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GLASGOW CORPORATION

REPORT

OF THE

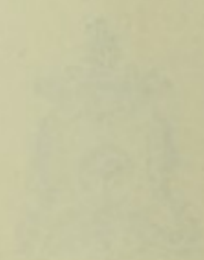
MEDICAL OFFICER OF HEALTH

OF THE

CITY OF GLASGOW

1905

PRINTED BY THE CORPORATION OF GLASGOW



PRINTED BY ROBERT ANDERSON, 11 WEST NINE STREET, GLASGOW

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REPORT OF THE MEDICAL OFFICER OF HEALTH.

1905.

SECTION I.

Under the revised instructions of the Local Government Board regarding the Annual Reports of Medical Officers, Article (a) requires "A general account of the 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 will be convenient, therefore, to preface this with a summary of the vital statistics for the year, and thereafter to include an abstract of the meteorological conditions which prevailed.

	Registrar-General's Estimate.	Medical Officer's Estimate.	
Population,	809,986*	785,474*	
Acreage, ... ..	...	12,688
Number of persons per acre, ...	63·8	61·9	
Total number of deaths registered, ... ..	...	14,460
Number, after correction for Institutions, &c., ...	...	13,758
Death-rate per 1,000 living— <i>All Causes</i> , 17·9 ...	...	17·5
Total number of Births registered, ... ..	...	24,316
Number, after correction, ... ..	...	24,175
Birth-rate per 1,000 living, ... ..	...	30·8
Infantile Deaths per 1,000 births, ... ..	...	131
Death-rate from zymotic diseases,	2·5 per 1,000	} 17·5	
" tubercular diseases—			
(a) Phthisis, ... 1·4	} 2·5		"
(b) Others, ... 1·1			
" diseases of respiration,	3·6		"
" " circulatory organs,	1·6		"
" " nervous system,	1·5		"
" cancer (malignant disease),	0·7		"
" septic diseases, ... 0·2	} 1·4		"
" violence, ... 0·6			
" premature births, ... 0·6			
" all other causes,	3·7		"

* On 7th November, 1905, the Police Burgh of Kinning Park became incorporated with the City, thereby adding 108 acres and an estimated population (Registrar-General's) of 13,946. Neither the population nor the deaths of this area have been included in the calculation of the present rates.

TABLE A.
ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at GLASGOW OBSERVATORY
during 1905.

MONTHS.	TEMPERATURE				RAINFALL.		
	Highest Temperature in Shade.	Lowest Temperature in Shade.	Mean Temperature for Month.	Departure from Average of 37 Years.	No. of Days it fell.	Amount Collected in inches.	Departure from average of 37 Years.
January, ...	51°·1	29°·2	40°·9	+ 2°·4	20	2·21	- 1·53
February, ...	50°·1	27°·4	40°·3	+ 1°·4	20	2·09	- 0·94
March, ...	57°·9	32°·5	42°·6	+ 2°·4	26	3·27	+ 0·76
April, ...	56°·4	28°·2	43°·1	- 1°·6	15	2·42	+ 0·41
May, ...	69°·1	36°·7	50°·6	+ 1°·2	11	1·52	- 0·94
June, ...	79°·2	42°·6	56°·9	+ 1°·8	7	0·66	- 2·07
July, ...	73°·9	46°·9	59°·3	+ 1°·8	20	2·96	- 0·16
August, ...	65°·8	43°·9	55°·8	- 0°·8	22	4·06	+ 0·18
September, ...	62°·8	40°·0	52°·7	- 0°·3	16	2·71	- 0·93
October, ...	58°·7	28°·2	44°·4	- 2°·4	11	2·28	- 1·44
November, ...	51°·9	24°·3	41°·1	- 1°·0	16	3·53	- 0·17
December, ...	51°·1	29°·7	43°·5	+ 4°·8	16	2·97	- 1·05
Total, ...	...	...	...	...	200	30·68	...

The aggregate hours of bright sunshine recorded for the months of January, February, June, July, September, and October was above the mean for 25 years while for March, April, May, and December it was below. There was no difference for November from the mean for 26 years.

TEMPERATURE AND RAINFALL.

If we regard these as secular forces operating on local conditions, any departure from the monthly averages of each may be considered in relation to the incidence of disease, and especially of the two classes—respiratory and diarrhœal—which most readily respond to these influences.

For example, in the winter months December to March, the mean temperature was uniformly above the average, and, in consequence, favourable to persons subject to bronchial attacks, while in the autumn months the departures were in the opposite direction, that is, below the average, and unsuitable for the spread of diarrhœal affections, and both find some response in the reduction of the death rates from respiratory and diarrhœal affections for the year. The combined effect of rainfall and temperature on diarrhœal affections is still subject of discussion, the later tendency being to regard excess of the former as the more influential in reducing their prevalence, but, save in March, April, and August, the rainfall of 1905 was below the average. These being general influences, it remains to be added that the causes which most largely influence health are, in the main, local, domestic, and personal.

FOOD ENQUIRY.

Through former enquiries, the increasing incidence of disease in descending the scale of house accommodation was established, and occasion was taken

during the year to conduct an enquiry into the food habits of over 500 families, comprising over 3,000 persons, whose households required visitation owing to the occurrence of infectious disease.

The enquiry was on lines similar to that formerly reported in connection with the school enquiry, and the results serve to emphasise the pressing need for educating the poorer classes of our citizens in the food values of the commoner articles of diet. As an immediately practical measure, the establishment by voluntary effort of food canteens in poorer-class districts, where substantial fare could be had at reasonable cost, could scarcely fail to accomplish much good.

The risks to which such establishments would be exposed are obvious, but could be guarded against by home visitation and a knowledge of the social circumstances of their patrons. But in all our poorer working class districts there are many motherless families where the children's food is a succession of tea-meals, with little variation, and no reliable female help available. It is to these that the canteen would prove invaluable.

With regard to the high average number of persons per room indicated in the following Table, it is to be observed that the families selected for the enquiry were those among whom infectious disease was occurring. They were, therefore, pre-eminently families with young children, and the average number of persons occupying the houses is naturally greater than had it been calculated on a more general basis:—

RESULTS of an INQUIRY into the NUMBER of INMATES and NATURE of FEEDING of 555 FAMILIES in which INFECTIOUS DISEASE (chiefly Measles) occurred.

	CLASSIFICATION OF DIETS.		
	Good.	Medium.	Bad.
Breakfast, ...	Porridge, Milk, and "Kitchen."	Tea, Bread, and Butter.	Tea, Bread, and Butter.
Dinner, ...	Soup, Meat, and Potatoes.	Potatoes, Soup.	Do.
Tea, ...	Tea, Bread, and occasionally "Kitchen."	Tea, Bread, Butter, and "Kitchen."	Tea, Bread, Butter, and occasionally "Kitchen."

Size of House.	No. of Families.	Persons.			Classification of Feeding of Families.					
		Adults.	Childr'n	Total.	Good.		Medium.		Bad.	
					No.	%	No.	%	No.	%
1 Apartment, ...	134	299	327	626	36	27	54	40	44	33
Average number of persons per room, ...		2.2	2.4	4.6						
2 Apartments, ...	379	1,233	1,167	2,400	173	46	166	44	40	10
Average number of persons per room, ...		1.6	1.5	3.1						
3 Apartments, ...	42	190	119	309	30	71	10	24	2	5
Average number of persons per room, ...		1.5	0.9	2.4						
Total, ...	555	1,722	1,613	3,335	239		230		86	

POPULATION.

The Registrar-General estimated the population of Glasgow at the middle of 1905 at **809,986**, or an increase of 11,629 on his estimate for the year 1904. This estimate is based on the rate of increase during the intercensal period 1891-1901, but it exceeds by 24,512 the Medical Officer's estimate based on the return of inhabited houses for the year under review.

The number of tenanted houses on 1st June, 1905, was 162,888, a decrease of 114 over the corresponding figures for 1904. Deducting $1\frac{1}{2}$ per cent. (2,443 houses), representing those not occupied, and applying the factor 4.769, which indicates the average number of persons per house at the 1901 Census, we get 765,162 as the number of persons occupying 160,445 inhabited houses. Adding to this 19,071 (the number of inmates in Institutions, as ascertained by special census) and 1,241 (the population of the Harbours of Glasgow as at the 1901 Census), the total population as at 1st June, 1905, may be estimated at 785,474.

We have thus a decrease of 114 in the number of inhabited houses, while the increase in the population is the purely nominal one of 9. The Registrar-General's figures represent an increase for the year of 1.5 per cent.

In the Report for 1904, I took occasion to show that the difference between births and deaths occurring within the City in the twenty years ending 1891 exceeded by 49,000 the Census increase during that period, and might fairly be taken to represent the loss to the City through overflow into the surrounding districts. When the City Assessor's returns for 1905 were available, I was able to carry the enquiry into a comparison of the rates of growth in recent years in the combined population of the several parishes represented within the municipal area of Glasgow, and to show that the movement outwards which took place in the '70's and '80's decades was again being repeated, but on a much larger scale. Indeed, when we come to consider the final results for the year 1905 (see under "Sources of Increase," p. 20), we shall find that the loss through overflow in this year exceeds 10,000. This enquiry formed the subject of a Memorandum, which was presented to the Town Council in November, 1905, and is here reproduced.

POPULATION—ESTIMATE FOR 1905.

For some time I have been in possession of the return of inhabited houses within the municipal area prepared by Mr. Henry, the City Assessor, but have delayed formally submitting the estimates of population, which are based thereon, until the inclusion of Kinning Park, which took place on 7th current, permitted some reference being made to the corresponding information relating to that burgh.

The facts disclosed by Mr. Henry's return are worthy of the closest attention. It shows that at 1st June last the number of "inhabited" houses within the municipality was 162,888, as compared with 163,002 at the corresponding period of 1904. This represents a decrease for the year of 114, and, although but a further development of the reduced rate of increase referred to in submitting the estimates for 1903 and 1904, it is notable as being the first actual interruption to a period of growth which has been continuous since 1887, and is the seventh only which has occurred since 1872—the majority, indeed, of the former years of decrease having occurred in the period of commercial depression which followed the failure of the City of Glasgow Bank. While this decrease represents the balance of the gains and losses in the several wards, something may be learned of the details of the ebb and flow which has produced it by a reference to Table I., which is appended. In considering this table it will help towards an appreciation of the significance of the changes shown therein if the boundaries of the City prior to the extension of 1891 are borne in mind.

Within this older area the districts which alone show increase during the present year are now mainly included within Mile-end, Dennistoun, Cowlands, and Anderston Wards, and it is to be observed that these wards are circumferential in part at least of their area, although Anderston might be regarded as an exception to this statement, by reason that it has no open country immediately beyond it. So also increase has

occurred in the suburban wards of Langside, Pollokshields, Kelvinside, and Maryhill—an increase, moreover, which has been maintained in each of them during the past three years, save in Maryhill, where an interruption occurred three years ago.

Elsewhere there has been decrease—in some cases, as in Dalmarnock, Calton, and Hutchesontown, it has been considerable—and further investigation of the facts seems desirable.

Can this decrease be regarded as accidental to the present year, or is it only a more pronounced illustration of a continuous process of depletion in certain areas? To some extent an answer to this question is afforded by comparing the movement over the years in which the ward areas have been taken as the units of Public Health administration.

In Dennistoun and Cowlares alone, both of which include districts outside the old boundary, has there been an unbroken record of increase during the last three years. Of the others there has been a progressive reduction during the same period in nine, viz., Dalmarnock, Townhead, Calton, Blackfriars, Blythswood, Broomielaw, Sandyford, Woodside, and Hutchesontown; it has continued during the past two years in two, viz., Whitevale and Cowcaddens; the wards which show decrease for the first time in the present year are four in number, viz., Springburn, Gorbals, Kingston, and Govanhill; while Exchange and Park Wards have shown decrease in two years out of three.

And if we extend the comparison over the whole area of the extended city, and include the whole period since that extension in 1891, we find evidence which suggests centrifugal displacement of population, by reason of the contrast presented between a central area, where growth is almost arrested, and a marginal zone, where it has been exceedingly active.

For the purposes of this comparison we may take the present Parliamentary area as representing—as it does in actual fact—the municipal area of Glasgow prior to the 1891 extension, and compare it with that portion of the present municipal area which is beyond the Parliamentary boundary, and represents, therefore, the districts added in that year. Although I have taken out the details for each year, it will sufficiently illustrate the contrast to produce here only a few of them—

NO. OF OCCUPIED HOUSES *within* AND *beyond* THE PARLIAMENTARY BOUNDARY.

Year.	Within.	Beyond.
1891,	119,693	18,165
1895,	123,091	21,061
1900,	129,822	27,584
1905,	129,209	33,679
Percentage Increase—1891-1905, ...	7.9	85.4

During these fifteen years the inhabited houses in "Old" Glasgow have increased by 7.9 per cent. only, while in the marginal areas they have increased by 85 per cent.

But in this summary we lose sight of the fluctuations in the rate of growth, which the following comparison may supply. The percentages which follow are calculated for quinquennial periods:—

Period.	WITHIN PARLIAMENTARY BOUNDARY.	BEYOND PARLIAMENTARY BOUNDARY.
	Decrease or Increase per cent.	Increase per cent.
1891-1895,	+ 2.8	13.8
1895-1900,	+ 5.5	23.6
1900-1905,	- .5	18.1

The contrast between the rate of growth in the Parliamentary area and in that beyond is sufficiently suggestive, but it is only during the last quinquennium that an actual reduction in the number of inhabited houses within the Parliamentary area occurs, and with it a reduced rate of growth in the zone beyond. Moreover, the arrest in growth of the central area has wholly occurred since 1903, and in the two intervening years the decrease has amounted to 1.7 per cent.

So far we have followed the movement as indicated by the number of houses "occupied," and necessarily have left aside the number of houses without tenants, regarding which I have at the moment no information. A table, however, which I owe

to the courtesy of the Master of Works, brings into prominence the districts in which the existence of a demand for new house accommodation may be inferred from the number being built to meet it. In that table (Appendix II.) the linings granted by the Dean of Guild Court for the year ending 31st August last are stated for the police districts of the city—the designations of which are sufficiently descriptive, although they do not correspond with the ward divisions. Here the Western, Southern, and Northern Police Districts are conspicuous by reason of the total absence of any new house linings having been granted for erection in them during the year, and the large proportion of houses of one and two apartments in the Queen's Park District is not less worthy of note, as indicating a tendency to provide smaller-sized houses in suburban areas.

Both returns serve, therefore, to emphasise the facts which are apparent enough to anyone familiar with the various districts of the city. Save in the marginal zone, growth is arrested—arrested, indeed, over an extent which almost corresponds with its Parliamentary area. Are the two movements in any sense complementary? Is the growing marginal zone absorbing the natural increase of the centre as well as retaining its own? Here we may appeal to the facts of 1904 for answer. In that year the births exceeded the deaths by almost 10,000 (9,919), while the estimated increase of the population is only 9, as we shall see later. The equivalent of the difference has, therefore, been lost to the city in one year by displacement outwards. To this we shall return later.

In proceeding to estimate the present population from the foregoing data by the use of factors obtained during a decade of continuous and considerable increase, considerable misgiving may be entertained as to the accuracy of the result obtained, because some variation in the number of persons per house may be assumed as at least a possible concomitant of a reduction in the number of houses occupied. By continuing their use, however, we shall not err, I think, on the side of excess. Deducting, therefore, $1\frac{1}{2}$ per cent. (2,443 houses), representing those not occupied, and applying the factor 4.769, which represents the average number of persons per house at the Census of 1901, we get 765,162 as the population of the houses within the municipal area prior to the inclusion of Kinning Park. This is to be compared with 765,696, which was the estimated "house" population for 1904, and represents a decrease of 534 for the year. There is, however, the institutional and Harbour population to be taken into account. These together this year number 20,312, compared with 19,769 last year, and represent a balance in excess of 543. Adding "house" and "institutional" (including "harbour") population together, we may thus estimate the total population within the municipal area, as at June last, at 785,474, compared with 785,465 for 1904, representing a difference of 9 persons only in favour of the present year. In other words, the population has only been saved from a numerical reduction by reason of an increase in the number of persons resident in institutions, and in consequence removed from opportunities of discharging many of the responsibilities of citizenship.

The estimate of the population thus made falls short of the Registrar-General's by 24,512, and will produce a difference equal to 0.5 per 1,000 in the death-rate. I purpose, therefore, in future, stating this rate as calculated on both estimates, as in round numbers a difference of 1 per 1,000 may readily arise.

GLASGOW AND ITS OUTER RING.

Two causes, at least, may be readily imagined as producing displacement of population. Fluctuation in trade or migration of industries may produce a genuine dispersal; while there are quite modern indications of a tendency in large populations to distribute themselves more widely. The Committee on Health will readily appreciate the hygienic value of this latter movement; but it is important to distinguish, if possible, between the two causes just suggested; and the following inquiry was undertaken in the hope that it would afford some information regarding this phase of the question.

Trade influences, however, readily overstep administrative limits; and if we are to discover the effect on our population of fluctuations in industrial prosperity, the whole commercial community of which Glasgow is the centre should be considered. This may be fairly represented, for our present purpose, by taking the total population of the combined parishes which are represented within the municipal area of Glasgow, viz., those of Glasgow, Govan, Cathcart, Eastwood, and Rutherglen. This area has the advantage of

including within itself that portion which was constituted by the Registrar-General in 1881 a "Principal Town District," under the name of "Glasgow Landward and Suburban,"* and it contains a population living, with few exceptions, within a radius of four miles from the Exchange.†

On this area, then, we may construct two populations, one within and the other outwith the City, and consider them together or separately. Dealing first with the facts of the Census enumerations, we have the following information regarding the growth of each in the decade 1891-1901:—

	1891.	1901.	Increase per cent. in 10 years.
Glasgow (present area),	658,073	761,709	15·7
In combined parishes outwith Glasgow,	163,653	219,443	34·0
Total population in the 5 parishes named,	821,726	981,152	19·4

Within the combined parishes, therefore, the population in the decade 1891-1901 increased by 19 per cent., while the increase within the Glasgow municipal area was 15·7, and in the portions of the parishes beyond 34 per cent. For future comparison these increases may be stated as annual rates of 1·9, 1·6, and 3·4 respectively.

From this, our next step is to estimate the present population of the five parishes which have been named. Had the rate of increase which was ascertained at the last census been maintained during the interval ($4\frac{1}{4}$ years), this population should now number 1,058,128. There are reliable grounds, however, for stating that the present population is considerably less than this, and may approximately be put at 1,033,428. It would serve no purpose at present to recite the details of the investigations through which this figure has been arrived at, but the following abstract of the adjusted details of the estimates for the portions of the various parishes which are beyond the boundary of Glasgow are of interest as showing wide variation in the rates of growth therein:—

1905.—ABSTRACT OF ESTIMATED POPULATIONS IN THE PARISHES OF GLASGOW, GOVAN, EASTWOOD, CATHCART, AND RUTHERGLEN, BEYOND THE MUNICIPAL BOUNDARY OF GLASGOW.

Parish.	Glasgow (Municipal).	Portion of Parish beyond Glasgow.		Estimated Increase per cent.
		1901 (Census).	1905 (Estimate).	
Glasgow,	23,970	28,489	18·9
Govan,	151,798	169,037	11·3
Eastwood,	15,366	16,498	7·4
Cathcart,	7,375	9,571	29·8
Rutherglen,	20,934	24,359	16·4
	785,474	219,443	247,954	
Estimated Total Population, } 1,033,428				
1905, }				

We may now revert to the rates of increase in the several portions of this area during the period 1891-1901 for the purpose of comparing them with those which may be drawn from the present estimates. A short table may serve to curtail the description:—

* See Medical Officer's "Census" Report, 1901, p. 31.

† Portions of all the parishes extend beyond this, but Thornliebank, Giffnock, and Mansewood are, I think, the only "populous places" in these parishes beyond this limit.

GROWTH (1) OF COMBINED PARISHES (2) OF GLASGOW AND (3) OF AREA BEYOND.

	1901 (Census).	1905 (Estimate by Medical Officer).	Increase (4½ years).	Annual Rate of Increase.	
				1901-5.	1891-1901.
(1) Combined Parishes,	981,152	1,033,428	52,276	1.25	1.9
(2) Glasgow (Municipal),	761,709	785,474	23,765	0.73	1.6
(3) Beyond Glasgow, ...	219,443	247,954	28,514	3.05	3.4

It may seem reasonable enough to attribute to depressed trade the lowered rate of increase over the whole area. The difference between 1.9 per cent. which was the rate of increase in last decade, and 1.3 per cent. in the present period is only fractional, but it represents a reduction in the number being annually added to this population of 5,812 persons. Most interest, however, attaches to the contrast presented by the rates within and beyond the municipality. Here, while in the former the rate of increase has fallen to barely one half, the rate of increase of the marginal parts has almost been maintained at its former level, notwithstanding the lowering of the rate over the whole area.

In all, it may be estimated that 52,276 persons have been added to the combined population during the period, and of this number 23,765 were added to Glasgow, while 28,514 were added to other portions of the outer ring.

With the evidence which past experience has provided of the evils which result from massing of population, this tendency towards wider distribution is to be welcomed, but it should be remembered that the vital interests of a community are liable to suffer when portions of it become dismembered by administrative limitations.

I wish here to express my personal indebtedness to, and appreciation of, the uniform kindness of the Assessors of the various parishes for placing at my disposal their registers of the inhabited houses for the present year; and my thanks are also due to Dr. Barras and Dr. Brown, who confirmed the estimates for their respective Burghs of Govan and Partick; to Dr. Wilson, Medical Officer of Health, Lanarkshire, who supplied me with valuable information regarding his own district, &c.; and to Dr. Campbell Munro, of Renfrewshire, who was fortunately able to supply the details of a recent police census of the portions of the parishes in Renfrewshire lying within the jurisdiction of the County Council.

KINNING PARK.

The inclusion of Kinning Park within the municipal boundary took effect on 7th November current. It contains 108 acres, and the number of inhabited houses (as at 1st June) was 2,878. On the basis of the census returns, this shows a population of 13,938 persons, and represents a density of *128 persons per acre, or fully twice that of the city*. In this respect it most nearly approaches Whitevale and Calton. Its area is fully built, and in the last 13 years only 6 new tenements have been added. *Its average house is small, and contains less than two rooms, resembling in this respect Dalmarnock, Mile-end, Springburn, and Hutchesontown, while each room contains on an average 2.498 persons, which again resembles Springburn.* For the past 5 years its death-rate has averaged 18.2 and its birth-rate 38.0 per 1,000.

About 40 houses are let in lodgings.

KINNING PARK.—CENSUS 1901.

Acreage, ...	108
Population—	
Without Institutions and Shipping, ...	—
Institutions, ...	—
Total Population, ...	13,852
Houses—	
Inhabited, ...	2,860
Empty, ...	93
Windowed Rooms—	
Inhabited Houses, ...	5,546
Institutions, ...	—
Per Inhabited House, ...	1.939
Persons per Acre, ...	128.3
„ House, ...	4.843
„ Room, ...	2.498

TABLE B.

GLASGOW, 1905.—INHABITED HOUSES AS PER ASSESSOR'S RETURN, AND ESTIMATE OF POPULATION FOR EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES.				POPULATION.			
	1904.	1905.	Decrease.	Increase.	1904.	1905.	Decrease.	Increase.
1. Dalmarnock, -	11,176	10,901	275	...	50,655	49,408	1,247	...
2. Calton, - -	8,315	8,077	238	...	37,966	36,881	1,085	...
3. Mile-end, - -	9,473	9,497	...	24	43,180	43,292	...	112
4. Whitevale, - -	7,006	6,961	45	...	33,087	32,877	210	...
5. Dennistoun, -	7,512	7,747	...	235	34,247	35,321	...	1,074
6. Springburn, -	8,869	8,828	41	...	42,287	42,094	193	...
7. Cowlairs, - -	6,205	6,328	...	123	30,337	30,939	...	602
8. Townhead, - -	8,333	8,227	106	...	39,354	38,856	498	...
9. Blackfriars, -	4,619	4,542	77	...	22,498	22,122	376	...
10. Exchange, - -	413	391	22	...	2,238	2,117	121	...
11. Blythswood, -	638	609	29	...	3,485	3,329	156	...
12. Broomielaw, -	1,547	1,477	70	...	8,091	7,726	365	...
13. Anderston, - -	6,184	6,278	...	94	29,142	29,588	...	446
14. Sandyford, - -	5,434	5,376	58	...	25,944	25,668	276	...
15. Park, - - -	5,143	5,102	41	...	25,222	25,017	205	...
16. Cowcaddens, -	8,146	7,965	181	...	38,191	37,344	847	...
17. Woodside, - -	9,858	9,671	187	...	45,060	44,207	853	...
18. Hutchesontown, -	9,261	9,043	218	...	41,465	40,488	977	...
19. Gorbals, - - -	7,524	7,423	101	...	36,563	36,074	489	...
20. Kingston, - -	7,351	7,269	82	...	34,957	34,566	391	...
21. Govanhill, - -	7,442	7,414	28	...	33,884	33,760	124	...
22. Langside, - -	7,154	7,891	...	737	32,660	36,026	...	3,366
23. Pollokshields, -	3,448	3,469	...	21	17,732	17,843	...	111
24. Kelvinside, - -	3,861	4,008	...	147	19,888	20,647	...	759
25. Maryhill, - -	8,090	8,394	...	304	37,563	38,972	...	1,409
Institutions, - -	...	...	...	...	18,528	19,071	...	...
Harbour, - - -	...	...	...	...	1,241	1,241	...	...
CITY, - - -	163,002	162,888	114	...	785,465	785,474	...	9
26. Kinning Park, -	...	2,878	...	...	...	13,938	...	...

TABLE C.

MEMORANDUM OF HOUSE LININGS GRANTED BY DEAN OF GUILD COURT
FROM 1ST SEPTEMBER, 1904, TILL 31ST AUGUST, 1905.

DISTRICT.					NO. OF APARTMENTS.					
					1.	2.	3.	4.	5.	6.
Central,	...	...	...	A,	32	51	—	—	5	—
Western,	...	...	...	B,	—	—	—	—	—	—
Eastern,	...	...	...	C,	200	739	4	—	—	1
Southern,	...	...	...	D,	—	—	—	—	—	—
Northern,	...	...	...	E,	—	—	—	—	—	—
St. Rollox,	...	...	...	F,	16	112	26	—	—	2
Queen's Park.	...	...	...	G,	12	231	271	45	43	49
Maryhill,	...	...	...	H,	—	2	68	27	59	90
					260	1,135	369	72	107	142

The following Table (I.) shows the acreage and number of inhabited houses in each Ward at the Census and in 1904, together with the increase or decrease in each, and the density for both years:—

TABLE I.—ACREAGE, INHABITED HOUSES, and PERSONS per Acre in each MUNICIPAL WARD in 1905; 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, 1905.	Inhabited Houses, 1905.	POPULATION.						Persons per Acre (including Institutions and Shipping)	
			Census 1901.	Estimated, Middle of 1905.	Increase.	Decrease.	Increase per Cent.	Decrease per Cent.		
1. Dalnarnock, ...	562	10,901	49,210	49,408	198	...	0.4	...	89	89
2. Calton, ...	337	8,077	39,045	36,881	...	2,164	...	5.5	123	116
3. Mile-end, ...	512	9,497	42,110	43,292	1,182	...	2.8	...	83	85
4. Whitevale, ...	321	6,961	33,897	32,877	...	1,020	...	3.1	111	105
5. Dennistoun, ...	718	7,747	30,482	35,321	4,839	...	15.9	...	45	52
6. Springburn, ...	1,531	8,828	37,744	42,094	4,350	...	11.5	...	26	29
7. Cowhairs, ...	865	6,328	26,597	30,939	4,342	...	16.3	...	31	36
8. Townhead, ...	261	8,227	40,492	38,856	...	1,636	...	4.0	163	149
9. Blackfriars, ...	146	4,542	24,333	22,122	...	2,211	...	9.1	173	158
10. Exchange, ...	123	391	2,326	2,117	...	209	...	9.0	23	21
11. Blythwood, ...	90	609	4,101	3,329	...	772	...	18.8	48	42
12. Broomielaw, ...	104	1,477	9,633	7,726	...	1,907	...	19.8	102	89
13. Anderston, ...	462	6,278	29,934	29,588	...	346	...	1.2	68	67
14. Sandyford, ...	138	5,376	26,449	25,668	...	781	...	3.0	192	187
15. Park, ...	346	5,102	24,903	25,017	114	...	0.5	...	74	75
16. Cowcaddens, ...	173	7,965	40,380	37,344	...	3,036	...	7.5	239	222
17. Woodside, ...	283	9,671	45,447	44,207	...	1,240	...	2.7	161	157
18. Hutchesontown, ...	224	9,043	42,284	40,488	...	1,796	...	4.2	189	181
19. Gorbals, ...	243	7,423	35,750	36,074	324	...	0.9	...	151	152
20. Kingston, ...	412	7,269	34,386	34,566	180	...	0.5	...	85	85
21. Govanhill, ...	449	7,414	31,639	33,760	2,121	...	6.7	...	70	75
22. Langside, ...	840	7,891	25,337	36,026	10,689	...	42.2	...	31	43
23. Pollokshields, ...	1,353	3,469	15,317	17,843	2,526	...	16.5	...	11	13
24. Kelvinside, ...	917	4,008	15,611	20,647	5,036	...	32.3	...	18	23
25. Maryhill, ...	1,278	8,394	33,717	38,972	5,255	...	15.6	...	28	32
— Institutions and Shipping,	...	...	20,588	20,312	...	276	...	...	...	...
CITY, ...	12,688	162,888	761,712	785,474	23,762	...	3.1	...	60.1	61.9
26. Kinning Park,	108	2,860	13,852	13,938	86	...	0.6	...	128.3	129.1

SOURCES OF INCREASE.

After correction the number of births occurring during the year was 24,175, and the number of deaths 13,758, leaving an excess of births over deaths of 10,417.

This would represent 89·6 per cent. of the increase estimated by the Registrar-General to have occurred, and would leave a surplus of 1,212 persons to be explained by the excess of immigration over emigration. But, as has been shown, on the inhabited-house estimate the increase (9) in the population has been a purely nominal one.

The differences thus arising will be better appreciated by comparing the natural increase with the estimated rates of the Registrar-General and Medical Officer respectively:—

	Registrar-General's Estimate.	Medical Officer's Estimate.	Natural Increase added to Registrar-General's 1904 Estimate.
Population, 1904, ...	798,357	785,465	—
1905, ...	809,986	785,474	808,774
Increase, ...	11,629	9	10,417
Percentage Increase,	1·5	0·0	1·3

By natural growth alone the population would have increased 1·3 per cent., and the Registrar-General's estimate assumes that this has been retained and the population further increased by a slight excess from surplus immigration, while the inhabited-house estimate suggests that there has been practically no addition at all made to the population during the year as against an increase equal to one-third of the natural increase during 1904.

MARRIAGES.

In 1905 there were 6,968 marriages registered in Glasgow, as compared with 7,185 in 1904. These represent rates per thousand persons living of 8·6 and 9·0 respectively. The rate is lower than any which has been registered since 1891-5.

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

1870, ...	980*	1886-90, ...	884
1871-75, ...	992	1891-95, ...	895
1876-80, ...	901	1896-1900, ...	989
1881-85, ...	937	1901-05, ...	908

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 4 per cent. only is shown during the last thirty years; whereas when it is calculated on the unmarried and widowed population over 15 years of age the reduction actually amounts to 16 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	31·7	100
1880-82	8·8	88	27·2	86
1890-92	9·5	95	24·8	78
1900-02	9·6	96	26·5	84

* From the Registrar-General's Annual Reports.

BIRTHS.

24,316 births were registered in Glasgow during the year 1905; and after deducting those born within the municipal area not belonging to Glasgow, and adding those born beyond the municipal area but belonging to Glasgow, there remain 24,175 births properly belonging to the City. This represents a birth-rate of 30·778 per 1,000 persons living, calculated on the Medical Officer's estimate of the population, as compared with 24,713 births, representing a birth-rate of 31·463 in 1904. The birth-rate is now lower than any previously recorded, and represents a fall in the rate equal to 685 per million compared with 1904.

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 22 per cent. below the average for 1870-72, when calculated on the whole population, the actual reduction amounts to 28 per cent. when calculated on the number of women at child-bearing ages.

Notwithstanding the various suggestions which have been advanced to explain the decline in the birth-rate, there seems in this, as well as in the reduced marriage-rate, a suggestion of decreased fertility, somewhat parallel to that which occurs in plant-life under conditions of excessive artificial culture.

GLASGOW.—MEAN ANNUAL BIRTH-RATES.

	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

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

During the decade 1895-1904, and in 1905, the rates for the following large towns have been as follows:—*

	1895-1904.	1905.
Glasgow,	32·6	30·0
Edinburgh,	26·2	23·0
Dundee,	28·9	28·0
Aberdeen,	32·0	29·2
London,	29·2	27·1
Liverpool,	34·7	33·3
Manchester,	32·3	29·5
Birmingham,	32·7	29·3

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

It will be observed that the birth-rate in Glasgow is lower than that of Liverpool and Birmingham for the period 1895-1904, but stands highest, with the exception of Liverpool, for 1905.

In Table II. the births and rates *per million* in each ward are stated, to which have been added the rates for 1903-4 for comparison. Mile-end Ward in 1905 had the highest birth-rate, while Dalmarnock, Springburn, and Maryhill have each a rate exceeding 40; Blythswood and Pollokshields are the two lowest, with rates of 9.6 and 9.8 respectively.

