these presses, it is necessary, in order to dry it before it is ground up as a manure, to place it in drying-stoves. During last spring this residue, along with a proportion of the box-meat, which was kept in the store previously referred to, was placed in a revolving heater, and the vapours from this heater were passed into the flue of the steam boiler, and so proceeded undestroyed up the chimney, from which they escaped and became a source of

nuisance in the surrounding neighbourhood. The revolving heater has now been dismantled, and the residue is placed in a stationary drying-stove on the west side of the boiler. An electric fan is connected with this stove, and discharges the offensive vapours from it into a covered receptacle, specially built, in front of the steam boiler, from which they are urged by the power of the fan into the ashpit, and thence through the incandescent fuel in the furnaces of the Lancashire boiler which supplies steam to the works.

As long as these furnaces are kept wholly covered with burning fuel, we do not doubt that the heat is great enough to destroy the organic fumes which enter the furnaces from the ashpit, but, in our opinion, when offensive fumes have escaped up the chimney, this has been caused by the fireman not keeping the bars sufficiently covered with incandescent fuel, and so permitting certain proportions of the offensive gases from the stove to escape up the chimney before they can be rendered innocuous.

The combination of the steam boiler furnaces with the thorough oxidation of such organic effluvia is not altogether satisfactory, as when the steam pressure in the boiler becomes excessive, and steam is blown off through the safety valves, the fireman naturally ceases to fire his furnaces, so as not to maintain a higher temperature therein than is necessary to keep the steam at a working pressure, and is thus apt to forget that his furnaces are also called upon to operate as fume cremators.

In these circumstances, and to avoid further complaints from this source, it will be necessary that representations should be made to the firm either to erect a special furnace for the purpose of thoroughly destroying, at all times, all offensive vapours which arise from the drying of the material, in conjunction with the building of a higher chimney stalk; or, otherwise, to remove daily all the residue from the digesters and filter presses to some other locality for drying purposes, where this process may be accomplished without creating a nuisance to residenters in its neighbourhood. Whether this can be insisted upon by the Local Authority, under the Public Health Act, is a question for the consideration of the Town-Clerk.

Summarising the foregoing report, we are of opinion—

(1) That there is a basis in actual fact for the complaints which have been made regarding the emission of smells from Couper's Works;

(2) That some part of the complaint, especially that which arises during the night hours, may have its origin in the emission of smells from the Kennyhill sewer, depending on the irregular discharge of fluids from works at Provan into that portion of the sewerage system; and

(3) That the requirements, so far as Couper's Works are concerned, are—

(*a*) Improved methods of handling the residue, either by daily removal of the contents of the filter presses for treatment elsewhere, or otherwise the introduction of a properly equipped drying room and cremating furnace for the destruction of the offensive vapours; and

(*b*) A considerable addition to the height of the chimney stalk.

(Signed) A. K. CHALMERS.

,, PETER FYFE.

Sanitary Chambers,
Glasgow, 13th December, 1910.

Later in the year, complaint having been made regarding the continuance of offensive smells in the Dennistoun District, the Local Government Board requested the Medical Officer of Health to report on the whole subject-matter, and in response thereto the following reports regarding odours emanating from the public sewer in Cumbernauld Road, and from the works above referred to, were made:—

REPORT ON SOURCES OF SMELLS COMPLAINED OF IN THE NEIGHBOURHOOD OF CUMBERNAULD ROAD.

CONTENTS.

REPORT ON SOURCES OF SMELLS COMPLAINED OF IN NEIGHBOURHOOD OF CUMBERNAULD ROAD AND COVENTRY DRIVE, GLASGOW.

The nuisance arising from these smells would appear to have been brought to the notice of the Board in one complaint (see Board's letter to Reporter of June 30, 1910). The smells, however, are believed to be quite separate in their origins, although their areas of distribution are sufficiently close to lead to their being regarded as common to one district in the north-east of the City.

Those which are peculiar to the Cumbernauld Road area of complaint are believed to emanate from sewer manholes, while those pervading the Coventry Drive area are regarded by many persons resident in the neighbourhood as originating in the Tallow Melting Works of Cooper & M'Donald, which is situated in their midst.

But although the area of distribution of the smells from the Cumbernauld Road sewer is partly within the Glasgow boundary, their source is believed to be the effluent from the Gartloch Distillery (which is situated in the Lower Ward of Lanarkshire) in its passage along the sewer in question to the Dalmarnock Sewage Works.

A further distinction may be noted, for while the Cumbernauld Road smells have formed the subject of prolonged negotiation between the Local Authorities of Glasgow and of the Lower Ward of Lanarkshire, those which are believed to be special to the Coventry Drive district have been regarded by the Local Authority of Glasgow as coming wholly within the scope of the Regulations for Offensive Trades under the Public Health Act.

For these reasons it will be convenient to deal with the several causes of complaint separately, and the following portion of the report is confined to those believed to arise in connection with the distillery effluent.

Gartloch Distillery Effluent.

It seems desirable here to trace shortly the history of past negotiations from the minutes of the Glasgow Corporation.

(1) *From Minute of Committee on Sewage, 14th December, 1904.*

At this meeting the Town-Clerk reported having observed in the *Glasgow Herald* record of a decision * in an action in the Court of Session regarding the discharge from the Gartloch Distillery into the Cumbernauld Road sewer, and thereby into the City sewers and the Eastern Sewage Purification Works of the City of Glasgow at Dalmarnock, and that he had written to the Clerk to the District Committee of the Lower Ward of Lanarkshire, whose reply he submitted. Before pronouncing on the matter the Committee remitted to the Town-Clerk to report thereon.

(2) *From Minute of Committee on Sewage, 25th January, 1905.*

The Town-Clerk reported that the Chairman of the Committee—Councillor R. Anderson—accompanied by a representative from the City Engineer's Department and from that of the Master of Works, had visited Gartloch Distillery; that the Manager had shown them the tank system which was then in operation for receiving, cooling, sedimenting, and finally discharging the effluent into the Cumbernauld Road sewer; that in conference with him it had been agreed that the opening in the final discharge tank from which the effluent goes direct to the sewer should be restricted to a circular opening of 3 inches in diameter with a stand pipe about 3 feet high, so that the clear liquid would be regularly discharged into the sewer, and any solid matter which might be brought up from the settling tank be thus prevented from entering it. It was also reported by the Town-Clerk that a sample had been taken from the " spent wash settling tank " in order to discover

" how much lime would be required to neutralise it, the Manager having
" expressed his willingness to add lime in sufficient quantity on being advised
" by the Corporation Chemist how much would actually be required."

The Committee thereafter agreed to recommend that, provided the means to be taken by the Manager of the distillery should prove effective, no objection was to be made to the reception of the sewage from the distillery, and it was recommended that the offer of the District Committee of the Lower Ward of the County of Lanark to pay over the proceeds of the Sewage Purification Rate on the valuation of the distillery be accepted.

The Committee further agreed that these recommendations should be without prejudice to the Corporation's right to object to receive the sewage from the distillery, if the means proposed to obviate the objection to the distillery refuse did not prove effective.

(3) *From Minute of 24th May, 1905.*

It is here recorded that the Town-Clerk submitted a report by the Corporation Chemist on the discharge from the distillery, and the quantity of lime necessary to effect neutralisation of the organic acids present in the sample; and that the Committee agreed to recommend that the Town-Clerk be instructed to communicate with the Manager of the distillery thereanent.

(This analysis forms Appendix A, although the system has been greatly modified since.)

(4) *From Minute, 14th June, 1905.*

It is here recorded that the Town-Clerk having forwarded to the Manager of the distillery copy of the Corporation Chemist's report, submitted a reply from him to the effect

" that he is making arrangements for having the necessary quantity of lime
" added to the discharge."

Whatever effect was given to this by the Manager would seem to have had little practical result in reducing the volume of smell, because in the following year —June, 1906—a complaint was made to the Board by the Rev. J. F. Miller, U.F. Church, Millerston, and others; and an investigation was in consequence carried out on behalf of the Board by Sir Henry D. Littlejohn, whose report is dated 20th July, of that year. In that report the emission of smells from the manholes in the

* The Depute Clerk can give me no information regarding this earlier action.

district of Millerston is regarded as established on the evidence, and the further important statement is made, so far as I know for the first time, that on removing the covering from one of the manholes (from the context probably that opposite the house of the Rev. J. F. Miller) the drain was seen

" with a flow of dirty looking liquid, some of which was brought to the surface.
" It possessed a well-marked distillery odour. There was also a considerable
" deposit to the depth of several inches, a specimen of which was also taken,
" and proved to contain a large amount of distillery refuse."

Similar characters were recognised in the effluent and deposit just at the point where the distillery pipe joins the sewer in Cumbernauld Road.

An indication of the work undertaken prior to this time for the abatement of the nuisance is contained in the following further extract from Sir Henry Littlejohn's report :—

" The expedients in the shape of tanks, &c., which have been adopted at the
" distillery to abate the nuisance have proved unavailing. I hold I am hardly
" warranted as your Inspector in suggesting remedies. This course might lead
" to protracted criticism, but short of shutting up the distillery or of causing
" its drainage to be carried along its natural shed, its drain should be
" ventilated before it joins the village drainage. No such ventilation exists at
" present. Hence the existence of the nuisance complained of. I observe that
" the Glasgow Authorities, to protect themselves so far, and to diminish the
" escape of smells from the drain, have erected a large ventilating shaft or
" chimney, but this only acts as a palliative, as complaints continue to be
" made along the line of the drain.*

The impression prevailing as to the cause of the nuisance at this period would appear to have been that the distillery effluent in cooling as it ran along the sewer deposited solid material, and underwent some chemical change which gave rise to the smells complained of. It would then seem to have occurred to those who were dealing with the matter that some provision for more effectively cooling the effluent before discharge from the distillery tank system would tend to lessen the amount of deposit in the sewer, and consequently the source of the smells complained of, and the Manager of the distillery, writing to the Town-Clerk on 12th October, 1906, makes the following observations :—

" We are pushing on the alterations connected with the better settling of our
" spent wash and washings, and these are to be composed of two large vats and
" six square brick tanks—three of the latter in a row. We will discharge into
" the first one, and allow it to flow from same to the second, and then to the
" third, so as to allow time for settling and cooling, using the different sets
" alternately, whereby we expect to be able to pass the waste into the sewers
" much fresher and quicker, and give less time for any chance of decomposition
" and without any solid matter whatever.
" This it is impossible to do under our present system, and a good deal
" of solids find their way into the tank from which we discharge, and thereby
" settles to the bottom, and although cleaned out regularly, same gives us con-
" siderable trouble to deal with sediment in bottom of same."

It was about this time that my personal attention was directed to this question, and I have already in my report to the Board of 4th July last, pp. 3-4, quoted from a letter which I wrote to the Town-Clerk on 9th November, 1906, containing the opinion which I then held regarding the method of dealing with this nuisance.

Subsequent to this a series of liming tanks were introduced, and in order to appreciate the part they occupy in the treatment of the effluent some description of the works themselves is necessary.

I have visited them on several occasions either alone or in association with officials from both Authorities interested, and the following description is from

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* This appears to refer to a ventilating pipe quite at the beginning of the sewer and some yards beyond the point where the distillery pipe discharges into it. It is considerably beyond the city boundary.

information given me by Mr. Moet, the present Manager of the works, and Mr. Taylor, the Secretary :—

Character and Volume of Effluent.—The effluent consists mainly of—

(*a*) Steep tank water—used in washing the grain before malting,

(*b*) Washings from the malting vats and mash tuns, and the apparatus generally,

(*c*) The spent wash or pot ale, being the residue from the distillation process.

There is a further addition from

(*d*) The effluent of a septic tank installation, which deals with the domestic sewage of the workmen resident at the distillery.

The total weekly output of pot ale varies from 180,000 to 200,000 gallons, and there are, in addition, about 70,000 gallons per week, of which 20,000 is steep tank water, and 50,000 gallons are washings in the sense indicated under (*b*).* The proportion of pot ale to the combined steep tank and washings water otherwise is thus fully 2½ to 1, but this proportion will not always be maintained in the combined effluent, as the several parts of the process of handling the grain must preserve a certain sequence.†

Treatment and Disposal of Effluent.

There is a series of six open brick tanks, adjacent to which, on the west, are two " spent wash " (wooden) vats, and on the east and north shallower open brick tanks—three in number. These, in one way or another, receive the whole of the effluent before it is passed to the liming tanks.

Cooling and Sedimenting of the Pot Ale.

The larger series (Nos. 1-6) is used in the following order :—

Pot Ale or " spent wash " is first discharged into tank No. 1 or No. 6, which are adjacent to each other on the southern boundary of the tank area. In either case the effluent makes a circuit of the system from 1 to 6, or from 6 to 1, each tank, after the receiving one, being filled in succession by overflow from that which precedes it.

The filling of these tanks usually begins on Friday, and the effluent is allowed to cool and settle till Monday morning, but it may happen that the progress of the week's work will admit of the discharge being begun on Thursday morning, in which case a day longer is allowed for settling. The tanks are emptied in the order of their filling, by the removal of wooden slots in succession from above downwards, so that the liquid is always drawn off from the top.

Of the shallower tanks 1-3 to the east and north, No. 1 is larger than the others, and is divided longitudinally. Towards one end of the inner section of the tank thus formed, 8 screens of jute sacking are inserted across its length, and through this all the pot ale from the series 1-6 is passed and filtered, before being finally discharged through the pump well to the liming tanks.

Steep Tanks and Washing Waters.

The right half of the shallow tank No 1 receives all the steep tank and washing water, while No. 3 receives the effluent from a septic tank dealing with the domestic sewage of the employees and their families.

No. 2 shallow tank is held in reserve at the moment.

The Use of the Wooden Vats.

The wooden vats to the west are filled direct from the still, and none of the pot ale which is discharged into the open tanks 1-6 is ever pumped subsequently into these vats.

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* The combined output here is only about half that estimated by the Lanark County officials (See Appendix B, containing extract from minutes of meeting of Sub-Committee on Public Health of Lanarkshire, dated 21st November, 1910, but referring to observations taken in August of that year), and the difference is explained by Mr. Moet, distillery manager, as arising from variation in the number of maltings in separate weeks.

† See Appendix C, and also analysis of " Malt Distillery " effluent on pages 4-15 of VI. Report of Royal Commission on Sewage Disposal (Cd. 4511).

The object of the vats is to retain, at a fairly high temperature (170° F.), some part of the pot ale, in order that the fluid part, which contains lactic acid—of a strength so that 100 cc.'s effluent require 5 cc.'s normal alkaline solution for neutralisation—may be returned into the mash tuns to stimulate fermentation in the next quantity of grain to be fermented. The sediment from the vats is thereafter emptied every Wednesday into No. 1 or 2 of the larger series of open brick tanks.

The capacity of the open tanks Nos. 1-6 is about 50,000 gallons each, or 300,000 gallons together, while the wooden vats hold about 45,000 gallons each.

Frequency of Discharge.

The Pot Ale.

The process of distillation is carried on from Wednesday to Friday afternoon or Saturday morning. There is only one still in operation—a continuous one called a coffee-still, and the total out-put of pot ale will by some time on Saturday have been discharged into the tanks above described, where it remains over the week-end.

On Monday or Tuesday about half the contents of the wooden vats is pumped back to the distillery for the purpose formerly described, and the sediment allowed to flow into one or other of the open tanks, where the pot ale is being sedimented and cooled to a temperature not exceeding 100° F., which is the maximum temperature allowed by the District Council for fluids entering their sewers.

It is sometimes possible to discharge some part of the week's effluent of pot ale on the Saturday, but in any case none of it is ever retained over the Wednesday of each week. By this time a considerable sediment has taken place, which is pumped back to the distillery, dried, and sold as " dreg " for cattle feeding (draff being the residue of the grain from the mash tun before distillation).

Steep Tank and Washing Waters.

These are received into the eastern section of No. 1 of the shallower tanks already described. Their discharge is more irregular than that of the pot ale, so that the largest volume goes on Thursday or Friday, when the whole work is being washed up. The discharge from the steep tanks, however, may begin on Monday evenings.

Domestic Sewage.

No. 3 tank of this series receives the effluent from a septic tank installation intended to deal with the sewage proper of the distillery. From the tank it is discharged round the end of No. 1, to join a channel which leads to a well situated between the pot ale and steep water tanks, and from which the combined effluent is pumped to the liming tanks.

No definite information can be obtained of the volume of this domestic sewage, but a rough guess may be made from the number of persons employed at the Distillery and resident in the workers' houses.

In all, there are 20 houses, 14 of which are at present occupied. All have water-closets, and 4 have baths. In addition, there are five water-closets in the distillery for the workmen (who number about 100), and three for the Office Staff. When the houses are fully occupied the inmates might number 100, but some will be employed in the Distillery. An outside estimate of the daily flow on these occasions might be placed at 5,000 gallons. The Secretary of the Distillery Company thinks it will be nearer 2,000 at the present time.

The septic tank is stated to measure 15 by 30 by 8 or 10 feet, but the effluent pipe comes off at least 3 feet below the top of the tank, and the actual capacity will in consequence be much less than these measurements suggest.

In any case, the structure of tank is defective, as leaks were observed. Moreover, no provision is made for filtering the effluent, so that the tank acts simply as a closed cesspool, and the brickwork surrounding the discharging end of the effluent pipe shows a luxuriant growth of sewage fungus.

Liming Tanks.

These are situated at some distance from the Distillery, in the neighbourhood of a wooden vat adjoining the Caledonian Railway line from Buchanan Street Station, and formerly used as the gravitation reservoir of the system.

The pot ale, steep tank, and washings water and sewage having been pumped from the well, formerly described, at the receiving tanks, passes through tank A, where it is mixed with the estimated amount of lime required to neutralise the acidity present.

Thorough mixing is ensured by hand stirring, after which the limed effluent is passed into channel B, in which there is a series of eight baffle plates. From this channel the effluent is discharged into one of two settling tanks provided.

After settling, the effluent is drawn off at the top, and at once discharged into the distillery effluent pipe. The sludge is discharged twice weekly into the well marked C, from which it is pumped to a wooden tank or sludge receiver (D), whence it gravitates to a sludge well in a neighbouring brick house, in which sludge presses have been erected.

Each of the lime settling tanks measure 20 by 50 by 8 feet, and at the rate of flow takes about three hours to fill. Thereafter an hour is allowed for settling, and four hours more are required for discharge, so that the working cycle continues through eight hours. The settling tanks are used alternately, and are emptied of their sludge twice weekly. (See note regarding former practice in minutes of Lower Ward District Committee, Appendix B).

The wooden sludge tank (B) measures 8 feet by 16 feet by 6 feet, and the sludge from it gravitates to a sludge well within the building formerly mentioned as containing the sludge presses. From this well the sludge is now pumped direct to the presses, instead of through sludge rams formerly used.

It may be mentioned here, although it will be more fully referred to hereafter, that the effluent from the lime sedimenting tanks is run off directly into the distillery pipe, without being filtered through ashes or any other material.

Mr. Moet, in a letter to me of 28th October, 1910, states that from 40-50 cwts. lime per week is used at the liming tanks:—

"To neutralise the spent wash of, say, 180,000 gallons, we calculate that about "105 grains to the gallon is necessary. The amount used by us weekly shows "a considerable excess over this quantity, and works out at fully 125 grains "to the gallon of the total sewage, calculating at 40 cwts. lime.* Lime is added "as required, in such quantity as to neutralise the acid and give an alkaline "liquid."

It would appear that the rapidity with which the process of liming and sedimenting is carried on is in some way responsible for the excess of lime which seems to be used, and in any case the sediment is said to contain a proportion of uncombined lime. But, while Mr. Moet explains that, as a matter of instruction:—

"A period of eight hours is allowed between the time any particular volume of "pot ale or washings gets to the liming tanks and its discharge into the sewer,"

it will be seen, from the analysis in Appendix C^1 and C^2, that on two occasions in July and September the neutralisation of acids in the effluent from the lime tanks was incomplete, while on several occasions subsequently an acid reaction had become re-established in the pipe near Robroyston Station, although the effluent was alkaline on leaving the tanks.

The rotation of the processes above described throws the largest volume of discharge between Monday and Wednesday, when the pot ale of the previous week is being discharged.

Past History of Works.

The Secretary explains that the erection of the distillery was completed, and distilling begun, in July, 1900, and that the effluent has always been sent into the Cumbernauld Road Sewer. Originally large circular wooden vats were used for precipitating the Dreg, instead of the six square brick tanks now used. Each vat was capable of containing 93,000 gallons, from which it was necessary to pump direct to the discharging vat, which still stands adjacent to the liming pits and to the railway.

The ownership of the distillery was changed in 1902, and again in 1907, when the present Company began operations.

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* This is a 4-mash week. A 6-mash week would require more.

Pipe leading from Distillery to Cumbernauld Road Sewer.

Information regarding this section of the discharge system is mainly obtainable from Mr. Copland, C.E., Consulting Engineer to the Distillery Company, on whose information I submit the following description :—

The pipe leading from the distillery to the Cumbernauld Road Sewer is roughly about three miles in length and 9 inches in diameter.

On leaving the liming tanks already referred to, it is led towards the Caledonian Railway, below and parallel to the 6-foot-way along which it runs, until it reaches within a quarter of a mile of Robroyston Station. Its main direction between these points is east to west, but on approaching Robroyston Station it is deflected suddenly to the left under the railway, and runs in a direction which is mainly south-east to join the Cumbernauld Road Sewer almost where it commences.

Mr. Copland explains that the gradient of the pipe for the greater part of its length is very flat the first mile or mile and a-half, being shown on the plan of the Engineer who constructed it as having a fall of about 1 in 1,400, while the next section, until it reaches Robroyston Station, is about 1 in 7,000. The remaining half-mile between the railway and its junction with the sewer has a fairly good gradient fall.

Mr. Copland has been aware, for nearly three years, that complaints have been made regarding smells from the Cumbernauld Road Sewer at some part or another, and that attention was in course of time directed to the condition of the pipe itself. This led to the discovery that, as it emerges from beneath the railway to the east of Robroyston Station, the pipe is at a level of 274·43 feet above O.D., while about 300 feet beyond this, to the south or south-east, that is, in the direction of the flow, the level is 276·78 feet above O.D., while at the junction with the Cumbernauld Road Sewer the level is 271·95 feet above O.D.

It is obvious, therefore, that a section of the pipe on the distillery side of the point marked 276·78 has sunk probably through pressure from the railway, and Mr. Copland is of opinion that this subsidence affects the flow for a distance of from 1,200-1,500 feet altogether.

This, therefore, represents a section of the pipe which has become a sewer of deposit, in which the effluent must always be retained, and from which it can only be displaced by a fresh discharge from the distillery itself. Mr. Copland estimates the the capacity of the length of the pipe affected by the subsidence at about 4,000 gallons. This is much lower than the estimate of the Lanark County Council Officers (see Appendix B), but in any case both agree as to existence of a physical obstruction to the flow of sewage in the pipe at this point.

Past Negotiations.

Sir Henry Littlejohn, in his report, refers to a ventilating shaft erected by the Corporation of Glasgow for the purpose of dispersing the effluvia before they reach Glasgow. I only know of one shaft erected for this purpose. It is placed quite at the beginning of the sewer, beyond where the effluent pipe joins it. Its internal diameter is less than six inches, and it must be quite inadequate for the purpose it was intended to serve. Mr. Copland informs me, however, that the Distillery Company, in 1908, with a full knowledge of the difficulties attending the discharge of their effluent, made a representation to the Directors of Mossbank Industrial School, and to certain neighbouring proprietors, for permission to lay a deep-level sewer from the lowest point where the present pipe leaves the railway to one immediately south of Mossbank, at which point it could join the Cumbernauld Road Sewer at a considerably lower level than at the existing junction, but that permission was entirely refused by the Mossbank Industrial School Directors, and the terms suggested by the neighbouring proprietors were prohibitive.

In addition to this, the Secretary of the Distillery Company states that a proposal was made to erect another ventilating shaft somewhere near the canal bank, and that a further suggestion was to introduce a pumping station at the railway, where the depression in the pipe occurs, so as

> " to ensure that the sewage reaches the sewer without any undue delay after " leaving the works."

I understand that this has formed the subject of an arrangement between the Distillery Company and the Railway Company.

Description of Cumbernauld Road Sewer.

This sewer ultimately discharges through the main intercepting sewer into the Dalmarnock Sewage Works of the Corporation of Glasgow. It enters the City of Glasgow at the north-eastern boundary thereof, and continues along the road, after which it is named, and which here forms the boundary, until it passes certain houses a little to the north-east of Kennyhill Goods Station, where it leaves the boundary to the eastwards, and re-enters it again some distance to the south. This portion of its course is through fields, and the sewer practically does not come near houses again until Duke Street is reached, where it connects with a sewer running mainly westward along the Old Edinburgh Road. From the point where Cumbernauld Road sewer joins the main sewer at Duke Street its direction is deflected towards the north-west, but a short distance further on it turns rather sharply south-west, and then maintains a southerly direction towards the Dalmarnock Sewage Works.

The tributaries of this part of the sewer are as follows:—

(1) The main sewer from the Old Edinburgh Road;
(2) Sewers, converging at the point in Duke Street already referred to, but mainly along the line of what was formerly known as New Road.

Further on it receives a sewer, constructed in line of what was called Glen burn, and which enters it below the Netherfield Chemical Works of Messrs. Garroway.

In its course southwards, from Gallowgate to London Road, it runs mainly through a factory district, but from the latter point onwards its course is among tenements. Special enquiry, however, has failed absolutely to discover any complaint of smells from the sewer south of the Kennyhill houses, on the Cumbernauld Road.

It is difficult to state with accuracy the proportion which the distillery effluent forms in the total volume of sewage ultimately conveyed to Dalmarnock Works, but the size of the sewer at successive sections will indicate the increasing volume which it is intended to carry.

The distillery pipe has been already stated to have an internal diameter of 9 inches. At the point where the Cumbernauld Road sewer enters the Glasgow boundary the sewer is an egg-shaped fireclay pipe, measuring 24 inches by 16 inches, and the gradient from here onwards until it reaches a point about 1,600 feet north of the canal is 1 in 300. For the next 300 yards the gradient is 1 in 27, the dimensions remain the same, save the portion underneath the canal, which is a tunnel sewer, measuring 3 feet 6 inches by 2 feet 4 inches. The sewer reverts to its original size after passing under the canal, and from this point onwards until it has reached about 300 yards below the canal bridge the gradient is 1 in 82.

The size of the sewer is maintained at 24 inches by 16 inches until it reaches the main sewer in Duke Street. There is no ventilating pipe in the sewer immediately before or after it enters the city boundary, and the only one known is that occurring at the beginning of the sewer, and beyond where the distillery pipe joins it.

Area of Distribution and Frequency of the Smells.

Apart from complaint at Millerston, and along the line of the sewer in Cumbernauld Road, before it reaches the boundary of Glasgow, the distribution of the smells thereafter is confined to that portion of the road which forms the boundary to the north-east of Kennyhill Goods Station. In this section of the sewer there are about one dozen grated manholes, and smells have been detected issuing from seven of them. Further along the sewer, where it makes an angle in unbuilt ground to the east of the boundary, there are two manholes, and by repeated inspection similar smells have also been detected escaping therefrom, but beyond this there is no complaint, and the most likely explanation is that the volume of added sewage ultimately dilutes the distillery effluent to a degree which renders it inoffensive.

Along the Cumbernauld Road section, however, smells are frequent, and I append copy of a record, kept by an inspector, of visits, and of the result of enquiry at householders, made between September 19, 1910, and January 4, 1911. In this period he made such enquiries on 49 separate days, and on 29 of them smells of varying intensity were present, either during his visit or were stated by householders to have been present at an earlier part of the day. The smells varied, in the words of a prison warder, "from that of stale beer to a stink." (Appendix "D.")

Character of Effluent before and after Liming, and as altered by Retention in Pipe near Robroyston Station.

I have been supplied with several analyses of the effluent at different stages of its flow, and these form Appendices C 1-7.

The following Table will illustrate the change in the proportion of suspended solids present at the several stages. It would have been instructive had the comparison also included an indication of the change which takes place in the dissolved solids, but there is no information enabling this to be done after the effluent is limed.

SOLIDS PRESENT AT DIFFERENT PARTS OF FLOW.

Parts per 100,000.

Solids.	Pot Ale before liming.	Mixed Effluent after liming.	At Robroyston Station.
Dissolved—			
Total, ...	434		
Vol., ...	352		
Mineral, ...	82		
Suspended—			
Total, ...	31	26	51
Vol., ...	25	20	44
Mineral, ...	6	6	7

The chief point to be noted here is the increase in the suspended solids which occurs after the effluent reaches that section of the pipe which forms "a sewer of deposit" in the neighbourhood of Robroyston Station. Quite as significant as their increase is the proportion of these solids which are volatile, and therefore liable to undergo further change. When this is considered as occurring in association with the re-establishment of an acid reaction in the effluent at this point, confirmation is, I think, obtained of the view which has already been expressed as to the result of the interruption to the flow in the character of the effluent itself.

Summary.

On all hands there seems to be common agreement as to the cause of the complaints herein dealt with, and in a way there is also some agreement as to the mechanics of the method of relief. The subsidence in the distillery pipe near Robroyston Station retains an unknown but large quantity of the effluent which, as shown by analysis, may regain an acid reaction and take up a larger proportion of suspended solids obviously undergoing putrefactive decomposition. This must be regarded as an essential defect in the system, and it is possible that it may be aided by a rearrangement at the liming tanks which does not provide for any filtration of the effluent.

In considering the remedy for these conditions, ventilating shafts in the course of the sewer have been suggested. I frankly doubt their value. The main thing seems to me to re-establish the function of the distillery pipe, or at least to prevent the stagnation which occurs in it to the east of Robroyston Station. If altering the whole line of the pipe is impracticable, then the erection of a Pumping Station in the neighbourhood of Robroyston Station, which will empty the dependent part of the pipe when the discharge from the distillery ceases, seems to me the most likely way of getting quit of the material from which the smells arise.

Some change also seems desirable at the liming tanks. On visiting these, on a recent occasion, I had the advantage of being accompanied by Mr. Melvin, of the Sewage Department, who pointed out that an earlier suggestion of his would have located the liming and subsequent sedimenting tanks on the crown of the hill, instead of on its slope, and an added elevation of 12 or 15 feet might thereby have been obtained. This would have supplied an ample head of water to filter the effluent

through ashes before entering the discharge pipe, and the sludge would have had a sufficient elevation to gravitate towards the presses.

Alteration in both directions should be kept in view when remediable treatment of the conditions complained of is being undertaken.

In concluding, I desire to express my great indebtedness to all the parties interested for their most helpful co-operation and their ready response to request for information.

(Signed) A. K. CHALMERS.

Sanitary Chambers,
Glasgow, 14th January, 1911.

APPENDIX "A."

Chemical Department,
John Street, 2nd May, 1905.

ANALYTICAL REPORT ON SAMPLE OF EFFLUENT TAKEN FROM GARTLOCH DISTILLERY ON 13TH JANUARY.

All Results expressed in Grains per Gallon.