TABLE II.

GLASGOW, 1905.—BIRTHS and BIRTH-RATES *per Million* in each WARD, exclusive of Institutions and Harbour, with corresponding Rates for 1903 and 1904.

MUNICIPAL WARDS.	1903.	1904.	1905.	
	Rate per Million.	Rate per Million.	Number.	Rate per Million.
1. Dalmarnock,	40,956	40,627	2,012	40,722
2. Calton,	32,858	32,634	1,277	34,625
3. Mile-end,	41,325	40,341	1,774	40,977
4. Whitevale,	32,506	33,789	1,062	32,302
5. Dennistoun,	29,192	29,783	1,035	29,303
6. Springburn,	41,852	41,666	1,700	40,386
7. Cowlairs,	35,526	37,017	1,124	36,329
8. Townhead,	32,734	31,940	1,201	30,909
9. Blackfriars,	33,135	32,580	702	31,733
10. Exchange,	22,401	20,107	36	17,005
11. Blythswood,	9,445	11,478	32	9,612
12. Broomielaw,	31,906	30,404	230	29,770
13. Anderston,	34,734	33,456	949	32,074
14. Sandyford,	25,559	22,356	637	24,817
15. Park,	13,345	11,815	276	11,032
16. Cowcaddens,	35,110	34,641	1,190	31,866
17. Woodside,	33,579	32,644	1,325	29,973
18. Hutchesontown,	40,358	39,598	1,533	37,863
19. Gorbals,	27,890	29,429	1,037	28,746
20. Kingston,	30,436	29,579	1,066	30,839
21. Govanhill,	35,339	38,011	1,203	35,634
22. Langside,	21,637	19,963	721	20,013
23. Pollokshields,	11,069	10,715	175	9,808
24. Kelvinside,	11,563	12,067	260	12,593
25. Maryhill,	42,821	38,600	1,562	40,080
— Institutions and Harbour, ...	...	...	56	...
CITY,	32,042	31,463	24,175	30,778

DEATHS—ALL CAUSES.

14,460 deaths from all causes were registered in Glasgow during the year 1905, but, as has been explained in former Reports, the deaths as registered are subject to correction for "Institutions" as follows:—

Number of deaths registered as occurring within the City, ...	14,460
Deduct deaths occurring in Glasgow, chiefly in Institutions, of persons whose usual residence is beyond the City boundary, ...	823
	<hr/> 13,637
Add deaths of Glasgow citizens in Govan Poorhouse, ...	121
	<hr/> 13,758
Deaths properly belonging to Glasgow, ...	<hr/> 13,758

On the Medical Officer's estimate of the population, which is lower by 24,512 than that of the Registrar-General, this represents a death-rate of 17·5 per 1,000 living. This is fractionally below the rate for 1904, and is the lowest recorded. In 1904 the rate thus calculated was 18·8 per 1,000, and the difference is equivalent to a decrease of 1,319 deaths per million living. In 1903 the death-rate was 18·5.

INSTITUTIONAL DEATHS AND DEATHS OF NON-RESIDENTS.

In correcting for Institutional deaths after the above manner, the custom of former years has been adhered to. But it will be obvious that two series of death-rates are becoming established—indeed, this has been the case for years—a national and a local one; and the latter—apart from differences in the population estimates, as in the present instance—will usually be lower than the national. And this for two reasons. The Registrar-General does not deduct from the registered deaths those of non-residents, occurring chiefly in institutions, such as hospitals, &c., to which persons have been removed solely for treatment. The Medical Officer can readily deduct these, but, on the other hand, he cannot, save by courtesy of his colleagues, recover all those of persons formerly resident in his district, but dying beyond it; *that is, there is presently no national system of transferring deaths to the place of residence of the deceased.* Consequently, it may be assumed that the sum of the deaths dealt with in local returns will not equal the number dealt with annually by the Registrar-General. It needs no argument to show that this discrepancy is undesirable, and may be misleading, and that some reform of present custom is required. The object of local statistics is to reflect the influence of local conditions affecting health. In a true accounting, impairment of vitality as well as loss by death should be indicated. For many persons in all populations impaired vitality implies a drift towards parochial relief. But the administrative areas for Poor Law and for Public Health purposes do not always coincide, and Poor Law hospitals and asylums are not always erected even within the limits of the parish from which their inmates are drawn. A considerable portion of the municipal area of Glasgow south of the Clyde is within the Parish of Govan, which provides for its infirm poor at Merry-flats, within the parish but in the Public Health area of Lanarkshire, whilst its insane paupers are removed to Hawkhead, in the Parish of Paisley, and within the Public Health area of Renfrewshire (Landward).

Similarly, on the north of the River, the Parish of Glasgow deals with its infirm poor in institutions within the municipal area, but its insane poor are treated at Gartloch and Woodilee, which are in Lanarkshire and Dumbartonshire respectively.

Hitherto the practice in Glasgow has been to refer back to their original residence within the City deaths of persons who had been removed to the Poor Law hospitals for treatment, and as the Glasgow Parish hospitals are

within the municipal area, these transferences were chiefly from Merryflats. A considerable leakage of deaths, chiefly of insane poor, must, therefore, occur annually, and, by voluntary arrangement among Medical Officers, an effort will be made to ascertain its extent. But the establishment of a proper system of transference of deaths should be national and compulsory, and can only be effected through the Registrar-General's Department. Other questions will subsequently arise as to the best method of dealing with such deaths, but without considering these in any detail at the moment, it would appear essential to any such system that, along with the deaths, information should also be readily obtainable of the permanent extra-mural population among which they occur. That is, to deal with deaths only without a population seems a statistical anomaly.

In all populations some portion is resident in institutions—either from choice or through infirmity—and a permanent record of this section would have the advantage of readily indicating the number of persons whom the vicissitudes of life leave dependent on organised relief, or who, for various reasons, elect to live in lodging-houses and elsewhere. It is a population largely composed of adults, and in whom, consequently, disease is more likely to end fatally. In the general population of the City, 46 persons out of every 100 are at ages 25 and upwards, while in the institutional population within the municipal area there are 70 in every 100 at these ages. Again, while in the general population 295 in every 1,000 deaths occur during the productive period of life, in institutions this proportion rises to 432. It is a population, moreover, where phthisis causes 18 per cent. of the institutional deaths against 8 per cent. in the general population. Above all, it is a population with a special environment, which has little in common with that of the average citizen, and for this reason is worthy of separate consideration.

For the purposes of showing the causes and age-distribution of deaths within the intra-mural institutions, the two following Tables have been constructed:—

GLASGOW, 1905.—INSTITUTIONAL DEATHS.—ANALYSIS of CAUSES and AGES.

CAUSE OF DEATH.	AGES.							Total.
	- 1	- 5	- 15	- 20	- 25	- 60	60 +	
Smallpox, ... ..	...	...	...	...	...	...	...	...
Diphtheria, ... ..	...	...	...	...	...	...	...	...
Scarlet, ... ..	...	...	1	...	...	1	...	2
Typhus, ... ..	...	...	...	...	...	...	...	...
Enteric, ... ..	...	...	...	...	...	2	...	2
Undefined, ... ..	...	...	...	...	...	...	...	...
Measles,	3	12	1	...	...	...	...	16
Whooping-cough, ...	...	...	...	...	...	...	...	...
Diarrhœa,	26	13	...	...	...	2	2	43
Septic Diseases, ...	...	...	...	...	...	1	...	1
Phthisis,	1	2	2	9	17	143	30	204
Other Tubercular Diseases,	9	6	14	1	2	6	1	39
Cancer, ... ..	...	...	...	...	1	29	22	52
Nervous Diseases, ...	1	1	3	1	...	40	65	111
Circulatory Diseases, ...	1	...	...	...	1	52	96	150
Croup, ... ..	...	...	...	...	...	...	...	...
Respiratory Diseases, ...	4	9	2	2	6	80	64	167
Violence,	1	...	2	2	2	65	10	82
Premature Births, ...	4	...	...	...	...	...	...	4
Unknown, ... ..	...	...	...	...	...	7	2	9
Others,	34	3	8	1	1	49	127	223
Per thousand Institu-	84	46	33	16	30	477	419	1,105
tional Deaths, ...	76	42	30	14	27	432	379	1,000
All deaths,	230	170	49	22	27	295	207	1,000

GLASGOW, 1905.—INSTITUTIONAL DEATHS.—SUMMARY.

CAUSE OF DEATH.	Poorhouses.	Lodging-houses.	Infirmaries, Hospitals, &c.	Homes for Old Men and Women and Orphans, Barracks, Prison, and Harbour.	Total.
Smallpox, ...	...	...	...	...	...
Diphtheria, ...	...	...	...	...	...
Scarlet, ...	1	...	1	...	2
Typhus, ...	...	...	...	...	...
Enteric, ...	...	1	...	1	2
Undefined, ...	...	...	...	...	...
Measles, ...	13	3	...	...	16
Whooping-cough, ...	...	...	...	...	...
Diarrhoea, ...	40	2	...	1	43
Septic Diseases, ...	...	...	...	1	1
Phthisis, ...	157	32	12	3	204
Other Tubercular Diseases, ...	27	4	8	...	39
Cancer, ...	36	9	5	2	52
Nervous Diseases, ...	66	19	17	9	111
Circulatory do., ...	95	32	12	11	150
Croup, ...	...	...	...	...	...
Respiratory Diseases, ...	87	57	9	14	167
Violence, ...	6	62	5	9	82
Premature Birth, ...	1	1	2	...	4
Unknown, ...	...	8	...	1	9
Others, ...	111	61	35	16	223
	640	291	106	68	1,105
Per cent., ...	57.9	26.4	9.6	6.1	100

In the following Table III. the rates for several classes of disease in 1904-5 are contrasted. Zymotics as a class have a fractionally higher rate, due largely to Measles, while the rates for all the other classes, save septic diseases, cancer, and diseases of the circulation, are lower:—

TABLE III.

GLASGOW, 1905.—DEATH-RATES per 1,000, with corresponding Rates for 1904.

	1904.		1905.		-	+	-	+
I. PRINCIPAL ZYMOTIC DISEASES, ...	...	2.450	...	2.500	...	...	...	.050
Smallpox, ...	.085	...	.001	...	.084	...	...	...
Diphtheria, ...	.116	...	.136	...	...	.020	...	...
Scarlet Fever, ...	.088	...	.045	...	.043	...	...	...
Typhus Fever, ...	.006	...	.018	...	...	.012	...	...
Enteric and Doubtful Fevers, ...	.108	...	.067	...	.041	...	...	...
Measles, ...	.418	...	.701	...	...	.283	...	...
Whooping-cough, ...	.731	...	.791	...	...	.060	...	...
Diarrhoea, ...	.898	...	.741	...	.157	...	...	...
II. SEPTIC DISEASES, ...	...	.146	...	.153	...	...	...	.007
III. TUBERCULAR DISEASES, ...	...	2.853	...	2.510	...	...	.343	...
Phthisis, ...	1.644	...	1.437	...	.207	...	...	...
Not Phthisis, ...	1.209	...	1.073	...	.136	...	...	...
IV. CANCER (Malignant Disease), ...	...	.690	...	.712	...	...	...	.022
V. DISEASES OF NERVOUS SYSTEM, ...	...	1.661	...	1.532	...	...	.129	...
VI. " CIRCULATORY SYSTEM, ...	...	1.597	...	1.622	...	...	...	.025
VII. " RESPIRATORY " ...	...	4.116	...	3.633	...	...	.483	...
VIII. OTHER CAUSES, ...	...	5.323	...	4.855	...	...	.468	...
All Causes, ...	...	18.836	...	17.517	...	...	1.319	...
Birth-rates, ...	...	31.463	...	30.778	...	...	...	...
Deaths under 1 year per 1,000 Births, ...	...	145	...	131	...	...	...	...

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

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

1881-1890,	24.22
1891-1900,	21.53
1901,	20.63
1902,	19.38
1903,	18.52
1904,	18.84
1905,	17.52

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.

	1895-1904.	1905.
Glasgow,	21.0	17.9
Edinburgh,	18.8	16.1
Dundee,	20.0	18.0
Aberdeen,	18.6	16.2
London,	18.2	15.6
Liverpool,	24.0	19.6
Manchester,	22.5	18.0
Birmingham,	20.2	16.2

INFLUENCE OF AGE AND SEX DISTRIBUTION ON THE DEATH-RATE.

As death-rates tend towards variation at different periods of life, and as in each sex the rates at corresponding age-periods differ, the effect of this must be excluded by standardising populations before the influence of local conditions on health can be shown. This has been done by the usual method, and on the assumption that the age and sex constitution of the several towns is identical with that of the country in which they are situated:—

TOWNS.*	DEATH-RATE PER 1,000.		Birth-rate.	Death-rate under 1 year per 1,000 Births.	Diarrhoea and Enteritis Mortality per 1,000 Births.
	Recorded.	Corrected.			
Edinburgh,	14.3	14.8	23.0	125	13.3
Leeds,	15.3	16.6	27.1	152	32.0
Birmingham,	16.1	17.3	29.2	155	29.3
Sheffield,	17.1	18.4	29.7	167	60.1
Glasgow,	17.9	19.8	30.0	131	24.1
Liverpool,	19.2	20.6	33.2	154	48.5

* Taken from "Public Health," No. 5, Vol. xviii.

In Table IV. the deaths and death-rates for each Ward are stated, together with the corresponding rates for 1903-4.

TABLE IV.

*GLASGOW, 1905.—DEATHS and DEATH-RATES *per Million* in each MUNICIPAL WARD, with corresponding rates for 1903 and 1904.

MUNICIPAL WARDS.	1903.	1904.	1905.	
	Rate per Million.	Rate per Million.	Deaths.	Rate per Million.
1. Dalarnock,	19,249	20,096	984	19,916
2. Calton,	22,844	23,626	771	20,905
3. Mile-end,	23,233	21,931	870	20,096
4. Whitevale,	19,184	20,340	637	19,375
5. Dennistoun,	13,258	13,519	416	11,778
6. Springburn,	18,665	18,918	733	17,413
7. Cowlares,	15,312	16,778	481	15,547
8. Townhead,	18,405	18,575	718	18,478
9. Blackfriars,	22,524	21,913	457	20,658
10. Exchange,	18,369	17,426	39	18,422
11. Blythwood,	13,626	16,643	38	11,415
12. Broomielaw,	27,588	20,517	170	22,004
13. Anderston,	18,470	19,387	542	18,318
14. Sandyford,	15,478	16,805	448	17,454
15. Park,	10,940	10,784	262	10,473
16. Cowcaddens,	23,949	24,744	800	21,422
17. Woodside,	15,179	15,912	632	14,296
18. Hutchesontown,	19,512	22,669	805	19,882
19. Gorbals,	18,966	18,051	612	16,965
20. Kingston,	18,727	17,850	604	17,474
21. Govanhill,	13,999	15,996	463	13,714
22. Langside,	10,363	9,614	313	8,688
23. Pollokshields,	9,656	8,741	153	8,575
24. Kelvinside,	8,009	7,090	147	7,120
25. Maryhill,	14,951	15,919	558	14,318
— Institutions and Harbour, ...	...	...	1,105	...
CITY,	18,524	18,835	13,758	17,517

The highest death-rate, 22·0 per 1,000, occurs in Broomielaw Ward; Cowcaddens comes next with a rate of 21·4; while Calton, Blackfriars, and Mile-end have each, in the order named, a rate of over 20·0 per 1,000. With the exception of Broomielaw, all these wards show an improvement over 1904, varying from 3·3 to 1·3 per 1,000. The rate in Broomielaw Ward shows an increase of 1·5 over that for 1904, but, as pointed out in last year's Report, the rate for 1904 was phenomenally low, and represented a decrease of no less than 7·1 per 1,000 on 1903.

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; but it is of interest at the present moment to continue the record, begun on page 15 of the Annual Report for 1903, of the deaths in the old Sanitary Districts of Brownfield and Cowcaddens. In the figures given in the annexed statement, the population and deaths include those resident and 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.

DISTRICT.		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
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

AGE DISTRIBUTION OF DEATHS.

In the following Table these are stated for seven periods of life, and on referring to the percentage distribution it will be seen that 23 per cent. were of infants under 1 year and 40 per cent. were of children under 5 years, as compared with 24 and 40 per cent. respectively in 1904:—

TABLE V.

GLASGOW, 1905.—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, ...	1	...	1	...	...	...	...	...	1	...
Diphtheria and Mem- branous Croup, ...	107	19	68	19	...	1	...	...	87	20
Scarlet Fever, ...	35	2	20	9	...	...	3	1	22	13
Typhus Fever, ...	14	...	...	...	...	1	13	...	...	14
Enteric Fever, ...	53	...	...	4	10	10	28	1	...	53
Undefined Fever, ...	...	...	...	...	...	...	...	...	...	...
Measles, ...	551	131	387	32	...	...	1	...	518	33
Whooping-cough, ...	621	240	354	25	1	...	...	1	594	27
Diarrhoeal Diseases,	582	354	140	15	1	2	33	37	494	88
Septic Diseases,* ...	120	19	4	6	6	15	63	7	23	97
Phthisis, ...	1,129	3	37	79	111	148	695	56	40	1,089
Other Tubercular Diseases, ...	843	249	343	142	28	16	61	4	592	251
Cancer, ...	559	4	2	2	3	7	324	217	6	553
Diseases of Nervous System, ...	1,203	193	88	70	11	7	374	460	281	922
Diseases of Circulatory System, ...	1,274	34	8	41	34	27	568	562	42	1,232
Diseases of Respira- tory System, ...	2,853	694	658	80	26	49	766	580	1,352	1,501
Violence, ...	471	26	62	48	16	22	244	53	88	383
Premature Birth, ...	435	435	...	...	...	...	...	...	435	...
Uncertified (or Un- known), ...	50	8	2	...	...	...	32	8	10	40
Other Causes, ...	2,857	750	167	109	54	70	848	859	917	1,940
All Causes, ...	13,758	3,161	2,341	681	301	375	4,053	2,846	5,502	8,256
Number in 1,000 dying at several Age Periods, f	...	230	170	49	22	27	295	207	399	601

* Includes Erysipelas, Puerperal Fever, Pyæmia, and Septicæmia.

INFANTILE MORTALITY.

3,161 deaths of infants under one year occurred, which represents a death-rate per 1,000 born of 131, as compared with 145 in 1904. Of these deaths 2,755] were of legitimate and 406 of illegitimate children, representing rates of 122 and 263 respectively per 1,000 births of each class. For several years the rate per 1,000 born of each class has been—

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Infantile death-rate of legitimate children, }	147	143	145	141	126	132	131	122
Infantile death-rate of illegitimate children, }	302	286	286	269	244	298	342	263

and the rate for both classes during several periods has been as follows:—

Average of 5 years, 1886-90, = 143 per 1,000 births.

"	1891-95, = 146	"
"	1896-1900, = 151	"
"	1901, = 149	"
"	1902, = 128	"
"	1903, = 142	"
"	1904, = 145	"
"	1905, = 131	"

Compared with several large towns the infantile mortality in 1895-1904 and in 1905 is as follows:—

	1895-1904.	1905.
Glasgow,	148	131
Edinburgh,	139	133
Dundee,	170	133
Aberdeen,	146	140
Paisley,	131	116
Greenock,	136	116
London,	155	131
Liverpool,	186	153
Manchester,	187	157
Birmingham,	188	154

The variations in the Ward rates are shown in the following Table VI. :—

TABLE VI.

GLASGOW, 1905.—NUMBER of DEATHS under ONE YEAR and DEATH-RATE per 1,000 BIRTHS in each MUNICIPAL WARD, with corresponding RATES for 1903 and 1904.

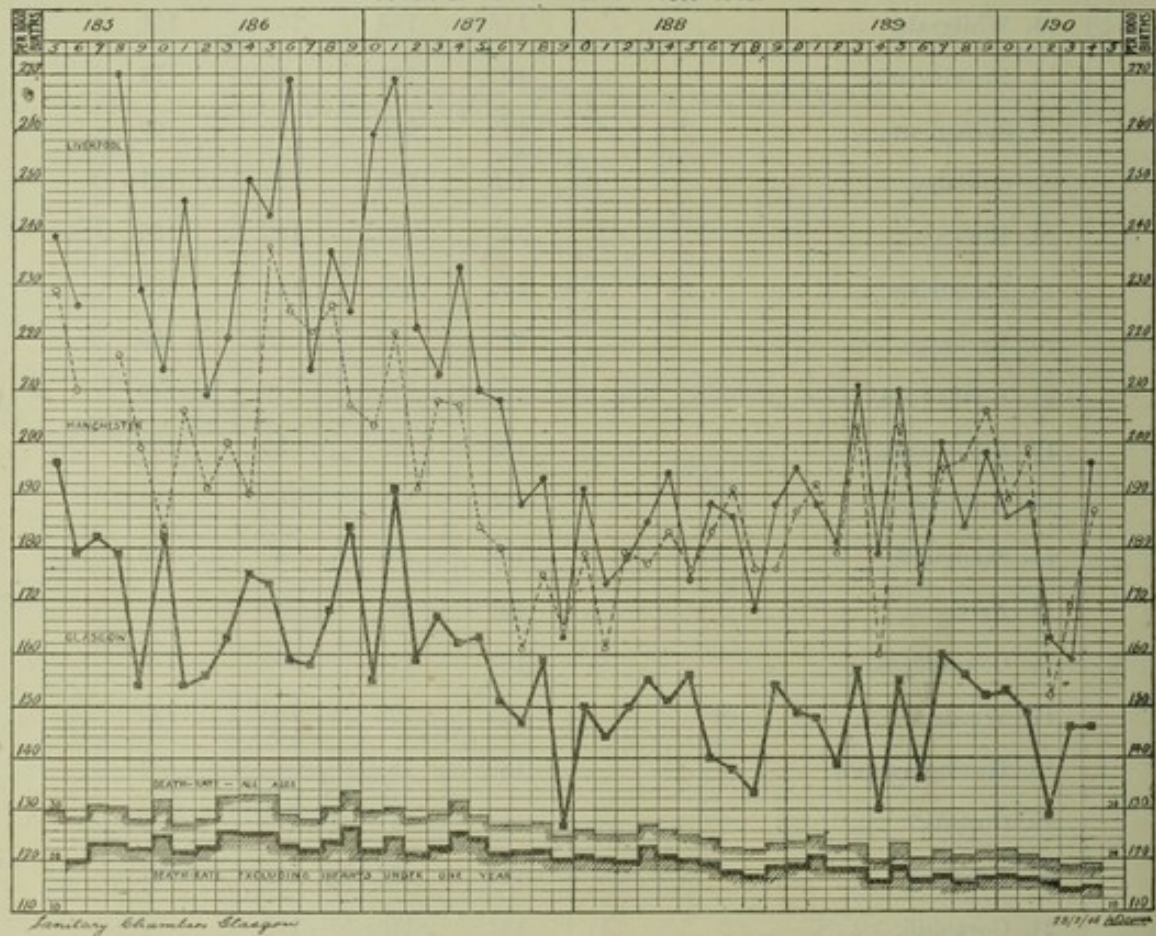
MUNICIPAL WARDS.	Rate per 1,000 Births.		1905.	
	1903.	1904.	Deaths.	Rate per 1,000 Births.
1. Dalmarneck,	140	149	284	141
2. Calton,	183	196	190	149
3. Mile-end,	152	172	220	124
4. Whitevale,	146	163	160	151
5. Dennistoun,	101	104	79	76
6. Springburn,	142	148	220	129
7. Cowlairs,	119	122	136	121
8. Townhead,	145	126	180	150
9. Blackfriars,	183	156	111	158
10. Exchange,	140	89	5	139
11. Blythswood,	177	375	7	219
12. Broomielaw,	199	163	32	139
13. Anderston,	132	159	153	161
14. Sandyford,	148	136	99	155
15. Park,	102	87	23	83
16. Cowcaddens,	194	177	209	176
17. Woodside,	121	126	163	123
18. Hutchesontown,	130	161	205	134
19. Gorbals,	151	151	126	122
20. Kingston,	164	139	135	127
21. Govanhill,	117	118	119	99
22. Langside,	69	87	28	39
23. Pollokshields,	117	32	11	63
24. Kelvinside,	73	71	21	81
25. Maryhill,	106	122	160	102
— Institutions and Shipping, ... ..	...	...	85	...
CITY,	142	145	3,161	131

In the autumn of 1905 the Chairman of the Health Committee of Glasgow and the Medical Officer attended a Conference on Infantile Mortality which was held in Paris, and on their return presented a report to the Corporation, which is reproduced in the Appendix hereof. Subsequently a national conference on the subject was held in London in June of the present year. In this way the subject of infantile mortality has received considerable prominence, and present reference may be confined to a short review of the position of the question as affecting Glasgow, together with an indication of the lines on which further action for its reduction seems desirable.

In the summer of last year the Medical Officer agreed to introduce a discussion on the subject before the Incorporated Society of Medical Officers of Health in London, and the following chart was prepared to illustrate the movement of the infantile death-rate during the past fifty years in certain of the large towns in the United Kingdom:—

CHART III

GLASGOW, MANCHESTER, LIVERPOOL
INFANTILE MORTALITY 1855-1905.



In this chart a definite decrease is indicated during the '70's decade, and it is impossible to dissociate therefrom the influence of the sanitary reforms which this period witnessed. In particular, there occurred in Glasgow during this decade extensive clearances under the City Improvements Trust, and during the same period Liverpool entered on a crusade against common privy middens.

Dealing more particularly with the period from 1870 onwards, the following Tables were prepared to show the decrease in the several quarters of the first year of life:—

GLASGOW.—BIRTHS and INFANT DEATHS.

Period.	Births.	DEATHS.			
		- 3 Months.	- 6 Months.	- 12 Months.	Total.
1870-2,	57,549	4,135	1,799	3,863	9,797
1880-2,	57,762	3,774	1,443	3,329	8,546
1890-2,	60,296	4,195	1,541	3,258	8,994
1900-2,	73,052	5,239	1,868	3,470	10,577
	248,659	17,343	6,651	13,920	37,914

Stating the deaths occurring in these several quarters of the first year as a proportion of the total births in each period, we have the following results:—

DEATH-RATE at - 3, - 6, and - 12 MONTHS, per 1,000 BIRTHS.

Period.	- 3 Months.	- 6 Months.	- 12 Months.	Total.
1870-2,	72	31	67	170
1880-2,	65	25	58	148
1890-2,	70	25	54	149
1900-2,	72	26	47	145
Percent. reduction, 1870-2, 1900-2,	...	16	30	15

During the thirty years here reviewed a decrease of 15 per cent. in the total infant death-rate is indicated, but this is composed of a decrease of 30 per cent. during the latter half of the year and of 16 per cent. in the period three to six months. During the first quarter of the year there was practically no change, and the immobility of the rate during the first quarter stands in striking contrast to that of the others, and has not shown any indication of decline during the period referred to. Continued inquiry into the causes which tend to prevail at one or other period thus becomes important, and in the following Tables these have been tabulated for each week of the first month and for each of the following months during the first year of life:—*

* See for discussion of this problem paper on "Infantile Mortality," published in the *Journal of Public Health*, May, 1906.

TABLE VIA.
GLASGOW, 1905.—MALE INFANT DEATHS at GIVEN AGES and from SEVERAL CAUSES.

CAUSES OF DEATH.	AGES IN WEEKS.					AGES IN MONTHS.										TOTALS.	Group Totals.	Group Percent-ages.	Death-rate per 1,000 Male Births.	
	AGES IN WEEKS.					AGES IN MONTHS.														
	1st	2nd	3rd	4th	Total.	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th					12th
I. IMMATUREITY, (a) Premature Birth, ... (b) Congenital Malformations, ... (c) Atelectasis, ... (d) Atrophy and Debility, ...	183 12 13 82	25 1 1 31	13 1 ... 25	11 2 ... 13	232 16 14 151	13 1 ... 47	4 2 ... 24	1 2 ... 16	... 1 ... 7	... ... ... 11	... ... ... 5	... ... ... 1	... ... ... 1	... ... ... 1	... ... ... 5	... ... ... 1	555	30.6	46
II. DISEASES OF RESPIRATION, ...	7	14	10	16	47	53	32	35	29	18	25	38	38	32	32	45	424	23.3	35	
III. DISEASES OF DIGESTION, ... (a) Diarrhoeal, ... (b) Dentition, ... (c) Others, ...	... ... ... 9	... 5 ... 2	... 8 ... 4	... 7 ... 4	... 20 ... 19	... 38 1 6	... 22 ... 3	... 46 ... 5	... 17 ... 1	... 20 ... 4	... 2 ... 6	... 11 ... 6	... 14 ... 3	... 16 ... 3	... 7 ... 2	... 8 ... 3	307	16.9	25
IV. DISEASES OF NERVOUS SYSTEM, ...	16	8	6	4	34	18	16	21	17	18	9	15	11	19	8	8	194	10.7	16	
V. TUBERCULAR DISEASES, (a) Tabes Mesenterica, ... (b) Tubercular Meningitis, (c) Other Forms, 1 2 1 1 ... 3 1 2 1	... 3 4 6 1 3	... 2 5 4	... 2 ... 5	... 4 1 3	... 1 3 3	... 1 3 6 6	... 2 ... 2	... 12 22 41	75	4.1	6
VI. ACCIDENTS OF BIRTH, (a) Injury, ... (b) Umbilical Hemorrhage, 7 2	... 1 8 2 8 2	10	0.6	0.8
VII. INFECTIOUS DISEASES, (a) Whooping-cough, ... (b) Measles, ... (c) Scarlet Fever, (d) Erysipelas, 1 4 ... 2	... 2 6 1 2	... 4 ... 1	... 10 1 7 6 7 1 10 8 9 13 12 12 20 8 11 24 17 115 72 4	191	10.5	16
VIII. SYPHILIS, ...	...	2	1	5	8	6	3	4	3	...	1	...	...	1	...	...	26	1.4	2
IX. SUFFOCATION, ...	2	1	...	...	3	...	1	2	1	1	1	1	1	...	...	...	11	0.6	0.9
X. OTHER VIOLENCE, ...	...	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...	4	0.2	0.3
XI. ALL OTHER CAUSES, ...	...	2	1	2	5	2	2	1	2	3	...	...	1	1	1	2	20	1.1	1.6
	335	95	75	67	579	101	122	154	80	67	80	62	104	115	84	112	1,217	100.0	440	

GLASGOW, 1905.—FEMALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSES OF DEATH.	AGES IN WEEKS.					AGES IN MONTHS.												TOTALS.	Group Totals.	Group Percentages.	Death-rate per 1,000 Female Births.
	AGES IN WEEKS.					AGES IN MONTHS.															
	1st	2nd	3rd	4th	Total.	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th					
I. IMMATURETY, (a) Premature Birth, ... (b) Congenital Malformations, ... (c) Atelectasis, ... (d) Atrophy and Debility, ...	130 7 6 57	17 1 ... 18	14 2 ... 16	5 1 ... 8	166 11 6 99	10 3 29 31	5 3 26 21	2 1 13 26	2 1 10 19	1 ... 9 25	2 2 2 19	... ... ... 28	... ... 2 19	... ... 2 25	... ... 8 26	3 3 ... 21	184 18 6 203	411	30.6	34
II. DISEASES OF RESPIRATION, ...	3	6	13	11	33	31	21	26	19	25	19	28	19	25	26	21	293	293	21.8	24	
III. DISEASES OF DIGESTION, (a) Diarrheal, ... (b) Dentition, ... (c) Others, ...	... ... 4	1 ... 1	5 ... 4	2 6 6	8 15 18	19 7 18	11 5 15	26 3 7	13 6 11	11 4 12	11 4 8	12 1 14	7 1 9	11 1 10	8 2 4	6 1 2	143 8 53	205	15.2	17
IV. DISEASES OF NERVOUS SYSTEM, ...	7	4	2	5	18	18	15	7	11	12	8	14	9	10	4	8	134	134	10.0	11	
V. TUBERCULAR DISEASES, (a) Tabes Mesenterica, ... (b) Tubercular Meningitis, (c) Other Forms, ...	... ... ...	... ... ...	... ... 3	... ... 1	... ... 4	... 1 5	... 2 2	1 2 5	... 1 4	... 1 2	... 1 1	... 1 2	... 3 3	1 3 1	... 3 2	1 2 1	... 4 20 32	56	4.2	5
VI. ACCIDENTS OF BIRTH, (a) Injury, ... (b) Umbilical Hemorrhage, ...	9 1	1 ...	... ...	... ...	... 10 1	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... 10 1	11	0.8	0.9
VII. INFECTIOUS DISEASES, (a) Whooping-cough, ... (b) Measles, ... (c) Scarlet Fever, (d) Erysipelas, ...	... ... ... ...	... 1 ... ...	... ... ... ...	5 ... 2	5 1 2	12 1 ...	10 1 ...	7 1 ...	10 1 1	10 1 ...	5 1 1	13 6 ...	13 11 ...	9 16 ...	15 13 ...	15 10 1	... 124 60 2 3	189	14.1	16
VIII. SYPHILIS, ...	...	...	...	3	3	3	4	5	3	1	1	1	1	1	...	...	23	23	1.7	2
IX. SUFFOCATION, ...	...	...	...	1	1	2	1	...	1	...	...	1	...	...	...	...	6	6	0.4	0.5
X. OTHER VIOLENCE, ...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	1	4	4	0.3	0.3
XI. ALL OTHER CAUSES, ...	2	2	...	2	6	1	1	1	...	1	...	...	...	...	1	1	12	12	0.9	1.0
	226	52	59	52	389	141	106	99	83	78	54	81	75	81	84	73	...	1,344	100.0	112	

Reverting to the varying incidence of the death-rate in the several wards, it will be found, by reference to Table VI., that, of the wards presenting the highest infantile rates, Blythswood, for the second year, is in excess of any other ward of the City, although numerically the deaths are second lowest. A statement, therefore, of the causes of death becomes important. There were 28 legitimate and 4 illegitimate births in this ward during the year, and, of the legitimate births, 1 died of diarrhoeal disease and 2 of diseases of the nervous system, while 3 of the 4 illegitimate births died, 2 being from diarrhoeal diseases.

The total infant deaths, therefore, consisted of 4 legitimate and 3 illegitimate children, and, so far as the manner of feeding is a reflex of the care taken with regard to infant life, it is noted that 1 only of the legitimate children was breast-fed, and 6 others being fed artificially. Indeed, this absence of breast-feeding in illegitimate children must be regarded as one of the factors determining their excessive mortality.

TABLE VIc.

GLASGOW, 1905.—INFANTILE MORTALITY.—DETAILS of DEATHS in WARD XI. (BLYTHSWOOD), showing LEGITIMATE and ILLEGITIMATE separately, with DEATH-RATE per 1,000 for each Class.

	Immaturity.	Diarrhoeal Diseases.	Diseases of Nervous System.	Death-rate per 1,000 Births of each Class.
Deaths of Legitimate Children, ...	1	1	2	125
Deaths of Illegitimate Children, ...	—	2	1	750

EARLY INTIMATION OF BIRTHS.

As is now well recognised, the interval which may elapse between the occurrence of a birth and its registration interposes a serious barrier to any effort which aims at early visitation of the family with a view to offering guidance to the mother regarding the child, and during the year the Corporation made effort in two directions to obtain this information—(1) through the co-operation of the Maternity Hospital and (2) by a resolution to make payment of the sum of one shilling for early information of births occurring under the circumstances described in a circular which was issued during the month of November. A copy of the form of enquiry and of the circular are subjoined.

Earlier in the year the arrangement with the Maternity Hospital came into operation, and by it the Medical Officer is informed every second morning of the number and addresses of out-door births attended by the staff during the preceding forty-eight hours. The following facts concerning these out-door maternity births occurring between August and December, 1905, have been gleaned by this arrangement:—

1,026 births were intimated during the above period. Of these, 9 were still-born, and of 1,017 remaining, 24 were already dead before visitation on behalf of the department, the understanding being that no visits should be made from this department until the maternity nurses have ceased calling. This usually occurs towards the end of the first week. The object of the visitation by the staff of the department is primarily to talk with and advise the mother regarding the advantages of continuing breast-feeding, but incidentally other questions concerning the mother's health, &c., come under review. These visits are, in general, welcomed by the people, who, indeed, readily avail themselves of any suggestion offered with a view to improving their own condition and that of the child. In many cases, however, repeated visitation is desirable,

but with the present staff it is impossible to continue this beyond a second visit in each case, which is made during the second month.

As a result of the first visits to the surviving children, their condition as then noted was as follows:—

899 were well nourished, and all the others, with the exception of 7, were fairly well nourished.

By the time of the second visit, however, it was found that the following groupings could be made:—

826	children	were	thriving,
26	„	were	not thriving,
35	„	were	dead,
4	„	were	in hospital,
and 62	„	had	removed and could not be traced.

Notwithstanding the large proportion of children breast-fed on the occasion of the first visit, it was found that of the 35 who died before the second visit, 9, or about 25 per cent., were artificially fed.

[Form of Enquiry referred to.]

ENQUIRY INTO CONDITION OF NEWLY-BORN INFANTS.

Address.....

Born..... Place.....

Name..... Sex.....

Occupation of Father.....

Occupation (if any) of Mother.....

Born at full term..... Prematurely.....

Condition of Infant—

1. Well, fairly, or badly nourished.....
2. Any known abnormality at birth.....
3. On breast or artificial food.....
4. If artificially fed—(a) On what?.....
- (b) Why?.....

Health and Occupation of Mother—

5. Age of Mother.....
6. If working during pregnancy—(a) At what?.....
- (b) Till when?.....
7. Health during pregnancy.....
8. Appetite during pregnancy.....
9. Was food sufficient during pregnancy?.....
10. Was alcohol in any form taken (whisky, beer, &c.)?.....

Family—

11. Number of previous children alive..... Ages.....
12. Do. do. dead..... Ages.....
13. Number of miscarriages..... Dates.....

Father—

14. Was he regularly employed during his wife's pregnancy?.....
15. Average weekly wage when working.....

House—

16. Number of Apartments.....
17. Rent (weekly or monthly).....

Condition—

18. Cleanly or otherwise.....
19. State any defects noted—such as dampness in walls, bad ventilation, darkness—in house or lobbies.....

Date of Second Visit.....

Condition of Infant—

1. Thriving, not thriving.
2. Breast or artificial food.

If artificially fed—

- (a) What?.....
- (b) Why?.....
3. Age of child when breast milk stopped.....

[Circular by Committee on Health.]

CORPORATION OF GLASGOW.

INFANTILE MORTALITY.

INTIMATION BY THE COMMITTEE ON HEALTH.

HAVING in view the great Infantile Mortality which exists in several districts of the City, the Health Committee of the Corporation desire to take steps towards its reduction. To obtain early information of births occurring in certain districts where those have not been attended by a Medical Practitioner or by the Nurses of the Maternity Hospital, they are prepared to pay the sum of One Shilling to the first person who intimates to the Medical Officer of Health, 23 Montrose Street, any such birth within 48 hours of its occurrence.

23 Montrose Street,
Glasgow, 3rd November, 1905.

INFANTS' MILK DEPÔT.

The increased demand for depôt milk during the year has been gratifying. The average daily number of gallons received at the depôt for modification in December, 1904, was 60, and this in December, 1905, had increased to 114, the maximum average being in November, when it reached 119 gallons daily. The average number of children fed daily increased correspondingly, so that whereas 253 baskets were issued daily during December, 1904, these had increased to 522 daily in December, 1905, and in November the number was 547.

As the work of the depôt increased, and as the opening of additional dairies for distribution multiplied, the average daily number fed from the depôt underwent some shrinkage, so that while the total daily number of children obtaining milk directly from the depôt in January, 1905, was 134, this in December had fallen to 57, whereas the number of children supplied from the dairies had increased from 119 to 465. The following Table VII. shows for each month of the year the average daily number of gallons of milk received and of baskets sold:—

TABLE VII.

STATEMENT showing AVERAGE DAILY AMOUNT of MILK RECEIVED and AVERAGE NUMBER of BASKETS ISSUED during 1905.

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.	Total baskets issued daily.
January,	60 gallons,	134 baskets.	119 baskets.	253 baskets.
February,	69 "	137 "	161 "	298 "
March,	87 "	127 "	221 "	348 "
April,	94 "	89 "	309 "	398 "
May,	105 "	82 "	364 "	446 "
June,	112 "	84 "	391 "	475 "
July,	107 "	73 "	435 "	508 "
August,	112 "	72 "	415 "	487 "
September,	115 "	66 "	480 "	546 "
October,	112 "	57 "	458 "	515 "
November,	119 "	53 "	494 "	547 "
December,	114 "	57 "	465 "	522 "

Cost of Working.—From a statement prepared by the Treasurer, the outlay in connection with the working of the depôt for the financial year ending 31st May, 1906, may be stated as £3,406 10s. 11d., while the revenue was £1,672 6s. 9d. In supplement to this, the following details contained in Table VIII. are of some interest:—

TABLE VIII.

STATEMENT of WORKING EXPENSES* for the Year ending 31st December, 1905.

INCOME.			EXPENDITURE.		
Drawings at Depôt, ...	£318	9 1	Milk, ...	£1,364	1 2
" „ Dairies, ...	1,245	2 8½	Sugar, ...	21	2 6
			Teats, ...	49	17 4
			Cylinders of CO ₂ , ...	10	11 2
			Commission on Sales to Dairies, ...	185	0 2½
Deficit, ...	226	0 1	Van Hire, ...	158	19 6
	£1,789	11 10½		£1,789	11 10½
			Wages, ...	£452	18 8
			Deficit as above, ...	226	0 1
				£678	18 9

* *Note.*—No sum for rent, taxes, heating and lighting, and apparatus (including bottles and baskets) is here included.

Record of Children Supplied.—In order to obtain some detailed record of the children joining the depôt, and the reasons therefor, a book, of which the following is a sample page, has been kept at the depôt:—

		No.....
Recommended by.....	Admitted.....	Weight.....
House—No. of Apts.....	Dismissed.....	Weight.....
Position in Tenement.....	Result.....	

Name.....
 Sex.....
 Date of Birth.....
 Address.....

FAMILY HISTORY:—

Birthplace of Father.....
 Birthplace of Mother.....
 Any Rickets in Family.....
 Ages of Brothers and Sisters Living.....
 How many Dead?.....
 Were Elder Children Nursed (wholly or partially).....

PERSONAL HISTORY AND PRESENT CONDITION:—

How Fed Previously?.....
 Any past Illness.....

PROGRESS:—

Record of Weight.....

It was the original intention that this information should be kept for all the children, but it has not been found possible to bring it into operation for those obtaining supplies from the dairies. Indeed, the absence of any such system as obtains, notably in French towns, of medically examining each child who joins, with the view of ascertaining whether they are legitimately such as

require artificial feeding, deprives the present results of a good deal of their educational value. The following Table IX. has been prepared to show for the children who joined the depôt and left during the year 1905, their ages at date of joining, and the length of time during which they were in receipt of the milk. In all, 72 children used the milk for limited periods only—27 for less than one month, 22 for less than two months, and 7 for less than three months. Of 20 children joining under one month of age, 10 were withdrawn in less than four weeks, and 14 were withdrawn in less than three months. Again, of children joining under two months old, 5 were withdrawn in the first week, and 7 in the first month, while 15 were continued for less than three months. Under three months old, 19 children joined, and, of these, 5 left within four weeks' time, and 8 within two months, while others continued for longer periods. Further details are contained in the Table.

TABLE IX.

CHILDREN who JOINED DEPÔT during 1905 but who LEFT before 31st December, showing AGES at DATE of ENTRY and PERIOD during which MILK supplied.

AGE AT ENTRY.		DURATION.																			
		WEEKS.				Total.	MONTHS.										Total.				
		-1	-2	-3	-4		-2	-3	-4	-5	-6	-7	-8	-9	-10	-11		-12			
Less than 1 Month,	...	6	1	1	2	10	3	1	2	2	—	—	1	—	—	—	1	—	—	1	20
" 2 Months,	...	5	1	1	—	7	4	4	—	1	—	—	—	—	—	—	—	—	—	—	16
" 3 "	...	—	—	4	1	5	8	1	—	—	—	—	—	1	2	2	—	—	—	—	19
" 4 "	...	—	—	—	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	4
" 5 "	...	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	3
" 6 "	...	1	1	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	4
" 7 "	...	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	2
" 8 "	...	1	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
" 9 "	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" 10 "	...	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
" 11 "	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" 12 "	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		13	3	6	5	27	22	7	3	3	2	1	3	3	—	—	—	—	—	1	72

Reasons for Leaving.—The need for systematic medical supervision of children who are supplied with depôt milk becomes more apparent on a study of the Table X. which follows. This gains emphasis from the fact that, of the 72 children dealt with in the preceding Table, no fewer than 34 were withdrawn without any reason being assigned, and against most of the entries under

the column "No reason assigned," it is noted that the baskets were not returned, and had to be sent for. It is against the indifference which this lack of care in returning the bottles indicates that the resources of the department ought to be directed.

TABLE X.
NUMBER of CHILDREN leaving DEPOT or transferred to DAIRIES during Year.

MUNICIPAL WARDS.	Milk does not agree.	Won't suck teat.	Too far to come.	Left Glasgow.	Being Nursed.	On Cow's Milk.	Weaned.	On holiday.	Cannot afford Milk.	Put on Barley Water.	No reason assigned.	Died.	Transferred to Dairies.	Total
1. Dalmarnock,	—	—	—	—	—	—	—	—	—	—	1	—	3	4
2. Calton, ...	1	1	—	—	1	—	1	—	—	—	4	—	3	11
3. Mile-end, ...	—	—	1	—	—	—	—	—	—	—	1	—	2	4
4. Whitevale, ...	1	—	—	—	—	—	—	—	—	—	1	1	1	4
5. Dennistoun, ...	—	—	—	—	—	—	—	1	—	—	1	—	2	4
6. Springburn, ...	—	—	—	—	—	—	—	—	—	—	—	1	5	6
7. Cowlares, ...	—	—	—	—	—	—	2	—	—	—	2	—	10	—
8. Townhead, ...	—	—	1	—	—	—	1	1	1	1	9	2	—	15
9. Blackfriars, ...	4	—	—	—	—	—	1	—	—	—	1	—	—	21
10. Exchange, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	1
11. Blythwood, ...	—	—	—	—	—	—	—	—	—	—	—	—	1	1
12. Broomielaw, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Anderston, ...	—	—	—	—	—	—	—	—	—	—	1	—	2	—
14. Sandyford, ...	—	—	—	—	—	—	—	—	—	—	—	—	1	—
15. Park, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16. Cowcaddens, ...	—	—	—	—	—	—	—	—	—	—	1	—	2	3
17. Woodside, ...	—	—	—	—	—	—	—	—	—	—	—	—	1	1
18. Hutchesontown, ...	3	1	2	—	—	—	—	—	—	—	—	—	12	19
19. Gorbals, ...	1	—	—	2	1	—	—	—	—	—	7	—	10	21
20. Kingston, ...	—	—	—	—	—	—	—	—	1	—	4	—	10	15
21. Govanhill, ...	1	—	—	1	—	—	2	—	—	—	—	—	7	11
22. Langside, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23. Pollokshields, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24. Kelvinside, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25. Maryhill, ...	—	—	—	—	—	—	—	—	—	—	—	—	1	1
— Beyond Boundary, ...	1	—	—	—	—	—	—	—	—	—	—	—	3	4
	12	2	4	3	2	—	6	2	2	1	34	4	78	150

Residence of Children using Milk.—In the Table XI. which follows, the number of children coming from the several wards first of all to the depôt, and subsequently supplied, for convenience, by the dairy nearest to their homes, is stated. It is to be observed that none of the children primarily joining the dairies are included therein. For the information regarding these latter, we are wholly indebted to the co-operation of the visitors of the Charity Organisation Society:—

TABLE XI.
RESIDENCE of CHILDREN supplied at DEPÔT or drafted to DISTRIBUTING DAIRIES during Year 1905.†

MUNICIPAL WARDS.	AGE IN WEEKS.					Total.	AGE IN MONTHS.										Total.
	1	2	3	4	Total.		-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	
1. Dalmarnock, ...	—	—	1	—	1	1	2	1	—	—	—	—	—	—	—	—	5
2. Calton, ...	—	—	1	1	2	3	5	1	—	—	—	1	1	—	—	—	17
3. Mile-End, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
4. Whitevale, ...	2	1	1	—	4	1	—	—	1	—	—	1	—	—	—	—	7
5. Dennistoun, ...	—	1	—	1	2	1	1	1	2	—	—	—	—	—	—	—	6
6. Springburn, ...	—	1	—	—	—	1	1	1	—	1	—	—	—	—	—	—	5
7. Cowfairs, ...	—	1	—	—	2	—	—	—	—	—	—	—	—	—	—	—	3
8. Townhead, ...	1	1	—	3	5	4	1	4	—	3	1	—	1	—	—	—	16
9. Blackfriars, ...	1	3	—	—	4	—	7	2	—	—	—	—	—	1	—	—	26
10. Exchange, ...	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
11. Blythswood, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
12. Broomielaw, ...	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2
13. Anderston, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14. Sandyford, ...	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
15. Park, ...	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
16. Cowcaddens, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17. Woodside, ...	—	—	—	—	—	1	1	—	1	—	—	—	—	—	—	—	3
18. Hutchesontown, ...	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	1
19. Gorbals, ...	3	—	1	1	5	3	5	4	1	1	1	—	—	—	—	—	20
20. Kingston, ...	—	—	—	2	2	6	5	4	3	1	—	—	—	—	—	—	21
21. Govanhill, ...	—	—	1	1	2	3	7	1	1	—	—	—	—	—	—	—	14
22. Langside, ...	1	—	—	2	3	1	2	2	1	1	—	—	—	—	1	—	11
23. Pollokshields, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
24. Kelvinside, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25. Maryhill, ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beyond Boundary, ...	—	—	—	1	1	—	1	—	1	—	—	—	—	—	—	—	4
	9	7	5	14	35	37	42	22	15	11	3	2	2	2	—	1	172

† This Table does not include any Children primarily going to the Distributing Dairies.

VISITATION OF CHILDREN USING CORPORATION MILK.

During the year much assistance was willingly rendered by the district visitors of the Charity Organisation Society in visiting the homes of children using the Corporation milk. In all, for the eleven months, February to December, 1905, I have a record of 422 families so visited, of which, however, 15 were beyond the municipal boundary. During the visitation the visitors used the card referred to in my former report, and while all the details are not available in every instance, the following statement may be made regarding 383 children, whose ages are as follows:—

Age 1 month,	...	...	...	...	...	...	36	
2 months,	...	...	...	...	...	...	60	
3 "	...	...	...	...	...	...	54	
6 "	...	...	...	...	...	...	122	
9 "	...	...	...	...	...	...	60	
12 "	...	...	...	...	...	...	51	
								383

Reasons for joining Dépôt—

(a) Affecting mother—

Ill health,	...	...	...	...	...	98	
No milk,	...	...	...	...	...	135	
At work,	...	...	...	...	...	43	
Dead,	...	...	...	...	...	19	
							295

(b) Affecting child—

Diarrhœa,	...	...	...	...	...	17	
Not thriving,	...	...	...	...	...	92	
Other causes,	...	...	...	...	...	14	
							123

How fed previously—

On breast,	...	...	...	...	...	200	
On cow's milk,	...	...	...	...	...	79	
Other artificial foods,	...	...	...	...	...	29	
							308

Number of other children in households using Dépôt milk—

Living,	...	...	...	...	...	1,088	
Dead,	...	...	...	...	...	351	
							1,439

Size of house—

One apartment,	...	...	...	...	...	101	
Two apartments,	...	...	...	...	...	218	
Three "	...	...	...	...	...	36	
Four " and upwards,	...	...	...	...	...	14	
							369

Condition of houses—

Clean,	...	...	...	...	...	297	
Dirty,	...	...	...	...	...	55	
							352

Result of feeding with Dépôt milk—

Thriving,	...	...	...	...	...	299	
Not thriving,	...	...	...	...	...	46	
							345

VISITATION OF CHILDREN "NOT THRIVING."

When information was received that any child in receipt of depôt milk was not thriving, a special visit was paid by one of the medical staff of the department, wherever the child was not under the care of a private medical attendant, and of 51 cases so visited the following statement may be made:—

Symptoms present in Child not thriving.—These generally were associated with gastro-intestinal disturbances—i.e., there was vomiting, sometimes diarrhoea, and occasionally constipation. One was associated with a skin eruption, one was epileptic, and in a few cases wasting alone is noted.

Methods of administering Milk.—It is the object of the Corporation to supply milk in bottles so that all that is required before using is to place the bottle in warm water to raise the contents to about blood heat. We have, however, become familiar with the fact that, for one or other reason, this practice is frequently departed from, and the milk is often given to children out of other bottles, or from the Corporation bottles by other than the short teats supplied. By way of illustration, of 28 children using the Corporation bottle, Dr. Martin notes that 19 only were using the Corporation teat and 11 had reverted to the old long rubber tube. Such misuses are made the subject of special warning in the leaflet issued from the Depôt, but personal visitation and instruction is alone likely to prevent it. There seems reasonable grounds, however, for believing that the long rubber tube is used because of certain mechanical difficulties which lie in the way of the use of the short teat. Chief of these is that as the supply of milk in the bottle becomes exhausted, a vacuum is established which makes the emptying of the bottle difficult unless the child is fairly vigorous. A simple method of overcoming this difficulty would be to momentarily remove the teat, but few mothers seem to be acquainted with this device.

Family history of Children not thriving.—This is somewhat important. Dr. Martin was able to classify 37 of these in the following manner, using—(1) bad, (2) fair, and (3) good, to mean respectively—(1) children with a tuberculous history in both parents, or collaterals; (2) children with tubercular history on one side only; and (3) tuberculous disease absent from both sides. Under the first group there were 10, under the second 13, and under the third 14.

CAUSES OF DEATH AMONG INFANTS FED ON CORPORATION MILK DURING 1905.

Of the 3,161 infants who died during the year, 128 were known to be using Depôt Milk either alone or along with some other food, and the causes of death in each of those groups were as follows:—

Causes of Death.	Corporation Milk alone.	Corporation Milk along with other Food.
I. Immaturity,	14	5
II. Diseases of Respiration,	15	8
III. „ Digestion,	34	19
IV. „ Nervous System,	13	4
V. Tubercular Diseases,	6	2
VI. Infectious „	4	2
VII. Suffocation,	1	...
VIII. Others,	1	...
All Causes,	88	40

TABLE XII.

SUMMARY of OCCUPATION of FATHERS of INFANTS using DEPÔT MILK.

I. Local Government—Policeman, 1	VIII. Housebuilding, &c.— <i>Contd.</i> —
II. Literary—Reporter, ... 1	Joiners, ... 6
III. Art—Engraver, ... 1	Slaters, ... 2
IV. Commercial—Cork Merchant, 1	Painters, ... 6
Clerks, ... 2	Masons, ... 2
Traveller, ... 1	Bricklayer, ... 1
Timekeepers, ... 2	Glazier, ... 1
Insurance Agent, 1	Cranemen, ... 2
V. Conveyance on Railways—	IX. Furniture, &c.—
Porters, ... 3	Cabinetmakers, 3
Engine Driver, ... 1	Basketmakers, 2
Stokers, ... 3	Wood— Coachbuilder, 1
Greaser, ... 1	X. Skin, Leather, and Hair—
Signalman, ... 1	Currier, ... 1
Conveyance on Roads—	Beltmaker, ... 1
Carters, ... 11	Hair Worker, 1
Motormen, ... 4	XI. Pottery and Glass—
Car Cleaner, ... 1	Earthenware
Car Inspector, ... 1	Workers, ... 2
Stableman, ... 1	Glass Worker, 1
Vanmen, ... 2	XII. Paper, Prints, and Books—
Cabman, ... 1	Book Cutters, 2
Conveyance on Seas—	Compositors, ... 2
Seaman, ... 1	Stationer, ... 1
Firemen, ... 3	XIII. Textile Fabrics—
Storage— Storeman, ... 1	Spinner, ... 1
VI. Coal Mines—Miner, ... 1	Twister, ... 1
Coal Dealer, ... 1	Embroiderer, ... 1
VII. Engineering and Machine	Carpet Weaver, 1
Making— Turners, ... 9	Dealers— Drapers, ... 2
Blacksmiths, ... 3	Warehousemen, 2
Mechanics, ... 8	XIV. Dress— Bootmakers, ... 3
Engineers, ... 7	Tailors, ... 3
Polisher, ... 1	XV. Food— Bakers, ... 7
Hammermen, ... 2	Miller, ... 1
Boilermakers, ... 2	Fishmongers, ... 3
Coppersmith, ... 1	Butcher, ... 1
Brass Finisher, ... 1	Spirituous Drinks—
Metal Trades—	Barmen, ... 3
Electric Wireman, 1	XVI. Chemicals, Oils, &c.—
Moulders, ... 4	Varnish Maker, 1
Steel Worker, ... 1	XVII. General Shopkeepers—
Ships— Rivet Heaters, ... 7	Ice Cream, ... 2
Holeborer, ... 1	Barbers, ... 3
Plater, ... 1	Seeds, ... 1
Carpenter, ... 1	XVIII. Miscellaneous—
Vehicles— Cycle Makers, ... 2	Steeple-jack, ... 1
Motor Makers, ... 3	Lamplighter, ... 1
VIII. Housebuilding, &c.—	Contractor, ... 1
Plumbers, ... 3	Labourers, ... 53
Plasterers, ... 2	

GLASGOW DAY-NURSERIES ASSOCIATION.

It may be of interest to refer to the work of this Association, which is closely related to the various social problems with which a large city has to deal. It must also, to some extent at least, have a more or less direct bearing on the question of infantile mortality, and it is for this latter reason that an enquiry into the scope and objects of its work has been undertaken.

The Association was founded in 1884, and possesses six crèches or day-nurseries, five of which are situated in Glasgow, the sixth being in Partick. The object which the Association has in view is to provide suitable accommodation where parents, and particularly mothers, who have to go out to work, can leave their children during the day. The Association recognises as a cardinal principle that children should not only be kept in safe custody, but that they should also be kept clean and properly fed; and it was with a view to elicit information upon this latter point, as being of first importance, that the enquiry was particularly directed.

The following tabulation summarises the more important information kindly placed at my disposal by the matrons of the various crèches:—

QUERIES.	DISTRICT DAY NURSERIES.				
	Dalmarnock.	Anderston.	Milton.	Hutchesontown.	Maryhill.
1. Average daily number of Infants } under One Year, ... }	4	20	5	6	3
2. Nature of Infants' food—					
(a) Milk + Water, ...	...	1	...	1	...
(b) „ + Barley-water, ...	1	...	1	...	1
(c) „ + Bread, ...	...	...	1	...	...
(d) „ (boiled) + Bread, ...	...	...	...	...	1
(e) „ + Rice, ...	...	...	1	...	...
(f) „ + Sago, ...	...	...	1	...	...
(g) „ + Artificial Foods, ...	...	...	...	1	1
(h) „ + Arrowroot, ...	...	...	...	...	1
Reasons for Infants being left—					
(a) Mother goes out to work, ...	1	1	1	...	1
(b) Parents careless and improvident, ...	1	1	...	1	...

INFECTIOUS DISEASES.

During the year 19,647 cases of infectious disease were registered and dealt with by the Department. This represents a rate equal to 25 per 1,000 of the population, which is 4 per 1,000 more than in 1904. Of the total, 4,976, or 25·3 per cent., were treated in hospital. The varying rates of incidence in the several wards are shown in Table XIII., but it must be remembered that these afford an accurate attack-rate for those diseases only which are notifiable under the Infectious Disease (Notification) Act. On the other hand, for measles and whooping-cough, which are here grouped with phthisis and anthrax in the column "All others," the rates given indicate only the cases known and dealt with.

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

GLASGOW.—CASE-RATE PER MILLION OF THE POPULATION FOR CERTAIN ZYMOTICS AND FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED, 1903-5.

YEAR	Typhus Fever.	Enteric Fever.	Continued and Undefined.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Croup.	All Others.	TOTAL.
1903, ...	41	1,207	22	138	373	2,597	926	15,776	21,080
1904, ...	34	800	39	113	1,108	2,003	824	15,873	20,794
1905, ...	67	569	37	137	5	1,235	924	22,038	25,013

If reference be made to Table V. in Appendix B, the number of cases occurring and of those removed to hospital in each ward will be found, and Table VI. gives the distribution of these cases throughout the several months of the year.

TABLE XIII.

GLASGOW, 1905.—CASE-RATE per Million for certain ZYMOTICS and for ALL CASES registered in each MUNICIPAL WARD.

MUNICIPAL WARDS.	FEVERS.					Smallpox.	Diphtheria and Membranous Group.	All other Causes.	TOTAL.
	Typhus.	Enteric.	Continued and Undefined.	Puerperal.	Scarlet.				
1. Dalarnock,	360	800	60	240	1,100	...	1,020	28,983	32,563
2. Calton,	128	745	103	103	1,233	...	950	22,347	25,609
3. Mile-end,	207	783	23	138	1,519	46	852	30,841	34,409
4. Whitevale, ... ..	...	593	...	119	1,186	...	889	20,337	23,124
5. Dennistoun,	27	540	...	108	1,214	...	917	17,807	20,613
6. Springburn,	22	632	22	109	785	...	981	24,510	27,061
7. Cowlares,	65	517	...	162	679	...	1,099	23,046	25,567
8. Townhead,	26	643	...	77	1,415	...	694	18,981	21,836
9. Blackfriars,	43	390	43	303	910	...	520	27,383	29,593
10. Exchange, ... ..	...	...	...	...	...	...	381	16,018	16,400
11. Blythwood, ... ..	...	266	...	...	533	...	266	7,457	8,522
12. Broomielaw, ... ..	...	323	...	323	1,185	...	969	14,000	16,799
13. Anderston,	64	225	32	161	837	...	902	21,702	23,924
14. Sandyford, ... ..	...	505	...	78	1,009	...	1,242	23,015	25,848
15. Park, ... ..	...	77	464	39	1,083	...	696	8,314	10,866
16. Cowcaddens,	26	1,014	52	208	910	...	754	18,635	21,598
17. Woodside, ... ..	...	676	...	68	631	...	563	24,374	27,077
18. Hutchesontown, ... ..	...	889	25	148	1,482	25	1,185	33,264	37,018
19. Gorbals, ... ..	...	298	54	217	732	27	813	19,860	22,000
20. Kingston,	313	597	...	142	2,416	...	881	28,115	32,465
21. Govanhill, ... ..	...	296	30	207	1,451	...	829	26,570	29,384
22. Langside, ... ..	...	330	...	110	2,363	...	962	7,200	10,965
23. Pollokshields, ... ..	...	560	...	...	1,345	...	1,009	3,363	6,277
24. Kelvinside, ... ..	...	234	...	47	1,453	...	1,032	8,205	10,972
25. Maryhill, ... ..	...	495	...	124	1,336	...	1,311	28,271	31,536
CITY,	67	569	37	137	1,235	5	924	22,038	25,013

* Measles, Whooping-cough, Chickenpox, Phthisis, and Anthrax.

NOTE.—The populations on which these rates are calculated include Institutions and Harbour.

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

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

GLASGOW.—AMOUNT PER 1,000 OF POPULATION OF FEES FOR CERTIFICATES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889, FOR EACH YEAR FROM 1891.

Year.	Amount.		
	£	s.	d.
1891,	1	1	10·4
1892,	1	6	1·2
1893,	1	6	9·2
1894,	1	4	8·7
1895,	1	1	5·0
1896,	0	18	0·1
1897,	0	18	0·1
1898,	1	0	9·0
1899,	1	3	10·0
1900,	1	2	1·0
1901,	1	4	5·9
1902,	0	16	7·4
1903,	0	14	0·5
1904,	0	13	4·2
1905,	0	9	2·6

PRINCIPAL INFECTIOUS OR EPIDEMIC DISEASES.

The number of deaths arising from the principal zymotic diseases—small-pox, diphtheria, scarlet fever, typhus, enteric, and undefined fevers, measles, whooping-cough, and diarrhoea—in 1905 was 1,964, representing an annual death-rate of 2·500 per 1,000 living, as compared with 2·450 in 1904.

The corresponding rates for several periods were—

1881-90,	3·600 per 1,000 living.
1891-1900,	3·282 "
1900,	3·013 "
1901,	3·773 "
1902,	2·072 "
1903,	2·507 "
1904,	2·450 "
1905,	2·500 "

In the following Table the corresponding rates for several towns are given:—

		PRINCIPAL ZYMOTIC DISEASES.*	
		Death-rate per 100,000.	
		1895-1904.	1905.
Glasgow, .....	...	292	188
Edinburgh, .....	...	230	119
Dundee, .....	...	219	131
Aberdeen, .....	...	231	81
London, .....	...	243	171
Liverpool, .....	...	349	259
Manchester, .....	...	321	225
Birmingham, .....	...	300	190

* See note under Births, p. 21.

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 diarrhoea; whereas the Registrar-General for Scotland omits diarrhoea from his group, but adds influenza.

In Table XIV. the number of deaths and the death-rate from diseases of this class are stated for each of the wards, and the following summary will show the constitution of the zymotic death-rate in those wards in which the combined rate much exceeds the mean rate for the whole city :—

GLASGOW, 1905.—ZYMOTIC DEATH-RATE per MILLION in certain WARDS whose RATES EXCEED the MEAN RATE of the whole City.

MUNICIPAL WARDS.	Total Zymotics.	Smallpox.	Diphtheria.	Scarlet.	Typhus.	Enteric.	Undeclared.	Measles.	Whooping-cough.	Diarrhoea.
1. Dalmarnock,	4,028	...	162	61	101	162	...	1,093	1,316	1,133
2. Calton, -	3,171	...	108	190	27	81	...	1,057	759	949
3. Mile-end, -	3,580	...	185	69	46	46	...	1,294	924	1,016
4. Whitevale, -	3,041	...	152	91	...	91	...	730	1,247	730
6. Springburn,	3,303	...	119	48	24	71	...	808	1,354	879
9. Blackfriars,	2,892	...	90	45	...	45	...	904	1,040	768
12. Broomielaw,	3,753	...	129	...	...	129	...	906	1,424	1,165
13. Anderston, -	3,651	...	338	...	34	34	...	777	913	1,555
14. Sandyford, -	3,000	...	195	78	...	39	...	818	1,052	818
16. Cowcaddens,	2,891	...	80	...	...	80	...	428	1,125	1,178
18. Hutcheson-town, -	3,606	25	222	99	...	123	...	1,260	1,210	667
City, - -	2,500	1	140	46	18	69	...	720	812	761

NOTE.—The very large proportion of this rate which is contributed by Measles, Whooping-cough, and Diarrhoea will be found by adding together the rates for these diseases and comparing the result with the total Zymotic rate given in the first column.