Appearance,		Very turbid.
Odour at ordinary temperature,		Sour odour.
Free and saline ammonia,		4·06
Albuminoid ammonia,		9·31
Chlorine,		3·85
Oxygen absorbed in 15 minutes at 27° C.,		12·65
Oxygen absorbed in 4 hours at 27° C.,		29·76
Solids in solution—		
Mineral,	45·36	
Volatile,	159·60	
Total,		204·96
Solids in suspension—		
Mineral,	2·94	
Volatile,	30·52	
Total,		33·46

This sample possessed, in more or less marked degree, the characteristics usually associated with distillery trades' waste.

It is highly charged with organic matter, the solids in solution amounting to 204·96 grains per gallon, by far the greater proportion of which consists of organic matter.

The nitrogenous organic matter contained in the sample, as evidenced by the albuminoid ammonia figure, is thirty times or thereby higher than the average figure for the Dalmarnock crude sewage.

In regard to suspended matters, the proportion contained in this sample, namely, 33·46 grains per gallon, is not excessive, in fact, objectionable characteristics of this sample depend entirely upon the amount and nature of the matter in solution.

Whilst such impurities are, in comparison with ordinary crude sewage, excessive in quantity compared with samples from similar sources previously analysed, therefore, comparatively speaking, this sample represents a rather dilute distillery waste effluent. This conclusion is further emphasised by the degree of acidity of the same. I find that the quantity of lime necessary to effect neutralisation of the organic acids present in the sample would amount to 34·4 grains per gallon.

(Signed) F. W. HARRIS.

APPENDIX "B."

Excerpt from Minutes of Meeting of Sub-Committee on Public Health, of 21st November, 1910.

County Offices,
Hamilton, 18th November, 1910.

Notes dated 17th August, 1910.—These give the results of inquiries and investigations made by Inspector M'Naughton, along with Inspector Philip. They deal with the nature and different sources of the liquid refuse, which is estimated at 500,000 gallons per week, one-half of which is derived from washings and steepings, and the other half from pot ale. The method of disposal and the rotation of the procedure followed shows that there is a weekly cycle of events—cooling and settling, pumping and liming, sedimentation, sludge pressing, and tank cleaning—which has been referred to in the minutes of August last. The conclusions come to were:—

1. Sludge may be allowed to accumulate to such a depth in the liming sedimentation ponds that some sludge may find its way into the sewer with the liquid as that is being drawn off about 18 inches from the bottom of the tank.

2. These tanks, which are cleaned out once a fortnight, should be cleaned out every week.

3. The sludge valves at the bottom of each tank, connected with the pump well, are sometimes both opened at the same time, and the contents allowed to pass from one tank into the other. This practice should be discontinued. Each tank should be cleaned out direct to the sludge well, and from that raised to the storage tank.

4. The sludge tank connected with the filter presses is not large enough to hold the quantity of sludge to be dealt with, so that it is necessary to employ carts to remove a certain amount of this in the wet state, for disposal on lands.

Since the above Notes were written the Company have provided a more powerful pump, by means of which they hope to clean out the tanks weekly, and dispose of the sludge satisfactorily.

At the inspection of manholes, both within the Millerston and Glasgow areas, no odours were detected during the week ending 13th August, except that on Thursday there was an odour at manholes near the canal, between 5 and 6 p.m. Said odours seemed associated with the discharge from the distillery, at a time when the tanks were being cleaned out.

Notes dated 8th October, 1910.—These relate to an inspection made by the Chemist in charge of the County Laboratory and Inspector M'Naughton, when the lime sedimentation tanks were carefully inspected, and samples taken at the distillery outfall pipe, where it leaves the Caledonian Railway. Conclusions arrived at were:—

1. The distillery outfall pipe on the railway seemed to be standing full of liquid recently discharged, and contained suspended matter at the moment of sampling to the extent of 223 parts per 100,000. The presence of this large amount of suspended matter was believed to be due to the escape of sludge from tank No. 1 on the previous evening.

2. It was estimated that the volume of liquid contained in the distillery pipe was about equal to the capacity of one of the tanks, viz.:—50,000 gallons.

Analyses of Samples.—Analyses of samples taken by Messrs. Tatlock & Thomson on behalf of the Company, extending over a period from 21st July to 11th October. Eleven samples were taken at two points, viz.:—

1. Effluent as it escapes from the lime sedimentation tanks, and

2. At the distant end of the distillery pipe, where it leaves the railway at Robroyston.

These show that, with one exception, there was no excess of suspended solids, the actual amount varying from 2 up to 50 parts per 100,000, and the average being 16 parts per 100,000. The exception referred to was on 22nd July, when there was an excess of suspended solids, probably due to sludge escaping from the tank.

The samples taken and examined in the County Laboratory were taken on five dates from 13th September to 11th October. In only one instance, 30th September, was suspended solids found in excess.

Notes dated 3rd November, 1910.—These relate to an inspection made by the County Medical Officer, along with the City Medical Officer of Health, and show that information as to complaints of smells was only elicited from occupiers of houses within the Lower Ward District near the Canal Bridge, where married officers of the Barlinnie Prison reside. At the time of inspection, 28th October, no offensive odours were detected at any of the manholes. The information elicited at the distillery was carefully recorded by the City Medical Officer of Health, who, I understand, is preparing some information for the Local Government Board. Since then, interviews between the officials of the Company and the City Medical Officer of Health have taken place, and further information was afforded.

The question might be asked as to whether the ventilating shaft proposed at the Canal Bridge would be sufficient for the length of sewer complained of within the City area. The section of this sewer has been carefully studied by the Lower Ward Sanitary Inspector, and the opinion formed that such a ventilating shaft would be sufficient. Where the sewer passes underneath the canal, it is about 30 feet deep, and the gradient for some distance is somewhat flat. There is also a flat gradient lower down, where rock was encountered, but there is no reason to believe that the flow of the sewage is in any way interrupted. At the point in the City below Kennyhill, where the sewer leaves the public highway to join the Camlachie Burn Sewer at Carntyne, there is a surface grating in the field a short distance from the highway, which will afford means of ventilation.

(Signed) JOHN T. WILSON.

APPENDIX "C" (1)."

Gartloch Distillery.

Summary of Analyses of Samples taken by Messrs. Tatlock & Thomson, Chemists, on behalf of Gartloch Distillery Company.

Sample No. 1.—Effluent as discharging from Lime Tank at Distillery.

Sample No. 2.—Effluent from Distillery Pipe as taken from Plug-hole on Pipe at Robroyston Station.

Results:—Parts per 100,000. Acidity as Lactic Acid.

Date of Sample.	Sample No. 1.			Sample No. 2.		
	Total Suspended Solids.	Volatile Suspended Solids.	Acidity.	Total Suspended Solids.	Volatile Suspended Solids.	Acidity.
1910.						
12th July, - -	11·50	6·70	27·9	—	—	—
14th ,, - -	—	—	—	167·00	143.60	108 0
22nd ,, - -	23·00	17·40	None	17·60	14·20	None
26th ,, - -	2·00	·40	None	8·40	6·00	None
30th ,, - -	—	—	—	12·60	10·50	None
8th Aug., -	3·00	·70	None	17·90	12·50	61·70
17th ,, - -	10·75	7·80	None	19·70	14·10	33·80
31st ,, - -	16·36	12·10	None	13·35	11·40	107·80
9th Sept., -	6·85	3·20	None	11·50	8·10	31·75
16th ,, - -	1·90	·30	None	12·15	9·20	81·12
11th Oct., - -	6·42	4·42	None*	50·00	26·67	*
29th Nov., -	26·30	20·50	None†	51·20	44·00	176·50

* Alkalinity (as lime) No. 1, 28·60. No. 2, 25·00. † Alkalinity (as lime) No. 1, 10·06.

County Offices,
Hamilton, 29th November, 1910.

APPENDIX "C (2)."

GARTLOCH DISTILLERY.

Summary of Analyses of Samples analysed in County Laboratory on behalf of the Lower Ward Local Authority.

Sample No. 1.—Effluent as discharging from Lime Tank at Distillery.

Sample No. 2.—Effluent from Distillery Pipe as taken from Plug-hole in Pipe at Robroyston Station.

Results :—Parts per 100,000. Acidity as Lactic Acid.

Date of Sample.	Sample No. 1.			Sample No. 2.		
	Total Suspended Solids.	Volatile Suspended Solids.	Acidity.	Total Suspended Solids.	Volatile Suspended Solids.	Acidity.
1910.						
Tank No. 1, 13th September,	14·0	10·0	19·8	27·2	20·4	36·0
Tank No. 2, 13th September,	16·6	9·6	*	51·2	27·0	48·6
14th September,	—	—	—	43·0	21·0	70·2
30th ,,	—	—	—	223·4	159·4	†
11th October,	1·1	—	†	41·20	7·60	12·60
29th November,	10·0	6·8	‡	50·0	27·2	246·6

* No. 1.—Alkalinity equivalent to 11·2 parts per 100,000 as CaO.
† ,, ,, ,, 1·68 ,, ,,
† No. 2. ,, ,, 12·88 ,, ,,
‡ No. 1. ,, ,, 11·2 ,, ,,

County Offices,
Hamilton, 29th November, 1910.

APPENDIX "C (3)."

Extract from County Chemical Laboratory Records.

GARTLOCH DISTILLERY.

Analyses of samples taken on 13th September, 1910, on behalf of the Lower Ward Local Authority.

Sample No. 1.—Effluent as discharging from Lime Tanks at Distillery.

Sample No. 2.—Effluent from Distillery pipe as taken from Plug-hole in Pipe at Robroyston Station.

Results :—Parts per 100,000.

	No. 1.	No. 2.
Oxygen absorbed in 4 hours, ...	68·40	53·24
Free Ammonia as Nitrogen, ...	2·45	1·60
Albuminoid Ammonia as Nitrogen, ...	5·28	7·36
Total Ammonia as Nitrogen, ...	7·76	8·96
Solids—Total, ...	594·0	1,016·0
,, Volatile, ...	458·0	776·0
,, Suspended, ...	14·0	27·2
,, Volatile suspended, ...	10·0	20·4
Acidity as Lactic Acid, ...	19·8	36·0
Alkalinity as CaO, ...	—	—

County Offices,
Hamilton, 14th December, 1910.

APPENDIX "C (4)"

Extract from Report by Messrs. Tatlock & Thomson.

Gartloch Distillery.

Analyses of Samples taken on 11th October, 1910, by Messrs. Tatlock & Thomson, Chemists, on behalf of the Distillery Company.

Sample No. 1.—Effluent as discharging from Lime Tank at Distillery.

Sample No. 2.—Effluent from Distillery Pipe as taken from Plug-hole in Pipe at Robroyston Station.

Results:—Parts per 100,000.

	No. 1.	No. 2.
Oxygen absorbed in 4 hours, ...	240·46	237·34
Free Ammonia as Nitrogen, ...	1·19	1·23
Albuminoid Ammonia as Nitrogen, ...	8·01	8·62
Total Ammonia as Nitrogen, ...	9·20	9·85
Solids—Total, ...	844·42	866·00
„ Volatile, ...	544·42	556·67
„ Suspended, ...	6·42	50·00
„ Volatile Suspended, ...	4·42	26·67
Acidity (by Litmus), ...	—	—
Alkalinity (as Lime), ...	28·60	25·00

County Offices,
Hamilton, 14th December, 1910.

APPENDIX "C (5)."

LANARK COUNTY COUNCIL.

Chemical Laboratory.

Sample of Pot Ale.—As discharging from Tank to Pump Well, taken on 13th September, 1910.

Physical characters { When taken. After standing. Dense opaque liquid, small whitish finely-divided deposit. Slight odour.

	Parts per 100,000.
Ammonia—Free, as Nitrogen, ...	2·64
„ Albuminoid, as Nitrogen, ...	13·28
Oxygen absorbed, ...	80·82
Hardness—Total, ...	—
„ Permanent, ...	—
Solids—Volatile suspended, ...	60·0
„ Suspended, ...	68·0
„ Total, ...	874·0
Loss on Ignition, ...	741·2
Acidity as Lactic Acid, ...	554·4

Iron. Sulphates. Lime.

Report,

APPENDIX "C (6)"

LANARK COUNTY COUNCIL.

CHEMICAL LABORATORY.

Sample of Pot Ale as discharging to Tank from Vat. Taken on 29th November, 1910.

Physical characters { When taken, sample was clear, almost transparent, with no visible particles of suspended matter.
After standing, Opaque, type invisible, small finely-divided gelatinous deposit. Distinct malt odour.

	Parts per 100,000.
Total Nitrogen (Kjeldahl),	35·00
Oxygen absorbed,	173·45
Hardness—Total,	—
,, Permanent,	—
Solids—Volatile Suspended,	24·4
,, Suspended,	35·20
,, Total,	—
Loss on Ignition,	—
Acidity as Lactic Acid,	729·0

Iron. Sulphates. Lime.

Report:—

APPENDIX "C (7)."

Copy Analyses by Messrs. R. R. Tatlock & Thomson.

30th December, 1910.

Analyses of two samples of effluent* received on the 26th and 28th instant from Messrs. the Gartloch Distilleries Company, Gartloch Distillery, Chryston.

Labels.—"1st Sample" and "2nd Sample."

	Parts per 100,000. 1st Sample.	2nd Sample.
Oxygen absorbed from Permanganate at 80° F. at once,	1·03	26·51
Oxygen absorbed from Permanganate at 80° F. in 4 hours,	3·96	290·40
Free Ammonia as Nitrogen,	·25	·54
Albuminoid Ammonia as Nitrogen,	·39	7·80
Total Ammonia as Nitrogen,	·64	8·34
Solids, total,	81·00	434·00
Solids, volatile,	28·00	352·00
Solids, suspended,	11·20	31·15
Solids, volatile suspended,	8·70	25·30
Acidity (as Lactic Acid, by Litmus),	—	244·00
Alkalinity (as Lime, by Litmus),	4·00	—

(Signed) R. R. TATLOCK & THOMSON.

* No. 1—Sample Washings.
No. 2—Sample of Spent Wash after draining off at settling squares.

APPENDIX "D."

Sewer Smells—Cumbernauld Road.

Record of visits made to Cumbernauld Road in connection with Alleged Offensive Smells.

Date.

Sept. 19—Visited Cumbernauld Road and examined all the sewer manholes and street gullies between the City boundary and Corporation property, east-end of Alexandra Park, and felt no smells.

„ 21—Slight smell felt at the entrance to Sylva Bank Villa.

„ 23—Slight smell felt at sewer manhole a few yards south of Canal Bridge. Also very slight smell at Corporation property, 767 Cumbernauld Road.

„ 27—No smell felt.

„ 28—Visited at 9.30 p.m. Strong smell between Riddrie Cottage and Sylva Bank, distance about 100 yards. Was unable to locate the exact manhole from which the smell came. Also strong at Corporation property, 755 Cumbernauld Road.

„ 30—11.30 a.m. Slight smell at Riddrie Cottage.

Oct. 3—11 a.m. Slight smell at manhole south, Canal Bridge.

„ 5—11.40 a.m. Strong smell at manhole, south Canal Bridge. Fairly strong from street gully between March Hill and Sylva Bank Villas. Slight at 755 Cumbernauld Road.

Oct. 7—Visited at 8.40 p.m. Very strong smell, Canal Bridge—very strong at manhole, twenty yards south of Riddrievale Dairy. Slight at Garrow Bank. Strong at 755 and 751 Cumbernauld Road.

„ 7—Visited at 11.40. Strong smell at Canal Bridge.

„ 10—Visited at 11.20 a.m., and felt no smell.

„ 12—Visited at 11.15 a.m., and felt no smell.

„ 14—Visited at 11 a.m., and felt no smell.

„ 17—Visited at 11.30 a.m., and felt no smell.

„ 19—Visited at 11.30 a.m. Slight smell at Canal Bridge.

„ 21—Visited at 11.25 a.m. No smell felt.

„ 24—Visited at 11.25 a.m. No smell felt.

„ 26—Visited at 2 o'clock, and felt strong smell at (1) manholes, Canal Bridge, (2) a little beyond car terminus, and (3) a few yards this side of Riddrievale Dairy. The smell was "sour," as if of fermentation.

„ 28—Visited at 1.45 and felt no smell.

„ 31—Visited at 2 o'clock and felt no smell.

Nov. 3—Visited at 12 o'clock and felt no smell.

„ 4—Visited at 11.30, accompanied by Inspector Chalmers, and felt very strong nasty smell at Canal Bridge, and manhole, twenty yards south of Riddrievale Dairy, and strong at 755 and 751 Cumbernauld Road.

„ 7—Visited at 11.40. No smell felt.

„ 9—Visited at 11.15 a.m. and felt slight smell at Canal Bridge. (Sour.)

„ 11—Visited at 11.15 accompanied by Inspector Chalmers. Strong smell at Canal Bridge; slight at Riddrievale and strong at manhole twenty yards south of dairy; slight at Riddrie cottages and 227 Cumbernauld Road.

„ 14—11.15. No smells felt to-day.

„ 16—Visited at 11.30. Fairly strong smells at Canal Bridge; slight at car terminus; strong at 767 Cumbernauld Road and slight at 755 Cumbernauld Road. (Chloride of lime smell.)

„ 18—Visited at 11.30. Very strong smell at canal felt twenty yards from manhole; slight at Riddrievale dairy and Riddrie cottages; strong at 755 Cumbernauld Road. (Sour.)

„ 21. Visited at 11.15. Fairly strong smell at Canal; slight at Riddrievale and strong at Garrowbank—nasty, stinking smell.

„ 23—Visited at 11.15. Strong smell at Canal; slight at Riddrievale dairy; strong at Garrowbank. (Sour.)

Date.

Nov. 25—Visited at 11.40. Slight smell at manhole, Riddrievale dairy. (Sour.)

,, 28—Visited at 11.30 No smell.

,, 30—Visited at 11.20. Very strong smell at Canal; strong at Riddrievale Dairy; very strong at Garrowbank; and slight at 751 Cumbernauld Road—nasty smell.

Dec. 5—Began my visit at Robroyston Station Road, and followed the sewer to Parkhead Station. Fairly strong smell at manhole where discharge from Gartloch enters the sewer; also fairly strong from manhole in the field at Rope Work, Carntyne Road.

,, 6—Began my inspection at Vinegarhill, and followed the sewer, where possible, to Dalmarnock Sewage Works, and felt no smells.

,, 7—Slight smell at Millerston Parish Church; strong at Canal; very strong from a manhole in field at M'Gibbon's Rope Works, Carntyne Road—nasty smell.

,, 8—No smells felt between Vinegarhill Street and Swanston Street.

,, 9—Went over the sewer between Robroyston Station Road end and Parkhead Station, and only felt slight smell where the effluent from Gartloch discharges into the sewer and Canal.

,, 10—No smells felt between Vinegarhill Street and Dalmarnock Sewage Works.

,, 12—Visited the sewer between Millerston and Rope Work, Carntyne Road, strong smell at Millerston Public School, and slight at Riddrievale Dairy. I spoke to Mr. Thomson, headmaster, Millerston School, and he says the smell is sometimes very bad from this manhole.

Dec. 14—No smells felt between Millerston and the Rope Work, Carntyne Road.

,, 16—No smell felt.

,, 19—Fairly strong at manhole where effluent from Gartloch discharges into sewer; slight at Hogganfield Parish Church; very strong at canal.

,, 21—Strong smell at canal.

,, 23—No smell to-day.

,, 27—Strong nasty smell at both sides of canal; slight at Riddrie Cottages; very strong at 755 Cumbernauld Road.

,, 29—Slight smell at Millerston Public School; strong at Hogganfield Parish Church; very strong both sides of Canal; and from two manholes in field between Cumbernauld Road and Carntyne Road.

Jan. 4—Very strong smell at Hogganfield Parish Church, and both sides of canal; slight at Riddrievale; strong at Garrowbank; and slight at 755 Cumbernauld Road.

,, 6—No smell to-day.

,, 9—Slight smell at Hogganfield Parish Church; strong at both sides of canal; and from manhole in field at Rope Work.

Sanitary Chambers,
Glasgow, 13th January, 1911

REPORT ON PROBABLE SOURCE OF SMELLS COMPLAINED OF IN NEIGHBOURHOOD OF COVENTRY DRIVE.

In reporting on the origin of the offensive smells emanating from the sewer in Cumbernauld Road, I explained why it seemed to me desirable to deal with them separately from those complained of in the neighbourhood of the Tallow Melting Works in Coventry Drive.

This report deals with the latter. Generally it may be said that the area affected by the smells emanating from the Tallow Works is on the west of Alexandra Park, and north of Alexandra Parade, while the Cumbernauld Road Sewer emanations are complained of in an area which begins to the east of Alexandra Park, and follows the line of the sewer north-eastwards to a point where it is joined by the distillery pipe outwith the City boundary.

With regard to the character of the smells complained of in the Coventry Drive neighbourhood, it may be noted that every kind of epithet save that implying "sourness" has been applied to them, and by this alone they can be separated from those affecting the Cumbernauld Road area. Indeed, the Coventry Drive smells have been accepted without question, I think, as originating in the tallow melting works, until the accidental meeting with a midwife in the district drew attention to the prevalence of smells during the night, at a time when the tallow works were not in operation. This discovery directed attention to the possibility of smells from two sources affecting this area, alternately or in combination, and enquiry into the distribution of the sewers of the district disclosed the association of a portion thereof with the possibility of occasional discharge of chemical effluents, especially during the night hours.

It will be convenient here to refer to my former report to the Board (of 14th July, 1910) in order to adopt a description of the works at Coventry Drive contained therein.

In the Spring of 1910, complaint regarding this work had been frequent, and there is little doubt that whatever portion of the smells at that time arose from trade processes, it was greatly accentuated by the presence of a large quantity of unwholesome box meat which was then being stored without any satisfactory provision for dealing with the effluvia therefrom. The removal of this had been accomplished before my report of July was submitted, but I then expressed the opinion that the apparatus for drying the solid residue of the digesters seemed to me to be defective, and a possible source of much smell.

The statutory officers under the Public Health Act had been instructed to report on the removal of this box meat, and in consequence of this, and of the instruction of the Board to submit the present report, special watches were instituted, and as a result of this and of personal inspection on several occasions, a conjoint report by the officers in question was submitted to the Committee on Health, on December 13, 1910. Much of the information now submitted is common to both reports.

The box meat formerly referred to having been removed in May, it became easier to discover to what extent the smells complained of were related to the several parts of the process conducted at the works, and in order to discover whether the occurrence of smells outside the works was frequent or not, a careful watch was kept by inspectors of the Department, extending from the beginning of May to December 8th.

During this period, one group of inspectors made in all 107 separate observations, and found offensive smells of varying degrees of intensity issuing from the works on 45 occasions. On 35 occasions the smells were noted as "very slight" or "slight," and on 10 they were characterised as "strong."

On 16th November I visited the works and neighbourhood, in association with the Sanitary Inspector, and in those houses which were on that occasion on the leeward side of the works we made several visits, and learned that a considerable abatement of the smells had occurred, as compared with former experience. It was stated, however, that the smells were mostly felt during the summer, and this was ascribed to the warm weather.

An accidental meeting with a midwife practising in the district, however, brought to our knowledge the fact that she often experienced nauseating smells towards midnight. These, she believed, arose from the works in question, but at the same time she associated them with the transport of certain material in carts, which she thought were being driven to the works.

With the view of tracing these nocturnal smells, a sketch plan of the sewers in this district was obtained from the Master of Works.

At the eastern portion of the area indicated therein, it will be seen that the sewers from Crinan Street, Culloden Street, portion of Coventry Drive, Ardmore Street, and Staffa Street are collected together into one, which ultimately connects, on the line of the Glasgow Union Railway, with another coming from Kennyhill Gardens. This latter, I understand, receives effluents from certain chemical works further to the north. These works are the Provan Gas Work and the Chemical Works of Messrs. Brotherton & Co., Ltd., and Messrs. Alexander Hope, jun., & Co., Ltd., so that from the manholes in the streets already mentioned there might quite readily escape such offensive gases (naphthalene and others) as were on a former occasion complained of by persons resident in Kennyhill Gardens and Staffa Street.

It is thus possible to explain part, at least, of the odours complained of by the irregular discharge of effluents from the Chemical Works into the Kennyhill Gardens sewer.

With regard, however, to those which are associated with the processes carried on at the tallow melting works, repeated visits have convinced me that the method of handling the residue of the digesters is defective. The digesters are three in number, and the smells are most likely to arise when they are being emptied of their solid contents, and during its subsequent handling.

During the visit formerly referred to, we were assured that the temperature of the solid contents of the digesters, after removal of the fats, was invariably lowered by the introduction of cold water, but it is obvious that efficiency in carrying out this instruction will depend on the care of the individual workman who executes it. This material was on three occasions found steaming during process of removal, but I understand this has not been repeated since the last discovery recorded, namely, 3rd November.

I believe, however, that the most fruitful source of smell arises in connection with the further handling of this residue. After removal from the digesters, the residue is introduced into hand-presses for the purpose of removing a further portion of the retained fat, and as a certain temperature is here necessary, smells are almost unavoidably associated with the process. Further, on removal from the presses the residue is roughly broken up with a shovel, and placed in a drying stove, through which air is drawn by an electric fan, and passed into a chamber in front of and below the furnace bars of the steam boiler.

These all represent recognised methods of dealing with material of this sort, but they nevertheless describe processes which are unavoidably associated with the development of smells, and in my opinion relief from the smells will only be accomplished by altering the whole process of drying, and possibly also by adding to the height of the chimney.

As long as the furnaces are being briskly fired, effluvia from the drying stove will undoubtedly be destroyed, but as the demand for steam varies, so, it is to be feared, will the efficiency of the furnace as a destructor of effluvia.

In the conjoint report already referred to, opinions were expressed that, in order to avoid further complaint, the firm should be asked :—

(*a*) To remove daily, to some other locality, for drying purposes, all the residue from the filter presses;

(*b*) That if the drying is to be continued on the present premises, a properly equipped drying-room be erected for the purpose, together with an efficient method of destroying by fire the effluvia therefrom; and

(*c*) That a considerable addition be made to the height of the chimney.

It must be remembered, however, that the methods of handling this material here are quite superseded by more recent processes in works elsewhere.

In any case the complaint may, it appears to me, be quite efficiently dealt with under the Regulations (Offensive Trades), or by process under Section 36 of the Public Health Act.

It should be added that until last spring part of the residue was dried in a revolving cylinder, the effluvia from which passed directly into the furnace flues behind the fire, and might, in consequence, be also discharged by the chimney without destruction.

This heater, however, has since been dismantled, and recent information is to the effect that a still further absence of cause of complaint has been noted since November last.

(Signed) A. K. CHALMERS.

Sanitary Chambers,
Glasgow, 14th January, 1911.

SECTION VI.

SPECIFIC ACCOUNT OF THE ADMINISTRATION OF THE FACTORY AND WORKSHOPS ACT, 1901, IN WORKSHOPS AND WORK-PLACES, IN TERMS OF SECTION 132 OF THAT ACT, TOGETHER WITH A TABULAR STATEMENT IN THE FORM ISSUED BY THE HOME OFFICE.

REGISTER OF WORKSHOPS, &c.

A statement of the number of laundries, bake-houses, restaurant kitchens, other food places, and all other workshops, as well as the total number of workshops in each Ward of the City, is contained in Appendix Table XLIV. The total number of the registered workshops in the City is 5,743, as against 5,824 last year.

35,005 inspections were made to these premises, and 1,597 notices were issued.

Table No. 1 of the Home Office List, which forms Appendix Table XLV. of the present report, requires that the number of inspections of such factories and factory laundries as are, by Section 103 of the Factory Act, placed under the jurisdiction of the Local Authority for sanitary purposes, and also of work-places as distinct from workshops, should be stated, but the total visits are here included under workshops. In general, the visits made to factories under the Public Health Act are for the purpose of discovering structural defects in connection with water-closets in the form of choked drains, &c.

SANITARY CONDITION OF WORKSHOPS.

Want of Cleanliness.—Speaking generally, it may be said that the condition in respect of cleanliness in the majority of workshops is satisfactory. In the 798 instances noted in the Table in which it was defective the remedy largely consisted of lime-washing.

Lighting and Ventilation.—In 28 cases this was defective. A variety of industries were involved, the main defects being fixed roof-lights or fixed windows.

Overcrowding.—The overcrowding here noted occurred during the day only. There is no record of any overcrowding during periods of overtime work in the evenings, as knowledge when overtime is worked is not usually within the command of the Department.

Want of Drainage of Floors.—These defects are now chiefly found in laundries which are conducted in premises originally intended for shops. The number of these—671—is included, along with other defects, such as choked closets and requests to limewash, in the total given, as representing both in the Table.

Sanitary Accommodation.—Here, again, the several items of the Table—"Insufficient," "Unsuitable," and "Not separate"—are grouped together under the 97 instances found.

The several items of this group cannot be separated, but in general it is the case that few places now have insufficient closet accommodation, save where a new business has been begun. A similar observation applies to the provision for the separate sexes.

The numbers here dealt with as "defects" or "unsuitable" usually arise from either misuse, carelessness, or tear and wear.

Underground Premises.—I had occasion last year to direct attention to the frequently defective condition of lighting and ventilation in underground premises. These defects most usually reach their greatest intensity when, as in a restaurant kitchen, they are associated with excessive temperature, and where, as occasionally occurs, there is a complete absence of natural lighting, the conditions in these premises become such that they cannot, I believe, be healthily occupied, and the question emerges whether a movement for their extinction should not be made in any amendment of the Factory Acts.

HOME WORK.

To outworkers' premises, 2,856 visits were made during the year, as compared with 2,738 last year. 1,951 of these visits were to home-workers' premises, and 905 to contractors'.

In conformity with the instructions regarding the allocation under Nature of Works of the Lists received from Employers, who give out work of more than one class, seven firms, who sent in lists twice in the year, and four firms, who sent in a list only once, have been included in columns 2 and 4 respectively under the principal class, namely, wearing apparel; while the outworkers have been assigned to their respective classes in columns 3 and 5.

BAKEHOUSES.

(1) Underground Bakehouses.

Seventy-one underground bakehouses remain in occupation in Glasgow, which is the same as at the end of last year. Of these, 70 are certified as conforming to the requirements for underground bakehouses.

During the year, 145 inspections were made to the bakehouses on the register, and on these occasions the fans were invariably found in use, the result, no doubt, of the action taken in previous years in checking the use of the fans by the condition of the air.

Table L. contains a statement of the number of each class in the several Wards, and the number of visits paid thereto during the year.

(2) Bakehouses not Underground.

It will be seen from Appendix Table LI. that the number of bakehouses not underground on the register at the close of the year was 142, as compared with 146 at the close of 1909. In addition, there are shown in Table XLIV. certain premises which are provided with hot-plates for baking purposes. Under this classification, should a dairy carry on its baking in an underground apartment, the question will require to be reconsidered as to whether it should not be added to the list of bakehouses, as much more stringent regulation is then possible.

The following illustrates some of the improvements effected in overground bakehouses during the year:—

Ward.