TABLE XIV.

GLASGOW, 1905.—PRINCIPAL ZYMOTIC DISEASES.—DEATHS AND DEATH-RATES IN THE SEVERAL WARDS, WITH THE CORRESPONDING RATES FOR 1903-4.

MUNICIPAL WARDS.	Death-rate per Million.		1905.	
	1903	1904.	Deaths.	Death-rate per Million.
1. Dalmarnock,	3,873	3,316	199	4,028
2. Calton,	4,132	3,529	117	3,171
3. Mile-end,	4,031	3,381	155	3,580
4. Whitevale,	2,694	2,932	100	3,041
5. Dennistoun,	1,876	1,752	40	1,133
6. Springburn,	2,248	3,571	139	3,303
7. Cowlairs,	2,149	2,802	67	2,166
8. Townhead,	2,626	1,931	93	2,394
9. Blackfriars,	2,859	2,667	64	2,892
10. Exchange,	896	894	2	945
11. Blythwood,	1,112	1,435	3	901
12. Broomielaw,	4,558	3,090	29	3,753
13. Anderston,	2,275	3,534	108	3,651
14. Sandyford,	2,227	2,351	77	3,000
15. Park,	842	674	13	520
16. Cowcaddens,	3,929	3,325	108	2,891
17. Woodside,	2,103	2,064	69	1,560
18. Hutchesontown,	2,716	3,690	146	3,606
19. Gorbals,	2,244	1,723	74	2,050
20. Kingston,	2,647	2,231	84	2,431
21. Govanhill,	1,865	1,977	79	2,341
22. Langside,	979	735	18	500
23. Pollokshields,	707	282	8	448
24. Kelvinside,	371	654	12	580
25. Maryhill,	1,622	1,890	97	2,489
— Institutions and Harbour, ... ..	...	...	63	...
CITY,	2,507	2,450	1,964	2,500

SECTION II.

SMALLPOX.

Only 4 cases of smallpox were registered during the year, and 1 death occurred.

All were treated in hospital.

The mortality from smallpox for several periods in Glasgow and other towns in England and Scotland is shown in the following Table:—

SMALLPOX.*							Death-rate per 100,000.	
							1895-1904.	1905.
Glasgow,	...	...	...	...	...	...	5·5	—
Edinburgh,	...	...	...	...	...	...	0·6	—
Dundee, ...	...	...	...	...	...	...	—	—
Aberdeen, ...	...	...	...	...	...	...	0·1	—
Paisley, ...	...	...	...	...	...	...	0·5	—
Greenock, ...	...	...	...	...	...	...	4·2	—
London, ...	...	...	...	...	...	...	3·5	—
Liverpool, ...	...	...	...	...	...	...	2·9	—
Manchester, ...	...	...	...	...	...	...	0·7	—
Birmingham, ...	...	...	...	...	...	...	0·5	—

* See footnote, p. 21.

The attack and death rates in each ward are given in Table XV., which follows:—

TABLE XV.

GLASGOW, 1905.—SMALLPOX.—CASES and CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding rates for 1904.

MUNICIPAL WARDS.	1904.		1905.			
	Case-rate per Million.	Death- rate per Million.	Cases.	Case-rate per Million.	Deaths.	Death- rate per Million.
1. Dalarnock,	3,238	336	...	...	...	...
2. Calton,	1,238	105	...	...	...	...
3. Mile-end,	2,802	185	2	46	...	...
4. Whitevale,	1,088	121	...	...	...	...
5. Dennistoun,	350	...	...	...	...	...
6. Springburn,	780	71	...	...	...	...
7. Cowlares,	231	66	...	...	...	...
8. Townhead,	559	51	...	...	...	...
9. Blackfriars,	1,511	133	...	...	...	...
10. Exchange,	447	...	...	...	...	...
11. Blythswood,	861	...	...	...	...	...
12. Broomielaw,	2,966	124	...	...	...	...
13. Anderston,	412	103	...	...	...	...
14. Sandyford,	694	116	...	...	...	...
15. Park,	119	...	...	...	...	...
16. Cowcaddens,	681	52	...	...	...	...
17. Woodside,	399	...	...	...	...	...
18. Hutchesontown,	1,085	96	1	25	1	25
19. Gorbals,	985	82	1	27	...	...
20. Kingston,	1,058	57	...	...	...	...
21. Govanhill,	885	59	...	...	...	...
22. Langside,	184	...	...	...	...	...
23. Pollokshields,	113	...	...	...	...	...
24. Kelvinside, ... ..	...	...	...	...	...	...
25. Maryhill,	80	...	...	...	...	...
— Institutions and Harbour,	...	...	...	...	...	...
CITY,	1,108	85	4	5	1	1

The following record of the cases occurring is taken from the fortnightly reports of the periods in which they occurred:—

In the fortnight ending 21st January an unvaccinated child of $4\frac{5}{12}$ years was admitted to hospital from the Southern District of the City. The vaccination had been postponed for four periods on account of ill health, and ultimately, through change of address, the child had escaped vaccination altogether. At the time of its occurrence no suggested source of infection was discovered. Later, however, two cases were admitted in the fortnight ending 4th March, and one in that ending 18th March. These occurred under the following circumstances:—

On 21st February, information was received that an unvaccinated child, aged $2\frac{4}{12}$ years, residing in the Southern District of the City, was ill of a suspicious-looking rash, and that it had been visiting the grandmother, residing in Partick, who was believed to be ill of chickenpox. On an examination being made, the child's disease was recognised to be smallpox, and after communicating with the Partick Local Authority, information was received from them that the grandmother's illness was a discrete attack of smallpox, she having sickened on 26th January. It was then also learned that among the visitors at the Partick address was a daughter, residing in Bridgeton, and she, on being visited, was also found to be suffering from the disease, although unaware of the fact. She had sickened on 19th and was removed to hospital on 23rd February.

The grandmother had been employed in a rag store in the South-Side of Glasgow, but had not been at work after the date of her sickening. No illness had occurred among the other workers, and, with the exception of this patient, all the workers had been re-vaccinated within the past four years.

The rags were obtained from the colliery districts around Glasgow, but the Local Authorities of the districts were unable to trace the source of the rags to any house in which smallpox was known to have occurred. The Bridgeton patient referred to above resided with a married sister, who, along with the rest of the household, was removed to the reception-house on the recognition of the disease, and, while under observation there, she, on the 9th March, or exactly fourteen days after last-known exposure to infection, sickened of the disease.

VACCINATION.

The following statement shows the number of vaccinations and re-vaccinations performed by the officers of the department, and otherwise at the cost of the Corporation, during the year 1905:—

	Primary.	Re-vaccinations.
At Office and Hospitals,	306	61
At Residence, by Staff,	—	12
In Prisons,	—	849
In Lodging-houses, &c.,	—	—
By Medical Practitioners, in terms of circular letter dated 4th January, 1904,	—	81
	<u>306</u>	<u>1,003</u>

COST.

1. Fees paid to Medical Practitioners,	£6 1 6
2. Overtime to Inspectors for work in Models and Tenements in evening,	—
3. Vaccinations at Prisons,	42 9 0
4. Paid to Lodging-house Keepers for Beds,	—
5. Cost of Lymph,	22 6 11
	<u>£70 17 5</u>

PRIMARY VACCINATION.

Table XVI. has been compiled from the figures contained in the Registrar-General's supplement for 1905, and gives particulars as to the vaccination of all children born in Glasgow during 1904. For comparison the figures for several preceding years are introduced.

TABLE XVI.

GLASGOW.—PRIMARY VACCINATION during 1904—COMPILED from the 51ST ANNUAL REPORT of the REGISTRAR-GENERAL.

Registration Districts.	Successfully Vaccinated.		Vaccination Postponed.		Insusceptible of Vaccination.		Died before Vaccination.		Removed from the District, or otherwise Unaccounted for.		No. of Children Born.
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	
1. Maryhill, ...	1,456	83.7	93	5.4	6	0.3	153	8.8	31	1.8	1,739
2. Shettleston, ...	1	...	...	...	...	...	...	...	...	...	1
3. Bridgeton, ...	1,774	83.6	10	0.5	28	1.3	234	11.0	77	3.6	2,123
4. Camlachie, ...	1,725	84.4	12	0.6	8	0.4	232	11.4	67	3.2	2,044
5. Dennistoun, ...	2,722	84.5	36	1.1	32	1.0	336	10.4	96	3.0	3,222
6. Calton, ...	865	79.2	10	0.9	10	0.9	154	14.1	53	4.9	1,092
7. Blackfriars, ...	927	71.2	10	0.8	15	1.1	210	16.1	140	10.8	1,302
8. St. Rollox, ...	1,692	84.6	25	1.2	19	1.0	192	9.6	71	3.6	1,999
9. Blythswood, ...	380	79.8	5	1.1	...	...	62	13.0	29	6.1	476
10. Milton, ...	1,317	84.8	10	0.6	5	0.3	175	11.3	47	3.0	1,554
11. Kelvin, ...	1,380	87.7	14	0.9	7	0.4	152	9.7	21	1.3	1,574
12. Anderston, ...	1,057	83.0	10	0.8	7	0.6	168	13.2	31	2.4	1,273
13. Hutchesontown, ...	2,332	82.6	21	0.8	9	0.3	342	12.1	119	4.2	2,823
14. Gorbals, ...	1,189	83.8	14	1.0	6	0.4	154	10.9	56	3.9	1,419
15. Tradeston, ...	657	84.6	9	1.1	5	0.7	71	9.1	35	4.5	777
16. Kinning Park, ...	381	83.3	4	0.9	5	0.9	42	9.2	26	5.7	458
17. Plantation, ...	12	100.0	...	...	...	...	...	...	...	...	12
18. Govan, ...	25	89.3	...	...	...	...	2	7.1	1	3.6	28
19. Partick, ...	220	90.9	2	0.8	2	0.8	15	6.2	3	1.3	242
20. Rutherglen, ...	1	...	...	...	...	...	...	...	...	...	1
21. Cathcart, ...	454	89.9	11	2.2	8	1.6	29	5.7	3	0.6	505
22. Eastwood, ...	78	89.7	1	1.1	...	...	5	5.7	3	3.5	87
CITY, ...	20,645	83.4	297	1.2	172	0.7	2,728	11.0	909	3.7	24,751
1901, ...	...	83.0	...	0.8	...	0.9	...	10.6	...	3.5	24,720
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

DIPHTHERIA.

The cases of diphtheria registered during the year numbered 726, compared with 647 in 1904. The number of deaths registered was 107, compared with 91 in 1904. These figures for 1905 represent an attack-rate of 924 per million living, and a death-rate of 136, compared with 824 and 116, which were the corresponding rates for 1904. The morbidity-rate (that is, the death-rate per 1,000 cases) also rose from 14·1 to 14·7.

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

1881-90,	...	...	...	...	...	280 per 1,000 living.
1891-1900,	...	...	...	...	...	231 "
1900,	...	...	...	...	...	165 "
1901,	...	...	...	...	...	151 "
1902,	...	...	...	...	...	135 "
1903,	...	...	...	...	...	132 "
1904,	...	...	...	...	...	116 "
1905,	...	...	...	...	...	136 "

Compared with several other towns during the ten years 1895-1904 and 1905, the death-rate per 100,000 is as follows:—

				1895-1904.			1905.
Glasgow,	...	...	...	14	...	...	14
Edinburgh,	...	...	...	18	...	...	22
Dundee, ...	...	...	...	14	...	...	16
Aberdeen,	...	...	...	14	...	...	5
Paisley, ...	...	...	...	12	...	...	9
Greenock,	...	...	...	19	...	...	21
London, ...	...	...	...	37	...	...	12
Liverpool,	...	...	...	26	...	...	21
Manchester,	...	...	...	17	...	...	20
Birmingham,	...	...	...	28	...	...	17

In the following Table (XVII.) the attack-rate and morbidity-rate, together with the percentage of cases treated in hospital, are shown.

TABLE XVII.
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.	
1886-90	...	...	...	...	466	...	...
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

In Table XVIII. the cases and deaths occurring in each ward during 1905, together with the corresponding rates, are shown, and for comparison the death-rates for 1903-1904 are included. It will be seen that frequency of attack is not coincident with severity, and that while Maryhill, Sandyford, Hutchesontown, Cowlares, Kelvinside, Dalmarnock, and Pollokshields, in the order named, present attack rates all in excess, the case-mortality rate is highest in Anderston, where the attack rate was less than the City, and it is followed by Kingston, Mile-end, Gorbals, Hutchesontown, and Townhead, of which Hutchesontown alone is noted as having an excessive rate of attack. These details are included in Table XVIII.

TABLE XVIII.

GLASGOW, 1905.—DIPHTHERIA and MEMBRANOUS CROUP.—CASES and CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD; with corresponding Death-rates for 1903-4.

MUNICIPAL WARDS.	Death-rates per Million.		1905.			
	1903.	1904.	Cases.	Case-rate per Million.	Deaths.	Death-rate per Million.
1. Dalarnock,	157	118	51	1,020	8	162
2. Calton,	128	158	37	950	4	108
3. Mile-end,	139	69	37	852	8	185
4. Whitevale,	148	60	30	889	5	152
5. Dennistoun,	154	88	34	917	3	85
6. Springburn,	97	142	45	981	5	119
7. Cowlaers,	235	132	34	1,099	5	162
8. Townhead,	75	76	27	694	5	129
9. Blackfriars,	87	...	12	520	2	90
10. Exchange, ... ..	...	...	1	381	...	...
11. Blythswood, ... ..	...	...	1	266	...	...
12. Broomielaw,	120	124	9	969	1	129
13. Anderston,	102	240	28	902	10	338
14. Sandyford,	113	154	32	1,242	5	195
15. Park,	80	...	18	696	1	40
16. Cowcaddens,	225	236	29	754	3	80
17. Woodside,	131	155	36	563	4	90
18. Hutchesontown,	119	121	48	1,185	9	222
19. Gorbals,	137	109	30	813	6	166
20. Kingston,	115	114	31	881	8	231
21. Govanhill,	148	59	28	829	1	30
22. Langside,	135	184	35	962	3	83
23. Pollokshields, ... ..	...	56	18	1,009	1	56
24. Kelvinside,	106	50	22	1,032	1	48
25. Maryhill,	165	186	53	1,311	9	231
— Institutions and Harbour, ...	...	...	...	...	...	...
CITY,	132	116	726	924	107	136

TABLE XVIII.

GLASGOW, 1905.—DIPHTHERIA and MEMBRANOUS CROUP.—CASE MORTALITY
compared with ATTACK-RATE in each WARD.

MUNICIPAL WARDS.	Number of Deaths.	Case-rate per million.	Case Mortality Rate.
25. Maryhill,	9	1,311	17·0
14. Sandyford,	5	1,242	15·7
18. Hutchesontown,	9	1,185	18·8
7. Cowlairs,	5	1,099	14·7
24. Kelvinside,	1	1,032	4·5
1. Dalmarnock,	8	1,020	15·7
23. Pollokshields,	1	1,009	5·6
6. Springburn,	5	981	11·1
12. Broomielaw,	1	969	11·2
22. Langside,	3	962	8·6
2. Calton,	4	950	10·8
5. Dennistoun,	3	917	8·8
13. Anderston,	10	902	35·7
4. Whitevale,	5	889	16·7
20. Kingston,	8	881	25·8
3. Mile-end,	8	852	21·6
21. Govanhill,	1	829	3·6
19. Gorbals,	6	813	20·0
16. Cowcaddens,	3	754	10·4
15. Park,	1	696	5·6
8. Townhead,	5	694	18·5
17. Woodside,	4	563	11·2
9. Blackfriars,	2	520	16·7
10. Exchange,	—	381	—
11. Blythswood,	—	266	—
CITY,	107	924	14·7

SEASONAL PREVALENCE.

The seasonal prevalence of the disease is shown in the following Table by stating their numbers monthly, along with the death-rates calculated as an annual average.

The indication of an increasing prevalence manifested in the last three months of the year forms the prelude to an increasing prevalence during 1906, which will fall to be dealt with in a subsequent report.

TABLE XIX.

GLASGOW.—DIPHTHERIA and MEMBRANOUS CROUP.—CASES REGISTERED and ANNUAL CASE-RATE per 100,000 LIVING for each MONTH for the ELEVEN YEARS, 1890-1900, and for 1901, 1902, 1903, 1904, and 1905.

MONTH.	CASES REGISTERED.						ANNUAL CASE-RATE PER 100,000 LIVING.					
	1890-1900.	1901.	1902.	1903.	1904.	1905.	1890-1900.	1901.	1902.	1903.	1904.	1905.
January, ...	652	69	40	96	48	57	103	107	61	145	72	85
February, ...	611	35	45	41	63	63	108	60	75	68	101	105
March, ...	586	45	53	66	53	54	93	70	80	99	79	81
April, ...	461	41	44	39	57	54	75	65	69	61	88	84
May, ...	444	43	42	47	62	46	70	66	64	70	92	69
June, ...	377	38	34	30	32	43	62	61	53	47	48	66
July, ...	300	33	50	38	31	30	47	51	76	57	46	45
August, ...	478	36	38	53	47	52	76	56	58	80	70	78
September, ...	608	49	50	51	56	63	100	78	78	79	86	98
October, ...	711	45	76	96	65	85	113	70	115	145	97	127
November, ...	698	81	68	106	76	85	114	129	106	165	118	132
December, ...	649	48	77	61	57	94	103	74	117	91	85	141
Year,	6,575	563	617	724	647	726	89	74	79	93	82	92

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 eleven years:—

TABLE XX.

GLASGOW.—DEATHS and DEATH-RATES *per Million* from DIPHTHERIA and CROUP from 1895 to 1905.*

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

* Registrar-General's Annual Reports.

Age and Sex Distribution.—As has been pointed out on previous occasions, every year passed after infancy renders the patient less liable to a fatal issue should he contract the disease. An exception to this, however, was shown in the figures for last year, when the death-rate for males in their fourth and fifth years was greater than in their third year. Similarly, in the present year, it is the fifth year which has the increased fatality, and it affects both sexes. In both cases the apparent increase may be solely on account of the small numbers dealt with—a possible error which continued observation should rectify.

GLASGOW, 1905.—DIPHTHERIA.—AGE and SEX DISTRIBUTION, DEATHS, and CASE-MORTALITY.

AGE.	Cases.		Deaths.		Case-mortality per cent.	
	Male.	Female.	Male.	Female.	Male.	Female.
0	20	16	12	7	60.0	43.8
1	53	49	15	13	28.3	26.5
2	48	40	10	11	20.8	27.5
3	36	35	5	2	13.9	5.7
4	36	36	6	9	16.7	25.0
5	82	101	7	8	8.5	7.9
10	22	30	...	1	...	3.3
15	8	13	...	...	...	...
20	9	35	1	...	11.1	...
25	11	28	...	...	...	...
35	4	7	...	...	...	...
45	2	2	...	...	...	...
55	...	...	...	...	...	...
65	...	...	...	...	...	...
All Ages,	331	392	56	51	16.9	13.0

Influence of School Holidays on the Prevalence of the Disease.—In the following Table, which is repeated on the lines of a corresponding one in last year's Report, it will be seen that the increase of diphtheria after the re-assembling of the schools in August is specially marked during the school period of life, namely, 3-13 years:—

GLASGOW, 1905.—DIPHTHERIA and MEMBRANOUS CROUP.—CASES notified between 24th May and 5th October, arranged to show the INFLUENCE of SCHOOL HOLIDAYS on CASE-INCIDENCE.

PERIODS	Cases Notified.						Increase or Decrease.						TOTAL
	Ages, 0—3.		Ages, 3—13.		Ages, 13 and up.		Ages, 0—3.		Ages, 3—13.		Ages, 13 and up.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1st. { May 24 to July 7,	9	10	10	17	3	8	...	...	...	...	...	...	57
2nd. { July 7 to Aug. 21,	8	9	12	20	3	5	- 1	- 1	+ 2	+ 3	...	- 3	57
							- 2		+ 5		- 3		
3rd. { Aug. 21 to Oct. 5,	15	9	30	27	3	9	+ 7	...	+ 18	+ 7	...	+ 4	93
							+ 7		+ 25		+ 4		
	32	28	52	64	9	22							
	60		116		31								207

Free Distribution of Diphtheria Antitoxin.—During the year, one of the medical societies in town had under discussion the desirability of the Local Authority making provision for placing supplies of antitoxin at the disposal of practitioners as occasion for its use should arise. As the subject will in all probability come formally before the Health Committee during the year now current, it need not be considered at any length here.

The practice is already in operation in some places, but I doubt whether it obtains in any where the facilities for removal to hospital are equal and the disposition to utilize them so marked as in Glasgow. Table XXI. shows that the fatality among home cases is still greater than among those removed to hospital.

Moreover, there is evidence that we are experiencing a rising tide of diphtheria prevalence, and the question of the prophylactic use of antitoxin in already invaded households is worthy of consideration.

But the low percentage of positive results obtained on bacterial examination of swabs sent to the laboratory (27 per cent.) suggests the desirability of scrutinising very closely any arrangement which might tend to delay or supplant removal to hospital.

Table No. XXI. was introduced last year with the view of contrasting the case-mortality in cases treated at home and in hospital for the years 1891 to 1905 inclusive, and this has been continued for the present year. As formerly stated, a considerable reduction is to be observed in both at the later years of the period; but while this begins in hospital in 1895, the reduction in those treated at home does not become apparent until 1902. Moreover, the reduction is greatest among those treated in hospital, a circumstance which suggests that the more systematic administration of antitoxin, which is there adopted, exercises a considerable influence in averting a fatal result.

TABLE XXI.
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

In the foregoing Table it is shown that the cases treated at home have a higher mortality than those treated in hospital, and an analysis of 429 cases occurring during the months of September and November in the years 1904 and 1905 serves to bring into prominence the lower vitality of the children in the smaller-sized houses. Among children sickening in one-apartment houses, 23 per cent. died, as against 19 per cent. in two-apartment houses and 7 per cent. in three-apartment houses.

DIPHTHERIA.—MORTALITY RATE in relation to SIZE OF HOUSE in which SICKENING OCCURS (3 Months—September, October, and November, 1904 and 1905).

YEAR.	1 Apartment.		2 Apartments.		3 Apartments.		TOTALS.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1904,	11	3	111	17	75	9	197	29
1905,	23	5	132	30	77	2	232	37
Totals, ...	34	8	243	47	152	11	429	66
Death-rate per 100 cases in each size of house,	23.5		19.3		7.2		13	

OCCURRENCE OF SORE THROAT IN HOSPITAL, WITH COINCIDENT STREPTOCOCCUS INFECTION OF MILK.

In my report for last year, I had occasion to describe the course of an outbreak of sore throat in hospital concurrently with the presence of a teat eruption among the milk cattle.

Early in the present year several cases of a similar character appeared among both patients and nurses in an enteric ward at Belvidere, and one of the milk animals had an acute mammitis, with suppression of milk, for a day or two before the first case sickened.

Numbers Attacked.—In all, three nurses and three patients were attacked. There were nine contacts with one of the former, presenting no symptoms, but from two of whom the *Bacillus diphtheriæ* was recovered, although the culture in the nurse's case proved negative.

Clinical Features.—These varied much in severity, but in general presented a sudden rise of temperature, faucial injection, and an exudate on the tonsils.

Bacteriological Features.—In cultures from the throats of one nurse and two patients the *Bacillus diphtheriæ* was obtained, but only one of these presented clinical symptoms, and these symptoms did not differ from those of the others whose throats were negative bacteriologically.

In the throats of the others a staphylococcus and bacillus (not *B. diphtheriæ*) were present.

Relation of Cases to each other in Time.—These cases extended from 26th January to 3rd March, and were confined to the patients and nurses in Ward III. It is possible, therefore, to suggest that the series was established by direct succession from the first case, but this would fail to account for its introduction.

Severity of Attack.—In this regard two classes are found—all the patients had severe symptoms, and all the nurses mild symptoms. The former, indeed, are described by the Medical Superintendent and the House Physician as presenting a definite clinical type, and it will be observed that their dates of sickening were, respectively, 26th January and 18th and 25th February. Moreover, the patients, being convalescent from enteric fever, consumed milk to a greater extent than the nurses. It might, therefore, be suggested that the severe attacks resulted from re-invasion in each case, and the milder from contact therewith.

BELVIDERE.—TABLE OF SEVERAL CIRCUMSTANCES ASSOCIATED WITH CERTAIN CASES OF SORE THROAT, 1905.

1 Influences External to Ward III.	2 Date of Sickening. Association.	3 NAME.	4 Position in Ward III.	5 Löffler.	6 Nature of Illness.
<i>Cow 1.</i> —On 24th January fell ill of indigestion, so that on 26th January the milk was visibly affected, and on 7th February the udder was inflamed and an inflamed crack was seen.	24th Jan. (approx.).				
	26th Jan.,	M. T., - -	Patient (Main Ward),	- ve,	Exudate with Temp. of 102°. In bed. Severe.
<i>Cow 2.</i> —On 1st February a cracked teat began, and continued for a week or two.	1st Feb. (approx.).				
<i>Nurse M.L.</i> —A nurse in Ward I., on 4th February, sickened of diphtheria, and was treated in Ward I. At the time of sickening she was with nurses of Ward III., and there have been certain comings and goings since, though without close association.	4th Feb.				
	8th Feb.,	Nurse C., - -	Nurse, - -	- ve,	No exudate. Temp. of 100.2°. Did not go off duty. Mild.
<i>B. S.</i> —A case of diphtheria seen on 9th February at home by House Physician of Ward III. Same person performed tracheotomy on B. S., same day, in Ward I.	9th Feb.				
	18th Feb.,	M. H., - -	Patient (Con. Ward),	+ ve,	Exudate. Negative. Temp. of 104°. In bed. Severe.
<i>Cow 282.</i> —Bloody milk. Negative streptococci. (Dr. Buchanan.)	25th Feb. (approx.).				
	25th Feb.,	L. M., - -	Patient (Con. Ward),	- ve,	Exudate. Negative. Temp. of 103.6°. In bed. Severe.
	28th Feb.,	Nurse M.G., -	Nurse, - -	- ve,	Discomfort of throat for 24 hours. Mild.
<i>Cow 282.</i> —Streptococci in milk. (Dr. Buchanan.)	1st March (approx.).				
	3rd March,	Nurse T., - -	Nurse, - -	- ve,	Throat sore. Mild.
Contacts—	1st March,	M. F., - -	Patient (Con.),	- ve,	Contacts only, with no subjective symptoms.
	Do.,	Mrs. T., - -	Patient (Con.),	+ ve,	
	Do.,	Nurse C., - -	Nurse, - -	- ve,	
	Do.,	Nurse H., - -	Nurse, - -	+ ve,	
	2nd March,	Nurse W., - -	Nurse, - -	- ve,	
	Do.,	Nurse M.B., -	Nurse, - -	- ve,	
	Do.,	Mrs. H., - -	Patient (Main),	- ve,	
	Do.,	Mat. A., - -	Patient (Con.),	- ve,	
	Do.,	H.P. of Wd. III.,	H. P., - -	- ve,	

Note.—Nurse T., in column 3, while in Ward X. had had a sore throat on 11th February. It was better before she came to Ward III. on 3rd March.

ENTERIC FEVER.

447 cases of enteric fever were registered during 1905, of which 406, or 90·8 per cent., were treated in hospital. The number of deaths from this disease in 1905 was 53, representing a death-rate of ·067 per 1,000 living. The case-rate for the year was 569 per million living, compared with 800 in 1904. The case-mortality was lower than in any year since 1891. The average annual death-rate for several periods has been as follows:—

1881-90,	·230 per 1,000.
1891-1900,	·215 "
1900,	·209 "
1901,	·275 "
1902,	·142 "
1903,	·182 "
1904,	·107 "
1905,	·067 "

The following Table gives the attack-rate and death-rate per million and the case-mortality for each year since 1891:—

TABLE XXII.
GLASGOW.—ENTERIC FEVER, 1891-1905.

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	85·4	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

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.

	1895-1904.	1905.
Glasgow,	21	7
Edinburgh,	12	6
Dundee,	11	7
Aberdeen,	7	2
Paisley,	28	16
Greenock,	23	30
London,	13	5
Liverpool,	27	10
Manchester,	17	9
Birmingham,	20	7

The shrinkage of the disease during the present year is well illustrated by the number of cases registered in the fifteen years shown in Table XXII.

In the number of cases registered, as in the deaths occurring, the year is, without exception, the lowest on record since 1865. In Exchange Ward no cases occurred, and there were no deaths in Park, Woodside, Blythwood, Pollokshields, or Kelvinside.

TABLE XXIII,

GLASGOW, 1905.—ENTERIC FEVER, CASES AND CASE-RATES, AND DEATHS AND DEATH-RATES, IN EACH MUNICIPAL WARD FOR SEVERAL YEARS.

MUNICIPAL WARDS.	Death-rate per Million.		Cases. 1905. Deaths.			
	1903.	1904.	Number.	Rate per Million.	Number.	Rate per Million.
1. Dalmarnock,	256	59	40	800	8	162
2. Calton,	282	79	29	745	3	81
3. Mile-end,	394	93	34	783	2	46
4. Whitevale,	296	121	20	593	3	91
5. Dennistoun,	154	204	20	540	3	85
6. Springburn,	121	118	29	632	3	71
7. Cowlares,	134	66	16	517	2	65
8. Townhead,	175	76	25	643	6	154
9. Blackfriars,	260	133	9	390	1	45
10. Exchange,	448	...	...	...	...	...
11. Blythwood, ... ..	...	...	1	266	...	...
12. Broomielaw,	120	...	3	323	1	129
13. Anderston,	271	172	7	225	1	34
14. Sandyford,	75	77	13	505	1	39
15. Park,	80	79	7	77	...	...
16. Cowcaddens,	450	157	39	1,014	3	80
17. Woodside,	66	200	30	676	...	...
18. Hutchesontown,	238	241	36	889	5	123
19. Gorbals,	164	55	11	298	2	55
20. Kingston,	86	86	21	597	4	116
21. Govanhill,	89	30	10	296	1	30
22. Langside,	67	...	12	330	1	28
23. Pollokshields,	118	...	10	560	...	...
24. Kelvinside,	53	50	5	234	...	...
25. Maryhill,	27	160	20	495	1	26
— Institutions and Harbour, ...	...	...	...	...	2	...
CITY,	182	107	447	569	53	67

SHELL-FISH INFECTION.

Further evidence occurred during the year of the part played by shell-fish taken from polluted waters in disseminating the disease. Earlier in the summer, however, attention was directed by a letter to the custom of gathering shell-fish at certain parts of the Gareloch for consumption in Glasgow, and the following report was subsequently presented to the Corporation:—

REPORT ON MUSSEL BEDS IN GARELOCH WHERE POLLUTION WAS SUGGESTED.

During past summers it has been necessary now and again to refer to cases of enteric fever occurring in association with the consumption of shell-fish by excursionists to coast resorts during the holiday season, and a word of warning at the present moment may not be inopportune, because in such cases it could usually be shown that the patients were themselves the gatherers of the implicated shell-fish. In contrast with these occurrences, there has been little local evidence tending to incriminate the trade customs of the regular shell-fish gatherers, and this circumstance seems to carry with it suggestions of a practical character.

It was recorded, for example, in connection with the Lochgilphead cases of enteric fever two years ago, that the regular gatherers at that place rejected such shell-fish as were regarded by them as "sick," because they lay on the surface; while, on the other hand, the visitors collected and ate these without hesitation, being unacquainted with the fact that the healthy mollusc of the species then implicated was to be found below the surface of the sand.

There thus arises the apparent anomaly that, while visitors sickened after consuming shell-fish gathered on the spot, no cases were traceable among the consumers of those despatched to Glasgow in course of trade.

It would therefore appear that, even where pollution of the foreshore is so common as we believe to be the case within the Clyde area, the risk of specific infection is determined by local circumstances, which are chiefly physical in their character, but along with which must be included the habits of the molluscs themselves.

An opportunity occurred during the present fortnight of obtaining some information on the question through the courtesy of a gentleman resident in Glasgow, but holidaying in the neighbourhood of Garelochhead. In a letter he drew my attention to the circumstances that at certain parts of the foreshore there gatherers were employed sending shell-fish to the Glasgow market, and, after verifying this latter circumstance, I communicated with Dr. M'Vail, Medical Officer for Dumbartonshire, and, in company with him and Dr. Buchanan, visited the mussel-gatherers while at work.

It may be stated, as a general description, that the sewage of this neighbourhood discharges on the foreshore towards the northern side of the loch, while that portion of the foreshore which lies between the houses and the burn separating the parishes of Row and Roseneath is a little further distant from the sewers.

The distribution of the mussel over the foreshore is irregular, the deposits lying closer at some places than at others; but the gatherers were quite alive to the business risk of disease becoming associated with the consumption of their gatherings, and purposely abstained from lifting mussels from that section of the shore on which sewers, or the bulk of them at least, were discharging.

Herein, therefore, lies the note which may serve as one of warning to excursionists during the approaching holidays; for, while the regular gatherers thus restrict their operations, we were told of irregular gatherings—sometimes for bait, but chiefly by visitors—of mussels from what may be called the "danger zone," or the area of obvious sewage pollution.

Information in sufficient detail is not forthcoming to enable me to say what distance from a sewage pipe discharging below high-water level would in all circumstances constitute risk of infection from shell-fish gathered in its neighbourhood, but the direction of tides and local currents will obviously influence the question. In general, however, to the occasional visitor who has no opportunity of studying the habits of the marine fauna, it would be well that shell-fish should only be gathered after enquiry has been made as to the habits of the local gatherers. This, however, is but a temporary expedient.

I have invited the attention of the Clerk to the provisions of the Unsound Food Clauses (43 *et seq.*) of the Public Health Act, with a view to his considering whether evidence of sewage pollution, founded on the recovery from the fluids of the mussel of the group of bacteria associated with excremental pollution, would constitute evidence in Court of unfitness for food in the sense of the clauses just referred to, and, in the absence of definite evidence, that their consumption had *de facto* been followed by disease. To this question the present Royal Commission on Sewage has directed considerable attention, and their findings do not support the view that such action would be successful under the corresponding clauses of the English Public Health Act.

But the circumstances noted suggest the desirability of an enquiry into the conditions present over the whole area of shell-fish layings in the Clyde basin, with a view to marking off such as come within the "danger zone" of sewage pollution. This is too extensive for any Local Authority to undertake, and I would suggest for the consideration of the committee whether they should not invite the Local Government Board to consider the question. Meanwhile Dr. Buchanan is engaged in an enquiry into the bacteria present in samples selected from various points during our visit.*

A. K. CHALMERS.

Sanitary Chambers,
Glasgow, 24th June, 1905.

On considering this report the Corporation directed the attention of the various Local Authorities interested to the desirability of having warning notices put up at dangerous places, and the following letter was sent to their Medical Officers:—

Sanitary Chambers,
Glasgow, 5th July, 1905.

TO THE MEDICAL OFFICER OF
THE LOCAL AUTHORITY OF

DEAR SIR,

SHELL-FISH INFECTION.

The Corporation of the City of Glasgow, at their meeting to-day, had under consideration the following recommendation of the Committee on Health:—

"The committee, having considered that portion of the Medical Officer's fortnightly report dealing with the question of shell-fish infection, agreed to recommend that the Town-Clerk be instructed to forward an excerpt thereof to the Local Government Board for their consideration, and that the Medical Officer of Health communicate with the Clerks to the Local Authorities of Argyllshire, Ayrshire, Renfrewshire, &c., &c., requesting those Authorities to have boards placed on the shores warning visitors of the dangers attendant on the consumption of the class of shell-fish referred to."

This was approved of, subject to the alteration that the matter be brought under the notice of the Clerks of the various Local Authorities concerned by the Town-Clerk of Glasgow, and that I should at the same time communicate the recommendation to the Medical Officers of those Authorities, and forward them a copy of the report thereon. Might I ask whether your Authority can take any action on the lines indicated in the recommendation regarding the erection of boards warning visitors of the dangers referred to in the report?

Yours truly,

A. K. CHALMERS.

(Extract from Minute, No. 38, p. 2530, of date 23rd August, 1905.)

INFECTION FROM MUSSELS.

I beg to report the occurrence of six cases of enteric fever during the last fortnight, the result of eating raw mussels. Three churches held their annual excursions on the 17th July last—two at a watering-place on the Clyde and one on the East Coast.

* Dr Buchanan subsequently reported that of six mussels taken at random from the neighbourhood of a sewage pipe, all contained bacterial evidence of sewage contamination; of a like number taken from a spot beyond this three were similarly affected, as were also four out of six taken from a spot still further removed, but probably subject to the influence of local currents.

The first case which occurred was that of a girl in a family in the Anderston District. Her sister brought home the mussels, and several members of the family partook of them in a raw state. All suffered from vomiting and diarrhoea the following day—the girl above mentioned, who had not been from home, latterly developing enteric fever.

The second case resides outside the city boundary, but was a member of one of the other trips to the same place and on the same day.

The third case was that of a girl who accompanied the trip to the East Coast. She ate raw mussels on the shore, suffered from similar symptoms, and was later removed to hospital suffering from enteric fever.

In the fourth case the girl had been spending her holidays at the same town on the East Coast, but before returning to Glasgow gathered and partook of some mussels from the shore, some fifteen days afterwards developing enteric fever.

Two other cases were reported yesterday, the result of having eaten raw mussels, cockles, and whelks at the same East Coast town.

(Extract from Fortnightly Report, 22nd November, 1905.)

INFECTIVITY OF ENTERIC FEVER.

The tendency to minimise the infectivity of this disease is so widespread that the following incident, which tends to throw considerable light on the accuracy of this view, may be left to carry its own moral.

On 8th November I received notification that two members of a family—a mother and daughter—residing on the south side of the river, were ill of enteric fever. On visiting, it was learned that their sicknesses dated from the 26th and 28th October respectively; that a child, whose illness had begun so far back as 2nd October, was just recovering; while two others were sickening. Placed in the order of succession, the four laterickenings are separated by quite a definite period from the first one, and are obviously secondary thereto. The symptoms in the first patient began on the ninth day after the return of the family from Dunoon, and, as the stay there had extended over a fortnight, there seems no reasonable doubt for believing but that the infection was caught there. The symptoms, however, would appear to have been indefinite in their character, as the illness was regarded as "pneumonia," until the occurrence of the subsequent cases led to the revisal of the diagnosis.

The following Table is again introduced to continue the contrast in fatality between cases treated at home and in hospital. Since 1901 the hospital death-rate has been continuously below that of the home cases:—

TABLE XXIV.
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

TYPHUS FEVER.

53 cases of typhus fever were registered in 1905, and 14 deaths occurred. All the cases were removed to hospital. The case-rate was 67 and the death-rate 18 per million living.

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

1881-90,	...	...	...	...	...	·040 per 1,000 living.
1891-1900,	...	...	...	...	...	·016 "
1900,	...	...	...	...	...	·023 "
1901,	...	...	...	...	...	·013 "
1902,	...	...	...	...	...	·012 "
1903,	...	...	...	...	...	·008 "
1904,	...	...	...	...	...	·006 "
1905,	...	...	...	...	...	·018 "

Compared with other large towns, the death-rate in the ten years, 1895 to 1904, and in 1905, per 100,000 living, was as follows:—

	1895-1904.			1905.
Glasgow,	2
Edinburgh,	—
Dundee,	1
Aberdeen,	9
Paisley,	—
Greenock,	2

In the following Table the Ward distribution of the cases and deaths is shown, and the death-rates for 1903 and 1904 are given for comparison:—

TABLE XXV.

GLASGOW, 1905.—TYPHUS FEVER.—CASES and CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding rates for 1903-4.

MUNICIPAL WARDS.	Death-rate per Million.		Cases, 1905.				Deaths.	
	1903.	1904.	No.	Rate per Million	No.	Rate per Million.	No.	Rate per Million.
1. Dalrnarnock, ... ..	...	...	18	360	5	101		
2. Calton,	51	26	5	128	1	27		
3. Mile-end, ... ..	...	23	9	207	2	46		
4. Whitevale, ... ..	...	...	...	...	...	...
5. Dennistoun, ... ..	...	...	1	27	1	28		
6. Springburn,	24	...	1	22	1	24		
7. Cowlairst, ... ..	...	33	2	65	...	...
8. Townhead, ... ..	...	...	1	26	...	...
9. Blackfriars, ... ..	...	44	1	43	...	...
10. Exchange, ... ..	...	...	...	...	...	...
11. Blythswood, ... ..	...	...	...	...	...	...
12. Broomielaw, ... ..	...	...	...	...	...	...
13. Anderston, ... ..	...	...	2	64	1	34		
14. Sandyford, ... ..	...	...	...	...	...	...
15. Park, ... ..	...	...	...	...	...	...
16. Cowcaddens, ... ..	...	...	1	26	...	...
17. Woodside, ... ..	...	...	1	23	...	...
18. Hutchesontown,	24	...	...	...	...	...
19. Gorbals,	27	27	...	...	...	...
20. Kingston, ... ..	...	...	11	313	3	87		
21. Govanhill, ... ..	...	...	...	...	...	...
22. Langside,	34	...	...	...	...	...
23. Pollokshields, ... ..	...	...	...	...	...	...
24. Kelvinside, ... ..	...	...	...	...	...	...
25. Maryhill, ... ..	...	...	...	...	...	...
— Institutions and Harbour, ... ..	...	...	...	...	...	...
CITY,	8	6	53	67	14	18		

The following extracts from the fortnightly reports presented to the Committee on Health describe the various groupings which occurred throughout the year:—

25th January.—Towards the close of the fortnight one case of typhus fever was admitted to hospital from the North-eastern District of the city. The wife of the patient visited Campbeltown along with two of the cases mentioned in the report of the cases occurring during the fortnight ending 27th December, 1904, and would appear to have conveyed the infection to a child, who, about 3rd December, sickened of symptoms which were regarded as due to a bronchitis, but which there is now reason to assume was the clinical evidence of typhus fever in a young child. The latter patient sickened on 6th January.

8th March.—During the fortnight three cases of typhus fever were removed to Belvidere from the Eastern District Parochial Hospital, to which they had been admitted two days previously suffering from what was at first regarded as influenza.

All three were members of one family, residing in a one-apartment house in Bridgeton District, a visit to which elicited the following facts:—

The house is situated on the third floor, and is part of an original room-and-kitchen house, which had been divided. It is ticketed for four adults, and the family—which consists of five members, all adults—had occupied it for eight months. It was fairly clean and well ventilated.

The whole property had an appearance of greater cleanliness than is usually observed in tenements of this class, this being probably due to the fact that the proprietor lives in the adjacent property, and himself exercises a careful supervision.

The following history of illness was obtained:—

About a fortnight before the New Year the mother became ill, and was very ill at Christmas. One visit paid by a medical man left the diagnosis indefinite. Altogether the patient was in bed about a month.

A daughter, aged 13 years, became ill just when the mother became convalescent—i.e., about the middle of January. She recovered somewhat more quickly, but remained in bed until Friday, the 10th February. The symptoms were similar to those of the mother, but no doctor was called.

The three admitted to hospital were—the father, aged about 50 years, and two daughters, aged respectively 16 years and 10 years.

The father had been on the unemployed list, and was working till 22nd February, although he felt out of sorts for some days previously.

The daughter aged 16 years sickened on 16th February, and the one aged 10 years sickened on the 21st.

After careful enquiry no case of illness could be found in the tenement, and the only contacts were a married son, his wife and child. These, along with the mother and daughter who had previously been ill, were removed to the reception-house.

12th April.—During the fortnight a case of typhus fever was removed to hospital from the Southern District of the city. The patient resided with her husband, two children, and other two adults (lodger-relatives) in a one-apartment house ticketed for three, although occupied, as has been stated, by four adults and two children. Patient's sickness began on 27th ultimo and there is a history of precedent illness in a neighbouring house, ticketed for two and a-half, but occupied by three adults and two children, apart from the husband, who is a seaman, and therefore only occasionally at home. It now appears that since the middle of January last there has been a succession of illness in this latter house, of which the following is a summary of the ages and dates of sickening:—

Age of Patient.				Date of Sickening.
1. Girl, aged 17,	...	...	...	Middle of January.
2. Boy, aged 10,	...	...	...	About the middle of February.
3. Boy, aged 12,	...	...	...	March 18th.
4. Boy, aged 4,	...	...	...	March 19th.

All had symptoms similar in character. Only the first patient was visited medically, and her symptoms were attributed to "influenza." In each case the patient was confined to bed about fourteen days, and emaciation resulted. The mother of this latter family is

employed as a washerwoman, and the present patient was in the habit of attending to the children's food during the mother's absence. This brought her into contact with the illness first recorded, from which there seems no reason to doubt that she contracted her illness, which has proved fatal.

It may help to explain the immunity of the mother of the family in which the four attacks occurred that, in 1896, she was removed to hospital from the same address suffering from typhus fever, when also one of the present patients, then 8 years of age, contracted the disease. The tenement is one which requires diligent supervision.

A strict watch is being kept in the district for the development of other cases, and the above recital may serve to direct attention to the possibility that typhus fever sometimes presents itself in clinical forms which suggest influenza only.

10th May.—There is continued evidence that typhus fever is present among the population, and, although the greater part of the following incidents belong to the week succeeding the fortnight to which the present report refers, their importance requires some reference in the present report.

Between the fortnight ending 1st April and the close of the fortnight now reviewed two cases were dealt with, both being removed from the reception-house, where they were under observation as contacts with the case referred to as occurring during that fortnight.

On 29th April two members of a family were removed from West Street to Ruchill Hospital, certified as enteric fever. A query was telephoned from the hospital as to the nature of the disease, which ultimately was returned as typhus. On visiting the household the inspector found the father of the two patients ill in bed, and enquiry disclosed the circumstance that a younger member of the family had been ill six weeks previously, the symptoms being regarded by the medical attendant as due to influenza. In reviewing the illness with this gentleman, after the nature of the later illnesses was recognised, I found him to be of opinion that the symptoms in this earlier case were in consonance with an attack of typhus fever.

On 1st current a policeman, residing in the police barracks at East Clyde Street, was removed to Ruchill as enteric fever, and here again the disease proved to be typhus. No illness has existed in the barracks, nor has the patient been exposed to any known infection. His beat was in the Northern District of the city.

During the week ending 6th current three patients have been removed from the reception-houses. One was employed as nurse to a baby in the Charlotte Place family, and the other, a younger member of the family, who sickened four days after admission to the reception-house. The third patient was one of the maids in the reception-house, who contracted her infection, there is reason to think, by means of vermin from the contacts with cases reported during the fortnights ending 1st and 15th April. A child of six months had to be nursed, and frequent complaint was made by the maids that, when the friends did part of the nursing, vermin, both lice and fleas, were transferred to the baby. To attempt to rid the clothing of such families of vermin is to encourage disappointment and a new generation of vermin. To be effectively dealt with its destruction is necessary, and the matrons should be authorised to replace it from the store.

CONTROL OF THE CONTACTS IN RECEPTION-HOUSES.

The following case illustrates the difficulties with which the matrons of the reception-houses have to contend:—

One of the inmates, a typhus fever contact, had been apprehended by the police on Saturday night, 22nd April, and it was only on a special representation being made that no risk of communicating disease attached to her in her then condition that the police detained her.

On the following day her husband, to her own undoing, obtained her release, on payment of half-a-guinea, and on Sunday night she returned to the reception-house.

On Monday morning, however, she set off with her two children, aged 7 and $1\frac{1}{2}$ years respectively, to visit, according to her own statement, friends in Paisley. She was, later in the day, apprehended in Paisley Road for drunkenness, and on the following morning sentenced, at the Southern Police Court, to fourteen days' imprisonment.

Again and again the difficulty of persuading the police that these people must be dealt with when they commit offences is experienced by the matrons, and I have taken occasion to communicate with Chief Constable Stevenson regarding this.

14th June.—In the report to the committee on 10th May I took occasion to refer to the evidence suggesting the continued presence of typhus fever in the South-Side and Central Districts of the city, and, while that fortnight was still current, two further cases were added to the list from contacts with the family in West Street.

In the four weeks which have since elapsed, seven other cases have occurred in two groups—one in Dale Street, Bridgeton, and the other in South Kinning Place.

The Dale Street group is instructive, because it arose in association with an illness in an adjacent family, which, there is now reason to believe, was typhus fever; and one of the children, ultimately sickening, had already been treated for typhus fever in Belvidere Hospital. For this reason the incidents may be related in some detail.

The first case removed to hospital was the father of a family, N., and it was subsequently discovered that illness had been present in a neighbour's family early in March, when the father had been under treatment at home for some considerable time. Enteric fever had been surmised, but, owing to a serum test having proved negative, the case was set aside as non-infectious, and the man was ultimately sent to a convalescent home to recruit. About the time of his recovery one of the children sickened, and a second one was sickening when the occurrence of typhus fever in the neighbour's came to our knowledge. This latter child had been in Belvidere in 1897, when she and other members of the family were under treatment for typhus fever.

In the South Kinning Place cases, which were three in number, several articles had been pledged before the nature of the symptoms had been recognised.

The foregoing facts tend to confirm the opinion expressed in my previous report that the possibility of typhus fever at the moment requires to be carefully considered in all cases presenting febrile symptoms of an indefinite character.

26th July.—Five cases of typhus fever were reported during the fortnight, and the total since the year began is 28, which exceeds by one the number which occurred during the whole of 1904. It has been necessary not infrequently of late to advert to the recognition of cases only after several antecedent ones had already been unrecognised, and further illustration of this has occurred during the past fortnight. Along with it there has been definite evidence of a disposition to repress information, which points to the advisability of the Corporation taking an early opportunity of acquiring a power similar to that which is contained in the annexed clause of the Liverpool Corporation Act, 1902.

The clause is as follows:—"The occupier of any building in the city which is used for human habitation, and in which there is or has been any person suffering from a dangerous infectious disease, shall, on the application of the Medical Officer of Health, or the Deputy or Assistant Medical Officer of Health, for the City, at any time during the illness of such person, or within six weeks from the occurrence of such illness, furnish such information within his knowledge as the Medical Officer of Health, or the Deputy or Assistant Medical Officer of Health, may reasonably require for the purpose of enabling measures to be taken to prevent the spread of the disease. Any occupier refusing to furnish such information, or knowingly furnishing false information, shall be liable on summary conviction to a penalty not exceeding forty shillings." (Liverpool Corporation Act, 1902.)

CASES IN OLD DALMARNOCK ROAD.

In this group a woman, Mrs. F., was admitted to the Royal Infirmary on 3rd July, believed to be suffering from pneumonia, but was removed to Belvidere on the following day, her illness having been recognised as typhus fever. On enquiring at the address it was found that a child, aged 5, had been ill from the middle of May, was seen once medically, and had been treated for catarrhal fever (?). Subsequent to Mrs. F.'s sickening, three others of the family—aged 11, 18, and 8 respectively—and a lodger, aged 22, sickened on the 4th, 6th (two cases), and 9th July respectively. It is probable that Mrs. F.'s illness began two days at least before the period above indicated, so that she and the others subsequently sickening may be regarded as secondary to the boy above mentioned. In connection with this illness an endeavour was made to suppress information. The present family are relations of a family referred to in a previous report as sickening in Dale Street, and exchange of visits had been carried on during the illness there, although this was denied in the first case by both families.

A neighbour of the Old Dalmarnock Road family has since also sickened of typhus.

It should be added that the affected houses were filthy and verminous, and that during the illness, or before its recognition, several articles of clothing had been pledged.

CASES OCCURRING IN SPRINGBURN.

A second group occurred in Springburn, and again the patient here may be regarded as the fifth of a series. The patient in this case sickened on 30th June, and was removed to Ruchill Hospital as enteric fever on 7th July, where he was recognised to be suffering from typhus. The family to which he belonged were then resident in Sheppard Street, Springburn, but during the currency of the events to be after noted they had removed thither from Carlston Street. The illnesses at Carlston Street began with a child who sickened early in May, probably in the first week, this being followed by the mother on the 2nd and the father (since dead) on 10th June. The cause of death here was certified as due to pneumonia and pleurisy, and the funeral was the occasion of a considerable gathering of people resident in and beyond Glasgow.

The persistence with which typhus fever has recurred in several parts of the city during most fortnights of the present year is only consistent with its continued presence in unrecognised forms, and again occasion may be taken to direct the attention of practitioners to a careful scrutiny of febrile cases unaccompanied by any obvious explanation.

26th July.—Of the three cases admitted to the hospital during the present fortnight, one occurred among each of the groups of contact of the cases at Old Dalmarnock Road and Sheppard Street, who were under observation in the reception-houses, and the third was a neighbour of the case already referred to in the report for the previous fortnight as occurring at the former address.

13th September.—During the fortnight eleven cases of typhus were removed to the hospital, and the circumstances again reveal the extent of mischief which may be worked by unrecognised cases of the disease. In the present instance it was reported on the morning of 21st August that R. G. and his daughter S., aged 11 years, residing at 18 Struthers Street, were ill and without medical attendance. On being visited, both were found to be suffering from typhus fever, and were removed to hospital. Both patients sickened together on the 17th or 18th August, and it was found on enquiry that they had been visitors at a house at 11 Greenvale Street, Calton, where a woman was reported to have been ill for several weeks. On following up this clue it was found that, while the mother of this latter family had recovered to the extent that she was able to be out of bed, three of her children were then ill of typhus fever. The senior patient of this group was a hawker, but had not been following her occupation for three months prior to her illness, and there is no record as to where she had obtained her infection. In point of time she was the first to sicken, the attack dating from 31st July, while her children sickened on the 15th, 18th, and 20th August respectively, and R. G. and his child S. both sickened on the 17th August. Among the inmates of the house at Greenvale Street, who were removed to the reception-house, five others sickened subsequently, between 22nd and 26th August, so that, out of the unrecognised case in this latter household, no less than ten others followed. In both cases the houses were dirty and verminous, lice and fleas being present in abundance; and, while the last house was of the cubic capacity of 1,895 feet, and the accommodation equivalent to four and a-half persons, it was found to be occupied at the time of the outbreak by no fewer than eight adults and two children. Of these, nine sickened and one died.

6th November.—In connection with the occasional cases of typhus fever which fall to be recorded, two instances have recently occurred which are of interest.

During the fortnight ending 14th October a nurse in Oakbank Hospital, who had been removed to Ruchill on the occurrence of febrile symptoms of an indefinite character, but believed to be due to enteric fever, was found to be suffering from typhus, and during the present fortnight one of the inmates of the Eastern District Parochial Hospital was found to be similarly affected. No source of infection was discovered to explain the attack in the case of the nurse at Oakbank, but in the more recent example the patient, a woman, was admitted from a house in Garngad Road where she was an occasional visitor, and whither she had gone on falling ill on 9th October.

13th December.—Early in December three cases of typhus fever occurred, two of which—a father and son—were removed from a house in Hope Street, Anderston, while the third was a nurse in one of the institutions from which nursing among the poorer districts in Glasgow is carried on. An occurrence of this sort has generally only one explanation, and it is usually supplied by an earlier unrecognised case of the disease—and this was found on enquiry to be the case here.

The first patient in the group seems to have sickened in October, and was seriously ill early in November, from what was regarded as pneumonia; but as both father and brother of the patient, and the nurse who was attending her, sickened within three weeks thereafter, it may be accepted as certain that her illness was not pneumonia, but typhus fever. This first patient was employed in a work in Anderston, but nothing has been discovered which would suggest the means by which she herself acquired infection. The household consisted of six inmates—five of whom are adults and one a child—and of these two adults have sickened.

27th December.—During the fortnight four cases of typhus fever were removed to hospital from the Eastern District of the city. One was resident in Main Street, Bridgeton, and the remaining three in Green Street, Calton.

The Main Street patient sickened on 8th December, and it was his illness which was first brought under notice on 14th December. A few hours later a child of 10½ in one household and a mother and daughter in another were reported to be ill in a tenement in Green Street.

On enquiry it was learned that, in the house of the patients last mentioned, the husband had passed through an illness which had begun about four weeks previously, and he was recovering just at the time when symptoms developed in his wife and daughter.

The Main Street patient, in the course of his work as a district collector, was in the habit of visiting the tenement in Green Street.

SCARLET FEVER.

The number of cases of scarlet fever notified during 1905 was 970, of which 845, or 87·1 per cent., were treated in hospital. The deaths in 1905 numbered 35, representing a death-rate of 45 per million living. The case-rate for the City was 1,235 per million living. In each case the rate is lower than any hitherto recorded.

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

Average of 10 years, 1881-90,	490 per 1,000 living.
" 10 " 1891-1900,	295 "
1900,	278 "
1901,	172 "
1902,	145 "
1903,	105 "
1904,	88 "
1905,	45 "

The death-rate per 100,000 from the disease in several large towns for several periods is as follows:—

	Death-rate per 100,000.	
	1895-1904.	1905.
Glasgow,	20	5
Edinburgh,	18	5
Dundee,	9	5
Aberdeen,	17	7
Paisley,	23	4
Greenock,	28	32
London,	13	12
Liverpool,	28	41
Manchester,	21	13
Birmingham,	23	10

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:—

TABLE XXVI.

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

In the following Table the ward-incidence of cases and deaths is shown, with corresponding death-rates for 1903-4:—

TABLE XXVII.

GLASGOW, 1905.—SCARLET FEVER, CASES AND CASE-RATES, WITH DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, WITH DEATH-RATES FOR 1903-4.

MUNICIPAL WARDS.	Death-rate per Million.		Cases, 1905. Deaths.			
	1903.	1904.	Number.	Rate per Million.	Number.	Rate per Million.
1. Dalmarnock,	59	59	55	1,100	3	61
2. Calton,	51	53	48	1,233	7	190
3. Mile-end,	116	139	66	1,519	3	69
4. Whitevale,	237	60	40	1,186	3	91
5. Dennistoun,	308	88	45	1,214	...	...
6. Springburn,	73	118	36	785	2	48
7. Cowlares,	67	165	21	679	...	...
8. Townhead,	50	51	55	1,415	...	...
9. Blackfriars,	87	133	21	910	1	45
10. Exchange, ... ..	...	...	...	...	...	...
11. Blythswood, ... ..	...	...	2	533	...	...
12. Broomielaw,	120	...	11	1,185	...	...
13. Anderston,	136	172	26	837	...	...
14. Sandyford,	38	39	26	1,009	2	78
15. Park,	80	79	28	1,083	2	80
16. Cowcaddens, ... ..	...	52	35	910	...	...
17. Woodside,	131	133	39	631	...	...
18. Hutchesontown,	119	48	60	1,482	4	99
19. Gorbals,	192	164	27	732	...	...
20. Kingston,	86	114	85	2,416	3	87
21. Govanhill,	296	118	49	1,451	...	...
22. Langside,	67	61	86	2,363	1	28
23. Pollokshields,	118	...	24	1,345	1	56
24. Kelvinside, ... ..	...	101	31	1,453	...	...
25. Maryhill,	55	27	54	1,336	1	26
— Institutions and Harbour, ...	...	...	...	...	2	...
CITY,	105	88	970	1,235	35	45

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

RETURN CASES.

Owing to the greatly reduced number of cases of scarlet fever which fell to be dealt with during the year, the pressure on the wards was not at any time excessive, and yet the occurrence of return cases in 2.7 per cent. of the dismissals is to be noted as bearing on the natural history of the disease.

In all, 21 cases occurred in 16 families subsequent to the return of an earlier case from hospital. The average residence in hospital of the earlier cases was 58 days, a decrease of 3 on last year. The maximum was 85, and the minimum 44 days.

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

GLASGOW, 1905.—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	1	8	2	15	...
2	...	9	1	16	...
3	3	10	4	17	1
4	1	11	2	18	2
5	1	12	...	19	...
6	...	13	...	20	...
7	...	14	...	{ 21 and over }	3
	6		9		6

GLASGOW, 1905.—SCARLET FEVER.—SECONDARY CASES occurring in HOUSEHOLDS.

FIRST WEEK.		SECOND WEEK.		THIRD WEEK.	
Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.
1	9	8	1	15	1
2	1	9	...	16	2
3	9	10	1	17	1
4	3	11	1	18	...
5	4	12	2	19	...
6	1	13	1	20	...
7	2	14	...	21	...
	29		6		4

EFFECT OF SCHOOL HOLIDAYS ON THE OCCURRENCE OF CASES.

A Table has been introduced here, similar to that already presented in dealing with diphtheria, in which the number of cases occurring during the school holidays is compared with a corresponding number of days immediately preceding and following. The increase among the children of school age subsequent to the reopening of the schools in August is very marked.

GLASGOW, 1905.—SCARLET FEVER.—CASES NOTIFIED between 24th May and 5th Oct.,
ARRANGED to SHOW the INFLUENCE of SCHOOL HOLIDAYS on CASE-INCIDENCE.

PERIODS.	Cases Notified.						Increase or Decrease.						TOTAL.
	Ages, 0—3.		Ages, 3—13.		Ages, 13 and up.		Ages, 0—3.		Ages, 3—13.		Ages, 13 and up.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1st. { May 24 to July 7,	5	8	24	32	4	12	...	...	...	...	...	...	85
2nd. { July 7 to Aug. 21,	7	9	19	23	6	5	+ 2	+ 1	- 5	- 9	+ 2	- 7	69
							+ 3		- 14		- 5		
3rd. { Aug. 21 to Oct. 5,	5	2	54	65	12	8	- 2	- 7	+ 35	+ 42	+ 6	+ 3	146
							- 9		+ 77		+ 9		
	17	19	97	120	22	25							
	36		217		47								300

MEASLES.

12,329 cases were registered in 1905, as compared with 8,348 in 1904, and 551 deaths occurred, representing a death-rate of 0·701 per 1,000 of the estimated population living. These figures are considerably in excess of those dealt with during any previous year of the present decade. 28·9 per cent. of the total deaths occurred in hospital, and 94·0 per cent. were 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 "
1900,	·610 "
1901,	·655 "
1902,	·342 "
1903,	·442 "
1904,	·418 "
1905,	·701 "

The following Table shows the death-rate per 100,000 for several large towns for the ten years 1895-1904, and for 1905:—

	1895-1904.	1905.
Glasgow,	65	70
Edinburgh,	49	31
Dundee,	37	53
Aberdeen,	50	19
Paisley,	47	21
Greenock,	57	80
London,	53	37
Liverpool,	52	32
Manchester,	79	37
Birmingham,	43	44

The total deaths, the number occurring in hospital, and their proportion to the total deaths, for several years, are as follows:—

TABLE XXVIII.

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	28·8

In Table XXIX. the number of deaths and the death-rate in each ward for 1905 is stated, together with the corresponding rates for 1903 and 1904.

TABLE XXIX.

GLASGOW, 1905.—MEASLES.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL
WARD, WITH CORRESPONDING RATES FOR 1903-4.

MUNICIPAL WARDS.	Death-rate per Million.		1905.	
	1903.	1904.	Deaths.	Death-rate per Million.
1. Dalrnarnock,	610	178	54	1,093
2. Calton,	821	342	39	1,057
3. Mile-end,	788	440	56	1,294
4. Whitevale,	533	363	24	730
5. Dennistoun,	246	88	12	340
6. Springburn,	484	1,324	34	808
7. Cowlairst,	101	791	20	646
8. Townhead,	625	407	24	618
9. Blackfriars,	520	178	20	904
10. Exchange, ... ..	...	447	...	...
11. Blythswood,	278	...	1	300
12. Broomielaw,	720	494	7	906
13. Anderston,	102	446	23	777
14. Sandyford,	302	501	21	818
15. Park,	80	159	4	160
16. Cowcaddens,	776	733	16	428
17. Woodside,	394	399	20	452
18. Hutchesontown,	477	555	51	1,260
19. Gorbals,	547	164	25	693
20. Kingston,	662	315	32	926
21. Govanhill,	237	295	24	711
22. Langside,	67	184	...	...
23. Pollokshields,	235	...	1	56
24. Kelvinside, ... ..	...	101	1	48
25. Maryhill,	165	373	26	667
— Institutions and Harbour, ... ..	...	...	16	...
CITY,	442	418	551	701

In dealing with this subject last year, I had occasion to notice the maintained prevalence of the disease during a second winter, but it falls to be recorded that for a third year measles was again prevalent during most of the months, with the exception of those which coincided with the period of the midsummer school holidays.

Early in the year it was already present in the eastern districts of Mile-end, Dalmarnock, and Whitevale, and in Anderston, Sandyford, and Woodside in the west. During February it appeared in Kingston, and later on extended to Hutchesontown, Gorbals, and Govanhill. In these districts it remained prevalent during the spring months, and gradually extended, dying out in the centre, and extending round the margins of the areas originally invaded, so that no ward wholly escaped, although relatively few cases occurred in Exchange, Blythswood, Park, and Pollokshields. Moreover, whenever prevalent, the tendency always is to make demands on the staff equal at least to, and frequently greater than, all the other infectious diseases together, and in the following tabulation measles will be found to account, as a rule, for something like two-thirds of the infectious case-rate of the wards used as illustration:—

GLASGOW, 1905.—MEASLES.—TABLE showing the PROPORTION, expressed as a PERCENTAGE, which the CASE-RATE INCIDENCE of MEASLES bears to the TOTAL CASE-RATE INCIDENCE for all INFECTIOUS DISEASES.

MUNICIPAL WARDS.	Case-rate per Million.		Percentage of Measles to All Infectious Diseases.
	All Infectious Diseases.	Measles.	
I. Dalmarnock,	32·6	23·4	71·7
XXI. Govanhill,	29·4	20·5	69·7
XVIII. Hutchesontown,	37·0	25·5	68·9
XVII. Woodside,	27·1	18·4	67·8
XX. Kingston,	32·5	22·0	67·6
III. Mile-end,	34·4	23·0	66·8
XIII. Anderston,	23·9	15·9	66·5
VI. Springburn,	27·1	17·9	66·0
II. Calton,	25·6	16·2	63·2
IX. Blackfriars,	29·6	18·5	62·5
VII. Cowlands,	25·6	15·8	61·7
XXV. Maryhill,	31·5	16·6	52·7
CITY,	25·0	15·7	62·6

School Closure.—Continuing the arrangement with the School Board referred to in last Report, the practice adopted during the year was to represent each infant department invaded as requiring closing immediately the earlier cases were known, and when suitable conditions occurred this closing was limited to individual classes. On 71 occasions this policy was carried into practice in one or other of the ways indicated, and the general result may be described as good. It helps to restrain the prevalence of the disease among scholars. But it was also considered desirable to ascertain what effect school closure exercised on the prevalence of the disease in the surrounding areas.