I. 146 Dalmarnock Road—Defective floor repaired.

II. 9 Green Street, Calton—Plaster work repaired.

II. 9 Green Street—Lighting improved by two additional windows. (Formerly gas used all day).

II. 9 Green Street—Ventilation improved by opening sash 4 square feet.

III. 242 Westmuir Street—New ceiling of tongued and grooved lining in place of canvas.

XVIII. 83 Sandyfaulds Street—South roof-light to open.

XIX. 98 Rutherglen Road—Ventilation improved by means of opening sash 3 feet by 2 feet.

XX. 219 Paisley Road—Ventilation improved by having the wood blocking of several windows removed and panes filled with glass.

XXI. 250 Allison Street—Two upper rows of panes in two windows made to open.

REGISTRATION OF HAIRDRESSERS.

Appendix Table LII. shows the number and Ward distribution of registered hairdressers, and the changes which have taken place during the year, as well as the number of visits of inspection to these premises.

A. K. CHALMERS,
Medical Officer of Health.

Sanitary Chambers,
Glasgow, 21st June, 1911.

APPENDIX.

TABLE I.

GLASGOW, 1910.—INHABITED HOUSES AS PER ASSESSOR'S RETURN, AND ESTIMATE OF POPULATION FOR EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES.				POPULATION.			
	1909.	1910.	Decrease.	Increase.	1909.	1910.	Decrease.	Increase.
1. Dalmarnock, -	10,861	10,913	...	52	49,244	49,480	...	236
2. Calton, - -	7,552	7,596	...	44	34,496	34,697	...	201
3. Mile-end, - -	9,787	9,675	112	...	44,625	44,117	508	...
4. Whitevale, - -	6,769	6,631	138	...	31,981	31,330	651	...
5. Dennistoun, -	8,306	8,263	43	...	37,879	37,686	193	...
6. Springburn, -	9,460	9,486	..	26	45,119	45,247	...	128
7. Cowlairs, - -	6,248	6,179	69	...	30,556	30,219	337	...
8. Townhead, - -	7,809	7,749	60	...	36,892	36,610	282	...
9. Blackfriars, -	4,152	4,073	79	...	20,230	19,842	388	...
10. Exchange, - -	349	340	9	...	1,892	1,842	50	...
11. Blythswood, -	554	540	14	...	3,031	2,953	78	...
12. Broomielaw, -	1,229	1,215	14	...	6,432	6,358	74	...
13. Anderston, - -	5,942	6,005	...	63	28,014	28,311	...	297
14. Sandyford,	5,001	5,004	...	3	23,887	23,902	...	15
15. Park, - - -	4,942	4,815	127	...	24,244	23,621	623	...
16. Cowcaddens, -	7,369	7,432	...	63	34,562	34,852	...	290
17. Woodside, - -	9,323	9,227	96	...	42,629	42,188	441	...
18. Hutchesontown, -	8,679	8,492	187	...	38,874	38,038	836	...
19. Gorbals, - -	6,826	6,854	...	28	33,184	33,318	...	134
20. Kingston, - -	6,853	6,860	...	7	32,597	32,631	...	34
21. Govanhill, - -	7,830	7,768	62	...	35,666	35,380	286	...
22. Langside, - -	9,551	9,627	...	76	43,617	43,966	...	349
23. Pollokshields, -	3,771	3,661	110	...	19,400	18,836	564	...
24. Kelvinside, - -	4,639	4,743	...	104	23,907	24,441	...	534
25. Maryhill, - -	8,742	8,603	139	...	40,602	39,956	646	...
Institutions, -	...	...	...	...	22,867	22,726	141	...
Shipping, - -	...	...	...	...	1,241	1,241	...	...
	162,544	161,751	793	...	787,668	783,788	3,880	...
26. Kinning Park, -	2,671	2,646	25	...	12,742	12,621	121	...
City, - -	165,215	164,397	818	...	800,410	796,409	4,001	...

TABLE II.—Unoccupied Houses.

Number of Unoccupied Houses in the several Municipal Wards, classified according to size, as at 1st June, 1910.

Municipal Wards.	1 Apartment.	2 Apartments.	3 Apartments.	4 Apartments.	5 Apartments and up.	Total.
1. Dalmarnock, ...	419	996	68	8	7	1,498
2. Calton, ...	208	420	119	33	13	793
3. Mile-end, ...	390	924	122	8	1	1,445
4. Whitevale, ...	200	564	151	20	3	938
5. Dennistoun, ...	58	422	237	69	46	832
6. Springburn, ...	455	844	119	9	8	1,435
7. Cowlairs, ...	205	571	108	8	4	896
8. Townhead, ...	118	509	156	55	41	879
9. Blackfriars, ...	84	197	102	76	19	478
10. Exchange, ...	5	27	17	4	4	57
11. Blythswood, ...	...	11	7	24	19	61
12. Broomielaw, ...	6	116	80	30	4	236
13. Anderston, ...	46	311	183	39	47	626
14. Sandyford, ...	49	160	132	70	90	501
15. Park, ...	5	57	72	127	227	488
16. Cowcaddens, ...	292	668	200	53	34	1,247
17. Woodside, ...	189	527	209	37	55	1,017
18. Hutchesontown, ...	275	590	104	5	...	974
19. Gorbals, ...	119	326	256	92	66	859
20. Kingston, ...	87	310	280	92	14	783
21. Govanhill, ...	127	475	219	41	22	884
22. Langside, ...	...	79	230	149	167	625
23. Pollokshields, ...	2	8	30	44	184	268
24. Kelvinside, ...	1	3	45	62	184	295
25. Maryhill, ...	228	833	180	57	80	1,378
26. Kinning Park, ...	47	100	58	9	8	222
City, ...	3,615	10,048	3,484	1,221	1,347	19,715

TABLE III.

COMPARATIVE TABLE of Linings granted by Dean of Guild Court for the Years ending 31st August, 1909 and 1910.

Districts.	No. of Apartments.												Totals.	
	1.		2.		3.		4.		5.		6.			
	1909.	1910.	1909.	1910.	1909.	1910.	1909.	1910.	1909.	1910.	1909.	1910.	1909.	1910.
Central, ...	...	...	6	...	...	...	...	...	...	...	...	...	6	...
Western, ...	...	...	48	...	...	...	...	...	...	...	...	...	48	...
Eastern, ...	19	32	185	213	34	136	...	...	1	...	...	...	239	381
Southern, ...	...	...	...	...	2	...	1	...	2	...	...	...	5	...
Northern, ...	...	...	...	...	27	...	5	...	...	...	...	...	32	...
St. Rollox, ...	13	62	207	150	17	40	2	...	13	2	2	...	254	254
Queen's Park, ...	...	...	107	180	82	169	12	19	38	30	58	38	297	436
Maryhill, ...	...	...	1	1	159	81	37	89	66	19	23	39	286	229
	32	94	554	544	321	426	57	108	120	51	83	77	1,167	1,300

TABLE IV.—ACREAGE, Inhabited Houses, and Persons per Acre in each Municipal Ward in 1910; also the Population and Persons per Acre at the Census of 1901, and the Percentage Increase or Decrease in the Population during the Intervening Period.

Municipal Wards.	Acreage 1910.	Inhabited Houses, 1910.	Population.						Persons per Acre (including Institutions and Shipping).	
			Census 1901.	Estimated, Middle of 1910.	Increase.	Decrease.	Per Cent. Increase.	Per Cent. Decrease.	Census 1901.	1910.
1. Dalmarnock,	550	10,913	49,210	49,480	270	...	0·5	...	91	91
2. Calton,	327	7,596	39,045	34,697	...	4,348	...	11·1	126	112
3. Mile-end,	514	9,675	42,110	44,117	2,007	...	4·8	...	83	87
4. Whitevale,	309	6,631	33,897	31,330	...	2,567	...	7·6	115	105
5. Dennistoun,	731	8,263	30,482	37,686	7,204	...	23·6	...	44	54
6. Springburn,	1,567	9,486	37,744	45,247	7,503	...	19·9	...	25	32
7. Cowlairs,	952	6,179	26,597	30,219	3,622	...	13·6	...	28	32
8. Townhead,	250	7,749	40,492	36,610	...	3,882	...	9·9	170	146
9. Blackfriars,	130	4,073	24,333	19,842	...	4,491	...	18·5	195	162
10. Exchange,	116	340	2,326	1,842	...	484	...	20·8	24	25
11. Blythswood,	88	540	4,101	2,953	...	1,148	...	28·0	49	40
12. Broomielaw,	98	1,215	9,633	6,358	...	3,275	...	34·0	108	81
13. Anderston,	443	6,005	29,934	28,311	...	1,623	...	5·4	70	67
14. Sandyford,	133	5,004	26,449	23,902	...	2,547	...	9·6	200	183
15. Park,	329	4,815	24,903	23,621	...	1,282	...	5·2	78	74
16. Cowcaddens,	158	7,432	40,380	34,852	...	5,528	...	13·7	262	228
17. Woodside,	272	9,227	45,447	42,188	...	3,259	...	7·2	167	156
18. Hutchesontown,	213	8,492	42,284	38,038	...	4,246	...	10·0	199	179
19. Gorbals,	229	6,854	35,750	33,318	...	2,432	...	6·8	160	149
20. Kingston,	405	6,860	34,386	32,631	...	1,755	...	5·1	87	82
21. Govanhill,	445	7,768	31,639	35,380	3,741	...	11·9	...	71	80
22. Langside,	850	9,627	25,337	43,966	18,629	...	73·5	...	30	52
23. Pollokshields,	1,590	3,661	15,317	18,836	3,519	...	22·9	...	11	12
24. Kelvinside,	902	4,743	15,611	24,441	8,830	...	56·6	...	18	28
25. Maryhill,	1,266	8,603	33,717	39,956	6,239	...	18·5	...	28	34
26. Kinning Park,	108	2,646	13,852	12,621	...	1,231	...	8·9	128	117
— Institutions and Shipping,	...	...	20,588	23,967	3,379	...	16·4	...	...	...
CITY,	12,975	164,397	775,564	796,409	20,845	...	2·7	...	60	61

TABLE V.

ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at GLASGOW OBSERVATORY during 1910.

MONTHS.	TEMPERATURE.				RAINFALL.		
	Highest Temperature in Shade.	Lowest Temperature in Shade.	Mean Temperature for Month.	Departure from Average of 42 Years.	No. of Days it fell.	Amount Collected, in inches.	Departure from average of 42 Years.
January, ...	52°·1	12°·0	37°·3	−1°·4	22	4·47	+0·46
February, ...	50°·7	29°·1	39°·5	+0°·6	20	3·53	+0·59
March, ...	56°·0	31°·9	43°·2	+3°·0	12	1·84	−0·79
April, ...	55°·2	33°·8	42°·9	−1°·7	18	4·43	+2·41
May, ...	70°·3	34°·0	49°·6	+0°·2	17	1·84	−0·72
June, ...	73°·4	43°·4	55°·7	+0°·6	11	2·08	−0·61
July, ...	77°·0	45°·0	56°·5	−0°·9	16	4·62	+1·52
August, ...	69°·3	42°·9	57°·0	+0°·4	21	6·67	+2·77
September, ...	66°·2	40°·0	53°·8	+0°·8	7	1·48	−2·04
October, ...	64°·1	38°·0	50°·0	+3°·0	9	1·83	−1·96
November, ...	47°·5	21°·9	36°·8	−5°·5	14	3·14	−0·45
December, ...	51°·8	28°·1	43°·0	+4°·2	24	3·48	−0·53
Total, ...	...	...	...	...	191	39·41	+0·65

TABLE VI.

GLASGOW, 1910.—BIRTHS and BIRTH-RATES *per Million* in each WARD, exclusive of Institutions and Harbour, with corresponding Rates for 1903-09.

MUNICIPAL WARDS.	1903-5.	1906.	1907.	1908.	1909.	1910.	
	Rate per Million.	Rate per Million.	Rate per Million.	Rate per Million.	Rate per Million.	Births.	Rate per Million.
1. Dalmarnock, -	40,768	38,350	39,795	38,467	38,137	1,774	35,853
2. Calton, - -	33,362	34,387	31,599	32,670	31,685	1,085	31,360
3. Mile-end, -	40,881	39,871	39,887	41,703	38,700	1,679	38,058
4. Whitevale, -	32,866	32,389	33,620	32,343	32,988	981	31,312
5. Dennistoun, -	29,426	26,803	26,737	27,134	26,268	896	23,775
6. Springburn, -	41,301	39,701	39,375	38,804	39,097	1,636	36,157
7. Cowlairs, -	36,291	34,424	32,809	34,246	30,141	980	32,430
8. Townhead, -	31,861	32,462	31,219	31,148	29,627	1,079	29,473
9. Blackfriars, -	32,483	32,268	29,569	32,157	32,427	612	30,844
10. Exchange, -	19,838	23,088	15,233	21,807	16,913	37	20,087
11. Blythswood, -	10,182	9,149	11,646	12,666	11,217	27	9,143
12. Broomielaw, -	30,697	28,851	31,275	33,175	29,073	184	28,940
13. Anderston, -	33,421	33,208	32,425	32,758	32,627	855	30,200
14. Sandyford, -	24,244	23,935	22,713	22,428	23,402	523	21,881
15. Park, - -	12,064	11,580	10,722	10,193	10,724	206	8,721
16. Cowcaddens, -	33,872	33,271	31,071	30,522	30,612	1,030	29,554
17. Woodside, -	32,065	30,078	29,217	28,459	26,437	1,111	26,334
18. Hutchesontown,	39,273	39,843	37,187	35,918	37,609	1,459	38,356
19. Gorbals, - -	28,688	30,104	26,206	28,746	26,519	865	25,962
20. Kingston, -	30,285	28,458	29,010	29,798	28,622	912	27,949
21. Govanhill, -	36,328	31,514	35,270	32,337	33,674	1,097	31,006
22. Langside, -	20,538	21,907	20,291	21,984	19,671	777	17,673
23. Pollokshields, -	10,531	8,500	8,203	8,848	8,351	180	9,556
24. Kelvinside, -	12,074	11,474	12,253	12,074	11,043	255	10,433
25. Maryhill, -	40,500	37,029	37,733	34,243	33,693	1,261	31,559
26. Kinning Park,	...	38,078	33,515	36,000	35,316	432	34,229
— Institutions and Harbour, -	...	...	...	...	...	81	...
CITY, - -	31,428	30,373	29,655	29,632	28,738	22,014	27,642

TABLE VII.

GLASGOW, 1910.—ALL CAUSES.—DEATHS and DEATH-RATES *per Million* in each MUNICIPAL WARD, with corresponding rates for 1903-09.

MUNICIPAL WARDS.	1903-5.	1906.	1907.	1908.	1909.	1910.	
	Rate per Million.	Rate per Million.	Rate per Million.	Rate per Million.	Rate per Million	Deaths.	Rate per Million.
1. Dalmarnock, -	19,754	19,205	23,014	20,489	19,353	890	17,987
2. Calton, - -	22,458	21,631	24,936	22,416	21,655	670	19,310
3. Mile-end, -	21,753	19,768	22,359	20,639	19,518	832	18,859
4. Whitevale, -	19,633	18,421	20,018	19,561	19,449	503	16,055
5. Dennistoun, -	12,852	12,779	12,921	11,402	13,253	407	10,800
6. Springburn, -	18,332	17,401	18,678	16,574	16,601	751	16,598
7. Cowlairs, -	15,879	15,335	14,916	15,755	14,923	414	13,700
8. Townhead, -	18,486	18,400	19,363	19,662	18,026	549	14,996
9. Blackfriars, -	21,698	19,893	23,359	23,503	22,046	353	17,791
10. Exchange, -	18,072	14,430	17,690	17,653	19,556	26	14,115
11. Blythswood, -	13,895	8,234	13,485	9,816	14,187	28	9,482
12. Broomielaw, -	23,370	21,175	26,463	27,718	23,321	124	19,503
13. Anderston, -	18,725	18,515	18,593	19,336	19,883	501	17,696
14. Sandyford, -	16,579	19,020	18,834	16,791	18,713	379	15,856
15. Park, - -	10,732	11,259	10,722	10,971	11,013	241	10,203
16. Cowcaddens, -	23,372	21,861	21,307	22,424	24,304	628	18,019
17. Woodside, -	15,129	16,638	15,265	14,985	16,210	565	13,392
18. Hutchesontown,	20,688	18,882	18,910	20,598	21,994	644	16,930
19. Gorbals, - -	17,994	15,860	17,631	18,798	18,714	545	16,358
20. Kingston, -	18,017	17,412	18,986	18,508	19,388	525	16,089
21. Govanhill, -	14,570	15,183	15,054	15,452	15,169	477	13,482
22. Langside, -	9,555	9,330	9,572	10,001	9,125	390	8,870
23. Pollokshields, -	8,991	8,500	9,822	8,374	9,227	163	8,654
24. Kelvinside, -	7,406	7,252	7,218	7,778	7,738	165	6,751
25. Maryhill, -	15,063	14,435	13,352	14,798	14,211	556	13,915
26. Kinning Park,	...	18,154	18,029	17,424	22,288	238	18,857
— Institutions & Harbour, -	...	...	...	...	...	907	...
CITY, - -	18,292	17,576	18,353	17,999	17,952	12,471	15 659

TABLE VIII.—GLASGOW, 1910.—INSTITUTIONAL DEATHS (INTRA-MURAL). SHOWING CAUSES and AGES.

CAUSE OF DEATH.	AGES.							Total.
	-1	-5	-15	-20	-25	-60	60+	
Diphtheria, ...	...	...	1	...	...	...	...	1
Cerebro-Spinal Fever, ...	...	...	...	...	...	1	...	1
Enteric Fever, ...	...	...	...	1	...	3	...	4
Scarlet Fever, ...	...	1	...	...	1	...	...	2
Typhus Fever, ...	...	...	...	...	...	...	...	...
Measles, ...	1	21	1	...	...	...	...	23
Whooping-cough, ...	...	...	...	...	...	...	...	...
Digestive Diseases, ...	10	10	...	...	...	5	5	30
Septic Diseases,... ...	...	...	...	...	1	3	3	7
Phthisis,...	1	...	...	7	11	109	33	161
Other Tuberculous Diseases,	11	9	6	1	...	2	2	31
Cancer, ...	...	...	...	...	...	16	29	45
Nervous Diseases, ...	...	...	1	...	...	30	49	80
Circulatory Diseases, ...	...	...	1	2	...	33	135	171
Pneumonia, ...	3	2	1	...	1	27	36	70
Other Respiratory Diseases,	8	6	1	...	...	10	50	75
Violence, ...	...	...	...	...	...	18	3	21
Premature Births, ...	5	...	...	...	...	...	...	5
Unknown, ...	...	...	...	...	...	4	3	7
All other Causes, ...	15	1	4	...	2	44	107	173
	54	50	16	11	16	305	455	907
Per thousand Institutional Deaths, ...	60	55	18	12	18	336	501	1,000

TABLE IX.

GLASGOW, 1910.—INSTITUTIONAL DEATHS (INTRA-MURAL).

Cause of Death.	Poor Law Institutions.	Model Lodging-houses.	General Hospitals.	Infectious Diseases Hospitals.	Homes for Old Men and Women and Orphans, Barracks, Prisons, Asylums, and Harbour.	Total.
Diphtheria, ...	...	1	...	...	...	1
Cerebro-Spinal Fever,	...	...	...	...	1	1
Enteric Fever, ...	1	1	...	1	1	4
Scarlet Fever, ...	1	...	...	1	...	2
Typhus Fever, ...	...	...	...	...	...	...
Measles, ...	22	...	...	...	1	23
Whooping-cough, ...	...	...	...	...	...	
Digestive Diseases,	26	2	...	...	2	30
Septic Diseases, ...	5	2	...	...	...	7
Phthisis, ...	119	39	1	...	2	161
Other Tuberculous Diseases, ...	22	...	3	...	6	31
Cancer, ...	34	5	3	...	3	45
Nervous Diseases,	45	11	...	...	24	80
Circulatory Diseases,	114	22	3	1	31	171
Pneumonia, ...	33	21	...	...	16	70
Other Respiratory Diseases, ...	52	10	1	...	12	75
Violence, ...	3	8	2	...	8	21
Premature Birth,...	4	...	...	1	...	5
Unknown, ...	...	7	...	...	...	7
All others Causes,	98	32	6	1	36	173
	579	161	19	5	143	907
Per cent., ...	63·8	17·7	2·1	0·6	15·8	100

TABLE X.

GLASGOW, 1910.—DEATHS OF PERSONS NOT BELONGING TO GLASGOW OCCURRING IN PUBLIC INSTITUTIONS AND ELSEWHERE IN GLASGOW, TABULATED ACCORDING TO DISEASE AND AGE.

AGE.	Diphtheria.	Scarlet Fever.	Cerebro-Spinal Fever.	Measles.	Whooping-cough.	Digestive Diseases (No Diarrhœal.)	Puerperal Fever.	Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer and Malignant Diseases.	Nervous Diseases.	Circulatory Diseases.	Pneumonia.	Respiratory Diseases.	Influenza.	Premature Births.	Violence.	Uncertified.	All other Causes.	TOTAL.
Under 1 year, -	1	...	...	2	...	19	...	4	...	3	...	4	2	4	...	...	8	1	1	31	80
1—5 years, -	2	...	...	4	2	7	...	3	2	7	2	4	1	7	4	...	...	11	...	15	71
5—15 „ -	1	1	...	...	...	34	...	4	...	13	3	2	7	1	2	...	...	14	...	19	101
15—25 „ -	...	...	2	...	...	30	3	5	3	7	6	4	8	3	...	...	...	20	1	22	114
25—60 „ -	...	...	...	...	...	73	8	15	11	14	91	32	69	27	24	...	...	55	...	139	558
60 and upwards,	...	...	...	...	...	15	...	3	...	1	42	12	24	2	11	1	...	12	...	37	160
Under 5 years, -	3	...	...	6	2	26	...	7	2	10	2	8	3	11	4	...	8	12	1	46	151
5 years & upw'ds,	1	1	2	...	...	152	11	27	14	35	142	50	108	33	37	1	...	101	1	217	933
Total, - -	4	1	2	6	2	178	11	34	16	45	144	58	111	44	41	1	8	113	2	263	1084

TABLE XI.

GLASGOW, 1910.—DEATHS OF PERSONS OCCURRING IN MERRYFLATS POORHOUSE BELONGING TO GLASGOW TABULATED ACCORDING TO DISEASE AND AGE.

AGE.	Measles.	Digestive Diseases.	Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer and Malignant Diseases.	Nervous Diseases.	Circulatory Diseases.	Pneumonia.	Respiratory Diseases.	Violence.	Uncertified.	All other Causes.	TOTAL.
Under 1 year, ...	1	3	1	...	1	...	...	...	1	1	...	1	3	12
1—5 years, ...	1	...	...	1	1	...	...	...	2	...	...	...	2	7
5—15 ,, ...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
15—25 ,, ...	...	...	...	11	1	...	...	...	...	...	...	...	2	14
25—60 ,, ...	...	1	...	34	1	7	4	10	12	1	1	...	13	84
60 and upwards, ...	...	...	...	5	...	6	2	17	3	4	...	...	5	42
Under 5 years, ...	2	3	1	1	2	...	...	...	3	1	...	1	5	19
5 years and upwards, ...	...	1	...	51	2	13	6	27	15	5	1	...	20	141
Total, ...	2	4	1	52	4	13	6	27	18	6	1	1	25	160

TABLE XII.

GLASGOW, 1910.—DEATHS OF PERSONS FORMERLY RESIDENT IN GLASGOW OCCURRING IN PUBLIC INSTITUTIONS AND ELSEWHERE BEYOND THE BURGH (EXCLUDING MERRYFLATS POORHOUSE), TABULATED ACCORDING TO DISEASE AND AGE.

AGE.	Diphtheria.	Scarlet Fever.	Puerperal Fever.	Measles.	Whooping-cough.	Diarrhœal Diseases.	Other Digestive Diseases	Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer and Malignant Diseases.	Nervous Diseases.	Circulatory Diseases.	Pneumonia.	Respiratory Diseases.	Influenza.	Violence.	Uncertified.	All other Causes.	TOTAL.
Under 1 year, - ...	...	...	...	...	...	1	1	1	...	2	...	...	...	...	2	...	...	...	6	13
1—5 years, - 2	...	...	1	1	1	...	1	...	...	...	5	...	3	1	...	...	..	2	17
5—15 ,, - 2	1	...	...	...	...	1	...	3	4	...	4	...	1	2	...	5	...	...	23
15—25 ,, - ...	...	1	...	...	...	1	1	11	1	...	9	1	3	...	..	5	...	3	36
25—60 ,, - ...	1	...	...	...	...	1	12	4	62	9	14	102	18	14	9	1	28	1	53	329
60 and upwards. ...	...	...	...	...	...	...	3	4	7	3	9	45	25	10	16	4	4	...	71	201
Under 5 years, - 2	...	...	1	1	2	1	2	...	2	...	5	...	3	3	...	...	...	8	30
5 years & upw'ds, 2	2	1	...	...	1	17	9	83	17	23	160	44	28	27	5	42	1	127	589
Total, - - 4	2	1	1	1	3	18	11	83	19	23	165	44	31	30	5	42	1	135	619

TABLE XIII.

GLASGOW, 1910.—DEATH-RATES per 1,000, from "All" and "Specified" Causes, with corresponding Rates for 1909.

	1909.		1910.		−	+	−	+
I. PRINCIPAL ZYMOTIC DISEASES, ...	...	2·244	...	1·682	...	...	·562	...
Smallpox, ...	...	...	...	...	...	...	...	...
Diphtheria, ...	·277	...	·240	...	·037	...	...	...
Scarlet Fever, ...	·197	...	·177	...	·020	...	...	...
Typhus Fever, ...	·004	...	·002	...	·002	...	...	...
Enteric Fever, ...	·116	...	·070	...	·046	...	...	...
Cerebro-Spinal Fever, ...	·060	...	·038	...	·022	...	...	...
Measles, ...	·492	...	·662	...	...	·170	...	...
Whooping-cough, ...	·968	...	·291	...	·677	...	...	...
Diarrhœa, ...	·130	...	·202	...	...	·072	...	...
II. SEPTIC DISEASES, ...	...	·187	...	·225	...	...	...	·038
III. TUBERCULOUS DISEASES, ...	...	2·413	...	2·181	...	...	·232	...
Phthisis, ...	1·409	...	1·297	...	·112	...	...	...
Other Tuberculous Diseases, ...	1·004	...	·884	...	·120	...	...	...
IV. CANCER (Malignant Disease), ...	...	·831	...	·888	...	...	...	·057
V. DISEASES OF NERVOUS SYSTEM, ...	...	1·364	...	1·283	...	...	·081	...
VI. „ CIRCULATORY SYSTEM,	...	1·699	...	1·586	...	...	·113	...
VII. „ RESPIRATORY „	...	4·033	...	2·843	...	...	1·190	...
Pneumonia, ...	2·046	...	1·494	...	·552	...	...	...
Other Respiratory Diseases, ...	1·987	...	1·349	...	·638	...	...	...
VIII. OTHER CAUSES, ...	...	5·181	...	4·971	...	...	·210	...
All Causes, ...	...	17·952	...	15·659	...	...	2·293	...
Birth-rate, ...	...	28·738	...	27·642	...	...	...	...
Deaths under 1 year per 1,000 Births,	...	131	...	120	...	...	...	...

TABLE XIV.

GLASGOW, 1910.—DEATHS from DIFFERENT DISEASES at several AGE-PERIODS.

DISEASES.	Total, All Ages.	Under 1 Year.	– 5 Years.	– 15 Years.	– 20 Years.	– 25 Years.	– 60 Years.	60 and Over.	Under 5 Years.	5 Years and Over.
Smallpox, ...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup, ...	191	15	126	47	...	1	2	...	141	50
Scarlet Fever, ...	141	11	73	43	2	5	5	2	84	57
Typhus Fever, ...	2	...	...	...	...	1	1	...	...	2
Enteric Fever, ...	56	...	2	8	3	7	36	...	2	54
Undefined Fever, ...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Fever,	30	5	11	8	1	...	5	...	16	14
Measles, ...	527	138	358	28	...	...	3	...	496	31
Whooping-cough, ...	232	92	134	6	...	...	...	...	226	6
Diarrhœa, ...	161	92	56	1	1	...	4	7	148	13
Puerperal Fever, ...	41	...	...	...	2	5	33	1	...	41
Erysipelas, ...	25	6	...	...	...	1	10	8	6	19
Other Septic Diseases,	113	8	5	11	8	8	53	20	13	100
Phthisis, ...	1,033	15	24	64	100	136	631	63	39	994
Other Tuberculous Diseases, ...	704	202	280	121	28	18	43	12	482	222
Cancer, ...	707	2	5	2	1	3	380	314	7	700
Diseases of Nervous System, ...	1,022	135	66	27	11	9	301	473	201	821
Diseases of Circulatory System, ...	1,263	31	12	33	19	35	537	596	43	1,220
Pneumonia, ...	1,190	299	294	48	17	27	327	178	593	597
Influenza, ...	54	5	4	1	1	...	20	23	9	45
Other Respiratory Diseases, ...	1,075	190	152	16	8	5	271	433	342	733
Violence, ...	371	29	55	37	18	15	161	56	84	287
Premature Birth, ...	450	450	...	...	...	...	...	...	450	...
Uncertified (or Unknown), ...	47	21	2	...	...	1	17	6	23	24
Other Causes, ...	3,036	878	260	109	44	69	772	904	1,138	1,898
All Causes, ...	12,471	2,624	1,919	610	264	346	3,612	3,096	4,543	7,928
Number in 1,000 dying in several Age-Periods,	1,000	210	154	49	21	28	290	248	364	636
1909, ...	1,000	210	171	50	21	26	274	248	381	619

TABLE XV.

GLASGOW, 1910.—DEATHS under ONE YEAR and DEATH-RATE per 1,000 BIRTHS in each MUNICIPAL WARD, with corresponding RATES for 1903-09.

MUNICIPAL WARDS.	Average of 5 years.	Rate per 1,000 Births.					1910.	
		1903-5.	1906.	1907.	1908.	1909.	Deaths.	Rate per 1,000 Births.
1. Dalmarnock, ...	147	143	142	161	152	129	255	144
2. Calton, ...	169	176	144	173	164	142	147	135
3. Mile-end, ...	149	149	145	152	149	129	216	129
4. Whitevale, ...	151	153	144	150	160	144	128	130
5. Dennistoun, ...	94	94	94	93	82	111	68	76
6. Springburn, ...	134	140	125	126	122	115	187	114
7. Cowlairs, ...	119	121	128	107	104	110	112	114
8. Townhead, ...	139	140	147	127	151	142	112	104
9. Blackfriars, ...	161	166	142	165	172	163	90	147
10. Exchange, ...	125	123	63	194	167	313	4	108
11. Blythswood, ...	226	257	200	158	25	59	1	37
12. Broomielaw, ...	169	167	142	201	203	160	26	141
13. Anderston, ...	143	151	140	121	149	151	99	116
14. Sandyford, ...	157	146	165	180	148	148	67	128
15. Park, ...	85	91	83	68	88	108	13	63
16. Cowcaddens, ...	172	182	168	144	162	186	155	150
17. Woodside, ...	121	123	123	110	118	130	97	87
18. Hutchesontown,	134	142	133	112	153	140	174	119
19. Gorbals, ...	139	141	121	151	137	141	118	136
20. Kingston, ...	145	143	145	151	158	152	128	140
21. Govanhill, ...	107	111	106	93	115	111	111	101
22. Langside, ...	62	65	47	69	72	52	43	55
23. Pollokshields, ...	65	71	60	53	30	80	11	61
24. Kelvinside, ...	62	75	44	40	60	42	12	47
25. Maryhill, ...	101	110	101	72	106	112	132	105
26. Kinning Park, ...	...	...	130	129	132	140	64	148
— Institutions and Shipping, ...	...	...	...	...	...	...	54	...
CITY, ...	136	139	131	129	136	131	2,624	119

TABLE XVI.