Effect of School Closure on Surrounding Prevalence.—This was carefully watched by continuous tabulation of the cases occurring amongst scholars and non-scholars in given districts before and subsequent to school closure, but there was practically no evidence to suggest that the closure had any restraining influence on the prevalence of the disease in the district. Moreover, it occasionally happened that, in closing a school, while the immediate effect was to interrupt the spread of measles among the school children, the susceptibility of the school was maintained, and it had to be certified a second time during the year. This occurred in—

Parkhead School, in June and November.
 Shields Road School, in June and October.
 Newlands School, in June and September.
 Wolseley Street School, in April and November.
 Dunard Street School, in March and December.
 St. Mary's R.C. School, in June and November.

Result of Closing Individual Classes.—With a view to minimising the interruption to education which even departmental closing entails, the practice was adopted, where possible, of closing such classes only of the infant department as had cases occurring, and this proved successful in Dovehill, Strathclyde, Rumford Street, Bishop Street, and Milton Street Schools, but in Napiershall Street and Keppochhill Road it failed, probably because unrecognised infection had already entered other classes in the infant department at the time when those known to be infected were closed. In general, therefore, even in a city population, it seems better to recommend closure on the occurrence of the first cases of an outbreak, although the particular school remains in a state of siege, as it were, for as long as the disease is prevalent in its neighbourhood.

WHOOPIING-COUGH.

The deaths from whooping-cough during 1905 numbered 621, which is equal to a death-rate of 0·791 per 1,000 living.

The annual death-rate during several periods is shown in the following Table:—

1881-90, ...	1·150 per 1,000 living.
1891-1900, ...	·879 "
1900, ...	·933 "
1901, ...	1·116 "
1902, ...	·600 "
1903, ...	·772 "
1904, ...	·731 "
1905, ...	·791 "

In comparison with other large towns, the rate per 100,000 for the ten years 1895-1904 and 1905 was as follows:—

	1895-1904.	1905.
Glasgow, ...	87	79
Edinburgh, ...	49	38
Dundee, ...	52	38
Aberdeen, ...	56	20
Paisley, ...	61	74
Greenock, ...	59	76
London, ...	41	32
Liverpool, ...	54	20
Manchester, ...	49	31
Birmingham, ...	49	29

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

TABLE XXX.
WHOOPIING-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

The number of deaths occurring at several age-periods is already stated in Table V. at page 31.

In the following Table the deaths in the several wards in 1905 are stated, together with the corresponding rates for 1903, 1904, and 1905:—

TABLE XXXI.

GLASGOW, 1905.—WHOOPIING-COUGH.—DEATHS AND DEATH-RATES in each MUNICIPAL WARD, with Corresponding Rates for 1903 and 1904.

MUNICIPAL WARDS.	Death-rate per Million.		1905.	
	1903.	1904.	Deaths.	Death-rate per Million.
1. Dalmarnock,	1,121	869	65	1,316
2. Calton,	1,130	1,080	28	759
3. Mile-end,	1,112	1,019	40	924
4. Whitevale,	681	816	41	1,247
5. Dennistoun,	646	730	12	340
6. Springburn,	508	1,111	57	1,354
7. Cowlairs,	1,041	659	24	776
8. Townhead,	975	457	31	798
9. Blackfriars,	606	845	23	1,040
10. Exchange, ... ..	...	...	2	945
11. Blythwood,	278	574	...	...
12. Broomielaw,	1,319	989	11	1,424
13. Anderston,	713	926	27	913
14. Sandyford,	680	771	27	1,052
15. Park,	160	119	3	120
16. Cowcaddens,	1,577	890	42	1,125
17. Woodside,	832	599	24	543
18. Hutchesontown,	905	1,785	49	1,210
19. Gorbals,	602	629	24	665
20. Kingston,	690	830	17	492
21. Govanhill,	651	679	31	918
22. Langside,	304	31	7	194
23. Pollokshields,	59	...	2	112
24. Kelvinside, ... ..	...	151	5	242
25. Maryhill,	659	266	29	744
— Institutions and Harbour, ... ..	...	...	...	...
CITY,	772	731	621	791

DIARRHOEAL DISEASES.

The deaths registered as due to diarrhoeal diseases in 1905 numbered 582, representing a death-rate of 741 per million living.

For several periods the diarrhoeal rate has been—

1881-90,	700 per 1,000 living.
1891-1900,	843 „
1900,	744 „
1901,	1130 „
1902,	642 „
1903,	834 „
1904,	898 „ *
1905,	741 „

In the report for 1900 attention was drawn to the inclusion of several forms of gastro-intestinal catarrh among the diarrhoeal diseases—an addition which, to a large extent, will affect 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.*	
	1895-1904.	1905.
Glasgow,	54	30
Edinburgh,	38	19
Dundee,	81	38
Aberdeen,	45	29
Paisley,	63	30
Greenock,	72	27
London,	82	73
Liverpool,	160	135
Manchester,	138	115
Birmingham,	137	83

* Compiled from Registrar-General's Annual Report.

AGE-INCIDENCE OF DIARRHOEAL DEATHS.

The tendency of the disease towards increased prevalence in the third quarter of the year and its special incidence in 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.

TABLE XXXII.

GLASGOW, 1905.—AGE-INCIDENCE of DIARRHOEAL DEATHS.

For the year 1905 these may be stated as follows:—

1905.	Under 1 year.	1-5.	5-15.	15-20.	20-25.	25-60.	60 years and upwards.
1st Quarter, ...	54	24	6	...	1	5	7
2nd „ ...	44	25	4	1	1	6	6
3rd „ ...	184	63	4	...	...	18	17
4th „ ...	72	28	1	...	...	4	7
Totals, ...	354	140	15	1	2	33	37

While the relation of mean temperature to the autumnal prevalence of the disease is as follows:—

	1902.		1903.		1904.		1905.	
	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, - -	53°·5	12	54°·6	31	54°·7	22	56°·9	17
July, - -	54°·9	26	56°·2	41	57°·0	25	59°·3	31
August, -	54°·3	23	54°·6	97	56°·3	131	55°·8	101
September, -	53°·5	42	52°·8	73	53°·2	91	52°·7	52

TABLE XXXIII.

GLASGOW, 1905.—DIARRHOEAL DISEASES.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, with corresponding Rates for 1903 and 1904.

MUNICIPAL WARDS.	Death-rate per Million.		1905.	
	1903.	1904.	Deaths.	Death-rate per Million.
1. Dalmarnock,	1,612	1,698	56	1,133
2. Calton,	1,669	1,686	35	949
3. Mile-end,	1,413	1,413	44	1,016
4. Whitevale,	770	1,390	24	730
5. Dennistoun,	369	555	9	255
6. Springburn,	943	686	37	879
7. Cowlairs,	571	890	16	517
8. Townhead,	675	813	27	695
9. Blackfriars,	1,299	1,245	17	768
10. Exchange,	448	...	...	...
11. Blythswood,	556	861	2	601
12. Broomielaw,	1,919	1,360	9	1,165
13. Anderston,	950	1,476	46	1,555
14. Sandyford,	944	694	21	818
15. Park,	361	238	3	120
16. Cowcaddens,	901	1,204	44	1,178
17. Woodside,	504	577	21	475
18. Hutchesontown,	762	844	27	667
19. Gorbals,	547	492	17	471
20. Kingston,	978	715	17	492
21. Govanhill,	444	708	22	652
22. Langside,	304	276	6	167
23. Pollokshields,	176	226	3	168
24. Kelvinside,	212	201	5	242
25. Maryhill,	550	878	31	795
— Institutions and Harbour, ... ..	...	...	43	...
CITY,	834	898	582	741

TUBERCULOUS DISEASES.

PHTHISIS.

In 1905, 1,129 deaths were registered as due to phthisis, representing a death-rate of 1·437 per 1,000 living.

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

1881-90,	...	...	...	2·680 per 1,000 living.
1891-1900,	...	...	...	2·015 "
1900,	...	...	...	1·876 "
1901,	...	...	...	1·764 "
1902,	...	...	...	1·672 "
1903,	...	...	...	1·611 "
1904,	...	...	...	1·644 "
1905,	...	...	...	1·437 "

In several towns in Scotland the average rate for the ten years, 1895-1904, has been—

PHTHISIS DEATH-RATE PER 100,000 IN CERTAIN SCOTCH TOWNS FOR THE
TEN YEARS, 1895-1904, AND FOR 1905.

	1895-1904.	1905.		1895-1904.	1905.
Glasgow, ...	193	153	Aberdeen, ...	163	125
Edinburgh, ...	177	142	Paisley, ...	170	146
Dundee, ...	201	174	Greenock, ...	174	132

In the following Table the incidence of the disease in the several wards is given, together with the corresponding rates for 1903-4:—

TABLE XXXIV.

GLASGOW, 1905.—PHTHISIS.—DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding rates for 1903 and 1904.

MUNICIPAL WARDS.	Death-rates per Million.		1905.	
	1903.	1904.	Deaths.	Death-rate per Million.
1. Dalmarnock,	1,357	1,500	60	1,214
2. Calton,	2,156	2,054	66	1,790
3. Mile-end,	1,992	1,714	73	1,686
4. Whitevale,	1,865	1,269	54	1,642
5. Dennistoun,	984	934	41	1,161
6. Springburn,	1,499	1,797	54	1,283
7. Cowlares,	1,141	1,022	35	1,131
8. Townhead,	1,350	1,677	43	1,107
9. Blackfriars,	2,296	2,356	43	1,944
10. Exchange,	1,792	1,340	2	945
11. Blythwood,	2,225	1,722	...	...
12. Broomielaw,	2,639	1,360	15	1,491
13. Anderston,	1,460	1,613	31	1,048
14. Sandyford,	1,057	1,118	37	1,441
15. Park,	721	555	17	680
16. Cowcaddens,	1,652	1,676	55	1,473
17. Woodside,	1,073	1,243	44	995
18. Hutchesontown,	1,715	1,905	55	1,358
19. Gorbals,	1,998	1,559	41	1,137
20. Kingston,	2,014	1,688	47	1,360
21. Govanhill,	1,154	1,446	38	1,126
22. Langside,	709	612	21	583
23. Pollokshields,	353	451	6	336
24. Kelvinside,	530	101	8	387
25. Maryhill,	1,017	1,118	40	1,026
— Institutions and Harbour, ... ..	...	...	203	...
CITY,	1,611	1,644	1,129	1,437

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,	1,437
1880-4,	3,140		

OTHER FORMS OF TUBERCULOUS DISEASE.

A similar comparison cannot be made for the tuberculous diseases which are not phthisis, because in 1883 a different classification was adopted; but during the last twenty-two years it may be shown that, while phthisis has been reduced 45 per cent., in the other forms, including tubercular meningitis, this has only amounted to 6·8 per cent.

GLASGOW.—DEATH-RATES FROM TUBERCULOUS DISEASES, 1883-88 AND 1900-1905.

	AVERAGE ANNUAL DEATH-RATE.		Reduction per cent.
	1883-88.	1900-1905.	
Phthisis,	2,849	1,577	45
Tubercular Meningitis,	405	314	22
Other forms,	685	702	*0
	1,090	1,016	6·8
All Tuberculous Diseases,	3,939	2,593	34

* Shows an increase of 2·4 per cent.

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

TABLE XXXV.

GLASGOW.—TUBERCULOUS DISEASES.—DEATHS and DEATH-RATES per MILLION for the TWELVE YEARS, 1894-1905.

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	332	515	847	2,271	3,118
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	260	334	594	1,419	2,013	364	467	831	1,985	2,816
1898	254	335	589	1,404	1,993	351	462	813	1,938	2,751
1899	235	401	636	1,444	2,080	320	546	866	1,968	2,834
1900	247	381	628	1,472	2,100	332	512	844	1,979	2,823
1901	237	446	683	1,418	2,101	310	583	893	1,855	2,748
1902	244	403	647	1,329	1,976	315	519	834	1,714	2,548
1903	240	553	793	1,175	1,968	307	707	1,014	1,502	2,516
1904	260	685	945	1,119	2,064	326	858	1,184	1,402	2,586
1905	237	836	1,073	818	1,891	293	1,032	1,325	1,010	2,335

NOTIFICATION OF PHTHISIS.

The question of making the disease notifiable is at present under consideration, and a report on an inquiry into the home conditions and occupations of current cases is being prepared, with the view of enabling the committee to arrive at a decision on the question. It cannot be said that the system of voluntary notification presently in operation in Glasgow has been attended with satisfactory results.

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:—

TABLE XXXV.

GLASGOW.—TUBERCULOUS DISEASES.—DEATHS and DEATH-RATES per MILLION for the ELEVEN YEARS, 1894-1904.

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.	Tuberculous Diseases (Not Phthisis).	Phthisis.	All Tuberculous Diseases.
1894	229	354	583	1,560	2,143	332	515	847	2,271	3,118
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	260	334	594	1,419	2,013	364	467	831	1,985	2,816
1898	254	335	589	1,404	1,993	351	462	813	1,938	2,751
1899	235	401	636	1,444	2,080	320	546	866	1,968	2,834
1900	247	381	628	1,472	2,100	332	512	844	1,979	2,823
1901	237	446	683	1,418	2,101	310	583	893	1,855	2,748
1902	244	403	647	1,329	1,976	315	519	834	1,714	2,548
1903	240	553	793	1,175	1,968	307	707	1,014	1,502	2,516
1904	260	685	945	1,119	2,064	326	858	1,184	1,402	2,586

The deaths and death-rates in 1904 arising from diseases of the tuberculous class other than phthisis, along with the death-rates for 1903, are given in the following Table:—

TABLE XXXVI.
GLASGOW.—TUBERCULOUS DISEASES other than PHTHISIS.*

MUNICIPAL WARDS.	1903.	1904.	
	Death-rate per Million.	Deaths.	Death-rate per Million.
1. Dalmarnock,	1,475	70	1,382
2. Calton,	1,540	57	1,501
3. Mile-end,	1,598	80	1,853
4. Whitevale,	1,658	49	1,481
5. Dennistoun,	1,261	37	1,080
6. Springburn,	1,523	57	1,348
7. Cowlairs,	1,041	37	1,220
8. Townhead,	1,426	62	1,575
9. Blackfriars,	1,213	18	800
10. Exchange,	448	3	1,340
11. Blythwood,	556	2	574
12. Broomielaw,	1,199	5	618
13. Anderston,	1,426	40	1,373
14. Sandyford,	831	23	887
15. Park,	281	9	357
16. Cowcaddens,	1,401	60	1,571
17. Woodside,	986	54	1,198
18. Hutchesontown,	1,525	64	1,543
19. Gorbals,	876	33	903
20. Kingston,	892	53	1,516
21. Govanhill,	1,095	31	915
22. Langside,	405	18	551
23. Pollokshields,	530	7	395
24. Kelvinside,	265	...	...
25. Maryhill,	989	43	1,145
— Institutions and Harbour, ... ..	...	38	...
CITY,	1,196	950	1,209

* All deaths from Meningitis under 5 years are included.

DISEASES OF ORGANS OF RESPIRATION.

3,170 deaths from respiratory diseases, including croup, were registered in 1904, representing a death-rate of 4,036 per million living.

The death-rate per 1,000 living for several periods 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

The deaths for 1904 and the death-rates in each of the Municipal Wards are given in the Table which follows:—

TABLE XXXVII.
GLASGOW.—RESPIRATORY DISEASES (including CROUP).

MUNICIPAL WARDS.	1903.	1904.	
	Death-rate per Million.	Deaths.	Death-rate per Million.
1. Dalmarnock,	4,463	238	4,698
2. Calton,	4,646	215	5,663
3. Mile-end,	4,424	187	4,331
4. Whitevale,	3,907	150	4,533
5. Dennistoun,	2,338	68	1,986
6. Springburn,	4,183	169	3,996
7. Cowlairs,	3,224	110	3,626
8. Townhead,	3,676	167	4,243
9. Blackfriars,	5,544	134	5,956
10. Exchange,	4,032	6	2,681
11. Blythswood,	2,781	10	2,869
12. Broomielaw,	5,997	35	4,326
13. Anderston,	3,803	101	3,466
14. Sandyford,	3,058	93	3,585
15. Park,	2,445	45	1,784
16. Cowcaddens,	5,931	245	6,415
17. Woodside,	3,001	147	3,262
18. Hutchesontown,	5,099	238	5,740
19. Gorbals,	4,762	166	4,540
20. Kingston,	3,740	124	3,547
21. Govanhill,	2,723	110	3,246
22. Langside,	1,519	45	1,378
23. Pollokshields,	1,119	12	677
24. Kelvinside,	955	23	1,156
25. Maryhill,	3,958	153	4,073
— Institutions and Harbour, ... ..	...	179	...
CITY,	3,927	3,170	4,036

PUERPERAL FEVER.—ERYSIPELAS.

In the following Table the cases of puerperal fever notified in each year since 1891, together with the case-rate per 1,000 births, and the death-rate from this cause and from erysipelas, are given:—

TABLE XXXVIII.

Year.	PUERPERAL FEVER.			ERYSIPELAS.
	Cases Notified.	Case-rate per 1,000 Births.	Death-rate per Million Living.	Death-rate per Million Living.
1891	80	4.0	105	115
1892	63	2.8	64	84
1893	73	3.1	68	75
1894	64	2.8	51	83
1895	74	3.2	63	69
1896	105	4.4	79	55
1897	62	2.6	48	49
1898	71	2.9	52	40
1899	83	3.4	82	45
1900	78	3.2	78	32
1901	71	2.9	71	60
1902	90	3.6	51	51
1903	108	4.3	53	44
1904	89	3.6	53	53

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

UNCERTIFIED DEATHS AND DEATHS WITHOUT MEDICAL ATTENDANCE.

In Tables XXXIX. and XL. the total deaths occurring during the 10 years, 1891-00, and 1901-4, 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 VII. of the Appendix the numbers occurring in each class in the several wards are given. Appendix Table VIII. gives corresponding information regarding the deaths occurring among members of Friendly Societies.

Certification.—At all ages 2.4 per cent. of the deaths were uncertified and 1 per cent. had no medical attendance. Under 5 years, however, 3.6 per cent. were uncertified and 1.8 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 4.5 per cent., while among illegitimates it was 8 per cent. 43.7 per cent. of the legitimate children dying under 1 year were insured, while among illegitimates the proportion is only 10.9 per cent.

In the subjoined figures a comparison is established between the proportion of deaths uncertified in 1903 and 1904:—

PROPORTION OF UNCERTIFIED DEATHS TO TOTAL DEATHS REGISTERED
IN 1903 AND 1904.

	Below 5 Years.		5 Years and Upwards.		All Ages.	
	1903.	1904.	1903.	1904.	1903.	1904.
Total deaths,	5,816	5,913	8,667	8,881	14,483	14,794
Not certified,	228	210	135	141	363	357
Percentage,	3·9	3·6	1·6	1·6	2·5	2·4

TABLE XXXIX.
GLASGOW, 1904.—CERTIFICATION of DEATHS.

	10 Years. 1891-1900.	1901.	1902.	1903.	1904.
Total Deaths,	149,184	15,716	15,054	14,483	14,794
Of these Uncertified,	4,916	451	412	363	351
Died without Medical Attendance,	2,638	240	217	162	151
Deaths under 5 years,	62,350	6,390	5,364	5,816	5,913
Of these Uncertified,	3,027	274	244	228	210
Died without Medical Attendance,	1,738	163	138	116	108
Deaths above 5 years,	86,834	9,326	9,690	8,667	8,881
Of these Uncertified,	1,889	177	168	135	141
Died without Medical Attendance,	900	77	79	46	43
Percentage of Total Deaths Uncertified,	3·3	2·9	2·7	2·5	2·4
Percentage of Total Deaths which occurred without Medical Attendance,	1·8	1·5	1·4	1·1	1·0
Percentage of Deaths under 5 years Uncertified,	4·9	4·3	4·5	3·9	3·6
Percentage of Deaths under 5 years which occurred without Medical Attendance,	2·8	2·6	2·6	2·0	1·8
Percentage of Deaths above 5 years Uncertified,	2·2	1·9	1·7	1·6	1·6
Percentage of Deaths above 5 years which occurred without Medical Attendance,	1·0	0·8	0·8	0·5	0·5

TABLE XL.
GLASGOW, 1904.—COMPARATIVE CERTIFICATION of LEGITIMATE and ILLEGITIMATE CHILDREN.

	10 Years. 1891-1900.	1901.	1902.	1903.	1904.
Legitimate Deaths under 1 year,	30,304	3,203	2,800	3,116	3,173
Of these Uncertified,	1,853	193	174	167	143
Legitimate Deaths, 1—5 years,	26,066	2,614	2,063	2,109	2,206
Of these Uncertified,	476	41	28	23	30
Illegitimate Deaths under 1 year,	4,202	399	368	447	402
Of these Uncertified,	551	34	39	36	32
Illegitimate Deaths, 1—5 years,	1,778	174	133	144	132
Of these Uncertified,	147	6	3	2	5
Percentage Legitimate Deaths under 1 year Uncertified,	6·1	6·0	6·2	5·4	4·5
Percentage Legitimate Deaths, 1—5 years, Uncertified,	1·8	1·6	1·4	1·1	1·4
Percentage Illegitimate Deaths under 1 year Uncertified,	13·1	8·5	10·6	8·1	8·0
Percentage Illegitimate Deaths, 1—5 years, Uncertified,	8·3	3·4	2·3	1·4	3·8

TABLE XLI.

GLASGOW, 1904.—INSURANCE of LIVES in FRIENDLY SOCIETIES, with COMPARISON of INSURANCE of LEGITIMATE and ILLEGITIMATE CHILDREN.

	10 Years. 1891-1900.	1901.	1902.	1903.	1904.
Total Deaths,	149,184	15,716	15,054	14,483	14,794
Of these Insured,	87,824	9,386	9,001	8,734	9,080
Deaths under 5 years,	62,350	6,390	5,364	5,816	5,913
Of these Insured,	33,333	3,405	2,747	2,993	3,148
Deaths above 5 years,	86,834	9,326	9,690	8,667	8,881
Of these Insured,	54,491	5,981	6,254	5,741	5,932
Legitimate Deaths under 1 year,	30,304	3,203	2,800	3,116	3,173
Of these Insured,	13,052	1,374	1,117	1,309	1,389
Illegitimate Deaths under 1 year.	4,202	399	368	447	402
Of these Insured,	434	50	40	57	44
Legitimate Deaths, 1—5 years,	26,066	2,614	2,063	2,109	2,206
Of these Insured,	19,232	1,931	1,540	1,570	1,662
Illegitimate Deaths, 1—5 years,	1,778	174	133	144	132
Of these Insured,	615	50	50	57	53
Percentage of Total Deaths Insured,	58·9	59·7	59·8	60·3	61·4
Do. Deaths under 5 years Insured,	53·5	53·3	51·2	51·5	53·3
Do. Deaths above 5 years do., ..	62·8	64·1	64·5	66·2	66·8
Do. Legitimate Deaths under 1 year Insured,	43·1	42·9	39·9	42·0	43·7
Do. Illegitimate Deaths under 1 year do.,	10·3	12·5	10·9	12·7	10·9
Do. Legitimate Deaths, 1—5 years, Insured,	73·8	73·9	74·6	74·4	75·3
Do. Illegitimate Deaths, 1—5 years, do.,	34·6	28·8	37·6	39·6	40·2

RABIES.

During the year the police reported that 162 persons had been bitten by dogs, in seven of which the injury inflicted was classified as "serious," and in 155 as of a trifling character. In the first quarter 10·5 per cent. of the cases occurred; in the second quarter 25·3 per cent.; in the third quarter 41·4 per cent.; while in the fourth quarter there were 22·8 per cent. The highest number occurred in the month of July, and the lowest in March.

In each case the condition of the animal was inquired into, and the absence of rabies ascertained.

ANTHRAX.

CONTAGIOUS DISEASES (ANIMALS) ACT, 1878.

During the year Principal McCall intimated the seizure of 4 carcasses of cattle dead of anthrax, all of which had been sent to the Cattle Market for food purposes, and advance information in each of these cases reached me through Mr. Trotter, Veterinary Surgeon. When the circumstances seemed to require it, the Medical Officer of Health of the district from which the animal had come was communicated with.

I also received intimation from Principal McCall of two cases occurring in yearling bullocks. In one case the animal was found dead in a cowshed, and the carcase had been removed to the premises of Messrs. Hodgkinson, Keppochhill Road, where it was destroyed. In the other the animal was found dead in a field, the carcase being removed to the same premises and destroyed.

One case of the disease occurred in the human subject, in the person of a girl employed as a wool spinner in the Eastern District, who was admitted to hospital on the 20th March suffering from malignant pustule. The nature of the illness was established bacterially in hospital, and samples of the wool with which she had been working were subjected to bacteriological examination, but with negative results. The history of the case is as follows:—

There were two pustules—one on the left ear, and the other on the corresponding cheek. On the 18th March the one on the ear appeared, and was scratched by the patient, and on the 19th the neck had become much swollen, but patient continued at work during part of the day. She had, however, to return home, and on the same afternoon the pimple on the cheek appeared. This second swelling broke on the 20th, and on the afternoon of that day she was removed to hospital. On admission her temperature was 100°·2, and both pustules presented a characteristic appearance, with considerable œdema of the cheek. The pustules were excised on the following day, when one of them presented a circle of minute vesicles forming a ring round the central slough. The patient recovered.

EMPLOYMENT.

The factory in which the patient worked employs about a dozen girls, and at the time of sickening all of them were engaged on several consignments of "grey tops" which had been delivered at the work between the 9th and 15th March from a firm in Bradford. Prior to this consignment arriving, the workers had been engaged on white wool. The bacterial investigation of the samples of "tops" with which the girl was working gave wholly negative results, both on culture and inoculation. Notwithstanding the nature of the material and the treatment to which it had been exposed before reaching Glasgow, it is impossible to escape the conviction that an accidental contamination of some portion of the wool had taken place which had been sufficiently virulent to communicate the disease to her.

BACTERIOLOGICAL LABORATORY.

During the year 2,791 specimens of morbid products were forwarded by 369 practitioners for bacterial examination from doubtful cases of enteric fever, diphtheria, and pulmonary tuberculosis. Compared with 1903, this is a decrease in the number of specimens submitted of 152, and in the number of practitioners availing themselves of the laboratory facilities an increase of 16. The figures represent an overhead average number of 7.6 specimens for each practitioner so availing himself, as compared with 8.2 in 1903.

Dr. Buchanan tabulates the results of these examinations in the following manner, the figures for 1902-3 being introduced for comparison:—

SPECIMENS SUBMITTED BY MEDICAL PRACTITIONERS FOR BACTERIOLOGICAL EXAMINATION DURING 1904, WITH COMPARISON FOR YEARS 1902 AND 1903.

	1902.			1903.			1904.		
	PERCENTAGE.		Total No.	PERCENTAGE.		Total No.	PERCENTAGE.		Total No.
	Posi- tive.	Nega- tive.		Posi- tive.	Nega- tive.		Posi- tive.	Nega- tive.	
Widal's Test, -	41.9	58.1	767	46.8	53.1	1,014	36.2	63.8	853
Swabs (Throat and Nose), }	35.5	64.5	705	34.8	65.2	997	34.3	65.7	928
Sputa, - - -	33.1	66.9	904	32.7	67.3	932	32.4	67.6	1,010
	36.6	63.4	2,376	38.3	61.7	2,943	34.2	65.8	2,791

The number of medical practitioners sending specimens for examination for one or other of the diseases indicated in the above table is as follows:—

				1901.	1902.	1903.	1904.
Widal's Test, ...	...	...	...	218	213	220	220
Swabs (Throat and Nose), ...	...	...	...	140	170	226	219
Sputa, ...	...	...	...	134	163	214	222
Total,*	...	...	...	<u>492</u>	<u>546</u>	<u>660</u>	<u>661</u>

The numbers given under each division in this Table are read into the columns of totals in the previous one, thus:—the average number of samples for Widal's test per practitioner sending is less than four; of diphtheria swabs, more than four; while 222 practitioners sent 1,010 samples of sputum.

* Many practitioners send specimens of more than one kind, and the actual number using the Laboratory equipment is as follows:—

1901—283.	1902—304.	1903—360.	1904—369.
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EXAMINATION OF MILK FOR TUBERCULOSIS.

During the year samples of milk obtained from 16 cows in City byres were submitted for examination, with the view of detecting the organism of tubercle. In one the result was positive. The milk of 5 cows in country byres was also examined, with one positive result.

EXAMINATION OF MILK FOR BACILLUS TUBERCULOSIS DURING 1904.

					Positive.	Negative.	Total.
Town Milk, ...	...	...	...	...	1	15	16
Country Milk, ...	...	...	...	...	1	2	3
Hospital Supply, ...	...	...	...	...	—	2	2
Total,	...	...	...	...	<u>2</u>	<u>19</u>	<u>21</u>

EXAMINATION OF RATS IN RELATION TO PLAGUE.

The following statement shows the number of rats examined at the Laboratory during 1904:—

DATE.	Number of Rats submitted for Examination.			
	From the City.	From Shipboard.	From Docks.	Total.
1st January to 31st December, 1904, -	811	1,145	393	2,349

DAIRIES, COWSHEDS, AND MILKSHOPS ORDER, 1899.

The number of persons registered during 1904 under Section 6 (1) of the above Order was 83; and the number of cattle kept for the production of milk in byres in Glasgow may be stated at 865, although this is subject to some fluctuation throughout the year.

Mr. Trotter informs me that during the year 11,916 examinations of these cattle were made during 1,070 visits by himself or his staff, with the result that the milk of 32 animals was withdrawn from distribution. The diseases affecting these animals and the measures adopted in dealing with them and their milk were as follows:—

	Total Number Affected.	Animals Removed or Destroyed.	Number from which the Milk was Destroyed.
UDDER DISEASES—			
Mastitis (Tubercular), - - - - -	2	2	...
Mastitis (Acute or Chronic), - - - - -	18	...	18
OTHER DISEASES AFFECTING THE MILK—			
Tuberculosis (General), - - - - -	3	3	...
Gastritis, - - - - -	1	...	1
Bronchitis, - - - - -	1	...	1
Part. Apoplexy, - - - - -	3	1	2
Stomach Derangement, - - - - -	4	...	4
	32	6	26

In addition to this, the milk of 2 animals affected with indurated udders proved on biological examination to be tubercular.

HOSPITALS AND RECEPTION-HOUSES.

(H) 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 IX. of the Appendix contains a statement of the beds available for epidemic disease for the several years. During 1904 two

pavilions were removed from the north-eastern corner of Parliamentary Road Hospital, thereby reducing the number of beds available by 64, in order to make room for the erection of Baird Street Reception-house.

(b) *Reception-houses*.—1,353 contacts with the diseases after-named were removed to the reception-houses during the year, and accommodated in the following way:—

GLASGOW, 1904.—RETURN OF PERSONS ADMITTED TO CITY RECEPTION-HOUSES.

Diseases.	Kennedy Street.	Weaver Street.	South York Street.
Smallpox,	1,235	...	1,012
Typhus, ... ..	...	70	...
Enteric Fever, ... ..	...	14	3
Scarlet „ ... ..	...	...	...
Others, ... ..	...	19	...
Total,	1,235	103	1,015

The largest number of contacts under supervision at one time was 228.

REMOVALS BY PUBLIC CONVEYANCE OF PERSONS DEAD OF INFECTIOUS DISEASE
(GLASGOW POLICE (AMENDMENT) ACT, 1890, SEC. 11).

Thirteen permits were granted for the removal by rail or steamer of the bodies of persons who had died from infectious disease.

INTERMENTS IN CLOSED BURYING-GROUNDS.

Fourteen permits for interment in the closed burying-grounds of the City were granted during the year.

FRESH-AIR FORTNIGHT.

The lists of the children to be sent to the Fresh-Air Fortnight Homes were, as usual, submitted by the convener of that organisation for inspection, and those children residing in infected tenements were refused for the time being. The homes of all children admitted to Eastpark Cottage Homes for Infirm Children have also been 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.

(E) AN ACCOUNT OF THE HOUSE ACCOMMODATION OF THE LABOURING CLASSES IN THE BURGH, AND OF ANY PROCEEDINGS UNDER THE HOUSING OF THE WORKING CLASSES ACT OR OTHERWISE.

(A.) GLASGOW POLICE (AMENDMENT) ACT, 1890.

By the operation of Clause 32 of this Act, 8 houses of one apartment, and 2 houses of two apartments were closed during the year. The number of persons displaced was 27, all of whom were tenants and their families. The situation and details of each are contained in the following Table:—

WARDS	ADDRESS.	Number of Persons Displaced.	One Apart.	Two Apart.	RENTAL.		REMARKS.	CONDITION AT 31ST DEC., 1904.
					Monthly.	Weekly.		
I. Bridgeton,	65 Dale Street, -	13	7	...	6/	2/2, sub.	Two single aparts. empty,	Closed 2nd Aug.
II. Calton, -	116 and 118 King Street, - -	9	1	1	...	5/ & 6/, sub.	...	" 29th "
XII. Broomielaw	187 Holm Street,	5	...	1	14/	...	...	" 2nd "
		27	8	2	...	...	...	...

The total number closed under this Act is as follows:—

	SIZE OF HOUSE.					
	1 apart.	2 aparts.	3 aparts.	4 aparts.	House & Shop.	Total.
Houses closed till 31st December, 1903,	577	263	10	2	8	860
Closed in 1904,...	8	2	...	...	...	10
TOTALS, ...	585	265	10	2	8	870

The mode of occupancy, average rental paid per occupant, and average cubic space per house closed in 1904 may be summarised as follows:—

						TENANTS.	
						1 apart.	2 aparts.
Number of persons displaced,	...	...	...	...	...	17	10
Average rental per week,...	...	...	...	...	...	2/9	4/9
Average number occupying,	...	...	...	...	...	2	5
Average cubic space (in feet) per house,...	...	...	...	...	...	1,153	...

(B.) HOUSING OF THE WORKING CLASSES ACT, 1890, PART II., SECTION 30.

During 1904 representations under Section 30 of this Act were submitted to the Local Authority, affecting tenements in the following wards:—

I.—Dalmarnock,	...	...	...	...	2	Representations.
II.—Calton,	...	...	...	...	25	"
III.—Mile-end,	...	...	...	...	6	"
IV.—Whitevale,	...	...	...	...	11	"
IX.)	—Blackfriars,	...	...	...	5	"
IXa. )		...	...	...	7	"
XII.—Broomielaw,	...	...	...	...	4	"
XIII.—Anderston,	...	...	...	...	2	"
XIV.—Sandyford,	...	...	...	...	4	"
XVI.—Cowcaddens,	...	...	...	...	7	"
XVIII.—Hutchesontown,	...	...	...	...	2	"
XIX.—Gorbals,	...	...	...	...	5	"
XXV.—Maryhill,	...	...	...	...	1	"
Making a total of					81	

representations in all, affecting 319 houses of one apartment, 299 of two apartments, and 26 of three apartments, in which 1,179 adults and 538 children, or a total of 1,717 persons, were housed. A summary showing the number of houses of several sizes, and of the persons affected in each ward, is contained in Table B hereof.

88 of the one-apartment houses, 55 of the two-apartment houses, and 5 of the three-apartment houses were empty at the time of representation. There was thus an average occupancy of 3·5 persons per house overhead (2·9 in one apartment and 4·2 in two apartments).

89 houses were "farmed out," 55 of these being one-apartment and 34 two-apartment houses. Of this total of 89, no fewer than 60 (67 per cent.) were in Ward II. (Calton).

The location of the several tenements included in these representations, together with the number and size of houses in each, and the persons residing therein, are stated in the following Table (A), arranged in wards:—

TABLE A.—REPRESENTATIONS arranged in WARDS, with DATES, for 1904.

Date.	Ward.	Address.	HOUSES.				POPULATION.		
			1.	2.	3.	4+	Ad.	Ch.	Tl.
May 11	I. Dalmarnock,	21 Dale Street (B.),	11	5	...	...	27	5	32
"	"	26 Savoy Street,	1	3	...	...	11	9	20
		Representations—2.	12	8	...	...	38	14	52
		These contained Empty Houses,	4	...	...	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...
Feb. 3	II. Calton,	60 Cumberland Street,	4	...	...	...	11	1	12
Mar. 2	"	48 Bell Street,	12	3	...	...	31	10	41
April 13	"	93½ Green Street,	2	...	...	...	4	...	4
May 11	"	33-35 Green Street	17	8	...	...	48	16	64
June 8	"	5-7 Gibson Street, ... ..	...	2	...	...	6	2	8
June 22	"	41 King Street, ... ..	...	6	...	...	14	7	21
" "	"	374 Gallowgate,	4	...	...	...	9	9	18
" "	"	16 Kirk Street,	5	9	3	...	39	19	58
August 8	"	41 King Street (N.W.),	2	...	...	...	2	3	5
" "	"	15 Abercromby Street,	8	8	...	...	...	...	...
" "	"	52, 54, 56 Bell Street,	11	5	...	...	31	16	47
" 17	"	352 Gallowgate,	6	2	...	...	17	2	19
" "	"	93½ Green Street,	2	2	...	...	11	7	18
" "	"	3 Green Street,	3	2	...	...	6	2	8
" 22	"	22 James Street,	2	1	...	...	7	4	11
Nov. 9	"	27 Charlotte Street,	4	10	1	...	25	20	45
Dec. 7	"	47 Green Street,	2	1	1	...	8	4	12
" "	"	22 Kent Street,	3	3	...	...	9	6	15
" 21	"	55 Green Street,	1	1	...	...	4	2	6
" "	"	3 Calton Entry,	4	1	1	...	12	5	17
" "	"	21 Craignestock Street,	8	...	...	...	15	6	21
" "	"	41 James Street,	8	2	...	...	15	6	21
" "	"	9 Green Street,	4	2	...	...	13	5	18
" "	"	398 Gallowgate (front), ... ..	...	9	...	...	1	1	2
		Representations—25.	112	77	6	...	338	153	491
		Empty Houses,	25	18	...	...	...	...	...
		Farmed-out Houses,	43	17	...	...	...	...	...

REPRESENTATIONS—*Continued.*

Date.	Ward.	Address.	HOUSES.				POPULATION.		
			1.	2.	3.	4+	Ad.	Ch.	Tl.
Feb. 17	III. Mile-end,	51 Soho Street,	1	4	...	...	15	3	18
June 8	"	190 Westmuir Street, ... ..	...	8	...	...	21	14	35
Aug. 31	"	88-90 Great Eastern Road,	13	...	...	...	...	...	...
Sept. 14	"	118 Abercromby Street,	8	...	...	...	16	10	26
Oct. 12	"	28-38 Summer Street, ... ..	...	1	...	...	4	...	4
		Representations—6.	22	13	...	...	56	27	83
		Empty Houses,	14	1	..	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...
Feb. 17	IV. Whitevale,	22 Sydney Street,	5	2	...	...	14	3	17
Mar. 2	"	221 Gallowgate, ... ..	...	1	...	...	2	2	4
June 8	"	13 Coalhill Street,	9	1	...	...	19	4	23
Aug. 24	"	{ 3 and 9 Saracen Lane, and 4, 6, and 10 Great Dovehill, }	22	11	1	...	...	...	...
" 31	"	37-39 Coalhill Street,	2	2	...	...	9	8	17
Dec. 7	"	11½ Hunter Street, ... ..	...	...	1	...	5	3	8
" "	"	15 Hunter Street,	2	4	...	...	13	3	16
		Representations—11.	40	21	2	...	62	23	85
		Empty Houses,	24	8	1	...	...	...	...
		Farmed-out Houses,	2	3	...	...	...	...	...
May 24	IX. Blackfriars,	6 Balmano Street,	6	2	...	...	13	7	20
" "	"	44 George Street,	2	...	...	...	5	5	10
Aug. 8	"	134 George Street,	1	...	...	...	4	1	5
" 17	"	118 George Street,	1	2	...	...	5	6	11
Dec. 14	"	118 George Street,	5	1	...	...	9	...	9
		Representations—5	15	5	...	...	36	19	55
		Empty Houses,	2	...	...	...	...	...	...
		Farmed-out Houses,	2	...	...	...	...	...	...

REPRESENTATIONS—Continued.

Date.	Ward.	Address.	HOUSES.				POPULATION.		
			1.	2.	3.	4+	Ad.	Ch.	Tl.
Jan. 11	IXa. *Blackfriars.	47 Crown Street,	6	5	...	...	21	12	33
" "	"	40 Rose Street,	2	13	...	...	27	8	35
April 13	"	13 Crown Street,	1	3	...	...	9	4	13
Aug. 24	"	†26 Rose Street, ... ..	...	16	...	...	10	24	34
Sept. 14	"	34 Rose Street,	1	8	...	...	20	14	34
Nov. 23	"	14 Rose Street,	1	‡ 2	‡ 7	...	20	8	28
" "	"	46½ Rose Street, ... ..	...	16	...	...	19	21	40
		Representations—7.	11	63	7	...	126	91	217
		Empty Houses,	1	19	3	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...
June 8	XII. Broomielaw,	3 Mains Street, ... ..	...	4	...	...	11	3	14
Aug. 8	"	3 Carrick Street,	4	...	...	...	4	2	6
Oct. 12	"	29 W. College Street,	2	9	...	...	32	20	52
		Representations—4.	6	13	...	...	47	25	72
		Empty Houses,	2	...	...	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...
May 24	XIII. Anderston,	75 Clyde Street, ... ..	...	9	...	...	19	4	23
Nov. 23	"	132-134 Piccadilly,	12	4	...	...	27	11	38
		Representations—2.	12	13	...	...	46	15	61
		Empty Houses,	5	...	...	...	...	...	...
		Farmed out Houses,	3	12	...	...	...	...	...
March 15	XIV. Sandyford,	16 Sharp's Lane,	8	1	...	...	18	6	24
Aug. 3	"	1 Perth Street, ... ..	...	6	...	...	12	9	21
" "	"	11 Perth Street,	6	2	1	...	14	14	28
" "	"	17 Perth Street,	8	...	...	...	19	8	27
		Representations—4.	22	9	1	...	63	37	100
		Empty Houses,	3	...	...	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...

* Portion of Blackfriars Ward south of the River.

† Ten houses empty. ‡ Both 2 apartments and three 3 apartments empty.

REPRESENTATIONS—Continued.

Date.	Ward.	Address.	HOUSES.				POPULATION.		
			1.	2.	3.	4+	Ad.	Ch.	Tl.
Mar. 2	XVI. Cowcaddens,	184 Garscube Road,	2	2	...	...	5	1	6
Apr. 27	"	28 Milton Street, ... ..	...	1	...	...	2	...	2
May 24	"	160 Cowcaddens,	1	12	...	...	29	12	41
Aug. 8	"	602 Dobbie's Loan,	2	...	...	...	3	2	5
" 17	"	18-20 Water Street,	2	5	1	...	27	7	34
Oct. 12	"	10 Renfrew Street,	1	2	2	...	11	6	17
" 26	"	21A Lyon Street,	7	2	1	...	27	8	35
		Representations—7.	15	24	4	...	104	36	140
		Empty Houses,	2	3	...	...	...	...	...
		Farmed-out Houses,	5	2	...	...	...	...	...
Oct. 26	XVIII. Hutchesontown,	26 Wellington Lane,	16	...	...	...	26	18	44
" "	"	32 South Wellington Street, ...	10	6	...	...	38	9	47
		Representations—2.	26	6	...	...	64	27	91
		Empty Houses,	4	...	...	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...
Mar. 14	XIX. Gorbals,	8 Bedford Street (120 Portugal Street), ... ..	...	4	...	...	7	1	8
April 27	"	54 Portugal Street, ... ..	...	7	...	...	12	8	20
June 22	"	24 Nicholson Street (back), ...	3	2	1	...	16	4	20
July 6	"	Do. (basement),	9	5	...	...	22	6	28
Nov. 9	"	{ 2 S. Stirling Street, }	...	14	2	...	55	17	72
		{ 6, &c., Buchanan Court, ... }	2	9	3	...	40	16	56
		Representations—5.	14	41	6	...	152	52	204
		Empty Houses,	2	6	1	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...
Mar. 30	XXV. Maryhill,	{ 1-7 Bridge Place, }	12	6	...	...	47	19	66
		{ 97-105 Bridge Street, }							
		Empty Houses, ... ..	...	...	...	...	...	...	...
		Farmed-out Houses, ... ..	...	...	...	...	...	...	...

TABLE B.—SUMMARY of the FOREGOING REPRESENTATIONS.

NAME OF WARD.	Number of Representations.	HOUSES.			POPULATION.		
		1 apart.	2 apart.	3 apart.	Adults.	Children.	TOTAL.
I. Dalmarnock, ...	2	12	8	...	38	14	52
II. Calton, ...	25	112	77	6	338	153	491
III. Mile-end, ...	6	22	13	...	56	27	83
IV. Whitevale, ...	11	40	21	2	62	23	85
IX. } Blackfriars, { ...	5	15	5	...	36	19	55
IXA. } ...	7	11	63	7	126	91	217
XII. Broomielaw, ...	4	6	13	...	47	25	72
XIII. Anderston, ...	2	12	13	...	46	15	61
XIV. Sandyford, ...	4	22	9	1	63	37	100
XVI. Cowcaddens, ...	7	15	24	4	104	36	140
XVIII. Hutchesontown, ...	2	26	6	...	64	27	91
XIX. Gorbals, ...	5	14	41	6	152	52	204
XXV. Maryhill, ...	1	12	6	...	47	19	66
Totals, ...	81	319	299	26	1,179	538	1,717
Number of Empty Houses, ...		88	55	5			

The death-rates obtaining in some of these tenements may be illustrated by the following examples:—

TABLE C.—DEATH-RATES per 1,000 in SEVERAL SELECTED TENEMENTS REPRESENTED during 1904. (AVERAGE of the FOUR YEARS, 1899-1902.)

ADDRESS.	GENERAL DEATH-RATES.		PHTHISIS AND RESPIRATORY DISEASES.		PERSONS PER ACRE.*		PERCENTAGE INFANTILE TO TOTAL DEATHS.
	Area Re-presented.	Old Sanitary District.	Area Re-presented.	Old Sanitary District.	Area Re-presented.	Old Sanitary District.	
1-17 Perth Street, Anderston,	49.0	24.8	15.4	7.77	1,007	224	30
2 South Stirling Street and Buchanan Court, ...	46.8	19.10	19.3	5.8	1,070	104	32
118 George Street, City, ...	41.5	15.3	15.6	4.06	560	106	21
CITY, ...	20.69		6.37		61		24

* The density here is calculated on the whole area of site—built and unbuilt—and on half the width of the adjoining streets.

DISPLACEMENTS DURING 1904 FROM TENEMENTS REPRESENTED IN 1903.

The following is a list of the tenements against which proceedings were still pending at the close of 1903, and which have since been removed:—

TABLE D.—REPRESENTATIONS in 1903 TERMINATED during 1904.

Ward.	Date.	Address.	HOUSES.				Sublet.			Persons Displaced.
			1 apt.	2 apts.	3 apts.	4 apts.	1	2	3	
II.—Calton,	Jan. 12	9-11 Gibson Street, ...	6	3	...	...	1	2	...	26
"	Nov. 2	106-114 King Street,	2	2	1	...	1	...	1	11
"	Dec. 28	398 Gallowgate, ...	4	...	...	...	2	...	...	11
"	" "	3 Canning Street, ...	3	2	1	...	...	...	...	13
"	" "	18 Clyde Street, ...	9	18	...	...	...	...	...	11
III.—Mile-end,	Nov. 16	187-199 Westmuir St.,	8	1	...	...	...	...	...	30
XII.—Broomielaw,	" 2	67 Brown Street, ...	2	8	1	...	...	...	...	34
"	" 30	53 M'Alpine Street,	4	2	...	...	4	2	...	15
XVI.—Cowcaddens,	" 2	101 Maitland Street,	9	10	...	...	...	...	...	63
"	" 16	47 Stirling Street, }	10	9	...	...	...	...	...	52
"	" "	42 Muse Lane, }								
"	" "	27 Maitland Lane, ...	4	...	...	...	...	...	...	6
"	" 30	8 Water Street, ...	...	6	...	...	...	1	...	12
XIX.—Gorbals,	" "	176 Main Street, S.S.,	9	1	...	...	...	...	...	24
			70	62	3	...	8	5	1	344

IMMEDIATE RESULTS OF DISPLACEMENT.

An endeavour was made, wherever possible, to follow the tenants displaced in 1904 from tenements represented under Section 30 during 1903 (proceedings regarding which had terminated in 1904), and the results may be stated as follows:—

Of the 70 houses of one apartment, 62 of two apartments, and 3 of three apartments (see Table D), demolished in 1904, 20 houses of one apartment and 20 of two apartments were closed at the time of demolition.

In 31 of the remaining houses (18 of one apartment, 10 two apartments, and 3 three apartments) the owners displaced the tenants before communicating their intention to do so. These addresses are as follows:—

ADDRESS.	REMARKS.
18 Clyde Street, Calton, - - -	Empty at time of demolition.
9-11 Gibson Street, - - - -	All sub-lets; also empty.
398 Gallowgate, - - - -	All sub-lets; nightiy tenants.
3 Canning Street, - - - -	No information from owner.
47 Stirling Street, } - - - -	Displaced before notice.
42 Muse Lane, }	
176 Main Street, S.S., - - -	Displaced before notice.

Of the remaining 32 one-apartment houses and 32 two-apartment houses, the tenants in which were followed up to their new addresses, 5 of the one-apartment and 6 of the two-apartment tenants were not traced, so that the results of displacement have reference only to the after-history of 53 families, embracing 76 persons resident in one-apartment houses and 69 persons in two-apartment houses; but even with regard to several of these, it was found that no prolonged stay was made at the new addresses given, and in the course of a few weeks they had again removed.

Of the 53 families, 27, or 51 per cent., embracing 76 persons, were resident in one-apartment houses, and 26, or 49 per cent., embracing 69 persons, were tenants in two-apartment houses; while, after displacement, 23, or 43·5 per cent., were found in one-apartment houses, 29, or 55 per cent., in two-apartment houses, and 1, or 1·5 per cent., in a three-apartment house.

In the old houses the average rent of the one apartments was 6s. 10d., against that of 8s. 11d. in the new; the old two-apartment rent was 11s. 2d., against 12s. 2d.—increases of 30·5 per cent. and 9 per cent. respectively.

SIZE OF HOUSE.	OLD ADDRESS.		NEW ADDRESS.		
	Percentage of Houses of	Average Rental.	Percentage of Houses of	Average Rental.	Percentage Increase in Rent.
1 apartment, ...	51·0	6s. 10d.,	43·5	8s. 11d.,	30·5
2 apartments, ...	49·0	11s. 2d.,	55·0	12s. 2d.,	9·0
3 apartments, ...	...	...	1·5	...	...

In the following tenements, represented during 1903, proceedings were still pending at the close of 1904:—

TABLE E.

WARD.	DATE.	ADDRESS.
III. Mile-end,	1903. December 28,	8 Soho Street.
V. Dennistoun,	November 30,	121 Drygate.
"	"	151 Castle Street.
XII. Broomielaw,	March 23,	34 Carrick Street.
"	"	15 " "
"	November 2,	56 " "
"	November 16,	63 " "
"	"	69 " "
"	"	56 M'Alpine Street.
"	"	66 " "
XVI. Cowcaddens,	November 30,	4 and 6 Water Street. } *
"	"	538, 546 Dobbie's Loan. }

* This property has been arranged to be reconstructed in order to obviate some of the internal defects, but the improvements have not yet been commenced.

DISPLACEMENTS FROM TENEMENTS REPRESENTED IN 1904.

In the following tenements, represented during 1904, proceedings had terminated at the close of the year, and the buildings were either removed or in course of removal:—

TABLE F.

WARD.	ADDRESS.	HOUSES.			POPULATION.		Persons Displaced.
		1 Apt.	2 Apts.	3 Apts.	Adults.	Children.	
I. Dalmarnock,	26 Savoy Street, ...	1	3	...	11	9	20
II. Calton,	60 Cumberland Street, ...	4	...	...	11	1	12
"	48 Bell Street, ...	12	3	...	31	10	41
"	93½ Green Street, ...	2	...	...	4	...	4
"	5-7 Gibson Street, ...	...	2	...	6	2	8
"	41 King Street, Calton, ...	2	...	...	2	3	5
"	374 Gallowgate, ...	4	...	...	9	9	18
"	22 James Street, ...	2	1	...	7	4	11
"	25 Struthers Street, ...						
"	33 Green Street, ...	17	8	...	48	16	64
IV. Whitevale,	22 Sydney Street, ...	5	2	...	14	3	17
"	13 Coalhill Street, ...	9	1	...	19	4	23
"	4 Saracen Lane, ...	22	11	1	...	...	...
IXA. Blackfriars,	47 Crown Street, ...	6	5	...	21	12	33
"	40 Rose Street, ...	2	13	...	27	8	35
IX. "	134 George Street, ...	1	...	...	4	1	5
XIV. Sandyford,	16 Sharp's Lane, ...	8	1	...	18	6	24
XVI. Cowcaddens,	28 Milton Street, ...	...	1	...	2	...	2
XXV. Maryhill,	Bridge Street and Place, Maryhill, ...	12	6	...	47	19	66
		109	57	1	281	107	388

In the following Table the tenants, displaced in 1904 from tenements represented that year (proceedings regarding which had terminated at the close of 1904, see Table F), have been traced, wherever possible, to their new addresses:—

TABLE G.—1904 REPRESENTATIONS.—RECORD OF PERSONS AND FAMILIES DISPLACED IN 1904.

ADDRESS.	FAMILIES.						PERSONS.						NOT TRACED. (Wrong Addresses given by Tenants.)		
	Old Address.			New Address.			Old Address.			New Address.					
	1 Apt.	2 Apts.	3 Apts.	1 Apt.	2 Apts.	3 Apts.	1 Apt.	2 Apts.	3 Apts.	1 Apt.	2 Apts.	3 Apts.			Lodgings.
	1 Apt.	2 Apts.	3 Apts.	1 Apt.	2 Apts.	3 Apts.	1 Apt.	2 Apts.	3 Apts.	1 Apt.	2 Apts.	3 Apts.	Lodgings.	Families.	Persons.
48 Bell Street, ...	1	...	...	1	...	...	2	...	...	2	...	...	...	...	...
22 Sydney Street, ...	5	...	...	3	1	...	11	...	...	6	3	...	2	...	...
60 Cumberland Street, ...	2	...	...	2	...	...	4	...	...	4	...	...	...	...	...
374 Gallowgate, ...	4	...	...	1	3	...	18	...	...	3	15	...	...	...	...
25 Struthers Street, ...	1	...	...	...	1	...	4	...	...	...	4	...	...	...	...
22 James Street, ...	2	...	...	1	1	...	7	...	...	3	4	...	...	...	...
93½ Green Street, ...	1	...	...	1	...	...	2	...	...	2	...	...	...	...	...
26 Savoy Street, ...	1	3	...	1	2	...	3	14	...	5	12	...	...	1	3
134 George Street, City, ...	1	...	...	1	...	...	2	...	...	2	...	...	...	...	...
40 Rose Street, S.S., ...	2	10	...	4	8	...	5	45	...	12	38	...	...	5	23
47 Crown Street, S.S., ...	4	4	...	4	3	...	9	22	...	11	17	...	3	1	4
97-105 Bridge Street and 1-7 Bridge Place, Maryhill, ...	10	6	...	8	6	...	33	33	...	32	28	...	6	2	7
16 Sharp's Lane, ...	8	1	...	4	4	...	18	4	...	14	7	...	1*	...	...
Totals, ...	42	24	...	31	29	...	118	118	...	96	128	...	12	9	37
Average Monthly Rental, ...	7/11	9/7	...	9/4	11/9	...	...	...	...	...	...	...	...	...	...

* Hospital.

It will thus be seen that in the old addresses 42 families, representing 118 persons, were resident in one-apartment houses, and 24 families, representing 118 persons, were resident in two-apartment houses; while, as the result of displacement, 31 families, representing 96 persons, went to one-apartment houses; 29 families, representing 118 persons, went to two-apartment houses; and 6 families, representing 12 persons, went into lodgings; and 1 person went to hospital.

The 42 one-apartment families thus became 31, and the 24 two-apartment families became 29.

The average rent of the old one-apartment houses was 7s. 11d., of the new 9s. 4d.; the old two-apartment rent was 9s. 7d., the new 11s. 9d.—increases of 16 per cent. and 23 per cent. respectively.

As an illustration of the untrustworthiness of the information frequently given, it may be stated that in 9 of the families included in the above no trace of them could be obtained at the addresses given.

OCCUPATION OF DISPLACED TENANTS.

(1903 Representations Displaced in 1904.)

These may be classified as under:—

1. Labourers, all classes (Males),	18	42 Dependents.
2. Factory Workers and others of similar grade (Females),	13	13 "
3. Hawkers and Itinerant Merchants,	3	6 "
4. Tradesmen and Skilled Labourers,	3	9 "
5. Miscellaneous—Porters, Stonebreakers,	3	6 "
6. Miners and Pit Workers,	1	2 "
7. Carters,	1	2 "
8. No occupation (idle),	3	7 "
Totals,	<u>45</u>	<u>87</u> "

(1904 Representations Displaced during Year.)

Classified as above, the results are as follows:—

1. Labourers, all classes (Males),	34	92 Dependents.
2. Factory Workers and others of similar grade (Females),	6	12 "
3. Hawkers and Itinerant Merchants,	4	8 "
4. Tradesmen and Skilled Labourers,	6	17 "
5. Miscellaneous—Railwaymen, Pointers, &c.,	8	29 "
6. Miners and Pit Workers,	5	9 "
7. No occupation (idle),	3	6 "
	<u>66</u>	<u>173</u> "

RELATION TO SCHOOL AND WORK.

In many cases the displaced tenants found houses in the front tenements at their respective addresses. In general they found accommodation at no great distance from their old houses, and quite as convenient both to work and school.

OWNERSHIP OF TENEMENTS REPRESENTED DURING 1904.

Grouping these 81 representations according to whether the tenements were owned privately or otherwise, we find that in 8 cases the owners were

either house factors or other business firms, in 20 the tenement was Trust property, and in 53 it was owned privately. Of these 53 owners, 41 were resident in Glasgow and 12 beyond the boundary.

OWNERSHIP OF TENEMENTS REPRESENTED IN 1904.

Private Owners.	Firms, House Factors, &c.	Trustees and Others.
53	8	20
Total Representations,		81

PRIVATE OWNERSHIP.

Resident in Glasgow.	Resident outside City.
41	12

GROWTH OF THE FARMED-OUT HOUSE CUSTOM.

The following Table (H) has been prepared to show the extent to which the practice of farming-out houses in Glasgow is increasing. At a special enumeration, referred to in the Census Report for 1901, there were in all 859 houses, containing 1,272 apartments, sub-let, and occupied under the conditions of farmed-out houses. Of these, 531 were houses of one apartment, 275 were houses of two apartments, while the remaining number of 153 were in houses of three apartments and upwards. At a special census, taken on the 30th of June, 1905, these numbers had increased to 541 one-apartment houses and 359 two-apartment houses. The persons found occupying one-apartment houses were equivalent to 1,351 adults, and in the two-apartment houses to 1,346½, or together 2,697½ persons living under the conditions of farmed-out houses.

HOUSES LET IN LODGINGS.

Closely associated with these is the number of houses let in lodgings, the distinction between which and the farmed-out house being to a large extent purely a technical one. Many rooms in houses of more than two apartments are sub-let as furnished apartments, and charged at the same rate as a farmed-out house, but they fall outside the definition of the latter as contained in the Public Health Act. For the first time, therefore, an attempt has been made at an enumeration of persons found in houses let in lodgings, and the result, as contained in Table J, is subjoined. Exclusive of persons who found accommodation in farmed-out houses, 798 families, comprising 1,652 persons, were found occupying houses of this description. It should be stated that in both cases the number of inmates has been supplied by the principal tenant.

TABLE H.—GLASGOW.—FARMED-OUT HOUSES and INMATES as at 30th JUNE, 1905.

WARDS.				Number of Houses Farmed-out.		Inmates in House of each Size.	
				1 Apartment.	2 Apartments.	1 Apartment.	2 Apartments.
1.	Dalmarnock,	...	...	...	...	...	...
2.	Calton,	...	...	143	74	378	261½
3.	Mile-end,	...	...	19	...	44½	...
4.	Whitevale,	...	...	13	3	28	58
5.	Dennistoun,	...	...	15	12	39½	39½
6.	Springburn,	...	...	11	1	28½	4
7.	Cowlairs,	...	...	...	...	...	...
8.	Townhead,	...	...	69	6	161	22
9.	Blackfriars,	...	...	81	89	211½	356
10.	Exchange,	...	...	...	16	...	54½
11.	Blythswood,	...	...	...	...	...	...
12.	Broomielaw,	...	...	30	51	72	199
13.	Anderston,	...	...	59	38	149	133½
14.	Sandyford,	...	...	38	1	96½	2
15.	Park,	...	...	...	...	...	...
16.	Cowcaddens,	...	...	7	2	18	5
17.	Woodside,	...	...	...	...	...	...
18.	Hutchesontown,	...	...	13	2	29½	5
19.	Gorbals,	...	...	21	25	46½	80½
20.	Kingston,	...	...	22	39	48½	126
21.	Govanhill,	...	...	...	...	...	...
22.	Langside,	...	...	...	...	...	...
23.	Pollokshields,	...	...	...	...	...	...
24.	Kelvinside,	...	...	...	...	...	...
25.	Maryhill,	...	...	...	...	...	...
CITY,				541	359	1,351	1,346½
1901,				531	275	...	...

TABLE J.—HOUSES LET in LODGINGS, showing NUMBERS in each WARD, at 30th JUNE, 1905.

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, ...	7	1	6	12	43	19	42
2. Calton, ...	35	15	20	59	186	67	151
3. Mile-end, ...	8	...	8	19	62	24	61
4. Whitevale, ...	26	22	4	10	30	11	20
6. Springburn, ...	17	1	16	32	102	46	75
7. Cowlairs, ...	7	2	5	10	34	11	26
8. Townhead, ...	15	2	13	29	89	36	87
9. Blackfriars, ...	24	3	21	86	266½	99	186
10. Exchange, ¹ ...	1	...	1	4	17½	5	5
11. Blythwood, ...	2	1	1	3	6½	2	10
12. Broomielaw, ...	24	8	16	53	139½	53	123
13. Anderston, ...	16	8	8	32	95	36	57
14. Sandyford, ...	4	...	4	12	33½	11	33
15. Park, ...	3	...	3	16	50	8	33
16. Cowcaddens, ...	11	2	9	25	76½	21	57
17. Woodside, ...	2	...	2	16	65	46	52
18. Hutchesontown, ...	15	9	6	12	41	17	39
19. Gorbals, ...	6	2	4	12	31½	20	25
20. Kingston, ...	11	3	8	29	84½	50	80
25. Maryhill, ...	143	66	77	159	537½	216	490
CITY, ...	377	145	232	630	1,990½	798	1,652

NOTE.—In Wards 5, 21, 22, 23, and 24 there are no Houses Let in Lodgings on the Register.

SECTION IV.

PORT LOCAL AUTHORITY.

The following Tables present a summary of the work of medical inspection at the Boarding Station conducted during 1904:—

- (1) This Table shows the total number of vessels arriving from foreign, distinguishing between those from infected and non-infected ports;
- (2) Shows the number of ships boarded and of persons inspected at the Boarding Station, distinguishing between the number inspected under the Cholera Order and for other reasons.

TABLE NO. 1.—NUMBER of SHIPS ARRIVING from FOREIGN—YEAR 1904.

CLASS.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
(A)													
H.M. Customs,	96	82	151	115	112	112	113	191	116	130	102	151	1,471
(B)													
Number of foregoing from Ports infected within the meaning of the Cholera Order,	27	25	51	36	31	29	33	58	34	43	31	43	441
(C)													
From infected Ports, but reaching Clyde "light"—boarded under Article 8 of Order,	11	16	36	25	24	18	16	28	20	19	22	13	248

TABLE II.—NUMBER of ARRIVALS BOARDED and of PERSONS INSPECTED at BOARDING STATION—1904.

CLASS.	January.			February.			March.			April.			May.			June.			HALF-YEAR TOTAL.		
	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.
From Infected Ports—																					
(B)	25	1,157	...	25	1,122	...	51	2,485	...	36	1,281	1	31	1,044	2	29	1,596	...	197	8,685	3
(C)	11	516	...	16	798	...	36	1,561	...	25	1,258	...	24	1,282	3	18	594	...	136	6,309	3
	36	1,673	...	41	1,920	...	87	4,046	...	61	2,539	1	55	2,326	5	47	2,190	...	333	14,994	6
From Non-infected Foreign Ports—																					
(D)	79	2,036	65	75	2,123	208	143	3,103	321	95	2,030	564	110	3,401	572	107	3,604	1,436	609	16,293	2,990
	115	3,709	65	116	4,043	208	230	7,149	321	156	4,569	565	165	5,727	577	154	5,794	1,436	942	31,287	2,996

CLASS.	July.			August.			September.			October.			November.			December.			GRAND TOTAL.		
	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.	Ship.	Crew.	Pass.
From Infected Ports—																					
(B)	33	1,631	21	58	2,452	22	34	1,817	7	43	2,161	10	31	1,636	...	43	2,273	1	439	20,655	64
(C)	16	593	...	28	1,392	2	20	948	2	19	813	...	22	1,086	...	13	632	...	254	11,773	7
	49	2,224	21	86	3,844	24	54	2,765	9	62	2,974	10	53	2,722	...	56	2,905	1	693	32,428	71
From Non-Infected Foreign Ports—																					
(D)	108	3,711	2,409	185	6,215	2,337	126	4,297	918	110	3,562	691	99	2,892	377	143	3,895	772	1,380	40,865	10,494
	157	5,935	2,430	271	10,059	2,361	180	7,062	927	172	6,536	701	152	5,614	377	199	6,800	773	2,073	73,293	10,565

It will be observed that the custom of boarding is not confined to these ships which are regarded by H.M. Customs as coming "foreign," the object of the boarding being primarily to ascertain the conditions of health existing on all ships trading with foreign ports whether they are so regarded or not.

As to the distribution of plague in foreign ports a pretty wide interpretation is applied, and the examination is extended to all ports in which the disease has appeared in recent years.

RATS.

The examination of rats, with the view of discovering any evidence of plague infection among them, can only be carried out satisfactorily when ships are in harbour at Glasgow. During the year the inspector detailed for the duty of trapping visited 243 vessels, and caught 1,172 rats, of which 1,145 were bacterially examined, details of which will be found in the work of the Bacteriological Department.