GLASGOW, 1910.—MALE INFANT DEATHS at GIVEN AGES and from SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.					AGE IN MONTHS.											TOTALS.	Group Totals.	Group Percentages.	Death-rate per 1,000 Male Births.
	1st	2nd	3rd	4th	Total.	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th				
I. IMMATURITY, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	474	32·9	42·2
(*a*) Premature Birth, ...	155	29	21	10	215	12	3	2	...	...	...	...	...	...	...	...	232	...	...	...
(*b*) Congenital Malformations, ...	24	8	1	...	33	1	2	...	2	1	...	1	...	1	...	...	41	...	...	...
(*c*) Atelectasis, ...	9	...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	9	...	...	...
(*d*) Atrophy and Debility, ...	49	18	12	11	90	43	19	11	13	4	4	1	1	2	4	...	192	...	...	...
II. DISEASES OF RESPIRATORY SYSTEM,	3	4	5	5	17	18	24	26	14	18	23	31	28	17	28	27	...	271	18·8	24·1
III. DISEASES OF DIGESTIVE SYSTEM,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	236	16·4	21·0
(*a*) Diarrhœal, ...	1	2	5	5	13	26	19	24	15	14	14	14	13	14	12	14	192	...	...	...
(*b*) Dentition, ...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	3	...	...	...
(*c*) Others, ...	6	4	1	2	13	6	6	4	1	1	5	2	1	...	1	1	41	...	...	...
IV. DISEASES OF NERVOUS SYSTEM, ...	4	5	3	2	14	13	9	7	9	8	5	7	6	5	6	7	...	96	6·7	8·6
V. TUBERCULOUS DISEASES, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	80	5·6	7·1
(*a*) Tabes Mesenterica, ...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	3	...	...	...
(*b*) Tubercular Meningitis, ...	...	...	...	...	...	...	3	5	3	4	5	4	1	3	6	5	39	...	...	...
(*c*) Other Forms, ...	...	...	...	...	..	3	3	4	2	2	3	9	4	3	1	4	38	...	...	...
VI. ACCIDENTS OF BIRTH, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	0·6	0·8
(*a*) Injury, ...	7	...	...	...	7	...	...	...	...	...	...	...	...	...	...	...	7	...	...	...
(*b*) Umbilical Hæmorrhage, ...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
VII. INFECTIOUS DISEASES, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	153	10·6	13·6
(*a*) Whooping-cough, ...	...	...	...	...	...	2	7	4	5	2	2	2	6	6	6	4	46	...	...	...
(*b*) Measles, ...	...	...	...	...	...	...	1	1	...	4	7	8	14	17	14	14	80	...	...	...
(*c*) Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	1	6	...	...	...
(*d*) Cerebro-Spinal Fever, ...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	...
(*e*) Erysipelas, ...	...	...	1	...	1	2	...	...	...	...	1	...	...	1	...	...	5	...	...	...
(*f*) Diphtheria and Memb. Croup,	...	...	...	...	...	...	...	...	...	...	...	1	2	2	1	4	10	...	...	...
(*g*) Chicken-pox, ...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	1	4	...	...	...
VIII. SYPHILIS, ...	...	2	1	1	4	5	5	2	1	...	...	...	...	...	...	1	...	18	1·3	1·6
IX. SUFFOCATION, ...	1	...	...	1	2	3	2	1	...	1	...	...	...	...	...	...	...	9	0·6	0·8
X. OTHER VIOLENCE, ...	1	...	...	1	2	...	...	...	...	...	...	1	...	...	2	...	...	5	0·3	0·4
XI. ALL OTHER CAUSES, ...	13	7	1	3	24	13	4	13	5	3	2	6	3	2	5	9	...	89	6·2	7·9
	275	79	51	41	446	147	107	105	70	64	71	90	79	82	87	92	...	1,440	100·0	128·3

TABLE XVII.

Glasgow, 1910.—FEMALE Infant Deaths at Given Ages and from Several Causes.

Cause of Death.	Age in Weeks.					Age in Months.											Totals.	Group Totals.	Group Percentages.	Death-rate per 1,000 Female Births.
	1st	2nd	3rd	4th	Total.	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th				
I. Immaturity, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	373	31·4	34·6
(a) Premature Birth, ...	133	21	14	9	177	7	11	3	1	...	...	...	...	...	...	...	199	...	...	...
(b) Congenital Malformations, ...	14	3	...	1	18	1	2	...	...	...	...	...	...	...	...	...	21	...	...	...
(c) Atelectasis, ...	8	...	1	...	9	...	...	...	...	...	...	...	...	...	...	...	9	...	...	...
(d) Atrophy and Debility, ...	48	9	8	9	74	15	18	9	7	8	...	2	6	1	2	2	144	...	...	...
II. Diseases of Respiratory System,	9	6	7	3	25	15	19	16	13	15	19	11	17	19	18	19	...	206	17·4	19·1
III. Diseases of Digestive System,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	204	17·2	18·9
(a) Diarrhœal, ...	...	1	1	1	3	9	16	23	13	17	14	11	16	20	9	11	162	...	...	...
(b) Dentition, ...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	4	1	8	...	...	...
(c) Others, ...	5	1	2	1	9	2	1	5	5	1	2	...	4	...	3	2	34	...	...	...
IV. Diseases of Nervous System, ...	6	2	3	1	12	10	2	9	2	11	5	6	11	4	2	4	...	78	6·6	7·2
V. Tuberculous Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	73	6·2	6·8
(a) Tabes Mesenterica, ...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	4	...	...	...
(b) Tubercular Meningitis, ...	1	...	...	...	1	1	2	...	5	1	5	3	4	2	4	1	29	...	...	...
(c) Other Forms, ...	...	...	...	...	...	2	2	4	3	2	4	2	8	5	4	4	40	...	...	...
VI. Accidents of Birth, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	0·5	0·6
(a) Injury, ...	5	1	...	...	6	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...
(b) Umbilical Hæmorrhage, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VII. Infectious Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	124	10·5	11·5
(a) Whooping-cough, ...	...	...	...	...	...	1	1	1	3	...	3	4	7	11	6	8	45	...	...	...
(b) Measles, ...	...	...	...	...	...	...	...	...	2	3	4	6	10	14	12	10	61	...	...	...
(c) Scarlet Fever, ...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	2	5	...	...	...
(d) Cerebro-Spinal Fever, ...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	3	...	...	...
(e) Erysipelas, ...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...
(f) Diphtheria and Memb. Croup,	...	...	...	...	...	...	...	...	...	...	2	1	...	1	1	1	6	...	...	...
(g) Chicken-pox, ...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2	...	...	...
VIII. Syphilis, ...	1	...	2	3	6	7	2	3	1	...	...	...	1	...	1	...	...	21	1·8	1·9
IX. Suffocation, ...	1	2	1	1	5	1	3	3	1	...	...	1	...	1	...	...	...	15	1·3	1·4
X. Other Violence,...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	0·2	0·2
XI. All Other Causes, ...	15	6	6	5	32	18	8	6	3	2	2	3	1	1	3	3	...	82	6·9	7·6
	246	52	45	35	378	89	90	85	62	62	60	52	87	82	69	68	...	1,184	100·0	109·7

TABLE XVIII.—GLASGOW, 1910.—ABSTRACT OF NOTIFICATIONS UNDER NOTIFICATION OF BIRTHS ACT, 1907, AND RESULTS OF VISITS, IN EACH MUNICIPAL WARD.

MUNICIPAL WARD.	Total Number of Notifications.	Dr. at Home.	Dr. in Institution.	Maternity Nurse.	Others.	Total Cards issued.	Total Cards returned.	Full Information.	Dr. found in attendance.	Duplicates.	Wrong Address.	Others.
1. Dalmarnock, ...	1,854	551	106	254	943	1,303	1,287	1,245	1	2	3	36
2. Calton, ...	1,094	236	56	330	472	858	845	808	4	2	9	22
3. Mile-end, ...	1,746	528	65	297	856	1,218	1,178	1,150	1	1	6	20
4. Whitevale, ...	1,001	307	50	231	413	694	689	665	3	1	12	8
5. Dennistoun, ...	992	694	86	64	148	298	298	214	8	...	3	73
6. Springburn, ...	1,779	738	113	285	643	1,041	1,039	918	14	3	4	100
7. Cowlairs, ...	1,009	388	35	102	484	621	630	594	15	1	1	19
8. Townhead, ...	1,121	438	58	384	241	683	681	648	2	2	...	29
9. Blackfriars, ...	624	123	47	276	178	501	501	468	1	2	5	25
10. Exchange, ...	41	15	7	13	6	26	26	22	...	...	...	4
11. Blythswood, ...	26	17	1	5	3	9	8	6	...	...	...	2
12. Broomielaw, ...	192	28	11	97	56	164	161	155	...	...	...	6
13. Anderston, ...	913	318	32	303	260	595	599	588	2	2	1	6
14. Sandyford, ...	543	172	25	227	119	371	373	362	1	1	...	9
15. Park, ...	260	139	65	11	45	121	123	72	5	...	...	46
16. Cowcaddens, ...	1,053	210	44	347	452	843	845	828	1	...	2	14
17. Woodside, ...	1,246	551	108	186	401	695	692	587	5	...	3	97
18. Hutchesontown, ...	1,471	408	47	262	754	1,063	905	774	42	1	8	80
19. Gorbals, ...	880	282	41	174	382	598	543	460	18	...	12	53
20. Kingston, ...	936	315	37	181	403	621	568	526	11	1	9	21
21. Govanhill, ...	1,123	693	29	56	345	430	366	263	20	...	2	81
22. Langside, ...	746	691	5	...	50	55	51	5	2	...	...	44
23. Pollokshields, ...	196	171	2	1	22	25	23	15	...	...	...	8
24. Kelvinside, ...	254	233	1	1	19	21	20	12	...	...	...	8
25. Maryhill, ...	1,312	734	27	35	516	578	570	527	2	1	4	36
26. Kinning Park, ...	453	146	15	76	216	307	272	263	2	...	1	6
CITY, ...	22,865	9,126	1,113	4,198	8,428	13,739	13,293	12,175	160	20	85	853

TABLE XIX.

GLASGOW, 1910.—TABLE SHOWING THE NUMBER OF LIVE AND STILL-BIRTHS NOTIFIED AND THE NUMBERS AND PERCENTAGES ATTENDED MEDICALLY AND NON-MEDICALLY IN EACH WARD.

MUNICIPAL WARDS.	NOTIFICATIONS RECEIVED.			Births Medically Attended.	Medically Attended in Institutions.	Total Births Medically Attended.	Attended by Maternity Hospital Nurses.	Attended by Midwives—Certified and Uncertified.	Total Births not Medically Attended.	Percentage Medically Attended.	Percentage not Medically Attended.
	Total.	Live-Births.	Still-Births.								
1. Dalmarnock, ...	1,852	1,773	79	552	106	658	254	940	1,194	35·5	64·5
2. Calton, ...	1,092	1,050	42	240	56	296	330	466	796	27·1	72·9
3. Mile-end, ...	1,745	1,674	71	529	65	594	297	854	1,151	34·0	66·0
4. Whitevale, ...	1,000	957	43	310	50	360	231	409	640	36·0	64·0
5. Dennistoun, ...	992	956	36	702	86	788	64	140	204	79·4	20·6
6. Springburn, ...	1,776	1,712	64	752	113	865	285	626	911	48·6	51·4
7. Cowlairs, ...	1,008	972	36	403	35	438	102	468	570	43·4	56·6
8. Townhead, ...	1,119	1,072	47	440	58	498	384	237	621	44·4	55·6
9. Blackfriars, ...	622	593	29	124	47	171	276	175	451	27·4	72·6
10. Exchange, ...	41	40	1	15	7	22	13	6	19	53·7	46·3
11. Blythswood, ...	26	25	1	17	1	18	5	3	8	69·2	30·8
12. Broomielaw, ...	192	180	12	28	11	39	97	56	153	20·3	79·7
13. Anderston, ..	911	870	41	320	32	352	303	256	559	38·6	61·4
14. Sandyford, ...	542	521	21	173	25	198	227	117	344	36·5	63·5
15. Park, ...	260	254	6	144	65	209	11	40	51	80·4	19·6
16. Cowcaddens, ...	1,053	992	61	211	44	255	347	451	798	24·2	75·8
17. Woodside, ...	1,246	1,192	54	556	108	664	186	396	582	53·3	46·7
18. Hutchesontown,	1,470	1,426	44	450	47	497	262	711	973	33·8	66·2
19. Gorbals, ...	880	844	36	300	41	341	174	365	539	38·8	61·2
20. Kingston, ...	935	895	40	326	37	363	181	391	572	38·8	61·2
21. Govanhill, ...	1,123	1,087	36	713	29	742	56	325	381	66·1	33·9
22. Langside, ...	746	729	17	693	5	698	...	48	48	93·6	6·4
23. Pollokshields, ...	196	191	5	171	2	173	1	22	23	88·3	11·7
24. Kelvinside, ...	254	252	2	233	1	234	1	19	20	92·1	7·9
25. Maryhill, ...	1,311	1,272	39	736	27	763	35	513	548	58·1	41·9
26. Kinning Park, ...	453	438	15	148	15	163	76	214	290	36·0	64·0
CITY, ...	22,845	21,967	878	9,286	1,113	10,399	4,198	8,248	12,446	45·5	54·5

TABLE XX.

GLASGOW. 1910.—TABLE SHOWING NUMBER OF LIVE-BIRTHS AND STILL-BIRTHS NOTIFIED, WITH PROPORTIONS MEDICALLY AND NON-MEDICALLY ATTENDED IN EACH WARD.

MUNICIPAL WARDS.	Number of Live-Births Notified.	Number of Still-Births Notified.	Percentage Still-Births to Live-Births Notified.	Live-Births Medically Attended, but excluding Institutions.	Still-Births Medically Attended, but excluding Institutions.	Percentage Still-Births to Live-Births Medically Attended.	Live-Births Non-Medically Attended.	Still-Births Non-Medically Attended.	Percentage Still-Births to Live-Births Non-Medically Attended.
1. Dalmarnock, ...	1,773	79	4·5	552	28	5·1	1,194	38	3·2
2. Calton, ...	1,050	42	4·0	240	12	5·0	796	25	3·1
3. Mile-end, ...	1,674	71	4·2	529	25	4·7	1,151	35	3·0
4. Whitevale, ...	957	43	4·5	310	13	4·2	640	21	3·3
5. Dennistoun, ...	956	36	3·8	702	26	3·7	204	6	2·9
6. Springburn, ...	1,712	64	3·7	752	24	3·2	911	29	3·2
7. Cowlairs, ...	972	36	3·7	403	17	4·2	570	13	2·3
8. Townhead. ...	1,072	47	4·4	440	17	3·9	621	24	3·9
9. Blackfriars, ...	593	29	5·0	124	4	3·2	451	23	5·1
10. Exchange, ...	40	1	2·5	15	1	6·7	19	...	...
11. Blythswood, ...	25	1	4·0	17	1	5·9	8	...	...
12. Broomielaw, ...	180	12	6·7	28	2	7·1	153	5	3·3
13 Anderston, ...	870	41	4·7	320	8	2·5	559	27	4·8
14. Sandyford, ...	521	21	4·0	173	6	3·5	344	13	3·8
15. Park, ...	254	6	2·4	144	3	2·7	51	1	2·0
16. Cowcaddens, ...	992	61	6·1	211	13	6·2	798	44	5·5
17. Woodside, ...	1,192	54	4·5	556	22	4·0	582	23	4·0
18. Hutchesontown,	1,426	44	3·1	450	10	2·2	973	27	2·8
19. Gorbals. ...	844	36	4·3	300	17	5·7	539	14	2·5
20. Kingston, ...	895	40	4·5	326	14	4·3	572	19	3·3
21. Govanhill, ...	1,087	36	3·3	713	20	2·8	381	13	3·4
22. Langside, ...	729	17	2·3	693	16	2·3	48	...	...
23. Pollokshields, ...	191	5	2·6	171	5	2·9	23	...	...
24. Kelvinside, ...	252	2	0·8	233	2	0·9	20	...	...
25. Maryhill, ...	1,272	39	3·1	736	24	3·3	548	10	1·8
26. Kinning Park,...	438	15	3·4	148	5	3·4	290	9	3·1
CITY, ...	21,967	878	4·0	9,286	335	3·6	12,446	419	3·4

TABLE XXI.

GLASGOW, 1910.—CASES of CERTAIN ZYMOTICS, PHTHISIS, and ALL CASES registered in each MUNICIPAL WARD.

MUNICIPAL WARDS.	FEVERS.						SMALLPOX.	DIPHTHERIA AND MEMBRANOUS CROUP.	PHTHISIS.	* ALL OTHER CASES.	TOTAL.
	Cerebro-Spinal.	Typhus.	Enteric.	Continued and Undefined	Puerperal	Scarlet.					
1. Dalmarnock, ...	6	...	25	3	11	378	...	146	184	2,061	2,814
2. Calton, ...	6	...	28	...	7	197	...	80	205	726	1,249
3. Mile-end, ...	3	2	12	...	6	300	...	114	196	1,663	2,296
4. Whitevale, ...	1	...	6	...	8	160	...	70	109	934	1,288
5. Dennistoun, ...	1	...	15	1	6	190	...	78	88	1,094	1,473
6. Springburn, ...	2	1	18	...	9	360	...	204	193	1,889	2,676
7. Cowlairs, ...	2	...	2	1	2	201	...	97	81	1,007	1,393
8. Townhead, ...	1	1	6	...	3	186	...	113	148	736	1,194
9. Blackfriars, ...	...	1	11	1	4	87	...	61	114	493	772
10. Exchange, ...	...	...	...	1	...	8	...	2	16	40	67
11. Blythswood, ...	...	...	2	...	...	6	...	6	3	14	31
12. Broomielaw, ...	1	...	2	1	...	20	...	18	46	190	278
13. Anderston, ...	3	...	21	3	7	129	1	65	117	1,006	1,352
14. Sandyford, ...	2	...	10	1	5	102	...	63	86	585	854
15. Park, ...	1	...	7	...	1	126	...	47	36	177	395
16. Cowcaddens, ...	1	5	16	6	4	168	...	57	203	402	862
17. Woodside, ...	3	...	7	...	4	209	...	102	125	548	998
18. Hutchesontown,	1	...	42	...	9	232	...	142	154	1,089	1,669
19. Gorbals, ...	1	5	25	1	5	166	...	72	168	760	1,203
20. Kingston, ...	5	...	23	1	3	133	...	54	115	857	1,191
21. Govanhill, ...	2	...	18	...	8	183	...	71	106	1,223	1,611
22. Langside, ...	2	...	6	...	1	231	...	67	57	757	1,121
23. Pollokshields, ...	...	...	7	1	...	67	...	26	25	215	341
24. Kelvinside, ...	1	...	4	...	1	78	...	39	22	178	323
25. Maryhill, ...	1	...	15	1	7	237	...	123	126	1,596	2,106
26. Kinning Park, ...	...	...	12	1	2	49	...	22	53	137	276
— Institutions, ...	...	...	...	...	...	...	...	...	811	...	811
— Harbour, ...	...	...	...	...	...	...	...	...	3	...	3
CITY, ...	46	15	340	23	113	4,203	1	1,939	3,590	20,377	30,647

* Erysipelas, Measles, Whooping-cough, Chickenpox, Beri-Beri, Anthrax, Mumps, and Trachoma.

NOTE.—Cases occurring in Institutions are allocated to the respective Wards, except for Phthisis.

TABLE XXII.

GLASGOW, 1910.—CASE-RATE per Million for CERTAIN ZYMOTICS, PHTHISIS, and for ALL CASES registered in each MUNICIPAL WARD.

MUNICIPAL WARDS.	FEVERS.						Smallpox.	Diphtheria and Membranous Croup.	Phthisis.	All other Cases.	TOTAL.
	Cerebro-Spinal.	Typhus.	Enteric.	Continued and Undefined	Puerperal	Scarlet.					
1. Dalmarnock ...	119	...	498	60	219	7,523	...	2,906	3,719	41,016	56,060
2. Calton, ...	163	...	763	...	191	5,366	...	2,179	5,908	19,778	34,348
3. Mile-end, ...	67	45	269	...	135	6,728	...	2,557	4,443	37,298	51,542
4. Whitevale, ...	31	...	185	...	247	4,934	...	2,159	3,479	28,804	39,839
5. Dennistoun, ...	25	...	379	25	152	4,804	...	1,972	2,335	27,663	37,355
6. Springburn, ...	40	20	361	...	181	7,224	...	4,094	4,265	37,908	54,093
7. Cowlairs, ...	66	...	66	33	66	6,651	...	3,210	2,680	33,325	46,097
8. Townhead, ...	27	27	164	...	82	5,069	...	3,080	4,043	20,060	32,552
9. Blackfriars, ...	...	47	522	47	190	4,125	...	2,893	5,745	23,377	36,946
10. Exchange, ..	...	...	...	351	...	2,807	...	702	8,686	14,034	26,580
11. Blythswood, ...	...	...	568	...	...	1,705	...	1,705	1,016	3,977	8,971
12. Broomielaw, ...	126	...	252	126	...	2,519	...	2,268	7,235	23,939	36,465
13. Anderston, ...	101	...	704	101	235	4,325	34	2,179	4,133	33,730	45,542
14. Sandyford, ...	82	...	411	41	206	4,196	...	2,591	3,598	24,064	35,189
15. Park, ...	41	...	286	...	41	5,156	...	1,923	1,524	7,242	16,213
16. Cowcaddens, ...	28	139	445	167	111	4,667	...	1,584	5,825	11,167	24,133
17. Woodside, ...	71	...	165	...	94	4,929	...	2,405	2,963	12,923	23,550
18. Hutchesontown,	26	...	1,104	...	237	6,099	...	3,733	4,049	28,626	43,874
19. Gorbals, ...	29	146	731	29	146	4,854	...	2,106	5,042	22,225	35,308
20. Kingston, ...	150	...	692	30	90	3,999	...	1,624	3,524	25,769	35,878
21. Govanhill, ...	57	...	509	...	226	5,172	...	2,007	2,996	34,567	45,534
22. Langside, ...	45	...	135	...	22	5,181	...	1,503	1,296	16,976	25,158
23. Pollokshields, ...	..	...	372	53	...	3,557	...	1,380	1,327	11,415	18,104
24. Kelvinside, ...	40	...	158	...	40	3,084	...	1,542	900	7,038	12,802
25. Maryhill, ...	24	...	361	24	168	5,701	...	2,959	3,153	38,395	50,785
26. Kinning Park, ...	...	...	951	79	158	3,882	...	1,743	4,199	10,856	21,868
CITY, ...	58	19	427	29	142	5,277	1	2,435	4,508	25,586	38,482

* Erysipelas, Measles, Whooping-cough, Chickenpox, Beri-Beri, Anthrax, Mumps, and Trachoma.

NOTE.—The populations on which these rates are based include Institutions and Shipping, except for Phthisis.

TABLE XXIII.

GLASGOW, 1910.—*PRINCIPAL ZYMOTIC DISEASES.—DEATHS AND DEATH-RATES IN THE SEVERAL WARDS, WITH CORRESPONDING RATES FOR 1903-9.

MUNICIPAL WARDS.	Death-rate per Million.					1910.	
	1903-5.	1906.	1907.	1908.	1909.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	3,739	3,440	6,011	3,704	3,494	147	2,971
2. Calton, ...	3,611	3,023	5,595	3,504	2,349	81	2,334
3. Mile-end, ...	3,664	4,007	5,093	3,538	2,667	123	2,789
4. Whitevale, ...	2,889	3,261	4,566	2,705	2,689	77	2,457
5. Dennistoun, ...	1,587	1,355	1,058	915	923	21	557
6. Springburn, ...	3,041	2,613	4,347	2,851	1,950	84	1,856
7. Cowlairs, ...	2,372	2,373	3,173	2,703	2,257	50	1,654
8. Townhead, ...	2,317	2,351	3,527	2,474	2,115	47	1,284
9. Blackfriars, ...	2,806	2,568	4,773	4,020	2,668	44	2,218
10. Exchange, ...	912	962	1,965	519	1,057	3	1,629
11. Blythswood, ...	1,149	305	306	317	330	...	...
12. Broomielaw, ...	3,800	3,705	5,480	3,303	3,730	14	2,202
13. Anderston, ...	3,153	2,918	4,622	3,771	2,927	65	2,297
14. Sandyford, ...	2,526	2,079	3,200	2,003	2,093	44	1,841
15. Park, ...	679	925	773	369	577	7	295
16. Cowcaddens, ...	3,382	3,812	3,499	3,402	4,802	49	1,406
17. Woodside, ...	1,909	2,186	1,980	1,836	2,462	57	1,351
18. Hutchesontown,...	3,337	3,330	3,574	5,021	4,425	86	2,261
19. Gorbals, ...	2,006	2,119	2,924	3,533	2,532	67	2,010
20. Kingston, ...	2,436	2,527	3,950	2,485	2,485	62	1,900
21. Govanhill, ...	2,061	2,206	2,394	2,810	2,214	67	1,894
22. Langside, ...	738	542	904	662	505	15	341
23. Pollokshields, ...	479	337	378	211	259	3	159
24. Kelvinside, ...	535	138	357	361	209	6	246
25. Maryhill, ...	2,000	2,460	2,125	2,679	1,454	72	1,802
26. Kinning Park, ...	...	2,436	4,191	2,687	3,659	17	1,345
— Institutions and Harbour, ...	...	...	...	...	...	32	...
CITY, ...	2,486	2,436	3,300	2,586	2,244	1,340	1,682

* Includes Smallpox, Diphtheria, Membranous Croup, Scarlet Fever, Typhus Fever, Enteric Fever, Continued and Undefined Fevers, Cerebro-Spinal Fever, Measles, Whooping Cough, and Diarrhœa.

TABLE XXIV.

GLASGOW.—PRIMARY VACCINATION during 1909—COMPILED from the 56TH ANNUAL REPORT of the REGISTRAR-GENERAL.

Registration Districts.	Successfully Vaccinated.		Vaccination Postponed.		Insusceptible of Vaccination.		Died before Vaccination.		Statutory Declaration of Conscientious Objection.		Removed from District, or otherwise Unaccounted for		Total Births for 1909.
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	
1. Bridgeton, ...	1,240	70·1	11	0·6	18	1·0	173	9·8	206	11·6	121	6·9	1,769
2. Camlachie, ...	1,353	71·1	23	1·2	10	0·5	184	9·7	209	11·0	124	6·5	1,903
3. Calton, ...	1,238	71·3	22	1·3	6	0·3	203	11·7	134	7·7	132	7·7	1,735
4. Dennistoun, ...	750	70·2	13	1·2	2	0·2	113	10·6	139	13·0	51	4·8	1,068
5. Garngadhill, ...	858	67·9	17	1·4	9	0·7	142	11·3	187	14·8	50	3·9	1,263
6. Springburn, ...	541	53·9	14	1·4	6	0·6	71	7·1	315	31·4	57	5·6	1,004
7. Possilpark, ...	420	70·8	7	1·2	6	1·0	39	6·6	93	15·7	28	4·7	593
8. St. Rollox, ...	727	69·6	17	1·6	3	0·3	110	10·5	132	12·6	55	5·4	1,044
9. Milton, ...	723	66·8	12	1·1	13	1·2	147	13·6	79	7·3	109	10·0	1,083
10. Blythswood, ...	811	59·3	10	0·7	9	0·7	234	17·1	106	7·7	198	14·5	1,368
11. Anderston, ...	1,048	72·4	16	1·1	13	0·9	166	11·5	128	8·8	77	5·3	1,448
12. Hillhead, ...	293	78·3	14	3·7	15	4·0	18	4·8	32	8·6	2	0·6	374
13. Kelvin, ...	874	63·7	21	1·5	14	1·0	153	11·2	210	15·3	99	7·3	1,371
14. Maryhill, ...	685	63·3	70	6·5	10	0·9	115	10·6	155	14·3	47	4·4	1,082
15. Hutchesontown,	1,120	64·3	44	2·5	4	0·2	197	11·3	168	9·6	210	12·1	1,743
16. Govanhill, ...	769	63·8	17	1·4	6	0·5	105	8·7	234	19·4	75	6·2	1,206
17. Gorbals, ...	1,018	66·9	30	2·0	15	1·0	178	11·7	138	9·1	143	9·3	1,522
18. Pollokshields, ...	481	61·0	13	1·7	12	1·5	72	9·1	148	18·8	62	7·9	788
19. Cathcart, ...	492	77·8	18	2·8	10	1·6	26	4·1	76	12·0	11	1·7	633
20. Eastwood, ...	110	79·7	3	2·2	4	2·9	3	2·2	16	11·6	2	1·4	138
CITY, ...	15,551	67·2	392	1·7	185	0·8	2,449	10·6	2,905	12·6	1,653	7·1	23,135
1902, ...	...	84·2	...	0·8	...	0·9	...	10·6	...	...	...	3·5	24,720
1903, ...	...	84·6	...	0·7	...	0·6	...	10·8	...	...	...	3·3	25,142
1904, ...	...	83·4	...	1·2	...	0·7	...	11·0	...	...	...	3·7	24,751
1905, ...	...	84·5	...	1·3	...	0·6	...	10·0	...	...	...	3·6	24,315
1906, ...	...	82·9	...	0·8	...	0·5	...	10·6	...	0·2	...	5·0	24,557
1907, ...	...	75·0	...	1·5	...	0·7	...	10·7	...	4·9	...	7·2	24,003
1908, ...	...	69·5	...	1·7	...	0·8	...	10·8	...	9·2	...	8·0	23,912

TABLE XXV.

GLASGOW.—STATUTORY DECLARATIONS OF CONSCIENTIOUS OBJECTION TO VACCINATION in each Ward from 1907 to 1910.

MUNICIPAL WARDS.	1907.	1908.	1909.	1910.	TOTAL.
1. Dalmarnock, ...	20	126	195	223	564
2. Calton, ...	6	54	70	109	239
3. Mile end, ...	25	112	156	261	554
4. Whitevale, ...	12	61	86	113	272
5. Dennistoun, ...	26	119	119	152	416
6. Springburn, ...	37	253	336	394	1,020
7. Cowlairs, ...	41	183	210	214	648
8. Townhead, ...	14	97	145	165	421
9. Blackfriars, ...	10	41	27	39	117
10. Exchange, ...	2	...	3	4	9
11. Blythswood, ...	...	2	5	3	10
12. Broomielaw, ...	...	7	13	14	34
13. Anderston, ...	10	72	98	92	272
14. Sandyford, ...	11	35	38	52	136
15. Park, ...	6	22	16	35	79
16. Cowcaddens, ...	9	64	73	90	236
17. Woodside, ...	43	169	176	211	599
18. Hutchesontown, ...	23	90	140	177	430
19. Gorbals, ...	15	71	73	86	245
20 Kingston, ...	18	86	101	125	330
21. Govanhill, ...	54	174	196	207	631
22. Langside, ...	39	127	95	119	380
23. Pollokshields, ...	9	14	17	22	62
24. Kelvinside, ...	5	28	20	28	81
25. Maryhill, ...	35	127	164	193	519
26. Kinning Park, ...	4	49	81	103	237
CITY, ...	474	2,183	2,653	3,231	8,541

TABLE XXVI.

GLASGOW, 1910.—DIPHTHERIA and MEMBRANOUS CROUP.—CASES and CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding Death-rates for 1903-09.

MUNICIPAL WARDS.	Death-rates per Million.					1910.			
	1903-5.	1906.	1907.	1908.	1909.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	146	320	222	202	467	146	2,906	21	424
2. Calton, ...	131	83	253	313	174	80	2,179	13	375
3. Mile-end, ...	131	179	217	224	359	114	2,557	15	340
4. Whitevale, ...	120	30	185	404	406	70	2,159	9	287
5. Dennistoun, ...	109	...	81	81	211	78	1,972	4	106
6. Springburn, ...	119	324	288	331	199	204	4,094	17	376
7. Cowlairs, ...	176	192	131	132	327	97	3,210	4	132
8. Townhead, ...	93	78	80	134	461	113	3,080	7	191
9. Blackfriars, ...	59	46	46	378	346	61	2,893	5	252
10. Exchange, ...	...	...	...	...	...	2	702	1	543
11. Blythswood, ...	...	...	...	317	330	6	1,705	...	...
12. Broomielaw, ...	124	...	401	287	311	18	2,268	...	...
13. Anderston, ...	227	208	276	104	250	65	2,179	8	283
14. Sandyford, ...	154	400	40	82	377	63	2,591	6	251
15. Park, ...	40	121	41	...	41	47	1,923	1	42
16. Cowcaddens, ...	180	192	85	144	318	57	1,584	13	373
17. Woodside, ...	125	92	69	93	281	102	2,405	14	332
18. Hutchesontown,	154	351	304	256	412	142	3,733	6	158
19. Gorbals, ...	137	251	312	148	151	72	2,106	18	540
20. Kingston, ...	153	116	265	299	184	54	1,624	5	153
21. Govanhill, ...	79	324	173	281	589	71	2,007	9	254
22. Langside, ...	134	52	98	71	183	67	1,503	4	91
23. Pollokshields, ...	37	...	...	...	...	26	1,380	...	...
24. Kelvinside, ...	68	...	45	...	...	39	1,542	1	41
25. Maryhill, ...	194	226	25	172	197	123	2,959	8	200
26. Kinning Park,	...	295	224	230	314	22	1,743	1	79
— Institutions and Harbour, ...	...	...	...	...	...	...	...	1	...
CITY, ...	128	169	157	180	277	1,939	2,435	191	240

TABLE XXVII.

GLASGOW, 1910.—ENTERIC FEVER, CASES AND CASE-RATES, AND DEATHS AND DEATH-RATES, IN EACH MUNICIPAL WARD, WITH CORRESPONDING DEATH-RATES FOR 1903-09.

MUNICIPAL WARDS.	Death-rates per Million.					1910.			
	1903-5.	1906.	1907.	1908.	1909.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	159	180	222	101	162	25	498	1	20
2. Calton, ...	147	139	169	171	116	28	763	3	86
3. Mile-end, ...	178	157	87	45	67	12	269	1	23
4. Whitevale, ...	169	91	93	124	219	6	185	3	96
5. Dennistoun, ...	148	138	81	54	26	15	379	...	...
6. Springburn, ...	103	116	44	44	133	18	361	1	22
7. Cowlairs, ...	88	64	262	66	33	2	66	...	...
8. Townhead, ...	135	105	53	108	27	6	164	2	55
9. Blackfriars, ...	146	46	417	47	198	11	522	1	50
10. Exchange, ...	149	...	491	...	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...	2	568	...	...
12. Broomielaw, ...	83	397	...	287	466	2	252	...	...
13. Anderston, ...	159	35	103	173	214	21	704	5	177
14. Sandyford, ...	64	80	80	204	167	10	411	5	209
15. Park, ...	53	201	81	41	...	7	286	...	...
16. Cowcaddens, ...	229	82	141	115	260	16	445	4	115
17. Woodside, ...	89	69	92	23	...	7	165	...	...
18. Hutchesontown,	201	200	101	102	232	42	1,104	7	184
19. Gorbals, ...	91	56	85	119	151	25	731	5	150
20. Kingston, ...	96	58	118	90	123	23	692	3	92
21. Govanhill, ...	50	29	29	84	140	18	509	7	198
22. Langside, ...	32	...	24	24	...	6	135	1	23
23. Pollokshields, ...	39	169	54	...	...	7	372	...	...
24. Kelvinside, ...	34	46	45	226	84	4	158	1	41
25. Maryhill, ...	71	50	75	49	49	15	361	1	25
26. Kinning Park, ...	...	74	150	307	235	12	951	1	79
— Institutions and Harbour, ...	...	...	...	...	...	...	...	4	...
CITY, ...	119	102	114	90	116	340	427	56	70

TABLE XXVIII.

GLASGOW, 1910.—CEREBRO-SPINAL FEVER.—CASES AND CASE-RATES, with DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding DEATH-RATES for 1906-9.

MUNICIPAL WARDS.	Death-rate per Million.				1910.			
	1906.	1907.	1908.	1909.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	229	1,069	243	183	6	119	4	81
2. Calton, ...	361	1,631	228	87	6	163	3	86
3. Mile-end, ...	649	1,257	448	67	3	67	3	68
4. Whitevale, ...	366	1,388	124	156	1	31	...	...
5. Dennistoun, ...	138	596	215	...	1	25	...	...
6. Springburn, ...	370	1,331	133	66	2	40	1	22
7. Cowlairs, ...	96	589	165	65	2	66	1	33
8. Townhead, ...	325	981	161	...	1	27	...	...
9. Blackfriars, ...	367	1,298	331	148	...	...	...	...
10. Exchange, ...	...	1,474	...	...	...	...	...	...
11. Blythswood, ...	...	306	...	...	...	...	...	...
12. Broomielaw, ...	...	1,738	144	...	1	126	2	315
13. Anderston, ...	35	1,311	208	143	3	101	2	71
14. Sandyford, ...	80	760	82	42	2	82	2	84
15. Park, ...	40	244	41	...	1	41	...	...
16. Cowcaddens, ...	82	818	346	...	1	28	...	...
17. Woodside, ...	92	645	186	117	3	71	3	71
18. Hutchesontown, ...	125	837	205	77	1	26	1	26
19. Gorbals, ...	56	511	297	30	1	29	1	30
20. Kingston, ...	203	1,061	210	123	5	150	...	...
21. Govanhill, ...	88	519	169	...	2	57	2	57
22. Langside, ...	26	122	47	23	2	45	2	45
23. Pollokshields, ...	...	54	105	...	...	...	...	...
24. Kelvinside, ...	...	89	...	...	1	40	1	41
25. Maryhill, ...	126	825	246	25	1	24	1	25
26. Kinning Park, ...	...	973	230	...	...	...	...	...
— Institutions and Harbour,	...	...	...	...	...	...	1	...
CITY, ...	178	847	193	60	46	58	30	38

TABLE XXIX.

GLASGOW, 1910.—TYPHUS FEVER.—CASES and CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding rates for 1903-09.

MUNICIPAL WARDS.	Death-rate per Million.					1910.			
	1903-5.	1906.	1907.	1908.	1909.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	34	...	...	20	...	...	...	...	...
2. Calton, ...	35	...	...	...	...	...	...	...	...
3. Mile-end, ...	23	22	...	...	...	2	45	...	...
4. Whitevale, ...	...	...	...	...	...	...	...	...	...
5. Dennistoun, ...	9	...	...	...	...	...	...	...	...
6. Springburn, ...	16	...	...	...	..	1	20	1	22
7. Cowlairs, ...	11	...	...	...	...	...	...	...	...
8. Townhead, ...	...	...	...	...	...	1	27	...	...
9. Blackfriars, ...	15	...	...	...	...	1	47	...	...
10. Exchange, ...	...	...	...	...	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...	...	...	...	...
12. Broomielaw, ...	...	...	...	...	...	...	...	...	...
13. Anderston, ...	11	...	...	...	...	...	...	...	...
14. Sandyford, ...	...	...	...	...	...	...	...	...	...
15. Park, ...	...	...	...	...	...	...	...	...	...
16. Cowcaddens, ...	...	...	...	...	...	5	139	...	...
17. Woodside, ...	...	...	...	...	23	...	...	...	...
18. Hutchesontown,	8	...	...	...	...	...	...	...	...
19. Gorbals, ...	18	...	...	...	...	5	146	1	30
20. Kingston, ...	29	...	...	...	...	...	...	...	...
21. Govanhill, ...	...	...	...	...	...	...	...	...	...
22. Langside, ...	11	...	...	...	...	...	...	...	...
23. Pollokshields, ...	...	...	...	...	...	...	...	...	...
24. Kelvinside, ...	...	...	..	...	...	...	...	...	...
25. Maryhill, ...	...	25	25	...	49	...	...	...	...
26. Kinning Park, ...	...	...	...	...	...	...	...	...	...
— Institutions and Harbour, ...	...	...	...	...	...	...	...	...	...
CITY, ...	11	2	2	1	4	15	19	2	2

TABLE XXX.

GLASGOW, 1910.—SCARLET FEVER.—CASES AND CASE-RATES, WITH DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, ALSO DEATH-RATES FOR 1903-09.

MUNICIPAL WARDS.	Death-rate per Million.					1910.			
	1903-5.	1906.	1907.	1908.	1909.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	60	140	101	121	325	378	7,523	15	303
2. Calton, ...	98	55	56	57	232	197	5,366	5	144
3. Mile-end, ...	108	22	22	157	448	300	6,728	18	408
4. Whitevale, ...	129	213	62	124	344	160	4,934	9	287
5. Dennistoun, ...	132	83	81	54	132	190	4,804	4	106
6. Springburn, ...	80	46	89	133	377	360	7,224	13	287
7. Cowlairs, ...	77	...	131	66	196	201	6,651	4	132
8. Townhead, ...	34	105	...	161	190	186	5,069	10	273
9. Blackfriars, ...	88	92	46	95	148	87	4,125	2	101
10. Exchange, ...	...	...	...	...	...	8	2,807	...	...
11. Blythswood, ...	...	...	...	...	...	6	1,705	...	...
12. Broomielaw, ...	40	...	267	...	...	20	2,519	2	315
13. Anderston, ...	103	...	69	311	250	129	4,325	7	247
14. Sandyford, ...	52	40	...	41	209	102	4,196	1	42
15. Park, ...	80	40	41	...	82	126	5,156	3	127
16. Cowcaddens, ...	17	...	85	144	260	168	4,667	6	172
17. Woodside, ...	88	23	92	70	117	209	4,929	6	142
18. Hutchesontown,	89	50	76	179	283	232	6,099	7	184
19. Gorbals, ...	119	28	114	148	151	166	4,854	6	180
20. Kingston, ...	96	29	29	120	61	133	3,999	5	153
21. Govanhill, ...	138	118	...	169	140	183	5,172	5	141
22. Langside, ...	52	52	49	71	115	231	5,181	1	23
23. Pollokshields, ...	58	...	...	...	103	67	3,557	1	53
24. Kelvinside, ...	34	...	...	45	...	78	3,084	1	41
25. Maryhill, ...	36	201	25	147	99	237	5,701	6	150
26. Kinning Park, ...	...	...	...	77	157	49	3,882	2	158
— Institutions and Harbour, ...	...	...	...	...	...	...	...	2	...
CITY, ...	79	62	56	111	197	4,203	5,277	141	177

TABLE XXXI.

GLASGOW, 1910.—MEASLES.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, WITH CORRESPONDING RATES FOR 1903-09.

MUNICIPAL WARDS.	Death-rate per Million.					1910.	
	1903-5.	1906.	1907.	1908.	1909.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	627	480	686	1,215	366	65	1,314
2. Calton, ...	740	527	928	1,282	551	29	836
3. Mile-end, ...	841	649	1,148	1,007	359	36	816
4. Whitevale, ...	542	457	1,234	809	219	24	766
5. Dennistoun, ...	225	221	325	188	132	5	133
6. Springburn, ...	872	601	754	1,061	111	33	729
7. Cowlairs, ...	513	834	425	1,088	491	23	761
8. Townhead, ...	550	470	424	968	623	17	464
9. Blackfriars, ...	534	321	973	1,797	692	22	1,109
10. Exchange, ...	149	481	...	519	...	2	1,086
11. Blythswood, ...	193	...	...	...	...	...	...
12. Broomielaw, ...	707	1,323	1,069	1,723	777	4	629
13. Anderston, ...	442	486	690	1,799	250	30	1,060
14. Sandyford, ...	540	360	520	1,185	251	19	795
15 Park, ...	133	201	...	123	165	1	42
16. Cowcaddens, ...	646	1,317	141	1,182	2,170	13	373
17. Woodside, ...	415	414	276	558	751	17	403
18. Hutchesontown,	764	902	304	2,844	1,286	38	999
19. Gorbals, ...	468	362	341	1,752	482	25	750
20. Kingston, ...	634	610	796	868	491	31	950
21. Govanhill, ...	414	353	231	1,124	280	26	735
22. Langside, ...	84	52	...	189	46	5	114
23. Pollokshields, ...	97	56	...	...	52	2	106
24. Kelvinside, ...	50	46	89	45	...	1	41
25. Maryhill, ...	402	351	275	1,082	148	30	751
26. Kinning Park, ...	...	148	973	691	2,747	6	475
— Institutions and Harbour, ...	...	...	...	...	...	23	...
CITY, ...	520	492	496	1,028	492	527	662

TABLE XXXII.

Glasgow, 1910.—WHOOPING-COUGH.—Deaths and Death-Rates in each Municipal Ward, with Corresponding Rates for 1903-09.

Municipal Wards.	Death-rate per Million.					1910.	
	1903-5.	1906.	1907.	1908.	1909.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,102	580	2,521	1,053	1,625	23	465
2. Calton, ...	990	444	1,518	940	725	10	288
3. Mile-end, ...	1,017	784	1,170	1,142	1,008	25	567
4. Whitevale, ...	915	732	833	933	1,345	19	606
5. Dennistoun, ...	572	194	623	269	396	6	159
6. Springburn, ...	991	185	1,198	773	953	10	221
7. Cowlairs, ...	825	192	1,210	659	1,047	11	364
8. Townhead, ...	743	313	1,459	646	678	3	82
9. Blackfriars, ...	830	550	1,159	1,088	1,087	5	252
10. Exchange, ...	315	...	...	...	1,057	...	...
11. Blythswood, ...	284	...	...	...	...	...	...
12. Broomielaw, ...	1,244	265	1,604	431	2,021	5	786
13. Anderston, ...	851	799	1,587	1,003	1,642	6	212
14. Sandyford, ...	834	240	1,360	368	963	10	418
15. Park, ...	133	161	244	123	206	1	42
16. Cowcaddens, ...	1,197	1,152	1,439	750	1,620	3	86
17. Woodside, ...	658	1,013	553	697	1,032	10	237
18. Hutchesontown,	1,300	851	1,648	999	2,084	19	500
19. Gorbals, ...	632	418	1,192	653	1,446	6	180
20. Kingston, ...	671	465	1,091	449	1,380	9	276
21. Govanhill, ...	749	706	1,154	562	953	18	509
22. Langside, ...	176	77	464	189	138	2	45
23. Pollokshields, ...	57	56	162	53	52	...	...
24. Kelvinside, ...	131	46	...	45	125	1	.41
25. Maryhill, ...	560	577	425	688	887	24	601
26. Kinning Park, ...	...	886	1,347	998	157	6	475
— Institutions and Harbour, ...	...	...	...	...	...	...	...
CITY, ...	765	498	1,081	656	968	232	291

TABLE XXXIII.

Glasgow, 1910.—DIARRHŒAL Diseases.—Deaths and Death-rates in each Municipal Ward, with Corresponding Rates for 1903-09.

Municipal Wards.	Death-rate per Million.					1910.	
	1903-5.	1906.	1907.	1908.	1909.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,481	1,520	1,190	749	366	18	364
2. Calton, ...	1,435	1,414	1,040	513	464	18	519
3. Mile-end, ...	1,281	1,545	1,192	515	359	25	567
4. Whitevale, ...	963	1,372	771	187	...	13	415
5. Dennistoun, ...	393	581	271	54	26	2	53
6. Springburn, ...	836	971	643	376	111	8	177
7. Cowlairs, ...	659	995	425	527	98	7	232
8. Townhead, ...	728	1,045	530	296	136	8	219
9. Blackfriars, ...	1,104	1,146	834	284	49	9	454
10. Exchange, ...	149	481	...	...	...	...	...
11. Blythswood, ...	673	305	...	...	...	...	...
12. Broomielaw, ...	1,481	1,720	401	431	155	1	157
13. Anderston, ...	1,327	1,355	586	173	178	7	247
14. Sandyford, ...	819	879	440	41	84	1	42
15. Park, ...	240	161	122	41	83	1	42
16. Cowcaddens, ...	1,094	987	790	721	174	10	287
17. Woodside, ...	519	483	253	209	141	7	166
18. Hutchesontown,	758	851	304	436	51	8	210
19. Gorbals, ...	503	948	369	416	121	5	150
20. Kingston, ...	728	1,046	590	449	123	9	276
21. Govanhill, ...	603	588	288	421	112	...	...
22. Langside, ...	249	283	147	71	...	...	...
23. Pollokshields, ...	190	56	108	53	52	...	...
24. Kelvinside, ...	218	...	89	...	...	...	...
25. Maryhill, ...	741	904	450	295	...	2	50
26. Kinning Park, ...	...	1,033	524	154	49	1	79
— Institutions and Harbour, ...	...	...	...	...	...	1	...
CITY, ...	824	933	547	327	130	161	202

TABLE XXXIV.

GLASGOW, 1910.—PHTHISIS.—CASES AND CASE-RATES, WITH DEATHS AND DEATH-RATES in each MUNICIPAL WARD, with Corresponding Death-rates for 1903-09.

MUNICIPAL WARDS.	Death-rates per Million.					1910.			
	1903-5.	1906.	1907.	1908.	1909.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,357	1,360	1,392	1,478	1,259	184	3,719	54	1,091
2. Calton, ...	2,000	1,941	2,165	1,994	1,768	205	5,908	57	1,643
3. Mile-end, ...	1,797	1,187	1,712	1,545	1,434	196	4,443	68	1,541
4. Whitevale, ...	1,592	1,555	1,357	1,399	1,814	109	3,479	41	1,309
5. Dennistoun, ...	1,026	940	894	672	898	88	2,335	28	743
6. Springburn, ...	1,526	1,849	1,331	1,392	1,330	193	4,265	61	1,348
7. Cowlairs, ...	1,098	1,059	1,407	1,285	884	81	2,680	38	1,258
8. Townhead, ...	1,378	1,307	1,273	1,184	1,681	148	4,043	39	1,065
9. Blackfriars, ...	2,195	1,558	2,225	1,986	1,631	114	5,745	28	1,411
10. Exchange, ...	1,359	1,443	2,457	1,038	...	16	8,686	...	...
11. Blythswood, ...	1,316	305	...	633	330	3	1,016	1	339
12. Broomielaw, ...	1,830	1,588	2,272	1,293	1,088	46	7,235	10	1,573
13. Anderston, ...	1,374	1,598	1,207	1,314	1,392	117	4,133	43	1,519
14. Sandyford, ...	1,205	1,399	1,520	1,062	1,340	86	3,598	21	879
15. Park, ...	652	684	609	655	412	36	1,524	17	720
16. Cowcaddens, ...	1,600	1,893	2,032	1,845	2,141	203	5,825	59	1,664
17. Woodside, ...	1,104	1,197	1,427	953	1,103	125	2,963	47	1,114
18. Hutchesontown,	1,659	1,427	1,470	1,537	1,543	154	4,049	34	894
19. Gorbals, ...	1,565	1,199	1,533	1,455	1,175	168	5,042	35	1,050
20. Kingston, ...	1,687	1,337	1,739	1,108	1,503	115	3,524	41	1,256
21. Govanhill, ...	1,242	1,148	894	1,208	1,037	106	2,996	43	1,215
22. Langside, ...	635	619	440	731	757	57	1,296	17	387
23. Pollokshields, ...	380	563	648	790	258	25	1,327	12	637
24. Kelvinside, ...	339	275	267	271	167	22	900	8	327
25. Maryhill, ...	1,054	1,280	1,375	1,229	862	126	3,153	45	1,126
26. Kinning Park, ...	...	1,550	1,197	1,151	1,413	53	4,199	26	2,060
— Institutions and Harbour, ...	...	...	...	...	...	814	...	161	...
CITY, ...	1,564	1,513	1,562	1,417	1,409	3,590	4,508	1,033	1,297

TABLE XXXV.

GLASGOW, 1910.—TUBERCULOUS DISEASES other than PHTHISIS.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, WITH CORRESPONDING RATES FOR 1903-09.

MUNICIPAL WARDS.	Death-rates per Million.					1910.	
	1903-5.	1906	1907.	1908.	1909.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,492	1,440	1,351	1,458	1,523	58	1,172
2. Calton, ...	1,493	1,109	1,293	1,396	1,160	50	1,441
3. Mile-end, ...	1,543	1,478	1,582	1,410	1,501	48	1,088
4. Whitevale, ...	1,523	1,555	1,234	1,182	1,251	30	958
5. Dennistoun, ...	1,063	968	867	592	1,056	15	398
6. Springburn, ...	1,218	1,802	1,109	928	1,130	56	1,238
7. Cowlairs, ...	1,174	1,476	1,439	725	1,113	37	1,224
8. Townhead, ...	1,421	1,228	1,194	1,426	1,247	45	1,229
9. Blackfriars, ...	1,002	1,192	1,548	757	840	16	806
10. Exchange, ...	911	...	983	1,038	3,171	1	543
11. Blythswood, ...	677	...	919	...	660	1	339
12. Broomielaw, ...	821	926	1,337	1,723	1,866	6	944
13. Anderston, ...	1,327	1,424	1,138	1,280	1,071	20	706
14. Sandyford, ...	884	1,478	1,240	531	879	17	711
15. Park, ...	333	362	366	409	41	9	381
16. Cowcaddens, ...	1,428	1,042	1,016	1,355	926	30	861
17. Woodside, ...	969	667	553	767	610	28	664
18. Hutchesontown,	1,434	1,377	963	845	1,158	41	1,079
19. Gorbals, ...	1,018	1,059	795	772	934	32	960
20. Kingston, ...	1,150	1,192	1,150	1,258	1,166	30	919
21. Govanhill, ...	1,104	1,118	865	1,011	1,065	26	735
22. Langside, ...	439	567	610	448	298	17	387
23. Pollokshields, ...	476	169	162	263	206	5	265
24. Kelvinside, ...	234	184	223	271	502	8	327
25. Maryhill, ...	1,002	926	1,000	860	566	33	826
26. Kinning Park, ...	...	1,771	1,047	691	1,805	14	1,109
— Institutions and Harbour, ...	...	...	...	..	...	31	...
CITY, ...	1,159	1,135	1,031	983	1,004	704	884

TABLE XXXVI.

GLASGOW, 1910.—RESPIRATORY DISEASES (including CROUP).—DEATHS and DEATH-RATES in each MUNICIPAL WARD, with Corresponding Rates for 1903-09.

MUNICIPAL WARDS.	Death-rate per Million.					1910.			
						Excluding Pneumonia.		Total, Including Pneumonia.	
	1903-5.	1906.	1907.	1908.	1909.	Deaths.	Death-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	4,254	3,720	4,598	4,191	4,609	75	1,515	150	3,031
2. Calton, ...	4,891	4,437	4,948	4,928	5,624	69	1,989	122	3,517
3. Mile-end, ...	4,381	3,895	4,442	4,052	4,795	80	1,813	154	3,490
4. Whitevale, ...	4,071	3,324	3,917	3,546	4,128	38	1,213	76	2,426
5. Dennistoun, ...	2,083	2,074	1,761	2,125	2,429	35	929	66	1,752
6. Springburn, ...	3,962	3,535	3,860	3,424	3,303	77	1,702	144	3,183
7. Cowlairs, ...	3,501	2,855	2,813	3,164	3,142	24	794	54	1,787
8. Townhead, ...	4,132	3,764	3,581	4,116	3,767	60	1,639	113	3,087
9. Blackfriars, ...	5,590	5,134	5,006	5,722	6,179	27	1,361	79	3,982
10. Exchange, ...	3,497	1,443	3,440	4,154	4,757	1	543	2	1,086
11. Blythswood, ...	2,284	1,525	1,532	633	2,640	4	1,355	8	2,710
12. Broomielaw, ...	4,951	4,368	6,415	8,330	6,841	11	1,730	21	3,303
13. Anderston, ...	3,640	3,473	3,587	3,667	4,676	46	1,625	94	3,320
14. Sandyford, ...	3,500	3,117	3,639	3,840	4,145	41	1,715	74	3,096
15. Park, ...	1,783	1,769	1,787	1,679	2,475	22	931	34	1,439
16. Cowcaddens, ...	6,258	4,773	4,346	4,813	5,816	66	1,893	143	4,102
17. Woodside, ...	3,151	3,567	3,200	2,834	3,565	36	853	83	1,967
18. Hutchesontown,	4,988	4,933	4,386	4,713	5,633	39	1,025	150	3,943
19. Gorbals, ...	4,505	3,401	4,315	4,364	4,520	46	1,381	114	3,422
20. Kingston, ...	3,741	3,401	2,948	3,894	4,418	54	1,655	110	3,371
21. Govanhill, ...	2,849	2,736	2,855	2,809	3,533	35	989	80	2,261
22. Langside, ...	1,410	1,109	1,391	1,250	1,696	29	660	58	1,320
23. Pollokshields, ...	916	1,013	1,889	895	1,134	10	531	16	850
24. Kelvinside, ...	930	1,285	802	814	1,130	11	450	24	982
25. Maryhill, ...	3,686	2,837	2,875	3,048	3,473	41	1,026	104	2,603
26. Kinning Park, ...	...	3,690	3,441	4,529	6,514	23	1,822	47	3,724
— Institutions and Harbour, ...	...	...	...	...	...	75	...	145	...
CITY, ...	3,844	3,427	3,610	3,601	4,033	1,075	1,349	2,265	2,843

TABLE XXXVII.

GLASGOW, 1910.—PNEUMONIA.—DEATHS and DEATH-RATES in each MUNICIPAL WARD, with CORRESPONDING RATES for 1906-09.

MUNICIPAL WARDS.	Death-rate per Million.				1910.	
	1906.	1907.	1908.	1909.	Deaths.	Death-rate per Million.
1. Dalmarnock, ...	1,900	2,521	2,106	2,234	75	1,516
2. Calton, ...	1,719	2,446	2,364	2,551	53	1,528
3. Mile-end, ...	1,701	2,297	1,970	2,375	74	1,677
4. Whitevale, ...	1,464	1,912	1,804	1,907	38	1,213
5. Dennistoun, ...	996	1,002	861	1,162	31	823
6. Springburn, ...	1,802	2,263	1,900	1,707	67	1,481
7. Cowlairs, ...	1,155	1,472	1,780	1,735	30	993
8. Townhead, ...	1,699	1,830	1,829	1,382	53	1,448
9. Blackfriars, ...	2,704	2,874	3,074	3,658	52	2,621
10. Exchange, ...	962	1,966	2,596	1,057	1	543
11. Blythswood, ...	610	919	...	990	4	1,355
12. Broomielaw, ...	2,912	3,475	3,590	3,576	10	1,573
13. Anderston, ...	1,528	1,966	1,799	1,928	48	1,695
14. Sandyford, ...	1,439	1,480	1,593	1,884	33	1,381
15. Park, ...	804	731	860	1,196	12	508
16. Cowcaddens, ...	2,277	2,088	2,363	3,038	77	2,209
17. Woodside, ...	1,588	1,796	1,464	1,853	47	1,114
18. Hutchesontown, ...	3,105	2,738	2,869	3,498	111	2,918
19. Gorbals, ...	2,007	2,782	2,494	2,803	68	2,041
20. Kingston, ...	1,221	1,356	1,827	2,025	56	1,716
21. Govanhill, ...	1,589	1,644	1,798	1,879	45	1,272
22. Langside, ...	619	708	660	825	29	660
23. Pollokshields, ...	281	702	579	722	6	319
24. Kelvinside, ...	459	356	497	544	13	532
25. Maryhill, ...	1,707	2,025	1,721	2,291	63	1,577
26. Kinning Park, ...	1,328	2,095	1,919	2,982	24	1,902
— Institutions and Harbour, ...	...	...	...	...	70	...
CITY, ...	1,657	1,934	1,860	2,046	1,190	1,494

TABLE XXXVIII.

GLASGOW, 1910.—TABLE SHOWING CASES OF PUERPERAL FEVER IN EACH WARD, WITH NATURE OF ATTENDANCE AT BIRTH.

MUNICIPAL WARDS.	Doctor Alone.	Midwife.		Nurse and Doctor.	Total.
		Certified	Uncertified.		
1. Dalmarnock, ...	3	3	3	2	11
2. Calton, ...	3	1	2	1	7
3. Mile-end, ...	1	...	3	2	6
4. Whitevale, ...	4	2	2	...	8
5. Dennistoun, ...	3	...	1	1	5
6. Springburn, ...	1	2	3	4	10
7. Cowlairs, ...	...	...	1	1	2
8. Townhead, ...	...	3	...	...	3
9. Blackfriars, ...	...	...	2	3	5
10. Exchange, ...	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...
12. Broomielaw, ...	...	...	...	...	...
13. Anderston, ...	1	2	3	1	7
14. Sandyford, ...	1	...	3	1	5
15. Park, ...	...	...	...	1	1
16. Cowcaddens, ...	1	2	1	...	4
17. Woodside, ...	2	1	1	...	4
18. Hutchesontown, ...	2	2	5	...	9
19. Gorbals, ...	1	...	3	1	5
20. Kingston, ...	...	2	1	...	3
21. Govanhill, ...	5	1	1	1	8
22. Langside, ...	...	...	...	...	...
23. Pollokshields, ...	...	...	...	...	...
24. Kelvinside, ...	1	...	...	...	1
25. Maryhill, ...	2	1	4	...	7
26. Kinning Park, ...	...	1	1	...	2
City, ...	31	23	40	19	113

TABLE XXXIX.

GLASGOW, 1910.—CERTIFICATION of DEATHS.

	10 Years. 1891-1900.	5 Years. 1901-1905.	1906.	1907.	1908.	1909.	1910.
Total Deaths, ...	149,184	73,805	14,117	14,807	14,422	14,369	12,471
Of these Uncertified, ...	4,916	1,865	296	158	187	172	148
Died without Medical Attendance, ...	2,638	912	143	126	117	139	116
Deaths under 5 years, ...	62,350	28,985	5,352	5,697	5,890	5,474	4,543
Of these Uncertified, ...	3,027	1,122	175	61	82	75	60
Died without Medical Attendance, ...	1,738	618	93	107	90	118	90
Deaths above 5 years, ...	86,834	44,820	8,765	9,110	8,532	8,895	7,928
Of these Uncertified, ...	1,889	743	120	97	105	97	88
Died without Medical Attendance, ...	900	294	50	19	27	21	26
Percentage of Total Deaths Uncertified, ...	3·3	2·5	2·1	1·1	1·3	1·2	1·2
Percentage of Total Deaths which occurred without Medical Attendance, ...	1·8	1·2	1·0	0·9	0·8	1·0	0·9
Percentage of Deaths under 5 years Uncertified, ...	4·9	3·9	3·3	1·1	1·4	1·4	1·3
Percentage of Deaths under 5 years which occurred without Medical Attendance, ...	2·8	2·1	1·8	1·9	1·5	2·2	2·0
Percentage of Deaths above 5 years Uncertified, ...	2·2	1·7	1·4	1·1	1·2	1·1	1·1
Percentage of Deaths above 5 years which occurred without Medical Attendance.	1·0	0·7	0·6	0·2	0·3	0·2	0·3

TABLE XL.

GLASGOW, 1910.—COMPARATIVE CERTIFICATION of LEGITIMATE and ILLEGITIMATE CHILDREN.

	10 Years. 1891-1900.	5 Years. 1901-1905.	1906.	1907.	1908.	1909.	1910.
Legitimate Deaths under 1 year, ...	30,304	15,453	2,794	2,727	2,858	2,659	2,276
Of these Uncertified, ...	1,853	821	132	43	54	47	35
Legitimate Deaths, 1—5 years, ...	26,066	11,332	2,043	2,495	2,494	2,317	1,817
Of these Uncertified, ...	476	144	19	10	10	9	11
Illegitimate Deaths under 1 year, ...	4,202	2,022	391	348	360	363	348
Of these Uncertified, ...	551	169	22	7	17	17	12
Illegitimate Deaths, 1—5 years, ...	1,778	713	124	127	178	135	102
Of these Uncertified, ...	147	18	4	1	2	2	2
Percentage Legitimate Deaths under 1 year Uncertified, ...	6·1	5·3	4·7	1·6	1·9	1·8	1·5
Percentage Legitimate Deaths, 1—5 years, Uncertified, ...	1·8	1·3	0·8	0·4	0·4	0·4	0·6
Percentage Illegitimate Deaths under 1 year Uncertified, ...	13·1	8·4	6·1	2·0	4·7	4·7	3·5
Percentage Illegitimate Deaths, 1—5 years, Uncertified, ...	8·3	2·5	4·0	0·8	1·1	1·5	2·0

TABLE XLI.

GLASGOW, 1910.—INSURANCE of LIVES in FRIENDLY SOCIETIES, with COMPARISON of INSURANCE of LEGITIMATE and ILLEGITIMATE CHILDREN.

	10 Years. 1891-1900.	5 Years. 1901-1905.	1906.	1907.	1908.	1909.	1910.
Total Deaths, ...	149,184	73,805	14,117	14,807	14,422	14,369	12,471
Of these Insured, ...	87,824	44,829	8,918	9,752	9,323	9,256	8,014
Deaths under 5 years, ...	62,350	28,985	5,352	5,697	5,890	5,474	4,543
Of these Insured, ...	33,333	15,316	2,918	3,361	3,327	2,998	2,423
Deaths above 5 years, ...	86,834	44,820	8,765	9,110	8,532	8,895	7,928
Of these Insured, ...	54,491	29,513	6,000	6,391	5,996	6,258	5,591
Legitimate Deaths under 1 year, ...	30,304	15,453	2,794	2,727	2,858	2,659	2,276
Of these Insured, ...	13,052	6,417	1,257	1,298	1,302	1,168	975
Illegitimate Deaths under 1 year....	4,202	2,022	391	348	360	363	348
Of these Insured, ...	434	243	58	49	56	49	42
Legitimate Deaths, 1—5 years, ...	26,066	13,132	2,043	2,495	2,494	2,317	1,817
Of these Insured, ...	19,232	8,401	1,555	1,948	1,891	1,732	1,358
Illegitimate Deaths, 1—5 years, ...	1,778	713	124	127	178	135	102
Of these Insured, ...	615	255	48	66	78	49	48
Percentage of Total Deaths Insured, ...	58·9	60·7	63·2	65·9	64·6	64·4	64·3
Do. Deaths under 5 years Insured,	53·5	52·8	54·6	59·0	56·5	54·8	53·3
Do. Deaths above 5 years Insured,	62·8	65·8	68·4	70·2	70·3	70·4	70·5
Do. Legitimate Deaths under 1 year Insured, ...	43·1	41·5	45·1	47·6	45·6	43·9	42·8
Do. Illegitimate Deaths under 1 year Insured. ...	10·3	12·0	14·7	14·1	15·6	13·5	12·1
Do. Legitimate Deaths, 1—5 years, Insured, ...	73·8	74·1	76·1	78·1	75·9	74·8	74·7
Do. Illegitimate Deaths, 1—5 years, Insured. ...	34·6	35·8	38·4	52·0	43·8	36·3	47·1

TABLE XLII.—GLASGOW.—FARMED-OUT HOUSES and INMATES as at DECEMBER, 1910.

WARDS.	Number of Houses Farmed-out.		Inmates in Houses of each Size.			
			1 Apartment.		2 Apartments.	
	1 Apt.	2 Apts.	Adults.	Children.	Adults.	Children.
1. Dalmarnock, ...	...	...	...	...	...	...
2. Calton, ...	157	86	275	94	190	74
3. Mile-end, ...	...	...	...	...	...	...
4. Whitevale, ...	35	29	64	23	57	15
5. Dennistoun, ...	48	15	100	21	44	10
6. Springburn, ...	...	...	...	..	...	...
7. Cowlairs, ...	...	...	...	...	...	...
8. Townhead, ...	50	26	91	19	69	25
9. Blackfriars, ...	102	144	202	56	451	154
10. Exchange, ...	...	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...	...
12. Broomielaw, ...	22	31	45	19	58	33
13. Anderston, ...	80	31	130	33	74	23
14. Sandyford, ...	...	...	...	...	...	...
15. Park, ...	...	...	...	...	...	...
16. Cowcaddens,... ...	137	11	230	31	23	7
17. Woodside, ...	...	...	...	...	...	...
18. Hutchesontown, ...	35	19	68	22	60	26
19. Gorbals, ...	25	49	46	11	79	41
20. Kingston, ...	1	41	1	...	117	43
21. Govanhill, ...	...	...	...	...	...	...
22. Langside, ...	...	...	...	...	...	...
23. Pollokshields, ...	...	...	...	...	...	...
24. Kelvinside, ...	...	...	...	...	...	...
25. Maryhill, ...	...	...	...	...	...	...
26. Kinning Park, ...	...	...	...	...	...	...
CITY, ...	692	482	1,252	329	1,222	451
CENSUS, 1901, ...	531	275	...	...	...	...

TABLE XLIII.—HOUSES LET in LODGINGS, showing NUMBERS in each WARD, as at DECEMBER, 1910.

WARDS.	No. of Houses on Register.	No. of Houses Empty or in which no Lodgers kept.	No. of Houses Actually Let in Lodgings.	No. of Apartments.	No. to Accommodate (Adults).	Inmates found.	
						No. of Families.	Total No. of Persons (All Ages).
1. Dalmarnock, ...	2	...	2	4	14½	4	14
2. Calton, ...	28	6	22	81	260	44	125
3. Mile-end, ...	3	...	3	6	21½	6	24
4. Whitevale, ...	4	1	3	16	38	11	29
5. Dennistoun, ...	...	...	...	...	...	...	...
6. Springburn, ...	7	...	7	15	50	8	39
7. Cowlairs, ...	4	1	3	14	131½	13	54
8. Townhead, ...	9	1	8	21	67½	18	47
9. Blackfriars, ...	21	...	21	88	287½	75	194
10. Exchange, ...	...	...	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...	...	...
12. Broomielaw, ...	3	1	2	13	78	10	46
13. Anderston. ...	5	1	4	22	64	18	39
14. Sandyford, ...	4	...	4	14	46	11	22
15. Park, ...	4	1	3	14	73½	8	12
16. Cowcaddens, ...	4	...	4	9	24	8	17
17. Woodside, ...	2	...	2	10	84½	10	60
18. Hutchesontown,...	4	1	3	11	28	7	23
19. Gorbals, ...	26	4	22	82	257½	69	200
20. Kingston, ...	8	1	7	22	67	17	64
21. Govanhill, ...	..	...	...	...	...	...	...
22. Langside, ...	...	...	...	...	...	...	...
23. Pollokshields, ...	...	...	...	...	...	...	...
24. Kelvinside, ...	...	...	...	...	...	...	...
25. Maryhill, ...	23	5	18	51	178	47	137
26. Kinning Park. ...	...	...	...	...	...	...	...
CITY, ...	161	23	138	493	1,771	384	1,146

TABLE XLIV.—TOTAL NUMBER OF WORKSHOPS AND WORKPLACES IN EACH WARD OF THE CITY, THE TOTAL NUMBER OF INSPECTIONS, AND THE NUMBER OF NOTICES SENT TO OCCUPIERS, OF NUISANCES OR DEFECTS, DURING 1910.

MUNICIPAL WARDS.	Laundries.	Retail Bakehouses.	Bakehouses in connection with Restaurants.	Dairy Premises with Hot-plates in use.	Dairy Premises with Griddles in use.	Provision Shop Premises with Hot-plates in use.	Restaurant Kitchens.	Other Food Places.	All other Workshops.	Total Workshops (including Bakehouses and Premises with Hot-plates).	Number of Inspections.	Number of Notices issued.
1. Dalmarnock, ...	5	14	...	33	...	...	26	5	139	222	1,268	27
2. Calton, ...	7	13	1	25	...	...	12	19	381	458	5,479	238
3. Mile-end, ...	9	14	...	47	...	...	24	7	178	279	1,303	31
4. Whitevale, ...	3	15	...	21	...	...	17	14	173	243	2,074	46
5. Dennistoun, ...	5	9	...	36	...	...	6	4	94	154	984	18
6. Springburn, ...	6	2	...	26	...	...	19	2	52	107	742	39
7. Cowlairs, ..	3	1	1	10	...	...	19	...	52	86	622	22
8. Townhead, ...	3	7	1	20	1	...	17	1	129	179	2,042	114
9. Blackfriars, ...	1	7	1	14	...	2	12	22	295	354	3,414	156
10. Exchange, ...	1	5	2	...	...	...	25	6	403	442	2,728	170
11. Blythswood, ...	1	4	1	...	...	...	44	6	358	414	2,587	138
12. Broomielaw, ...	3	3	...	3	...	...	28	14	320	371	2,988	149
13. Anderston, ...	5	4	...	9	...	...	25	2	93	138	114	14
14. Sandyford, ...	6	7	1	10	...	...	5	2	212	243	321	43
15. Park, ...	7	4	1	10	...	2	3	2	181	210	139	8
16. Cowcaddens, ...	8	12	4	21	...	1	24	1	185	256	1,517	121
17. Woodside, ...	14	13	...	32	2	...	18	2	153	234	933	94
18. Hutchesontown,	6	6	...	39	...	2	10	13	80	156	1,271	33
19. Gorbals, ...	9	16	...	23	1	2	10	8	359	428	2,311	80
20. Kingston, ...	14	5	1	25	3	...	27	3	204	282	1,580	49
21. Govanhill, ...	2	11	1	34	1	...	...	...	24	73	91	1
22. Langside, ...	6	13	...	40	1	...	...	...	62	122	86	...
23. Pollokshields, ...	4	4	...	10	1	...	...	1	26	46	70	3
24. Kelvinside, ...	1	1	...	2	...	...	...	...	90	94	168	2
25. Maryhill, ...	7	5	...	19	...	...	6	...	47	84	84	...
26. Kinning Park, ...	4	1	1	13	...	...	...	1	48	68	89	1
TOTAL IN CITY, ...	140	196	16	522	10	9	377	135	4,338	5,743	35,005	1,597
		212		541								

TABLE XLV.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND HOMEWORK.

INSPECTION.

(Including Inspections made by Sanitary Inspectors.)

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories (including Factory Laundries), ...	...	...	...
Workshops (including Workshop Laundries),			
Workplaces (other than Outworkers' Premises included in Part 3 of this Report), ...	35,005	1,597	...
Total, ...	35,005	1,597	...

DEFECTS found.

Particulars. (1)	Number of Defects			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
* Nuisances under the Public Health Acts—				
Want of cleanliness, ...	798	761	...	...
Want of ventilation or light, ...	28	36	...	...
Overcrowding, ...	3	3	...	...
Want of drainage of floors, ...	671	714	...	...
Other nuisances, ...				
Sanitary accommodation—(*a*) Insufficient, ...	97	98	...	...
(*b*) Unsuitable or defective,				
(*c*) Not separate for sexes,				
Offences under the Factory and Workshop Act—				
Illegal occupation of underground bakehouse (Section 101), ...	...	...	...	...
Breach of special sanitary requirements for bakehouses (Sections 97 to 100), ...	...	...	...	...
Other offences, ...	...	...	...	...
(Excluding offences relating to outwork which are included in Part 3 of this Report.)	...	...	...	...
Total, ...	1,597	1,612	...	...

* Including those specified in Sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

TABLE XLVI.

REGISTERED WORKSHOPS.

Important classes of workshops, such as workshop bakehouses, may be enumerated here.

Workshops on the Register (Section 131) at the end of the year. (1)		Number. (2)
Laundries, ...		140
Bakehouses:—		
Underground, ...	71	
Overground, ...	141	
		212
Restaurant Kitchens, ...		377
Other Food Places, ...		135
All other Workshops, ...		4,338
Dairy and other Premises with hot plates for baking purposes,		541
Total number of workshops on Register, ...		5,743

OTHER MATTERS.

Class. (1)		Number. (2)
Matters notified to H.M. Inspector of Factories:—		
Failure to affix Abstract of the Factory and Workshop Act, 1901 (Section 133), ...		12
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (Section 5) ...	Notified by H.M. Inspector, ...	31
	Reports (of action taken) sent to H.M. Inspector, ...	31
Other, ...		...
Underground Bakehouses (Section 101):—		
Certificates granted during the year, ...		...
In use at the end of the year, ...		71

NOTE.—The Factory and Workshop Act, 1901 (Section 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, laundries, workplaces, or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

21*st June*, 1911.

(Signature) A. K. CHALMERS,
Medical Officer of Health.

TABLE XLVII.—HOME WORK.

NATURE OF WORK.*	OUTWORKERS' LISTS, SECTION 107.												Number of Inspections of Outworkers' premises.		OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.					OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Numbers of Addresses of Outworkers received from other Councils.		Numbers of Addresses of Outworkers forwarded to other Councils.		Prosecutions.				Instances.		Notices served.		Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110).
	Twice in the year.			Once in the year.							Failing to keep or permit inspection of lists.	Failing to send lists.										
	Lists. †	Outworkers. †		Lists.	Outworkers.																	
(1)	(2)	(3)		(4)	(5)		(6)		(7)		(8)	(9)	(10)		(11)		(12)		(13)	(14)	(15)	(16)
		Home-workers.	Con-tractors.		Home-workers.	Con-tractors.	Home-workers.	Con-tractors.	Home-workers.	Con-tractors.			Home-workers	Con-tractors.	Home-workers.	Con-tractors.	Home-workers.	Con-tractors.				
Wearing apparel—																						
(1) making, &c.	804	1,880	1,151	68	58	78	...	...	...	...	...	...	...	...	...	..	...	...	...	8	...	...
(2) cleaning and washing,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lace, lace curtains and nets,	...	2	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Sacks, ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	...	...
Furniture and upholstery, ...	6	9	5	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fur pulling, ...	6	2	9	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Feather Sorting, ...	2	4	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umbrellas, ...	14	39	12	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paper bags and boxes, ...	32	39	37	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Brush making, ...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Stuffed toys, ...	2	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
File making, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Electro-plate, ...	70	14	144	3	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cables and chains, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anchors and grapnels, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Making and repairing sacks,	2	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cart gear, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Locks, latches, and keys. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umbrella coverer, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Others, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...
																				2	...	...
Total, ...	940	2,017	1,374	76	62	83	13	17	264	79	...	...	1,951	905	12	36	9	36	...	15	...	...

* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 4 as the case may be) against the principal class *only*, but the outworkers should be assigned in column 3 (or 5) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2 and 3 are the *total* number of lists received from employers who sent them both in February and August as required by the Act and of the entries of names of outworkers in those lists. They will, therefore, usually be double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

‡ Notices to whitewash or cleanse walls of premises.

TABLE XLVIII.—WORKSHOPS MEASURED AND REGISTERED DURING 1910.

Nature of Workshop.	Number of Workshops.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
I. Professional Occupations and their Subordinate Services—							
1. Medical—							
Dentists' Mechanics, ...	8	8	14	1	3	1,623·3	754·8
Optician, ...	1	2	2	...	...	2,102	2,102
2. Art, Music, Drama, &c.—							
Musical Instrument Makers,	4	6	7	1	...	2,022·1	1,516·6
Engravers, ...	6	6	12	...	6	4,621·5	1,540·5
Photographer, ...	1	1	2	2	...	1,890	472
II. Domestic Offices or Services—							
Laundries, ...	20	42	1	61	15	2,204·5	1,202·5
III. Metals, Machines, Implements, and Conveyances—							
1. Engineering & Machine Making—							
Blacksmiths, ...	5	5	13	...	1	5,650·8	2,018·2
Machine Repairers, ...	2	2	5	...	...	3,230	1,295
Farriers, ...	3	3	9	...	...	7,673·3	2,557·7
Boiler Covering Manufacturer, ...	1	2	5	...	...	13,622	5,448·8
Mill Furnisher, ...	1	2	5	...	...	4,472·5	1,789
2. Miscellaneous Metal Trades—							
Brass-finisher, ...	4	7	10	4	...	2,328·5	1,164·2
Sheet-metal Workers, ...	2	3	10	...	2	19,870·3	4,967·5
Tinsmiths, ...	4	5	9	1	...	2,966	1,483
Locksmith, ...	1	1	2	...	...	1,308	654
File Maker, ...	1	1	3	...	...	1,350	450
Flexible Metallic Tube Maker, ...	1	1	1	...	2	4,578	1,526
Saw Maker, ...	1	3	1	9	...	7,314·6	2,194·4
3. Vehicles—							
Cycle Makers and Repairers,	5	5	7	...	2	2,056·2	1,031·2
Cartwrights, ...	1	2	9	...	...	13,140	2,228
IV. Precious Metals, Jewels, Watches, Instruments, and Games—							
1. Precious Metals and Jewellery—							
Jewellers, Watch and Clock Makers, ...	17	19	33	1	9	1,941·8	858
2. Apparatus for Sports and Games—							
Golf-club Makers, ...	3	3	4	...	...	1,225·6	919·2
V. Building and Works of Construction—							
1. House Building, &c.—							
Joiners and Wrights, ...	30	30	64	1	7	5,767·1	2,402·9
Plumbers and Gasfitters,...	24	28	95	...	21	4,204	1,014·7
Lath Splitter, ...	1	1	6	...	...	4,919	819·8
Marble Cutter, ...	1	1	2	...	...	2,193	1,096·5
Plasterer, ...	1	1	3	...	...	6,088	2,029·3

WORKSHOPS MEASURED AND REGISTERED DURING 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
VI. Wood, Furniture, Fittings, and Decorations—							
1. Furniture, Fittings, and Decorations—							
Upholsterers, ...	5	7	11	15	1	5,344	1,385·4
Upholstery Trimming Maker, ...	1	1	7	7	2	16,934	1,058·3
Trunk Maker, ...	1	1	12	...	...	28,855	2,219·6
Picture-frame Makers, ...	5	6	12	1	1	3,840·6	1,646
Bedding Makers, ...	4	11	19	10	1	10,171·9	3,726·3
Wood Carvers, ...	3	4	3	...	2	1,095·7	876·6
Fancy Box Makers, ...	2	3	14	46	14	30,349·6	1,230·3
Coopers, ...	2	2	11	...	...	7,112	1,293
Cabinetmakers and French Polishers, ...	49	59	142	94	9	5,043·6	1,214·5
Shop Fitters and Show-case Makers, ...	3	3	7	1	...	5,244·6	1,966·7
Basket Makers, ...	2	2	5	...	...	3,761·5	1,504·6
Coffin Making, ...	2	2	4	1	...	5,361	2,144·4
Painters, ...	6	7	11	...	8	2,879·7	1,060·9
VII. Brick, Cement, Pottery, and Glass—							
Glass Stainers and Embossers, ...	2	4	10	...	1	4,938·2	1,795·7
Mosaic Manufacturer, ...	1	1	8	...	...	22,500	2,812·5
VIII. Chemicals, Oil, Grease, Soap, Resin, &c.—							
1. Chemical Manufacturers, ...	2	2	3	...	2	19,538·5	7,815·4
Manufacturing Chemists,	1	1	1	1	...	6,071	3,035·5
2. Blacking Manufacturer, ...	1	1	2	...	1	2,228	742·6
Drysalter, ...	1	2	2	...	...	7,231	7,231
Polish Manufacturer, ...	1	1	2	...	...	23,809	16,904·5
IX. Skins, Leather, Hair, & Feathers—							
1. Skins and Leather—							
Furriers, ...	6	8	4	20	...	3,287·7	821·9
Rabbit Skin Drier, ...	1	1	2	...	...	14,829	7,414·5
Leather Belt Makers, ...	3	3	7	3	3	3,197	737·7
2. Saddlery and Harness—							
Saddlers, ...	3	7	22	...	2	3,849·2	1,122·7
X. Paper, Prints, Books, and Stationery—							
1. Paper and Stationery—							
Paper-bag Maker, ...	1	1	8	...	...	2,876	3,195
2. Prints and Books—							
Ticket Writers, ...	2	3	3	...	...	2,088	2,088
Printers and Bookbinders,	2	3	2	1	2	2,024	1,214·4
Show-card Maker, ...	1	1	2	3	...	10,827	2,165·4
XI. Textile Fabrics—							
1. Hemp and other Fibrous Materials—							
Sack Makers and Repairers,	3	5	6	7	...	7,642·8	2,939·5
2. Calenderer, ...	1	1	3	...	...	14,400	4,800

WORKSHOPS MEASURED AND REGISTERED DURING 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
XII. Dress—							
Blouse Makers,	3	3	...	13	2	5,251·6	1,050·3
Boot, Shoe, and Slipper Makers,	112	122	208	7	5	1,760·7	976·3
Dressmakers,	92	106	10	404	94	1,996·6	416·6
Clog Maker,	4	4	12	1	...	3,034·5	933·6
Hat and Cap Makers,	7	8	18	17	7	3,573·2	690·6
Mantle and Costume Makers,	13	17	8	156	22	6,615·9	604·6
Milliners,	36	38	1	124	32	3,175	768·4
Shirt and Collar Maker,	1	2	...	5	1	2,292·5	764·1
Tailors and Clothiers,	104	137	302	263	83	2,654·8	561·5
Hosiery Manufacturers,	3	4	1	19	8	3,129	447
Hairdressers, Wig and Pad Makers,	6	6	10	20	6	2,731·3	455·2
Underclothing Manufacturers,	9	9	3	54	7	2,979·3	418·9
Shroud and Grave-Gown Maker,	1	1	2	2	...	4,784	1,196
Stay Maker,	1	1	...	4	...	1,568	392
Umbrella Makers,	4	5	5	2	...	2,876	2,054·2
Waterproof Maker,	1	1	1	1	...	2,482	1,241
Tie Maker,	1	1	...	20	20	16,412	410·3
XIII. Food, Tobacco, and Drink—							
1. Food—							
Packing Grocery Goods,	1	2	1	6	1	6,140	1,535
Fish Curers,	4	6	7	3	...	1,969·5	1,181·7
Onion Bunchers,	5	6	16	...	1	6,483·5	2,288·3
Sausage-skin and Spice Makers,	3	5	...	5	...	3,108·6	3,108·6
Sauce Maker,	1	3	1	9	...	7,314·6	2,194·4
Confectioners and Preserve Makers,	6	6	6	9	12	5,661·3	1,258
Ham Curer,	1	1	2	...	..	9,520	4,760
Preserved Meat Makers,	5	5	4	7	1	2,100·2	875
2. Tobacco and Cigarette maker,	2	2	1	3	...	2,866	1,433
Tobacco Pipe Maker,	2	4	8	5	...	3,941·2	1,212·6
3. Dealing with Spirituous and other Drinks—							
Bottling and Labelling,	2	2	4	8	...	17,911·5	2,985·2
Aerated Water Manufacturers,	2	3	3	...	...	30,497·6	3,0497·6
XIV. Other General and Undefined Workers and Dealers—							
Sundry Specified Industries—							
Fire-light Maker,	1	1	2	...	...	4,158	2,079
Rag and Waste Paper Merchants,	22	34	27	99	4	8,361·6	2,186·8
Cork Cutter,	1	1	2	...	...	2,722	1,361
Advertising Contractor,	1	1	3	...	...	9,775	3,258·3
Fibre-plate Maker,	1	1	1	...	1	1,722	811
Salt Store,	1	1	9	...	...	23,263	2,584·7

ABSTRACT OF RESTAURANTS MEASURED AND REGISTERED DURING 1910.

Districts.	Number of Restaurants.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
Central,	14	14	3	53	...	2,843·5	710·8
Eastern,	14	16	11	21	2	2,269·3	1,067·9
Western,	2	2		4	...	3,696	1238·4
Northern,	69	69	100	76	10	2,907·9	1,078·7
Southern,	18	19	20	28	4	2,665·1	973·8
North-West,	...	...	...	...	...	...	...
Kinning Park,	..	...	...	...	...	...	...
South Suburban,	...	...	...	...	...	...	...

TABLE XLIX.—NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31ST DECEMBER, 1910.

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
I. Professional Occupations and their Subordinate services—				
1. Medical—				
Artificial Teeth Makers,	33	65	3	14
Artificial Limb Makers,	3	10	3	...
2. Art, Music, Drama, &c.—				
China Painting,	2	2	9	2
Designers,	...	...	...	...
Fine Art and Fancy Goods Dealers,	3	10	4	1
Photographers,	48	47	122	32
Engravers,	31	71	3	29
Sculptors,	7	17	...	8
II. Domestic Offices or Services—				
Laundries,	140	17	591	119
III. Fishing—				
Fish Curers,	19	64	62	9
Fish Bass Makers,	2	...	11	...
IV. In and about and dealing with the Products of Mines and Quarries—				
1. Mines—				
Asbestos Manufacturer,	1	...	6	...
2. Quarries—				
Marble Cutters,	10	38	...	...
V. Metals, Machines, Implements, and Conveyances—				
1. Manufacture of Mixed or Unspecified Metals—				
Metal Merchants and Refiners,	4	17	...	...
Spelter Manufacturer,	1	5	...	...
Tinsmiths and Coppersmiths,	44	149	6	38
2. Engineering and Machine Making—				
Blacksmiths,	55	170	...	7
Brassfinishers,	12	29	5	3
Electrical Engineers,	14	73	...	16
Farriers,	33	117	...	2
Heating and Ventilating Engineers,	8	54	1	4
Indicator Makers,	3	22	...	2
Machine Makers and Repairers,	9	21	...	4
Machinists,	4	1	7	4
Pattern Makers,	3	15	...	3
Sheet-metal Workers,	12	42	...	7
Boiler Coverers,	2	8	...	...
3. Tools—				
Saw Makers,	6	11	...	5
Cutlers,	3	5	...	...
File Makers,	3	14	1	2
Grindstone Maker,	1	2	...	...

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31st DECEMBER, 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
V. Metals, Machines, &c.—*Continued*—				
4. Types, Dies, Medals, Coins—				
Stereotyper,	1	11	...	...
Die Sinker,	1	6	...	...
5. Arms—				
Gunsmiths,	3	9	...	1
6. Miscellaneous Metal Trades—				
Bakers' Utensil Maker,	1	2	...	...
Chain Maker,	1	11	...	...
Fireproof-door Maker,	1	8	...	...
Lamp Makers,	2	8	...	...
Lead Worker and Embosser,	1	3	5	...
Locksmiths,	4	7	...	1
Weighing Machine and Scale Makers,	5	19	...	4
Wire Workers,	8	33	...	6
Metal Designer,	1	2	...	1
Paint Pot Maker,	1	2	...	...
7. Ships and Boats—				
Boat Builders,	2	4	...	...
8. Vehicles—				
Cartwrights,	14	101	1	9
Carriage Builders,	11	177	1	26
Cycle and Motor Makers and Repairers,	32	87	3	7
9. Dealers—				
Ironmongers and Mill Furnishers,	6	19	...	1
VI. Precious Metals, Jewels, Watches, Instruments, and Games—				
1. Precious Metals and Jewellery—				
Gold Beaters,	2	17	1	...
Jewel-case Makers,	4	14	8	3
Jewellers, Goldsmiths, Watch and Clock Makers,	148	394	32	92
2. Watches and Scientific Instruments—				
Nautical and Scientific Instrument Makers,	6	18	...	3
Opticians,	7	14	...	3
Surgical Instrument Makers,	1	1	...	1
3. Musical Instruments—				
Musical Instrument Makers,	20	39	25	8
4. Apparatus for Sports and Games—				
Fishing-tackle Makers,	3	1	92	17
Golf-club Makers,	9	21	...	4
Billiard Table Makers,	5	25	29	3

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31st DECEMBER, 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
VII. Building and Works of Construction—				
1. Housebuilding, &c.—				
Joiners and Wrights,	207	659	2	85
Lathsplitters,	2	14	...	1
Painters and Decorators,	42	180	9	60
Plasterers and Modellers,	13	23	...	16
Plumbers and Gasfitters,	201	698	10	183
Slaters,	9	75	...	4
Stair Railers,	4	26	...	4
Tile Layers,	2	4	..	1
Concrete Step Makers,	2	9	...	2
Cistern Maker,	1	3	...	...
Glaziers,	24	107	1	18
Window Blind Makers,	4	7	5	2
VIII. Wood, Furniture, Fittings, and Decorations—				
1. Furniture, Fittings, and Decorations—				
Picture-frame Makers,	32	93	9	11
Shop Fitters and Show-case Makers,	9	23	4	...
Modellers,	6	31	...	2
Upholsterers,	48	139	141	54
Upholstery Trimming Makers,	7	17	72	21
Basket Makers,	8	25	...	2
Bedding Manufacturers,	13	36	29	4
Artists and Decorators,	2	4	...	1
Bellows Maker,	1	3	...	...
Cabinetmakers and French Polishers,	188	790	246	80
Carvers and Gilders,	32	141	6	14
Coffin Mounting and Shroud Making,	11	35	1	...
Fancy-box Makers,	29	87	354	108
Box-clip Makers,	2	3	4	3
Map Mounting,	1	4	1	1
Marquetry-cutting,	1	2	1	1
2. Wood and Bark—				
Coopers,	17	87	...	2
Cork Cutters,	11	40	22	17
Packing-case Makers,	4	30	...	4
Portmanteau Makers,	8	53	11	16
Trunk Makers,	3	33	8	6
Wood Turner,	1	2	...	...
IX. Brick, Cement, Pottery, Glass, &c.—				
Glass Stainers and Embossers,	17	101	4	17
Pavement-light Maker,	1	10	...	2
Mosaic Manufacturer,	1	8	...	...

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31st DECEMBER, 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
X. Chemicals, Oil, Grease, Soap, Resin, &c.—				
1. Colouring Matter—				
Blacking Manufacturers, ...	2	3	3	1
2. Salt, Drugs, and other Chemicals and Compounds—				
Chemical Manufacturers, ...	3	8	1	...
Fire Extinguisher Maker, ...	1	6	...	3
Manufacturing Chemists, ...	11	23	19	13
3. Oil, Grease, Soap, Resin, &c.—				
Oil, Paint, and Varnish Manufacturers, ...	12	24	12	7
Drysalters, ...	4	5	10	5
Soap and Soda Manufacturers, ...	4	7	1	2
India Rubber Stamp Makers, ...	3	5	..	...
Waterproof Manufacturers, ...	10	8	24	6
XI. Skins, Leather, Hair, Feathers, and Rubber—				
1. Skins and Leather—				
Curriers and Tanners, ...	2	53	1	...
Furriers, ...	20	28	97	19
Hat-box Makers, ...	2	1	3	3
Hide and Skin Merchants, ...	1	4	2	2
Rabbit Skin Driers, ...	2	3	...	...
2. Saddlery and Harness—				
Leather Belt Makers, ...	6	22	3	3
Saddlers, ...	43	176	2	25
Whip Maker, ...	1	1	1	...
Leather Scrap Sorting, ...	1	...		...
3. Hair and Feathers—				
Brush Makers, ...	17	128	28	12
Feather Dressers, ...	3	...	5	4
4. Rubber—				
India Rubber Merchants, ...	3	5	...	1
XII. Paper, Prints, Books, and Stationery—				
1. Paper and Stationery—				
Card Cutters, ...	2	9	8	5
Envelope Maker, ...	1	3	18	7
Paper-bag Makers, ...	14	5	195	67
Carbon Paper Makers, ...	1	...	4	...
2. Prints and Books—				
Lithographers, ...	11	26	16	15
Pattern-book Makers, ...	9	19	65	45
Printers, Bookbinders, and Stationers, ...	47	212	167	168
Ticket Writers, ...	12	31	5	6
Show Card Makers, ...	2	25	15	2

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31ST DECEMBER, 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
XIII. Textile Fabrics—				
1. Cotton and Flax—				
Warpers and Winders,	5	19	33	...
Weavers,	14	42	9	4
2. Wool and Worsted—				
Pattern Weaving and Darning,	10	58	28	6
Shawl and Scarf Manufacturers,	2	47	...	18
Wool Sorter,	1	2	...	...
3. Hemp and other Fibrous Materials—				
Rope Makers,	2	8	...	...
Sack Makers and Repairers,	16	20	105	1
Sail Maker,	1	8	...	2
4. Mixed or Unspecified Materials—				
Curtain Maker,	1	2	1	...
Embroiderers,	7	14	36	6
Flag Makers,	2	2	10	...
Fringers,	3	...	11	4
Tape-line Makers,	2	3	4	1
Thread Manufacturer,	1	6	79	...
Carpet Sewing,	2	3	6	1
Doormat Maker,	1	1	1	...
5. Bleaching, Printing, Dyeing, &c.—				
Calenderers,	11	98	109	31
6. Dealers—				
Drapers,	13	9	36	14
XIV. Dress—				
Belt, Brace, and Necklet Makers,	3	...	29	8
Blouse Makers,	11	1	57	15
Boot, Shoe, and Slipper Makers,	513	1,179	57	51
Button and Stud Makers,	2	2	5	5
Children's Outfitters,	2	1	24	5
Clog Makers,	7	32	1	...
Dressmakers,	534	56	3,033	644
Hairdressers and Wig Makers,	20	49	21	14
Hat and Cap Manufacturers,	29	66	140	100
Handkerchief Hemmers,	7	12	273	91
Hosiery Manufacturers,	19	8	70	27
Last and Boot-tree Maker,	1	1	...	...
Mantle and Costume Makers,	67	77	1,114	191
Milliners,	195	4	721	215
Napery Hemming,	3	...	13	2
Shirt Makers,	19	86	721	29
Stay Makers,	11	...	33	10
Tailors and Clothiers,	637	2,763	1,687	465
Tie Makers,	4	...	39	32
Umbrella Makers,	28	57	168	45

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31ST DECEMBER, 1910.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
XIV. Dress—*Continued*—				
Underclothing Manufacturers, ...	57	10	375	79
Hat Band and Pad Maker, ...	1	...	1	1
Highland Dress Accoutrement Maker, ...	1	2	1	1
Sporran Maker, ...	1	1	2	...
Shroud and Grave-gown Makers, ...	4	1	10	5
XV. Food, Tobacco, Drink, and Lodging—				
1. Food—				
Aerated Water Manufacturers, ...	4	24	4	...
Coffee Essence Maker, ...	1	18	32	47
Confectioners and Preserve Makers, ...	31	38	90	124
Ham Curers, ...	21	100	...	1
Pickle and Sauce Makers, ...	5	10	62	7
Poulterers, ...	5	29	2	6
Preserved Meat Makers, ...	13	14	17	3
Sausage-skin and Spice Makers, ...	22	53	90	33
Tea Blenders and Packers, ...	13	28	21	16
Packing Grocery Goods, ...	6	13	17	13
2. Tobacco—				
Tobacco and Cigarette Makers, ...	14	45	134	80
3. Dealing with Spirituous Drinks—				
Bottling and Labelling, ...	41	116	143	26
4. Board, Lodging, &c.—				
Restaurants, ...	377	364	870	76
XVI. Gas, Water, and Electricity Supply—				
Meter Fitting and Repairing, ...	1	430	...	...
XVII. Other General and Undefined Workers and Dealers—				
1. About Animals—				
Birds'-cage Maker, ...	1	3	1	1
Birds' Seed Merchants, ...	3	6	2	3
2. Sundry Specified Industries—				
Mail-cart Makers, ...	2	11	4	1
Tobacco-pipe Makers, ...	9	52	18	4
Firelight Manufacturers, ...	8	65	9	5
Ivory Turner, ...	1	4	...	2
Japanners, ...	6	12	10	1
Rag and Waste Paper Merchants, ...	74	255	430	22
Taxidermists, ...	2	3	...	1
Emery and Glass Paper Makers, ...	3	8	2	8
Florist, ...	2	1	6	3
Whip Maker, ...	1	1	1	...
3. Makers and Dealers (general and undefined)—				
Manufacturers and Warehousemen, ...	3	1	42	12
Smaller Trades, ...	22	36	20	15
Totals, ...	4,990	13,100	13,780	4,297

TABLE L.

GLASGOW, 1910.—UNDERGROUND BAKEHOUSES, CERTIFIED AND OTHERWISE, WITH NUMBER OF VISITS.

WARDS.	Closed previous to 1910.	Closed during 1910.	No. on Register at 31st Dec., 1910.	Total Certified, 1910.	Inspections, 1910.
1. Dalmarnock, ...	...	...	1	1	2
2. Calton, ...	1	...	3	3	4
3. Mile-end, ...	...	...	...	...	...
4. Whitevale, ...	1	...	1	1	2
5. Dennistoun, ...	1	...	3	3	2
6. Springburn, ...	1	...	1	1	3
7. Cowlairs, ...	1	...	1	1	1
8. Townhead, ...	4	...	3	3	13
9. Blackfriars, ...	7	...	3	3	5
10. Exchange, ...	4	...	7	7	15
11. Blythswood, ...	3	...	4	4	10
12. Broomielaw, ...	4	...	3	3	9
13. Anderston, ...	2	...	2	2	4
14. Sandyford, ...	3	...	8	8	18
15. Park, ...	...	...	4	4	9
16. Cowcaddens, ...	9	...	7	7	17
17. Woodside, ...	3	...	2	2	3
18. Hutchesontown, ...	1	...	3	3	4
19. Gorbals, ...	10	...	4	4	6
20. Kingston, ...	1	...	2	2	3
21. Govanhill, ...	3	...	3	3	3
22 Langside, ...	...	...	1	...	2
23. Pollokshields, ...	2	...	3	3	7
24. Kelvinside, ...	1	...	1	1	2
25. Maryhill, ...	2	...	...	...	...
26. Kinning Park, ...	...	...	1	1	1
CITY, ...	64	...	71	70	145

TABLE LI.

GLASGOW, 1910.—OVERGROUND BAKEHOUSES.

WARDS.	On Register, 1909.	On Register, 1910.	Inspections.
1. Dalmarnock, ...	14	13	16
2. Calton, ...	11	11	14
3. Mile-end, ...	14	14	21
4. Whitevale, ...	16	14	13
5. Dennistoun, ...	5	6	4
6. Springburn, ...	2	1	4
7. Cowlairs, ...	2	1	3
8. Townhead, ...	5	5	5
9. Blackfriars, ...	5	5	2
10. Exchange, ...	...	...	...
11. Blythswood, ...	1	1	1
12. Broomielaw, ...	...	...	...
13. Anderston, ...	2	2	2
14. Sandyford, ...	...	...	...
15. Park, ...	1	1	2
16. Cowcaddens, ...	12	9	10
17. Woodside, ...	12	11	12
18. Hutchesontown, ...	5	3	5
19. Gorbals, ...	9	12	12
20. Kingston, ...	4	4	4
21. Govanhill, ...	8	9	5
22. Langside, ...	13	13	8
23. Pollokshields, ...	...	1	1
24. Kelvinside, ...	...	...	...
25. Maryhill, ...	4	5	3
26. Kinning Park, ...	1	1	...
Totals, ...	146	142	147

Table LII.

Glasgow, 1910.—REGISTRATION of Hairdressers' Saloons.

Wards.	On Register, 31st Dec., 1909.	Applied for Registration during 1910.	Number Certified during 1910.	Withdrawn from Register.		On Register, 31st Dec., 1910.	Inspections.	Renewal Certificates.
				(a) Premises Closed.	(b) Non-compliance with Regulations.			
1. Dalmarnock, ...	1	1	1	...	...	2	4	...
2. Calton, ...	8	...	...	...	...	8	15	...
3. Mile-end, ...	12	1	...	3	...	9	25	...
4. Whitevale, ...	8	...	...	...	...	8	23	1
5. Dennistoun, ...	5	1	1	...	...	6	16	...
6. Springburn, ...	5	...	...	...	...	5	8	1
7. Cowlairs, ...	3	1	1	...	...	4	9	...
8. Townhead, ...	17	1	1	...	...	18	40	1
9. Blackfriars, ...	9	1	...	...	...	9	23	...
10. Exchange, ...	10	3	3	...	...	13	34	...
11. Blythswood, ...	3	1	1	...	...	4	7	...
12. Broomielaw, ...	7	1	1	2	...	6	17	...
13. Anderston, ...	5	1	1	1	...	5	23	...
14. Sandyford, ...	5	...	...	...	...	5	9	1
15. Park, ...	2	1	1	...	...	3	7	...
16. Cowcaddens, ...	16	2	2	4	...	14	55	2
17. Woodside, ...	7	...	...	...	...	7	9	...
18. Hutchesontown, ...	9	2	2	...	...	11	27	...
19. Gorbals, ...	6	...	...	...	...	6	22	...
20. Kingston, ...	4	1	1	2	...	3	8	...
21. Govanhill, ...	4	...	...	...	...	4	10	...
22. Langside, ...	5	...	...	...	...	5	20	1
23. Pollokshields, ...	...	...	...	...	...	...	...	...
24. Kelvinside, ...	2	...	...	...	...	2	4	...
25. Maryhill, ...	9	...	...	1	...	8	22	2
26. Kinning Park, ...	1	...	...	...	...	1	1	...
Totals, ...	163	18	16	13	...	166	438	9

TABLE LIII.—GLASGOW.—POPULATION; BIRTHS and DEATHS; BIRTH-RATES and DEATH-RATES per 1,000; also DEATHS under 1 YEAR and DEATH-RATES per 1,000 BIRTHS, from 1855 to 1910.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year.	
						Number.	Rate per 1,000 Births.
1855	356,355	13,242	10,655	37·2	29·9	2,600	196
1856	362,606	15,170	10,298	41·8	28·4	2,713	179
1857	369,318	15,706	11,375	42·5	30·8	2,851	182
1858	376,131	15,889	11,472	42·2	30·5	2,846	179
1859	382,756	15,947	10,832	41·6	28·3	2,448	154
1860	389,843	15,943	12,436	40·8	31·9	2,905	182
1861	397,673	16,537	10,936	41·6	27·5	2,544	154
1862	405,789	16,400	11,565	40·4	28·5	2,562	156
1863	413,944	16,986	13,329	41·0	32·2	2,774	163
1864	420,738	17,411	13,674	41·4	32·5	3,051	175
1865	428,123	17,956	13,914	41·9	32·5	3,097	173
1866	437,850	18,288	12,829	41·8	29·3	2,905	159
1867	446,028	18,347	12,578	41·1	28·2	2,895	158
1868	455,000	18,607	13,832	40·9	30·4	3,127	168
1869	464,332	18,495	15,648	39·8	33·7	3,411	184
1870	471,453	19,355	13,955	41·1	29·6	2,991	155
1871	491,900	18,867	15,790	38·4	32·1	3,608	191
1872	494,824	20,158	14,053	40·7	28·4	3,198	159
1873	494,847	19,487	14,499	39·4	29·3	3,255	167
1874	498,270	20,039	15,845	40·2	31·8	3,240	162
1875	499,480	20,825	15,384	41·7	30·8	3,388	163
1876	502,299	20,981	13,763	41·7	27·4	3,166	151
1877	504,487	21,124	13,823	41·9	27·4	3,106	147
1878	507,420	20,622	14,157	40·6	27·9	3,285	159
1879	508,048	19,751	12,498	38·8	24·6	2,504	127
1880	509,732	18,912	13,304	37·1	26·1	2,842	150
1881	512,034	19,106	12,916	37·3	25·2	2,745	144
1882	517,904	19,735	13,046	38·1	25·2	2,959	150
1883	523,154	19,911	14,577	38·1	27·9	3,091	155
1884	528,459	20,557	13,942	38·9	26·4	3,094	151
1885	533,817	19,861	13,492	37·2	25·3	3,100	156
1886	539,231	19,862	13,104	36·8	24·3	2,786	140
1887	544,700	19,328	12,135	35·5	22·3	2,676	138
1888	550,226	19,309	11,681	35·1	21·2	2,560	133
1889	555,808	19,503	13,139	35·1	23·6	3,008	154
1890	561,447	19,279	13,374	34·3	23·8	2,880	149
1891	567,143	19,857	14,324	35·0	25·3	2,946	148
1892	669,059*	22,815	15,218	34·1	22·7	3,168	139
1893	677,883	23,173	15,798	34·2	23·3	3,649	157
1894	686,820	22,644	13,673	34·0	19·9	2,937	130
1895	695,876	22,803	16,344	32·8	23·5	3,538	155
1896	705,052	24,029	14,385	34·1	20·4	3,278	136
1897	714,919	23,880	15,727	33·4	22·0	3,826	160
1898	724,349	24,262	15,333	33·5	21·2	3,792	156
1899	733,903	24,249	15,828	33·0	21·6	3,696	152
1900	743,969	24,362	16,393	32·7	22·0	3,778	153
1901	764,467	24,206	16,197	31·7	21·2	3,607	149
1902	775,601	24,722	15,532	31·9	20·0	3,206	129
1903	786,897	25,135	15,073	31·9	19·0	3,663	146
1904	798,357	24,754	15,414	31·0	19·3	3,606	146
1905	809,986	24,316	14,460	30·0	17·9	3,195	131
1906	835,625*	24,560	14,889	29·4	17·8	3,223	131
1907	847,584	24,006	15,659	28·3	18·5	3,116	130
1908	859,715	23,915	15,265	27·8	17·8	3,284	137
1909	872,021	23,140	15,242	26·5	17·5	3,073	133
1910	884,520	22,222	13,395	25·1	15·1	2,694	121

* Extended City.

The figures in this Table are taken from the Registrar-General's Reports.

TABLE LIV.—GLASGOW, 1910—ESTIMATED POPULATION; BIRTHS; ILLEGITIMATE BIRTHS; and DEATHS at all AGES and at CERTAIN PERIODS of LIFE, and their PROPORTION to the POPULATION in each MUNICIPAL WARD.

MUNICIPAL WARDS.	ESTIMATED POPULATION.			BIRTHS.		ILLEGITIMATE BIRTHS.		DEATHS, ALL AGES.		DEATHS AT CERTAIN PERIODS OF LIFE.						
	Without Institutions and Shipping.	Institutions and Shipping.	Total.	Number.	Rate per 1,000 Living.	Number.	Percentage of Total Births.	Number.	Rate per 1,000 Living.	Under 1 Year.	1—5 Years.	5—15 Years.	15—20 Years.	20—25 Years.	25—60 Years.	60 Years and above.
1. Dalmarnock, ...	49,480	767	50,247	1,774	35·9	95	5·4	890	18·0	255	190	43	19	20	196	167
2. Calton, ...	34,697	2,013	36,710	1,085	31·3	99	9·1	670	19·3	147	126	33	13	25	198	128
3. Mile-end, ...	44,117	470	44,587	1,679	38·1	100	6·0	832	18·9	216	156	46	16	18	219	161
4. Whitevale, ...	31,330	1,096	32,426	981	31·3	89	9·1	503	16·1	128	96	23	12	11	133	100
5. Dennistoun, ...	37,686	1,863	39,549	896	23·8	32	3·6	407	10·8	68	40	15	9	16	145	114
6. Springburn, ...	45,247	4,584	49,831	1,636	36·2	64	3·9	751	16·6	187	155	43	17	17	206	126
7. Cowlairs, ...	30,219	...	30,219	980	32·4	43	4·4	414	13·7	112	62	29	13	13	105	80
8. Townhead, ...	36,610	81	36,691	1,079	29·5	71	6·6	549	15·0	112	93	34	8	15	161	126
9. Blackfriars, ...	19,842	1,247	21,089	612	30·8	83	13·6	353	17·8	90	59	20	11	10	102	61
10. Exchange, ...	1,842	1,008	2,850	37	20·1	5	13·5	26	14·1	4	6	1	...	...	5	10
11. Blythswood, ...	2,953	567	3,520	27	9·1	4	14·8	28	9·5	1	...	...	...	2	12	13
12. Broomielaw, ...	6,358	1,579	7,937	184	28·9	22	12·0	124	19·5	26	22	4	2	3	48	19
13. Anderston, ...	28,311	1,513	29,824	855	30·2	54	6·3	501	17·7	99	81	28	10	16	170	97
14. Sandyford, ...	23,902	409	24,311	523	21·9	46	8·8	379	15·9	67	53	16	13	12	115	103
15. Park, ...	23,621	818	24,439	206	8·7	32	15·5	241	10·2	13	8	6	4	6	93	111
16. Cowcaddens, ...	34,852	1,142	35,994	1,030	29·6	142	13·8	628	18·0	155	88	33	11	27	192	122
17. Woodside, ...	42,188	218	42,406	1,111	26·3	77	6·9	565	13·4	97	72	41	16	23	182	134
18. Hutchesontown, ...	38,038	4	38,042	1,459	38·4	80	5·5	644	16·9	174	134	31	11	9	178	107
19. Gorbals, ...	33,318	878	34,196	865	26·0	77	8·9	545	16·4	118	90	32	8	20	141	136
20. Kingston, ...	32,631	626	33,257	912	27·9	64	7·0	525	16·1	128	80	20	10	19	156	112
21. Govanhill, ...	35,380	...	35,380	1,097	31·0	51	4·6	477	13·5	111	80	26	13	15	128	104
22. Langside, ...	43,966	622	44,588	777	17·7	16	2·1	390	8·9	43	27	13	12	6	112	177
23. Pollokshields, ...	18,836	...	18,836	180	9·6	8	4·4	163	8·7	11	5	3	3	...	59	82
24. Kelvinside, ...	24,441	849	25,290	255	10·4	7	2·7	165	6·8	12	5	5	3	2	45	93
25. Maryhill, ...	39,956	1,613	41,569	1,261	31·6	49	3·9	556	13·9	132	101	36	11	16	140	120
26. Kinning Park, ...	12,621	...	12,621	432	34·2	26	6·0	238	18·9	64	40	13	8	9	66	38
— Institutions and Harbour, ...	...	...	...	81	...	58	...	907	...	54	50	16	11	16	305	455
CITY, ...	772,442	23,967	796,409	22,014	27·6	1,494	6·8	12,471	15·7	2,624	1,919	610	264	346	3,612	3,096

TABLE LV.—GLASGOW.—DEATHS at all AGES from DIFFERENT DISEASES in each MUNICIPAL WARD during 1910.

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and M. Croup.	Fevers.				Cerebro-Spinal Fever.	Measles.	Whooping-cough.	Diarrhœa.	Septic Diseases.	Tuberculous Diseases.		Cancer, Malignant Diseases.	Diseases of Nervous System.	Diseases of Circulatory System.	Croup.	Pneumonia	Diseases of Respiratory System.	Violence.	Premature Birth.	Uncertified.	Influenza.	All Other Causes.
				Scarlet.	Typhus.	Enteric.	Undefined						Phthisis.	Other than Phthisis.											
1. Dalmarnock, ...	890	...	21	15	...	1	...	4	65	23	18	13	54	58	31	68	83	2	75	73	34	51	1	...	200
2. Calton, ...	670	...	13	5	...	3	...	3	29	10	18	9	57	50	38	51	61	2	53	67	21	20	7	...	153
3. Mile-end, ...	832	...	15	18	...	1	...	3	36	25	25	9	68	48	44	53	68	3	74	77	19	21	6	5	214
4. Whitevale, ...	503	...	9	9	...	3	...	...	24	19	13	15	41	30	25	38	47	1	38	37	14	24	1	2	113
5. Dennistoun, ...	407	...	4	4	...	...	...	...	5	6	2	8	28	15	37	43	55	3	31	32	6	14	2	3	109
6. Springburn ...	751	...	17	13	1	1	...	1	33	10	8	10	61	56	29	56	67	1	67	76	26	40	...	4	174
7. Cowlairs, ...	414	...	4	4	...	...	...	1	23	11	7	12	38	37	25	35	27	...	30	24	11	19	...	4	102
8. Townhead, ...	549	...	7	10	...	2	...	...	17	3	8	6	39	45	34	34	54	1	53	59	14	18	5	4	136
9. Blackfriars, ...	353	...	5	2	...	1	...	...	22	5	9	3	28	16	16	23	28	...	52	27	18	11	7	2	78
10. Exchange, ...	26	...	1	...	...	...	...	...	2	...	...	...	...	1	1	5	3	...	1	1	2	...	1	1	7
11. Blythswood, ...	28	...	...	...	...	...	...	...	...	..	...	1	1	1	2	4	4	...	4	4	...	..	...	1	6
12. Broomielaw, ...	124	...	...	2	...	...	...	2	4	5	1	2	10	6	7	9	16	1	10	10	2	4	2	1	30
13. Anderston, ...	501	...	8	7	...	5	...	2	30	6	7	8	43	20	31	31	53	2	48	44	23	26	1	3	103
14. Sandyford, ...	379	...	6	1	..	5	...	2	19	10	1	7	21	17	26	27	50	...	33	41	11	12	...	3	87
15. Park, ...	241	...	1	3	...	...	...	...	1	1	1	3	17	9	28	31	29	1	12	21	5	...	2	1	75
16. Cowcaddens, ...	628	...	13	6	...	4	...	...	13	3	10	11	58	30	27	50	43	2	77	64	32	32	...	2	151
17. Woodside, ...	565	...	14	6	...	...	...	3	17	10	7	5	47	28	26	59	58	...	47	36	19	26	...	3	154
18. Hutchesontown,	644	...	6	7	...	7	...	1	38	19	8	8	34	41	35	60	39	1	111	38	14	21	1	1	154
19. Gorbals, ...	545	...	18	6	1	5	...	1	25	6	5	6	35	32	35	42	53	1	68	45	10	20	...	...	131
20. Kingston, ...	525	...	5	5	...	3	...	...	31	9	9	5	41	30	32	34	45	1	56	53	8	19	...	5	134
21. Govanhill, ..	477	...	9	5	...	7	...	2	26	18	...	6	43	26	25	30	50	3	45	32	9	24	3	3	111
22. Langside, ...	390	...	4	1	...	1	...	2	5	2	...	8	17	17	39	47	47	...	29	29	15	10	...	...	117
23. Pollokshields, ...	163	...	...	1	...	...	...	...	2	...	...	2	12	5	15	22	23	3	6	7	7	2	...	1	55
24. Kelvinside, ...	165	...	1	1	...	1	...	1	1	1	...	...	8	8	18	28	17	...	13	11	5	2	...	1	48
25. Maryhill, ...	556	...	8	6	...	1	...	1	30	24	2	10	45	33	25	45	55	...	63	41	17	19	1	3	127
26. Kinning Park,	238	...	1	2	...	1	...	.	6	6	1	5	26	14	11	17	17	...	24	23	8	10	...	1	65
— Institutions and Harbour, ...	907	...	1	2	...	4	...	1	23	...	1	7	161	31	45	80	171	1	70	74	21	5	7	...	202
CITY, ...	12,471	...	191	141	2	56	...	30	527	232	161	179	1,033	704	707	1,022	1,263	29	1,190	1,046	371	450	47	54	3,036

TABLE LVI.—GLASGOW.—DEATH-RATES per MILLION from DIFFERENT DISEASES in each MUNICIPAL WARD during 1910.

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and Membranous Croup.	Fevers.					Measles.	Whooping-cough.	Diarrhœa.	Septic Diseases.	Tubercular Diseases.		Cancer, Malignant Diseases	Diseases of Nervous System.	Diseases of Circulatory System.	Croup.	Pneumonia.	Diseases of Respiratory System.	Violence.	Premature Birth.	Uncertified.	Influenza.	All Other Causes.
				Scarlet.	Typhus.	Enteric.	Undefined	Cerebro-Spinal.					Phthisis.	Otherthan Phthisis.											
1. Dalmarnock, ...	17,987	...	424	303	...	20	...	81	1,314	465	364	263	1,091	1,172	627	1,374	1,677	40	1,516	1,475	687	1,031	20	...	4,043
2. Calton, ...	19,310	...	375	144	...	86	...	86	836	288	519	259	1,643	1,441	1,095	1,470	1,758	58	1,528	1,931	605	576	202	...	4,410
3. Mile-end, ...	18,859	...	340	408	...	23	...	68	816	567	567	204	1,541	1,088	997	1,201	1,541	68	1,677	1,745	431	476	136	113	4,852
4. Whitevale, ...	16,055	...	287	287	...	96	...	...	766	606	415	479	1,309	958	798	1,213	1,500	32	1,213	1,181	447	766	32	64	3,606
5. Dennistoun, ...	10,800	...	106	106	...	...	...	...	133	159	53	212	743	398	982	1,141	1,459	80	823	849	159	371	53	80	2,893
6. Springburn, ...	16,598	...	376	287	22	22	...	22	729	221	177	221	1,348	1,238	641	1,238	1,481	22	1,481	1,680	575	884	...	88	3,847
7. Cowlairs, ...	13,700	...	132	132	...	...	...	33	761	364	232	397	1,258	1,224	827	1,158	894	...	993	794	364	629	...	132	3,376
8. Townhead, ...	14,996	...	191	273	...	55	...	...	464	82	219	164	1,065	1,229	929	929	1,475	27	1,448	1,612	382	492	137	109	3,716
9. Blackfriars, ...	17,791	...	252	101	...	50	...	...	1,109	252	454	151	1,411	806	806	1,159	1,411	...	2,621	1,361	907	554	353	101	3,932
10. Exchange, ...	14,115	...	543	...	...	...	...	...	1,086	...	...	...	...	543	543	2,714	1,629	...	543	543	1,086	...	543	543	3,799
11. Blythswood, ...	9,482	...	...	...	...	...	...	...	...	...	...	339	339	339	677	1,355	1,355	...	1,355	1,355	...	...	...	339	2,029
12. Broomielaw, ...	19,503	...	...	315	...	..	...	315	629	786	157	315	1,573	944	1,101	1,416	2,517	157	1,573	1,573	315	629	315	157	4,716
13. Anderston, ...	17,696	...	283	247	...	177	...	71	1,060	212	247	283	1,519	706	1,095	1,095	1,872	71	1,695	1,554	812	918	35	106	3,638
14. Sandyford, ...	15,856	...	251	42	...	209	...	84	795	418	42	293	879	711	1,088	1,130	2,092	...	1,381	1,715	460	502	...	126	3,638
15. Park, ...	10,203	...	42	127	...	...	..	...	42	42	42	127	720	381	1,185	1,312	1,228	42	508	889	212	...	85	42	3,177
16. Cowcaddens, ...	18,019	...	373	172	...	115	...	...	373	86	287	316	1,664	861	775	1,435	1,234	57	2,209	1,836	918	918	...	57	4,333
17. Woodside, ...	13,392	...	332	142	...	...	...	71	403	237	166	119	1,114	664	616	1,399	1,375	...	1,114	853	450	616	...	71	3,650
18. Hutchesontown, ...	16,930	...	158	184	...	184	...	26	999	500	210	210	894	1,079	920	1,577	1,025	26	2,918	999	368	552	26	26	4,049
19. Gorbals, ...	16,358	...	540	180	30	150	...	30	750	180	150	180	1,050	960	1,050	1,261	1,591	30	2,041	1,351	300	600	...	...	3,934
20. Kingston, ...	16,089	...	153	153	...	92	...	...	950	276	276	153	1,256	919	981	1,042	1,379	31	1,716	1,624	245	582	...	153	4,108
21. Govanhill, ...	13,482	...	254	141	...	198	...	57	735	509	...	170	1,215	735	707	848	1,413	85	1,272	904	254	678	85	85	3,137
22. Langside, ...	8,870	...	91	23	...	23	...	45	114	45	...	182	387	387	887	1,069	1,069	...	660	660	341	227	...	...	2,662
23. Pollokshields, ...	8,654	...	...	53	...	...	...	...	106	...	...	106	637	265	796	1,168	1,221	159	319	372	372	106	...	53	2,921
24. Kelvinside, ...	6,751	...	41	41	...	41	...	41	41	41	...	...	327	327	736	1,146	696	...	532	450	205	82	...	41	1,963
25. Maryhill, ...	13,915	...	200	150	...	25	...	25	751	601	50	250	1,126	826	626	1,126	1,377	...	1,577	1,026	425	475	25	75	3,178
26. Kinning Park,	18,857	...	79	158	...	79	...	...	475	475	79	396	2,060	1,109	872	1,347	1,347	...	1,902	1,822	634	792	...	79	5,152
— Institutions and Harbour, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CITY, ...	15,659	...	240	177	2	70	...	38	662	291	202	225	1,297	884	888	1,283	1,586	36	1,494	1,313	466	565	59	68	3,813

Table LVII.—Glasgow.—CASES of Infectious Disease in each Municipal Ward, showing those Treated in Hospital, for the Year 1910.

Municipal Wards.	Infectious Disease (Notification) Act, 1889.																		Other Infectious Diseases.												All Causes.		Total Cases.	Total Visitations.	
	Fevers.								Smallpox.		Scarlet Fever.		Cerebro-Spinal Fever.		Diphtheria and Membranous Croup.		Erysipelas.		Phthisis.		Beri-Beri.		Anthrax.		Measles.		Whooping-cough.		Chickenpox.		Others.					
	Typhus.		Enteric.		Continued and Undefined.		Puerperal.																												For Infectious Diseases.	Cases found.
	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.		
1. Dalmarnock,	...	...	23	...	3	...	9	2	...	...	363	10	2	4	133	4	22	57	56	128	...	...	...	...	109	1,473	46	167	3	184	...	...	769	2,029	2,798	9,785	99
2. Calton, ...	...	...	27	1	...	...	5	2	...	...	187	8	2	4	76	3	20	29	62	143	...	..	...	...	46	404	26	118	8	55	...	...	459	767	1,226	7,599	59
3. Mile-end, ...	2	...	11	...	...	...	4	2	...	...	290	7	1	2	110	4	16	51	65	131	...	...	...	...	99	1,132	74	155	13	117	...	...	685	1,601	2,286	8,925	69
4. Whitevale, ...	...	...	6	...	..	...	6	2	...	...	154	6	...	1	68	2	14	34	30	79	...	...	...	...	46	605	23	134	9	68	...	...	356	931	1,287	6,861	73
5. Dennistoun, ...	...	...	12	...	1	...	3	2	...	...	145	32	...	...	66	12	8	26	17	71	...	...	1	...	13	799	8	72	3	133	...		277	1,147	1,424	6,474	141
6. Springburn, ...	1	...	16	...	...	...	7	1	...	...	289	16	2	...	188	13	15	50	64	129	...	...	...	...	51	1,419	20	77	...	120	...	...	653	1,825	2,478	13,330	17
7. Cowlairs, ...	...	...	2	...	1	...	2	...	...	...	194	7	...	2	91	6	10	28	30	51	...	...	...	...	40	748	16	81	...	84	...	...	386	1,007	1,393	7,928	1
8. Townhead, ...	1	...	6	...	...	...	3	...	...	...	178	8	...	1	108	5	17	35	56	92	...	...	...	...	27	576	3	13	4	61	...	...	403	791	1,194	8,531	29
9. Blackfriars, ...	1	...	11	...	1	...	3	...	...	...	80	3	...	...	60	1	26	18	40	74	...	...	...	...	64	247	18	39	9	64	...	...	313	446	759	4,163	18
10. Exchange, ...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	2	...	1	4	8	8	...	...	...	...	2	22	...	...	...	2	...	...	19	36	55	315	...
11. Blythswood, ...	...	...	1	...	...	...	...	...	...	...	2	2	...	...	5	1	1	1	...	3	...	...	...	...	6	...	...	1	...	...	...	...	15	8	23	352	...
12. Broomielaw, ...	...	...	1	1	1	...	...	...	...	...	16	1	...	1	15	2	4	7	15	31	...	...	...	...	5	94	7	26	...	42	...	...	64	205	269	2,124	14
13. Anderston, ...	...	...	16	...	...	...	5	2	...	...	115	10	..	2	61	4	7	25	33	84	...	...	...	...	14	643	9	167	...	120	...	...	260	1,057	1,317	6,737	37
14. Sandyford, ...	...	...	10	...	1	...	4	1	...	...	81	20	1	1	51	4	7	17	27	59	...	...	...	...	42	352	22	94	1	45	...	...	247	593	840	6,222	53
15. Park, ...	...	...	...	1	...	...	1	...	...	...	82	21	...	...	17	10	5	19	3	33	...	...	...	...	12	56	2	18	1	21	...	...	123	179	302	1,785	3
16. Cowcaddens,	5	...	16	...	6	...	4	...	...	...	163	3	1	...	44	7	11	26	83	120	...	...	...	...	34	158	13	31	5	117	...	...	385	462	847	9,818	7
17. Woodside, ...	...	...	6	1	...	...	2	2	...	...	190	19	3	...	90	12	11	39	40	85	...	...	...	...	21	279	17	76	...	102	*1	...	381	615	996	6,953	11
18. Hutchesontown,	...	...	41	1	...	...	8	1	...	...	226	6	1	...	135	7	24	37	28	126	...	...	...	...	58	543	36	239	13	139	...	...	570	1,099	1,669	7,997	177
19. Gorbals, ...	5	...	24	1	1	...	4	1	...	...	160	5	1	..	70	2	13	37	38	130	...	...	...	...	44	524	2	70	7	61	...	...	369	831	1,200	7,291	20
20. Kingston, ...	...	...	23	...	1	...	3	...	...	...	123	10	4	1	48	6	15	32	28	87	...	...	...	...	80	488	17	91	2	130	...	...	344	845	1,189	6,139	21
21. Govanhill, ...	...	...	18	...	...	...	8	...	...	...	175	8	...	2	65	6	6	31	15	91	...	...	...	...	63	840	17	200	...	66	...	...	367	1,244	1,611	6,121	78
22. Langside, ...	...	...	5	...	...	...	...	...	...	...	162	67	1	...	34	30	3	35	11	46	...	...	...	...	16	646	...	41	...	14	...	...	232	879	1,111	4,828	15
23. Pollokshields,	...	...	3	4	1	...	...	...	...	...	37	30	...	...	8	18	1	14	6	19	...	...	...	...	10	145	...	6	...	39	...	...	66	275	341	1,359	...
24. Kelvinside, ...	...	...	1	3	...	...	...	1	...	...	37	32	...	1	23	16	2	10	2	20	...	...	...	...	20	126	...	5	...	12	...	...	85	226	311	2,056	12
25. Maryhill, ...	...	...	11	1	1	...	4	3	...	...	181	26	...	1	84	21	12	33	27	99	...	...	...	...	43	1,118	17	282	2	79	...	...	382	1,663	2,045	12,432	151
26. Kinning Park,	...	...	8	...	...	...	2	...	...	...	48	1	...	...	19	1	10	13	12	41	...	...	...	...	4	36	1	42	6	19	...	...	110	153	263	9,551	...
— Institutions,	...	...	18	1	1	...	4	...	...	...	155	2	3	...	68	...	91	7	754	57	...	...	2	...	109	8	11	...	57	8	†2	...	1,275	83	1,358	1,188	...
— Harbour, ...	...	...	9	...	4	...	...	...	1	...	4	...	1	...	3	...	3	...	1	2	4	1	...	...	19	1	...	...	2	...	...	...	51	4	55	3,189	...
CITY, ...	15	...	325	15	23	...	91	22	1	...	3843	360	23	23	1742	197	375	715	1551	2,039	4	1	3	...	1,097	13,482	405	2,245	145	1902	3	...	9,646	21,001	30,647	170,053	1,105

* Trachoma. † Mumps.

TABLE LVIII.—GLASGOW.—CASES of INFECTIOUS DISEASE REGISTERED, showing the NUMBER TREATED in HOSPITAL for each MONTH of the YEAR 1910.

MONTHS.	INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.																				OTHER INFECTIOUS DISEASES.										TOTAL.	
	FEVERS.								SMALLPOX.		SCARLET FEVER.		CEREBRO-SPINAL FEVER.		DIPHTHERIA AND MEMBRANOUS CROUP.		ERYSIPELAS.		PHTHISIS.		BERI-BERI.		ANTHRAX.		MEASLES.		WHOOPING-COUGH.		CHICKENPOX.		OTHERS.			
	TYPHUS.		ENTERIC.		CONTINUED AND UNDEFINED.		PUERPERAL.																											
	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.	HOSP.	HOME.
Jan.,	1	...	44	1	...	...	8	...	...	...	277	34	2	3	131	22	34	56	4	65	...	...	...	...	378	5,813	7	67	11	199	...	...	897	6,260
Feb.,	...	...	39	1	1	...	5	2	...	...	234	37	2	3	119	17	22	48	123	421	...	...	1	...	214	3,698	19	118	12	222	...	...	791	4,567
March,	5	...	21	1	...	...	8	2	...	...	275	26	...	2	120	15	25	52	549	285	...	...	1	...	180	1,824	62	83	28	132	...	...	1274	2,422
April,	2	...	20	1	1	...	8	4	1	...	304	23	1	2	125	6	31	55	174	179	3	...	...	...	118	949	33	192	6	176	...	...	827	1,587
May,	...	...	11	...	2	...	9	3	...	...	298	33	1	...	88	13	32	72	111	170	...	...	...	...	99	569	19	222	15	152	...	...	685	1,234
June,	...	...	10	2	...	...	9	1	...	...	257	18	5	...	140	16	20	37	116	148	...	1	...	...	45	235	23	197	10	146	...	...	635	801
July,	...	...	15	...	1	...	9	1	...	...	238	17	3	2	107	7	17	32	67	104	...	...	...	...	16	73	18	48	6	19	*1	...	498	303
Aug.,	1	...	26	1	6	...	4	1	...	...	288	12	2	1	109	12	44	56	73	169	...	...	...	...	6	111	41	237	12	60	...	...	612	660
Sept.,	4	...	42	2	3	...	8	1	...	...	420	24	...	...	176	17	28	57	69	123	...	...	...	...	7	28	39	210	5	100	...	...	801	562
Oct.,	1	...	33	4	8	...	5	2	...	...	490	44	...	3	251	29	44	85	79	143	...	...	...	...	14	34	34	184	4	155	...	...	963	683
Nov.,	...	...	33	1	...	...	8	2	...	...	424	51	2	3	212	20	37	73	72	111	...	...	1	...	11	60	52	268	12	225	...	...	864	814
Dec.,	1	...	31	1	1	...	10	3	...	...	338	41	5	4	164	23	41	92	114	121	1	...	...	...	9	88	58	419	24	316	†2	...	799	1,108
TOTAL,	15	...	325	15	23	...	91	22	1	...	3843	360	23	23	1742	197	375	715	1551	2039	4	1	3	...	1097	13,482	405	2245	145	1902	3	...	9646	21,001

* Trachoma. † Mumps.

Table LIX.—Glasgow, 1910.—DEATHS Certified and otherwise in each Municipal Ward.

Municipal Wards.	Deaths certified and otherwise.								Deaths under 5 years.				Legitimate.				Illegitimate.			
	Certified.		Not Certified.		No Medical Attendance.		Dispensary.		Under 1 year		1 and under 5 years.		Under 1 year.		1 and under 5 years.		Under 1 year.		1 and under 5 years.	
	Under 5 yrs.	5 yrs. & up.	Under 5 yrs.	5 yrs. & up.	Under 5 yrs.	5 yrs. & up.	Under 5 yrs.	5 yrs. & up.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.
1. Dalmarnock, ...	430	442	1	3	13	...	1	...	255	240	190	190	230	216	184	184	25	24	6	6
2. Calton, ...	258	388	14	9	...	...	1	...	147	134	126	124	128	119	121	119	19	15	5	5
3. Mile-end, ...	356	458	8	2	8	...	...	...	216	201	156	155	189	176	149	148	27	25	7	7
4. Whitevale, ...	222	273	1	6	1	...	...	...	128	127	96	95	115	114	91	90	13	13	5	5
5. Dennistoun, ...	103	296	4	3	1	...	...	...	68	63	40	40	62	58	38	38	6	5	2	2
6. Springburn, ...	338	409	...	...	3	...	1	...	187	183	155	155	165	161	150	150	22	22	5	5
7. Cowlairs, ...	168	239	1	...	1	1	4	...	112	107	62	61	108	103	60	59	4	4	2	2
8. Townhead, ...	197	341	2	2	5	1	1	...	112	105	93	92	95	89	90	89	17	16	3	3
9. Blackfriars, ...	141	200	4	2	3	2	1	...	90	83	59	58	75	71	50	50	15	12	8	8
10. Exchange, ...	9	15	1	1	...	...	...	...	4	3	6	6	1	1	4	4	3	2	2	2
11. Blythswood, ...	1	26	...	1	...	...	...	...	1	1	...	...	1	1	1	...	...	...	...	...
12. Broomielaw, ...	43	75	4	1	...	...	1	...	26	22	22	21	23	20	19	18	3	2	3	3
13. Anderston, ...	176	320	2	1	2	...	...	...	99	96	81	80	90	87	75	75	9	9	6	5
14. Sandyford, ...	119	257	...	2	1	...	...	...	67	66	53	53	54	53	44	44	13	13	9	9
15. Park, ...	21	216	...	...	...	4	...	...	13	13	8	8	10	10	8	8	3	3	...	...
16. Cowcaddens, ...	203	371	...	4	24	9	16	1	155	119	88	84	123	95	85	81	32	24	3	3
17. Woodside, ...	163	389	1	6	2	1	3	...	97	91	72	72	88	83	65	65	9	8	7	7
18. Hutchesontown, ...	299	334	2	2	5	...	2	...	174	166	134	133	156	148	127	126	18	18	7	7
19. Gorbals, ...	191	331	7	6	6	...	4	...	118	105	90	86	91	80	84	81	27	25	6	5
20. Kingston, ...	191	314	2	3	8	...	7	...	128	113	80	78	109	98	76	74	19	15	4	4
21. Govanhill, ...	184	281	2	5	3	...	2	...	111	104	80	80	100	93	79	79	11	11	1	1
22. Langside, ...	70	318	...	1	...	1	...	...	43	43	27	27	42	42	27	27	1	1	...	...
23. Pollokshields, ...	16	144	...	3	...	...	...	...	11	11	5	5	10	10	5	5	1	1	...	...
24. Kelvinside, ...	17	146	...	1	...	1	...	...	12	12	5	5	11	11	5	5	1	1	...	...
25. Maryhill, ...	228	317	2	6	2	...	1	...	132	129	101	99	123	120	100	98	9	9	1	1
26. Kinning Park, ...	100	133	2	1	2	...	...	...	64	61	40	39	56	55	40	39	8	6	...	...
— Institutions and Harbour,	104	780	...	17	...	6	...	...	54	54	50	50	21	21	40	40	33	33	10	10
CITY, ...	4,348	7,813	60	88	90	26	45	1	2,624	2,452	1,919	1,896	2,276	2,135	1,817	1,796	348	317	102	100

TABLE LX.—GLASGOW, 1910.—DEATHS in FRIENDLY SOCIETIES in each MUNICIPAL WARD.

MUNICIPAL WARDS.	Under 1 Year.		1 and under 5 Years.		5 Years and over.	TOTAL.
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.		
1. Dalmarnock, ...	112	5	153	4	386	660
2. Calton, ...	73	1	88	3	314	479
3. Mile-end, ...	89	4	117	1	406	617
4. Whitevale, ...	49	1	72	2	225	349
5. Dennistoun, ...	18	...	21	1	237	277
6. Springburn, ...	68	4	125	3	342	542
7. Cowlairs, ...	46	...	51	2	197	296
8. Townhead, ...	49	4	76	2	286	417
9. Blackfriars, ...	30	1	32	5	154	222
10. Exchange, ...	...	...	3	2	7	12
11. Blythswood, ...	1	...	...	...	15	16
12. Broomielaw, ...	5	...	11	3	54	73
13. Anderston, ...	34	1	57	3	245	340
14. Sandyford, ...	26	1	29	4	180	240
15. Park, ...	2	1	5	...	121	129
16. Cowcaddens, ...	48	5	60	...	297	410
17. Woodside, ...	38	...	54	1	311	404
18. Hutchesontown, ...	74	2	99	6	280	461
19. Gorbals, ...	30	3	57	...	231	321
20. Kingston, ...	45	2	54	4	241	346
21. Govanhill, ...	41	1	62	1	220	325
22. Langside, ...	3	1	13	...	80	97
23. Pollokshields, ...	2	...	2	...	61	65
24. Kelvinside, ...	1	...	3	...	35	39
25. Maryhill, ...	61	2	74	...	246	383
26. Kinning Park, ...	26	3	31	...	109	169
— Institutions and Harbour, ...	4	...	9	1	311	325
CITY, ...	975	42	1,358	48	5,591	8,014

TABLE LXI.—HOSPITAL BED ACCOMMODATION for INFECTIOUS DISEASES in GLASGOW since 1865.

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.			
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	1,180	744	1·6
1901	...	...	...	...	200	390	220	440	1,250	764	1·6
1906	...	...	...	...	...	390	220	440	1,050	836	1·3
1910	...	...	...	...	...	390	220	542	1,152	884	1·3

TABLE LXII.—CITY of GLASGOW FEVER and SMALLPOX HOSPITALS.—NUMBER, AVERAGE RESIDENCE, and COST of TREATMENT OF PATIENTS from 1883-84.

Year.	Patients.			Total Ordinary Expenditure.			Average Daily Cost per Patient.			Average Cost of Treatment per Patient.			Average Cost of Bed per Year.		
	Total under Treatment.	Average Daily Number in Hospitals.	Average Residence in Days.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1883-84	3,200	338	41·7	15,772	0	0	0	2	6·6	5	6	4·0	46	10	9·0
1884-85	3,828	355	38·1	19,754	6	7	0	2	11·0	5	11	1·5	53	4	7·0
1885-86	2,154	215	40·3	15,550	6	6	0	3	11·5	7	19	6·2	72	4	9·5
1886-87	2,993	332	43·3	16,504	3	5	0	2	8·7	5	17	11·9	49	14	7·5
1887-88	3,056	327	42·5	17,768	17	10	0	2	11·6	6	6	1·0	54	5	9·6
1888-89	3,459	357	41·7	18,171	15	6	0	2	9·5	5	16	4·9	50	18	11·5
1889-90	3,582	361	36·8	17,899	7	3	0	2	8·6	4	19	11·7	49	11	7·0
1890-91	4,286	460	39·2	21,092	15	11	0	2	6·1	4	18	5·9	45	17	0·7
1891-92	4,850	491	37·1	26,808	9	7	0	2	11·8	5	10	8·2	54	11	10·8
1892-93	6,749	699	37·8	36,263	18	8	0	2	10·1	5	7	5·4	51	17	6·1
1893-94	5,528	624	41·2	34,551	14	3	0	3	0·5	6	5	2·6	55	9	3·5
1894-95	5,482	644	42·9	34,039	19	0	0	2	10·8	6	4	2·2	52	17	3·4
1895-96	5,127	651	46·5	34,892	12	8	0	2	11·1	6	16	1·5	53	11	5·6
1896-97	5,468	627	41·9	34,224	14	9	0	2	11·9	6	5	2·5	54	11	0·5
1897-98	5,687	709	45·5	36,972	18	10	0	2	10·3	6	10	0·3	52	3	5·7
1898-99	5,956	833	45·3	39,261	9	2	0	2	7·0	5	16	11·8	47	2	7·3
1899-1900	6,663	923	44·8	42,020	9	11	0	2	5·9	5	11	10·0	45	10	8·2
1900-01	8,888	1,031	42·3	69,015	8	6	0	3	8·0	7	15	1·9	66	18	9·8
1901-02	6,990	772	40·3	64,265	12	10	0	4	6·7	9	3	10·6	83	5	0·1
1902-03	4,882	592	44·3	53,185	12	10	0	4	11·1	10	17	10·6	89	17	2·8
1903-04	6,799	720	38·8	55,961	2	10	0	4	3·0	8	4	9·6	77	14	7·0
1904-05	5,484	576	36·3	52,558	11	4	0	5	0·0	9	1	5·0	91	5	0·0
1905-06	5,902	620	38·3	52,052	12	7	0	4	7·2	8	16	2·2	83	19	0·0
1906-07	6,803	766	41·1	54,325	19	6	0	3	10·6	7	19	8·5	70	18	4·0
1907-08	9,087	942	40·6	62,659	4	7	0	3	7·6	7	7	7·0	66	10	4·9
1908-09	8,558	1,019	47·9	67,905	6	2	0	3	7·8	8	15	2·0	66	12	10·3
1909-10	10,497	1,243	48·2	77,751	19	6	0	3	5·1	8	5	2·0	62	15	6·0
1910-11	9,329	1,187	56·7	75,967	4	2	0	3	6·1	9	18	10·2	64	0	0·0

N.B.—The above calculations of cost do not include interest on capital expended in erecting Hospitals.

TABLE LXIII.—CITY of GLASGOW FEVER and SMALLPOX HOSPITALS.—STATEMENT showing PATIENTS CLASSIFIED as to DISEASE, AVERAGE RESIDENCE, and AVERAGE COST per PATIENT for each YEAR from 1883-84.

Year.	Scarlet Fever.		Enteric Fever.		Whooping-Cough.		Typhus.		Measles.		Other Infectious Diseases.*		Smallpox.		All Other Diseases.†	
	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.
		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.
1883-84	51·7	6 11 10·0	44·4	5 13 2·6	58·9	7 10 2·3	35·8	4 11 3·5	34·8	4 8 8·9	...	...	27·5	3 10 1·5	26·4	3 7 3·8
1884-85	50·2	7 6 5·0	45·1	6 11 6·5	44·4	6 9 6·0	35·2	5 2 8·0	30·6	4 9 3·0	...	...	19·2	2 16 0·0	22·0	3 4 2·0
1885-86	54·7	10 16 6·2	46·6	9 4 5·5	36·2	7 3 3·5	31·5	6 4 8·2	26·2	5 3 8·5	24·7	4 17 9·2	24·1	4 15 4·7	21·8	4 6 3·5
1886-87	56·1	7 12 10·5	48·7	6 12 8·5	44·3	6 0 8·6	31·3	4 5 3·5	29·5	4 0 4·6	26·5	3 12 2·5	...	...	26·2	3 11 4·7
1887-88	55·2	8 3 9·1	50·3	7 9 2·7	42·1	6 4 10·7	33·2	4 18 5·9	22·2	3 5 10·3	29·0	4 6 0·4	16·5	2 8 11·4	21·3	3 3 2·3
1888-89	56·7	7 18 3·4	52·5	7 6 6·7	50·1	6 19 10·3	34·2	4 15 5·7	26·6	3 14 3·1	28·3	3 19 0·0	18·5	2 11 7·7	23·9	3 6 8·6
1889-90	54·4	7 7 9·4	50·2	6 16 4·5	53·0	7 3 11·8	34·9	4 14 9·7	30·6	4 3 1·6	21·4	2 18 1·6	24·0	3 5 2·4	22·5	3 1 1·5
1890-91	54·3	6 16 5·1	49·0	6 3 1·3	40·3	5 1 3·0	32·4	4 1 4·9	25·4	3 3 9·8	25·2	3 3 3·8	24·0	3 0 3·6	25·4	3 3 9·8
1891-92	53·7	8 0 2·5	49·3	7 7 0·9	43·8	6 10 10·0	31·3	4 13 4·5	26·2	3 18 2·0	22·9	3 8 3·8	38·0	5 13 4·4	20·8	3 2 0·6
1892-93	50·6	7 3 10·0	49·1	6 19 6·8	42·6	6 1 1·1	32·8	4 13 2·8	26·1	3 14 2·3	20·0	2 16 10·2	30·0	4 5 3·3	20·2	2 17 5·0
1893-94	52·7	8 0 2·0	52·5	7 19 6·7	51·0	7 15 0·0	34·8	5 5 9·2	27·7	4 4 2·2	22·4	3 8 0·9	42·2	6 8 3·0	23·1	3 10 2·5
1894-95	57·4	8 6 3·2	51·8	7 10 0·6	61·0	8 16 8·4	34·8	5 0 9·6	27·7	4 0 2·8	26·2	3 15 10·7	30·4	4 8 0·7	27·1	3 18 6·0
1895-96	57·7	8 8 11·0	57·2	8 7 5·4	54·1	7 18 4·5	33·1	4 16 10·8	29·2	4 5 5·8	31·2	4 11 4·1	30·1	4 8 1·4	29·4	4 6 0·8
1896-97	58·1	8 13 8·0	55·3	8 5 3·6	53·5	7 19 11·0	28·8	4 6 1·1	29·3	4 7 7·0	32·6	4 17 5·4	31·5	4 14 1·9	28·1	4 3 11·9
1897-98	59·9	8 11 2·9	54·7	7 16 4·5	58·1	8 6 1·2	43·1	6 3 2·6	29·2	4 3 5·7	36·3	5 3 9·3	31·0	4 8 7·5	31·3	4 9 5·8
1898-99	58·7	7 11 7·1	55·4	7 3 0·8	54·9	7 1 9·3	35·7	4 12 2·3	29·6	3 16 5·3	33·8	4 7 3·5	...	...	29·6	3 16 5·3
1899-1900	59·3	7 7 11·4	55·7	6 18 11·7	54·4	6 15 8·7	33·4	4 3 4·0	27·8	3 9 5·3	34·9	4 7 0·9	22·6	2 16 4·6	28·6	3 11 4·3
1900-01	58·7	10 15 3·7	56·7	10 7 11·7	51·1	19 7 5·2	33·2	6 1 9·3	26·0	4 15 4·4	38·7	7 1 11·4	28·1	5 3 0·9	30·0	5 10 0·5
1901-02	53·5	12 4 0·6	53·8	12 5 5·0	58·9	3 8 8·2	30·4	6 18 8·1	30·5	6 19 1·6	35·2	8 0 6·9	30·4	6 18 8·1	32·8	7 9 7·5
1902-03	57·9	14 5 1·3	51·6	12 14 1·0	60·8	14 19 4·7	44·0	10 16 8·0	31·6	7 15 7·2	35·5	8 14 9·7	26·1	6 8 6·3	31·4	7 14 7·4
1903-04	55·9	11 17 5·2	56·3	11 19 1·6	49·2	10 8 11·7	33·9	7 3 11·9	27·8	5 18 1·0	33·7	7 3 1·7	29·6	6 5 8·7	27·9	5 18 6·1
1904-05	54·3	13 11 5·0	57·3	14 6 5·0	43·4	10 17 0·0	32·0	8 0 0·0	27·0	6 15 0·0	34·5	8 12 5·0	27·3	6 16 5·0	29·2	7 6 0·0
1905-06	53·9	12 17 11·3	57·6	13 14 11·5	44·7	10 5 7·4	38·4	8 16 7·7	34·0	7 16 4·8	29·3	6 14 9·4	60·6	13 18 9·1	30·1	6 18 5·5
1906-07	50·7	9 16 10·7	49·8	9 13 8·0	47·5	9 4 8·8	80·5	15 12 9·7	27·3	5 6 0·3	43·3	8 8 0·7	74·5	14 9 5·9	13·3	2 11 7·7
1907-08	56·2	10 4 5·0	55·7	10 2 6·1	49·4	8 19 8·6	25·9	4 13 11·6	30·9	5 12 3·0	37·3	6 15 7·5	35·0	6 7 2·7	25·8	4 13 9·8
1908-09	55·3	10 2 0·6	53·9	9 16 9·9	52·8	9 12 11·4	35·7	6 10 2·6	35·2	6 8 5·6	37·9	6 18 6·1	29·0	5 5 10·8	28·7	5 4 7·4
1909-10	59·3	10 3 3·8	56·4	9 13 4·5	67·5	11 11 6·3	51·8	8 17 7·4	31·0	5 6 2·6	42·4	7 5 3·1	...	...	26·4	4 10 5·0
1910-11	61·7	10 16 5·2	59·7	10 9 4·1	57·1	10 0 5·2	31·4	5 10 1·9	37·5	6 11 7·6	57·6	10 2 0·5	46·0	8 1 2·6	27·9	4 17 11·1

* Includes Erysipelas, Diphtheria, Chickenpox, and Puerperal Fever; prior to 1885-86 these are included in "Other Diseases." † Includes Nursing Mothers, besides persons sent in by mistaken Diagnosis.

N.B.—The above Calculations do not include Interest on Capital expended in erecting Hospitals.

TABLE LXIV.

City of Glasgow Fever and Smallpox Hospitals.

RETURN BY THE MEDICAL OFFICER OF HEALTH

Shewing Number, Average Residence, and Cost of Treatment of Patients, 1910-1911.

ORDINARY NETT EXPENDITURE, as per Treasurer's Statement * :—

Fever Hospital, Belvidere, ...	£36.754 0 1	
Smallpox Hospital, Belvidere, ...	1,205 3 1	
Fever Hospital, Ruchill, ...	38,008 1 0	
		£75,967 4 2

* The Ordinary Expenditure on all the Hospitals has been thrown together. There is a certain amount of community in the Expenditure which could not be unravelled without trouble quite out of proportion to any result.

Average daily number of Patients in Fever Hospital, Belvidere, ...	581
Average daily number of Patients in Smallpox Hospital, Belvidere, ...	20
Average daily number of Patients in Fever Hospital, Ruchill, ...	586
Average daily number of Patients in Hospitals, ...	1,187

	Belvidere Fever Hospital.	Belvidere Smallpox Hospital.	Ruchill Hospital.	Total.
Patients remaining at 31st May, 1910, ...	525	24	480	1,029
Patients admitted during 1910-1911, ...	4,054	147	4,099	8,300
Total under Treatment, 1910-1911, ...	4,579	171	4,579	9,329
Patients dismissed during 1910-1911, ...	3,971	158	4,024	8,153
Patients remaining at 31st May, 1911, ...	608	13	555	1,176

Average Residence of Patients dismissed, ... 56·68 days.

Average Daily Expenditure, ...	£208 4 3
Average Daily Cost per Patient, ...	0 3 6·10
Average Cost of Treatment per Patient, ...	9 18 10·23
Average Cost of Bed per Year, ...	64 0 0

STATEMENT SHEWING 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.
Scarlet Fever, ...	3,748	61·69 days.	£10 16 5·15
Enteric Fever, ...	282	59·67 „	10 9 4·11
Whooping-cough, ...	885	57·13 „	10 0 5·17
Typhus Fever, ...	10	31·40 „	5 10 1·94
Measles, ...	391	37·52 „	6 11 7·59
Other Infectious Diseases,*	2,336	57·59 „	10 2 0·54
Smallpox, ...	1	46·00 „	8 1 2·60
All other Diseases,†	500	27·96 „	4 17 11·12
All Cases, ...	8,153		

* Includes Erysipelas, Diphtheria, Chickenpox, Puerperal and Cerebro-Spinal Fevers.
† Includes Nursing Mothers, besides Persons sent in by mistaken diagnosis.

The above calculations of cost do not include Interest on Capital expended in erecting Hospitals.

A. K. CHALMERS.

SANITARY DEPARTMENT,
GLASGOW, *20th June, 1911.*