INFECTIOUS DISEASES ON BOARD SHIPS.

During the year 32 cases of infectious disease were removed to hospital from ships arriving in Glasgow, the details of which are contained in the following Table:—

INFECTIOUS DISEASES REMOVED FROM SHIPS DURING YEAR 1904.

Date.	Name of Ship.	Enteric.	Undefined.	Smallpox.	Erysipelas.	Measles.	Beri-beri.
Jan. 4	Brig "Hannah," ...	1	...	...	...	...	...
" 5	s.s. "Dag," ...	...	...	...	1	...	...
" 13	s.s. "Clydesdale," ...	...	...	...	...	1	...
" "	s.s. "Buenos Ayres," ...	...	...	...	...	1	...
" 26	s.s. "Arabia," ...	...	...	...	...	...	1
Feb. 23	s.s. "Crown of Aragon," ...	...	...	...	...	...	6
Mar. 17	s.s. "Numidian," ...	...	...	1	...	...	...
April 16	s.s. "Portland," ...	...	...	...	...	1	...
" 18	s.s. "City of Madrid," ...	...	1	...	...	...	...
" 20	s.s. "Fulmar," ...	1	...	...	...	...	...
" 25	s.s. "City of Manchester," ...	...	1	...	...	...	...
" 27	s.s. "Rembrandt," ...	1	...	...	...	...	...
" 29	Barque "Emilie Siegfried," ...	...	...	...	...	...	4
May 4	" "	...	...	...	...	...	1
July 7	s.s. "Fernland," ...	...	1	...	...	...	...
Aug. 8	s.s. "Sardinian," ...	1	...	...	...	...	...
" 26	s.s. "Fern," ...	...	...	...	...	1	...
Oct. 7	s.s. "Clan Mathieson," ...	...	1	...	...	...	...
" 27	s.s. "Spero," ...	1	...	...	...	...	...
" 28	s.s. "Clan Ross," ...	...	...	...	...	...	1
Nov. 7	s.s. "Ladykirk," ...	2*	...	...	...	...	...
Dec. 15	s.s. "Pointer," ...	...	...	...	...	1	...
" 17	s.s. "Clan Cumming," ...	...	...	...	...	...	1
		7	4	1	1	5	14
32							

* Dysentery.

MEMORANDUM BY THE MEDICAL OFFICER OF HEALTH ON THE PRESENCE OF TRACHOMA IN CERTAIN ALIEN IMMIGRANTS.

Early in the present year it was brought to my knowledge that a number of cases of trachoma had within recent months been treated in the ophthalmic dispensaries in Glasgow. The patients were ascertained to be aliens whose intended destination, in most cases, was America, but within the class, as thus described, it soon became apparent that there were several groups readily distinguishable from each other by the duration of their residence in Glasgow district. At one end was the alien who was also a transmigrant—Glasgow being simply a stage in his journey; at the other, the alien who, for a variable period, had become incorporated with the industrial life of the West of Scotland (chiefly as an iron or coal worker), but, in time, offered himself at one of the emigration offices for shipment to America.

Associated with this difference in the manner of accomplishing the journey from the Continent to America were others which had relation to the means employed for the detection of trachoma, and to the return of the emigrant so affected to his own country. During the course of the inquiry, indeed, the medical inspection of emigrants at the original port of embarkation on the Continent was made more stringent for the direct transmigrant, while none was instituted for the other class who booked only for a port in this country. Moreover, when evidence of the disease was discovered only after the emigrant had begun his journey, the transmigrant might, if he chose, be returned by the shipping company to his original port of embarkation; but the other class had no such facility.

A general statement may be made to the effect that trachoma is not endemic among even the poorest of the native population of Britain. Further, although infectious, it is not explosive in its action, and unlikely rapidly to affect any large number of the population.

Yet the gradual accumulation of cases is not desirable nor unattended with some risk of spread in the poorer sections of the populations among whom the imported immigrant finds a domicile. So far as I have presently been able to learn cases are unknown in the schools in Glasgow or its neighbourhood attended by the children of these emigrants.

In its earlier stages it is easily amenable to treatment. A system of inspection for the recognition of cases on arrival in this country, together with the provision of a method of supervision until recovery was established, would accomplish all that is required, but could only begin effectively at the port of debarkation.

The details of the inquiry were for the most part conducted by Dr. Currie, and the following report has been prepared by him:—

1. THE DISEASE KNOWN AS TRACHOMA.

Trachoma, or granular ophthalmia, is an affection of the eyes to which certain races are specially subject. Damp climates, crowded dwellings, and impaired bodily conditions are fostering causes of the ailment. When accompanied by discharge the disease is contagious, and it is generally held that the exudate from a case of trachoma originates true trachoma in a contact. Trachoma may have notable consequences; for the lids become deformed, the eyes remain prone to acute inflammation, and blindness in certain cases may result.

The signs of trachoma are fine elevations on the inner aspect of the eyelids. The surface becomes thickened, its blood-vessels are more evident than normal, and the lining membrane of the lids, instead of being smooth and pale, has a rough and red appearance.

2. DETAILS REGARDING THE INQUIRY.

The Medical Officer of Health for Liverpool reports a condition of matters in that city which resembles that referred to above. The Medical Officer of Health for the Port of London reports the unimpeded introduction of trachoma into England. From representatives of the emigrant shipping companies in Glasgow information is derived regarding the number of emigrants rejected for trachoma, and from one of their medical examiners further details are received. Experts in ophthalmology have contributed to knowledge of the position, and by the kindness of the Board of Trade figures are at hand with reference to rejection of emigrants for trachoma at Glasgow.

The object of this inquiry is to ascertain the circumstances attending the presence in this city of aliens afflicted with trachoma.

3. DETAILS REGARDING THE ALIEN IMMIGRANTS.

The immigrants are of different nations. Many are Russians; some are Poles; others are Finns. Their religion is in some cases Jewish; in other cases it is Christian. Aliens who are recent from their native land are shipped at various harbours of the North Sea or the Baltic. There are others who have lived in Lanarkshire, employed in the mines and iron-works.

The incidence of trachoma on the emigrants is best apparent when they are discriminated into classes in accordance with their immediate place of origin.

4. THE FOUR CLASSES OF EMIGRANTS.

Through Transmigrants.—These book through from their native country to an American port. They leave their homes in their character as emigrants to America, and are medically examined, at the instance of the Glasgow shipping companies, before they embark for Britain.

Two-stage Transmigrants.—It is the course of others, taking passage to this country, to find their way to Glasgow and to present themselves at the offices of the shipping companies as candidates for emigration to America.

County Immigrants.—By the use of the word county, in this sense for convenience' sake, one indicates aliens who, on applying, have been resident in Lanarkshire, or have worked in the mines or iron works of that county.

City Immigrants.—These are aliens who describe themselves as resident or employed in Glasgow.

5.—INCIDENCE OF THE DISEASE ON EACH CLASS.

By the courtesy of the two shipping companies who carry the immigrants, and of their medical officer whom one consulted, the figures of the Appendix have been obtained. From these figures certain conclusions emerge for each of the above classes.

Through Transmigrants.—These immigrants, who had been medically examined on behalf of the companies before embarking for Britain, are again inspected in Glasgow. Figures for a period of six months indicate rejections of this class by both companies together at the rate of 10 per month.

Two-stage Transmigrants.—These form a smaller class than through transmigrants, for the through method of booking, on account of its greater cheapness, is more attractive to emigrants than the two-stage method. Figures for the last $3\frac{1}{2}$ months show rejections of the class of two-stage transmigrants at the rate of 5 per month.

County Immigrants.—It had been suggested that certain transmigrants of the two-stage order, taking Lanarkshire as a brief incident of their journey to America, and stating at the emigrant company's office that they have come from Lanarkshire, may, in a misleading fashion, swell the numbers of the class now under discussion. The suggestion, however, is not sustained by the medical

examiner for the companies. It is the custom of this gentleman to inquire, as far as possible, into the history of candidates who present themselves to him; he forms on these inquiries the opinion that aliens who describe themselves as of the county immigrant class, arrived in Lanarkshire at the first with the intention of permanent residence there, not with the design that Scotland should be a resting stage of the journey to America, and that they have, in large majority, had settled employment in Lanarkshire for periods of months or years. In other words, there is no reason to believe that county immigrants are overestimated at the expense of two-stage transmigrants. Figures for the last $3\frac{1}{2}$ months show rejections for the class of county immigrants at the rate of 23 per month.

City Immigrants.—These are the smallest class of the four. Figures for the last $3\frac{1}{2}$ months show rejections at the rate of 1 per month.

Arranging the four classes by the incidence of trachoma among them, one places them in the following order:—

Name of Class.					Rejections per Month.
County Immigrants,	...	...	...	...	23
Through Transmigrants,	...	...	...	...	10
Two-stage Transmigrants,	...	...	...	...	5
City Immigrants, ...	...	...	...	...	1

6. THE SIGNIFICANCE OF THE ORDER SHOWN.

County immigrants form the largest class and outnumber both orders of transmigrant together. The class of city emigrants, on the other hand, furnishes a number of rejections which is notably small.

By the comparison of *county immigrants* with the two orders of transmigrants together, the conclusion is reached that trachoma at Glasgow emigration offices appears in association rather with aliens who have been resident in Scotland for definite periods than with aliens who are merely transmigrant through the district in the course of a journey from the European continent to America. Transmigration, therefore, as conducted by the shipping companies, is neither the sole nor the chief cause of the presence in Glasgow of trachoma-infected foreign persons.

The high proportion of rejections among the county immigrants seems to indicate a certain prevalence of the disease among the alien population of surrounding areas, but a communication kindly made by the Medical Officer of Health for Lanarkshire discourages the suggestion that this is the case in that county to such degree as to bring the condition within administrative knowledge.

By the comparison of the two classes of *transmigrants* with one another, it is noted that the incidence for the through class is higher than the incidence for the two-stage class. This circumstance is explained by the greater numbers of through transmigrants. It is satisfactory in the public health aspect to recall in this place that through-booked aliens who are rejected for trachoma—as opposed to the two-stage class—remain under the supervision and direction of the shipping companies.

The comparison of rejected *city immigrants* with the other classes does not indicate any marked incidence of trachoma among candidates for emigration who are inhabitants of Glasgow.

Briefly, the figures suggest that trachoma is more prevalent among candidates for emigration who have been resident for definite periods in Scotland than among transmigrants who are merely passing through this district, and, further, that there is no evidence of notable trachoma among Glasgow aliens.

7. THE INFLUENCE OF REJECTED ALIENS ON THE LOCAL HEALTH.

When aliens who suffer from trachoma are rejected by the companies' officers' and so fail perforce of their destination, some remain in this country, others return whence they came. Definite figures in this detail are not at hand, but representatives of the companies have offered suggestions.

Through Transmigrants.—The estimates and statements of the companies suggest that about one quarter of the rejected of this class remain in Britain. The greater number return to their native country, urged by the shipping companies, who make it their care to avoid any accumulation in Glasgow of undesirable foreigners. Of the number who remain in Britain some pass to Leeds or London, others repair to the Lanarkshire coalfields; only an occasional unit appears to be left in permanent association with this city. In a word, so far as the through-transmigrant service is concerned, the addition of trachoma-infected aliens to the population of Glasgow appears as a negligible quantity.

Two-stage Transmigrants.—It is not probable that this class of the rejected returns home in such number as the through-booked variety. Even if they desired to return they have not the facilities for arrangement with the shipping companies which through transmigrants enjoy. Under treatment at dispensaries they may remain in Glasgow for a time; some at the propitious moment face the renewed scrutiny of the medical examiner; others have recourse to the English manufacturing centres, or seek employment in the Scottish coalfields. With such deductions, on a rejection rate of 5 per month, it is apparent that the number of trachoma-infected two-stage transmigrants who ultimately become resident in Glasgow is too slight to merit further consideration.

Immigrants of the county and city classes who are rejected by the examiners may be supposed, in certain cases, to return to their homes and to continue their ordinary pursuits. A proportion apply for treatment at the Eye Dispensaries of Glasgow. One is informed that the Ophthalmic Institution has treated 70 aliens for trachoma since October of last year. The unsuccessful attempt at emigration has the advantage of directing the attention of these aliens to the disease from which they suffer, and the hope of being passed at a later date stimulates them to continue under medical care.

County Immigrants who remain in Glasgow for treatment are possible *foci* of infection. It has been stated above that through transmigrants who are detained for trachoma continue under the supervision of the companies. This supervision is effected by the housing of these aliens in places where they are under the observation of the companies' medical officers. County emigrants, on the other hand, who are the most numerous of the four classes named, are not under the same organised control. Promiscuously lodged, they are capable of transmitting their disease to the persons with whom they may happen to be associated.

City Immigrants are a minute class, and do not call for detailed notice. From this section it seems warranted to conclude that transmigrants, whether through-booked or two-stage, are without appreciable influence in disseminating trachoma in Glasgow; but that rejected aliens of the county or city classes, if housed either in the county or the city without adequate precautions, may prove centres of infection.

S.—REJECTION AT AMERICAN AND CANADIAN PORTS.

Emigrants who have passed the shipping companies' doctors in Glasgow are not yet safe to American land. If the disease attacks them during the voyage they are rejected by the immigration authorities of Canada and the United States. The Board of Trade officials at Whitehall offer returns of such refusals for the United Kingdom as a whole, but figures for Glasgow alone have not been secured.

Those who sailed from Glasgow are returned to Glasgow. Doubtless many pass elsewhere later. Some have been heard of as destitute. The destitute become objects of charity or parish relief, for, if one reads correctly the case of *Wallace v. J. & A. Allan* in the Sheriff Court of Glasgow in 1893, the shipping companies are under no obligation to return such aliens to their native countries. There is no indication that the number of these cases is large, and one is assured that it is the desire of the companies, obligation apart, to send them back whence

they came. In brief, evidence is wanting to show that this class of rejection threatens in any degree the local health.

9. THE QUESTION REVIEWED.

In certain countries of the European continent at present disquiet exists, and many inhabitants, oppressed by their conditions of life, are seeking respite in Canada and the United States. The channels by which they approach the land of their aspiration differ for the peoples of different governments and provinces, but a certain number submit themselves to medical examination on the Continent, and seek egress to the west through the maritime portal of Glasgow. These aliens, who constitute the through transmigrants of this inquiry, are derived from populations among which trachoma is endemic, and the medical inspection referred to is not infallible in preventing trachoma-infected persons of this class from reaching Glasgow.

If Glasgow had been merely a brief resting place for through transmigrants before they proceeded further on their journey, the presence of trachoma among them might without difficulty have escaped observation, but the medical officers are stringent who act in the commission of the Marine Hospitals Service of the United States, and the shipping companies, who are fined for each case of disease that they carry to American shores, have found it useful to renew in Glasgow the examination already effected on the Continent. The companies act in Glasgow as the strainers or sieves of trachoma, passing healthy aliens through to ship-board, but withholding the diseased and their kindred.

If the disease which is thus brought in touch with Glasgow were capable of rapid and far-reaching spread, if the through transmigrants furnished cases in great excess by comparison with other classes, or if the rejected persons remained in permanent and unrestricted association with the district, a charge would lie against the companies.

Trachoma, however, is not a disease of a fulminating infectivity. Not casual intercourse, but a state of common living and housing, is the class of circumstance which favours its transmission. The introduction of a few cases into a district is not, without certain conditions, sufficient to ensure a wide extension of the malady. The incidence of trachoma on the various classes of immigrants at the Glasgow offices does not fall specially on through transmigrants; on the contrary, they are less affected than county immigrants. In the last place their association with the city is neither permanent nor unrestricted. It is not permanent, because the shipping companies induce three-fourths of their rejections to return to the Continent, and of the rest many repair to Lanarkshire, Leeds, and London. It is not unrestricted, because the transmigrants while in Glasgow reside in houses within the knowledge of the company and under the supervision of their medical officers.

It appears mere justice to place it on record that the measures employed by the companies are of value, and that evidence is wanting to prove that the through-transmigrant service, so far as trachoma is concerned, has a pernicious influence on the local health of Glasgow.

Besides the through transmigrants, it will be recalled that there were three other classes considered—that is to say, two-stage transmigrants, county immigrants, and city immigrants. These three classes have it in common that they leave the Continent without a medical examination and are admitted to this country under the existing conditions of access, which are not concerned with trachoma. Neither at the moment when the immigrant lands on the British Islands, nor at any period of his subsequent residence, is any process active by which trachoma is automatically brought under the notice of the authorities. Aliens whose symptoms prove troublesome seek relief at hospitals, but the early stages of the disease are of minor severity, and these patients, trained to submission, are prone to suffer in silence. Not until the scrutiny of the shipping company has been exercised is the fact of trachoma in evidence, and the Glasgow emigration service may in this manner claim the utility of placing on record the existence of a disease which is not in the meantime amenable to direct investigation by official means.

10. THE REMEDY FOR TRACHOMA IN BRITAIN.

One has no doubt that an enactment to exclude diseased aliens from the United Kingdom would place in the hands of the authorities concerned an appropriate instrument for the suppression of trachoma. The Aliens Bill which is at present before Parliament has the characters of such an enactment. The contending interests of this Bill do not come within the present inquiry, but the portion of the measure which deals with disease is relevant as regards trachoma.

Transmigrants of both classes would be directly affected, and the burden of discrimination by the shipping companies would be lightened.

In the case of county and city immigrants, the effect of excluding trachoma by legislative means is not so immediately obvious. Nevertheless one believes that a good effect will follow. Without detailing places by name, one accepts the presence of trachoma among the population in certain districts surrounding Glasgow, and also, if only to a minor extent, in Glasgow itself.

But trachoma is not a disease which is naturally endemic in Great Britain. Up till the present it has been properly a disease of the aliens. Introduced by the aliens, it is propagated among the aliens, and is also, under suitable conditions, transmitted by the aliens to the people of this country. The exclusion of trachomatous aliens will intercept the infective stream at its fount. Till this has been done local efforts at repression will have restricted usefulness. When this has been done it will be open to administrators to stamp out trachoma in their districts by the usual means.

It has been stated above that trachoma has not the quality of a disease which spreads from person to person with menacing speed, nevertheless the control of its beginnings has hygienic value. Its insidious progress has before now involved large areas. Even in this country it has on occasion attained prevalence enough to require local measures for its repression, and it is of interest to recall in the connection that trachoma in New York, originating from the alien population in a seafaring quarter, had, in 1903, so implicated schools in the poorer parts of the city that, when the Board of Health faced the position, no less than six thousand cases were discovered forthwith, chiefly among Italian and Yiddish boys.

APPENDIX.

REJECTIONS OF EMIGRANTS.

Through Transmigrants.	Two-Stage Transmigrants.	County Immigrants.	City Immigrants.
1904-1905.	1905.	1905.	1905.
Anchor Line. 3 Months to 12th January, - - 20 3 Months to 27th April, - - 20*	Anchor Line and Allan Line together. Examinations by Dr. Hardie.	Anchor Line and Allan Line together. Examinations by Dr. Hardie.	Anchor Line and Allan Line together. Examinations by Dr. Hardie.
40 40	January, - - 5	January, - - 32	January, - - 2
Allan Line. 3 Months to 16th January, - - 13 3 Months to 27th April, - - 8	February, - - 10	February, - - 15	February, - - 0
21 21	March, - - 1	March, - - 13	March, - - 1
61	Half April, - 0	Half April, - 21	Half April, - 0
	16	81	3
Total rejections of two lines together for 6 months = 61, which equals a rate 10 per month.	Total rejections of two lines together for 3½ months = 16, which equals a rate of 5 per month.	Total rejections of two lines together for 3½ months = 81, which equals a rate of 23 per month.	Total rejections of two lines together for 3½ months = 3, which equals a rate of 1 per month.
10 rejected monthly.	5 rejected monthly.	23 rejected monthly.	1 rejected monthly.

* This figure is an estimate.

OFFENSIVE TRADES.

PUBLIC HEALTH (SCOTLAND) ACT, 1897, SECTION 32.

During the year applications were made for sanction to establish businesses in the following wards:—

Ward	I.—Tallow Melter.
"	VI.—Soap Boiler.
"	XVIII.—Tallow Melter.
"	XX.—Tallow Melter.

Sanction was finally granted in three cases, while one is still under consideration.

SECTION V.

(D) SPECIFIC ACCOUNT OF THE ADMINISTRATION OF THE
FACTORY AND WORKSHOP 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.

In December, 1904, the Home Secretary reissued a former circular, No. B. 37,268, describing the duties of Local Authorities under the Factory and Workshop Act, 1901, and appended draft Tables containing an outline of the details which they desired Medical Officers to adopt in submitting their report. In view of this, the Tables presented in my Report for 1903 have been somewhat recast, in order to be in conformity with those contained in Home Office circular referred to.

REGISTER OF WORKERS.

The details presented in the Table forming XXXVI. in the Report for 1903 are now reproduced in Table XLII., which contains a statement of the number of laundries, bakehouses, restaurant kitchens, other food places, and all other workshops, as well as the total number of workshops in each ward in the City. The total number of workshops in the City is 4,776, as against 4,131 on the register last year; the number of inspections made, 25,780; and the number of notices issued, 1,544.

Table No. I. of the Home Office list, which forms Table XLIII. 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, but the total visits are here included under workshops.

To the home-workers' premises 2,502 visits were made during the year. In connection with home work, it would, I believe, be advantageous to have all industries carried on at home included in some system of registration; but an even more urgent requirement is the extension of the cubic space required in houses which are used for living, working, and sleeping purposes. The argument appeals with its greatest force in connection with industries carried on in single apartments. Here the cubic space per adult required for living purposes under local Acts is 400 feet, but when the same space is used throughout the twenty-four hours alternately for living, working, and sleeping in, its physiological value to the inmates must obviously be on a very different level from the corresponding space allowed per inmate in, say, the dormitory of a model lodging-house which is used exclusively for sleeping purposes.

In order to ascertain to what extent the health of the home-worker is affected by the conditions under which home work is carried on, it would be desirable to have information concerning the size of the house and the number of occupants in all cases where such is conducted.

TABLE XLII.—GLASGOW, 1904.—WORKSHOPS on the REGISTER.

WAGES.	LAUNDRIES.			BAKEHOUSES.			RESTAURANT KITCHENS.			OTHER FOOD PLACES.			ALL OTHER WORKSHOPS.			Total Number of Workshops.	Number of Inspections.	Number of Notices.
	On Register, 1903.	Added after deducting those abolished.	On Register, 1904.	On Register, 1903.	Added after deducting those abolished.	On Register, 1904.	On Register, 1903.	Added after deducting those abolished.	On Register, 1904.	On Register, 1903.	Added after deducting those abolished.	On Register, 1904.	On Register, 1903.	Added after deducting those abolished.	On Register, 1904.			
1. Dalmarnock, ...	7	1	8	11	...	11	10	1	11	3	1	4	156	20	176	210	1,232	52
2. Calton, ...	13	2	15	22	...	22	15	2	17	8	1	9	375	11	386	449	3,299	127
3. Mile-end, ...	12	1	13	12	...	12	4	...	4	15	...	15	151	18	169	213	1,327	38
4. Whitevale, ...	3	...	3	13	...	13	6	...	6	5	1	6	154	17	171	199	1,443	55
5. Dennistoun, ...	7	1	8	9	...	9	2	...	2	...	...	...	73	6	79	98	639	18
6. Springburn, ...	2	1	3	4	...	4	...	...	...	...	...	...	28	19	35	46	222	9
7. Cowlands, ...	3	...	3	6	...	6	...	...	6	...	...	...	51	2	30	45	223	11
8. Townhead, ...	5	1	6	13	...	13	...	...	...	1	...	...	391	54	105	129	590	23
9. Blackfriars, ...	8	1	9	15	...	15	8	...	9	4	...	4	350	52	443	480	2,225	133
10. Exchange, ...	...	...	...	11	...	11	27	3	30	1	4	5	296	26	376	422	2,180	165
11. Blythwood, ...	2	...	2	6	...	6	24	1	25	1	...	1	220	17	313	347	2,203	143
12. Broomielaw, ...	4	...	4	6	...	6	18	1	19	1	...	1	28	67	287	317	2,739	112
13. Anderston, ...	2	1	3	6	...	6	...	...	5	...	...	...	107	5	33	46	48	10
14. Sandyford, ...	1	2	3	16	...	16	...	...	3	1	1	2	11	56	107	131	153	18
15. Park, ...	5	1	6	8	...	8	...	...	...	1	1	2	97	...	65	81	70	2
16. Cowcaddens, ...	11	1	12	27	...	27	4	...	...	...	...	...	151	...	148	196	800	45
17. Woodside, ...	23	2	25	10	...	10	...	1	1	...	1	...	111	...	106	143	540	19
18. Hutchesontown, ...	16	1	17	11	...	11	...	9	9	2	1	3	55	37	92	132	1,108	110
19. Gorbals, ...	25	1	26	15	...	15	3	3	6	3	...	3	386	40	426	476	2,421	245
20. Kingston, ...	26	...	26	12	...	12	15	2	17	4	...	4	204	25	229	288	1,812	182
21. Govanhill, ...	5	2	7	9	...	9	...	...	...	...	1	1	60	...	42	59	32	...
22. Langside, ...	9	1	10	7	...	7	...	...	...	1	...	1	26	15	41	59	35	...
23. Pollokshields, ...	2	...	2	6	...	6	...	...	...	...	...	...	19	...	18	26	22	1
24. Kelvinside, ...	2	2	4	2	...	2	...	1	1	...	...	...	18	54	72	79	90	8
25. Maryhill, ...	2	5	7	7	...	7	...	8	8	...	...	...	12	71	83	105	327	16
TOTALS, ...	195	...	222	270	...	263	136	...	196	51	...	63	3,479	...	4,032	4,776	25,780	1,544

TABLE XLIII.—INSPECTION.

(Including Inspections made by Sanitary Inspectors.)

PREMISES.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries),...	(Not stated	separately.)	...
Workshops (including Workshop Laundries),	25,780	1,548	...
Workplaces,	(Not stated	separately.)	...
Home-workers' Premises,	2,502	42*	...
Total,	28,282	1,590	...

* Found Dirty.

Table XLIV. contains a statement of the defects found grouped as nuisances under the Public Health Acts and the Factory and Workshop Act.

TABLE XLIV.—DEFECTS FOUND

PARTICULARS.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
* Nuisances under the Public Health Acts—				
Want of cleanliness,	531	547	...	...
Want of ventilation,	42	36	...	...
Overcrowding,	4	4	...	...
Want of drainage of floors,	645	642	...	...
Other nuisances,				
Sanitary accommodation—(a) Insufficient,	326	418	...	...
(b) Unsuitable or defective,				
(c) Not separate for sexes,				
Offences under the Factory and Workshop Act—				
Illegal occupation of underground bakehouse (Section 101),	468	116	...	...
Breach of sanitary requirements for bakehouses (Sections 97 to 100),	6	...	...	...
Failure as regard lists of out-workers (Section 107), ...	...	...	...	...
Giving out work to be done in premises which are { Unwholesome (Section 108),	...	...	...	...
{ Infected (Section 110), ...	...	...	...	...
Allowing wearing apparel to be made in premises infected by scarlet fever or smallpox (Section 109),	...	...	...	...
Other offences, ... ..	...	...	...	...
Total,	2,022	1,763	...	...

* Including those specified in Sections 2, 3, 7, and 8 of the Factory Act as remediable under the Public Health Acts.

TABLE XLV.—OTHER MATTERS.

CLASS.	Number.
Matters notified to H.M. Inspectors of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (Section 133),... ..	2
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (Section 5),	14
Other,... ..	14
Underground Bakehouses (Section 101)—	
In use during 1903,	117
Certificates granted { In 1903, ... ..	...
{ In 1904,	29
In use at end of 1904,	88
Home-work—	
*Lists of Out-workers (Section 107)—	
Lists received,	815
Addresses of Out-workers { Forwarded to other Authorities,	268
{ Received from other Authorities,	6
Home work in unwholesome or infected premises—	
Notices prohibiting home work in unwholesome premises (Section 108), ... ..	...
Cases of infectious disease notified in home-workers' premises, ... ..	...
Orders prohibiting home-work in infected premises (Section 110), ... ..	...
*Workshops on the Register (Section 131) at the end of 1904—	
Laundries,	222
Workshop Bakehouses,	263
Restaurant Kitchens,	196
Other Food Places,	63
All other Workshops,	4,032
Total Number of Workshops on Register,	4,776

* Detailed Statement of Numbers in each Ward will be found in Table XLII.

The following abstracts of the workshops measured and registered during the year have been prepared by the Sanitary Inspector:—

TABLE XLVI.—ABSTRACT of WORKSHOPS MEASURED and REGISTERED during 1904.

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.	Total Number of Children under 14 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
Asbestos Mattress Maker,	1	1	..	6	...	...	4,235	705·8
Artificial Teeth Manufac- turers,	17	18	41	1	8	...	1,718·6	618·7
Boot, Shoe, and Slipper Makers,	123	129	269	14	1	...	2,148·6	976
Belt and Hose Makers, ...	1	1	6	...	...	...	13,093	2,182·1
Bamboo Furniture Makers,	2	3	5	...	...	...	2,371·3	1,422·8
Basket Makers,	2	2	9	...	1	...	4,480	896
Blacksmiths,	15	17	39	...	1	...	6,786·2	2,884·1
Boatfounders, /	1	1	2	...	...	...	9,000	4,500
Bristle Sorting and Brush Making,	5	7	32	6	3	...	5,859	1,000·3
Bottling and Labelling, ...	1	1	3	...	...	...	3,189	1,963
Bakers' Utensil Maker, ...	1	1	6	...	...	...	3,629	604·8
Bolting Manufacturers, ...	2	4	6	4	...	...	14,810·2	5,924·1
Bonewax Refiner and Paper Manufacturer,	1	1	2	18	1	...	74,137	3,530·3
Box Maker,	1	1	1	...	...	...	2,087	2,087
Button and Cuff Maker, ...	1	1	1	14	...	...	9,800	653·3
Cabinetmakers and French Polishers,	51	78	191	47	15	...	5,420·5	1,671·1
Cair Makers,	4	6	15	1	...	...	2,761·8	1,035·6
Dyers and Gilders,	7	9	26	...	6	...	3,190·1	897·2
Cycle Makers and Repairers,	12	13	17	...	3	...	2,217·6	1,441·4
Cycle Tyre Makers,	2	2	6	...	1	...	6,237	1,782
Cigarette Makers,	5	5	7	5	4	...	2,287·8	714·9
Coffin-mounting Makers,...	2	2	2	...	...	...	1,586·5	1,586·5
Currier,	1	1	3	1	...	...	4,830	1,207·5
Jack Cutter,	1	1	3	...	1	...	2,792	698
Coopers,	2	2	13	...	...	...	19,729·5	3,033·9
Cartwright,	1	1	1	...	...	...	4,146	4,146
Cream-makers,	90	102	1	294	88	1	1,860·9	494·3
Cup Sinkers,	1	3	6	...	...	...	3,835·6	1,917·8
Crapers,	3	3	1	5	1	...	1,426·3	611·2
Electrical Engineers,	2	2	7	...	2	...	7,202	1,600·4
Engravers,	3	4	6	...	3	...	2,238·5	994·8
Embroidering,	1	1	2	5	5	...	13,764	1,147
Firewood Manufacturers,	2	3	18	2	...	...	4,431	664·6
Iron-box Makers,	2	4	6	13	5	...	11,119	1,853·1
Labourer,	1	1	2	2	...	...	2,277	569·2
Furniture Polish Manufac- turers,	2	2	3	1	...	...	5,310	2,155
Lathers,	2	3	10	...	1	...	6,096	1,662·5
Lease Embossing and Stain- ing,	4	6	13	2	8	...	16,206·8	4,227·8
Self-club Maker,	1	1	1	...	...	...	1,836	1,836
Hat and Cap Makers,	6	11	14	92	21	...	6,850·2	593·3

ABSTRACT of WORKSHOPS MEASURED and REGISTERED during 1904.—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.	Total Number of Children under 14 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
Horse Shoeing,	2	2	5	...	...	...	7,052	2,820.8
Hosiery Manufacturers, ...	3	3	3	3	...	...	1,857	928.5
Horse Clothing Manufacturer,	1	1	1	1	1	...	4,016	1,338.6
Joiners and Wrights,	29	32	97	...	16	...	7,321.9	2,073.4
Jewellers, Goldsmiths, Watch and Clock Makers,	29	33	48	4	10	...	1,689.9	899.5
Kilt Maker,	1	1	...	2	1	...	1,545	515
Ladies' Belt and Necklet Maker,	1	1	...	12	2	...	3,978	284.1
Laundries,	58	125	10	231	31	...	2,452.8	1,126.8
Locksmiths,	3	3	4	...	3	...	3,197	1,370.1
Lithographers,	1	1	1	...	1	...	2,136	1,068
Leather Merchant,	1	1	2	...	...	...	4,487	2,243.5
Ladies' Blouse Maker,	1	1	...	26	10	...	16,464	457.3
Milliners,	35	42	...	202	32	...	4,129.9	741.2
Mantles and Costumes,	5	7	...	28	6	...	3,327.5	685
Motor Makers and Repairers,	3	5	9	...	3	...	5,835.8	2,431.5
Manufacturing Stationers,	2	3	5	6	2	...	5,873.3	1,356.1
Machine Repairers,	1	1	2	...	...	...	5,616	2,808
Medicinal Capsule Maker,	1	1	1	...	2	...	3,306	1,102
Musical Instrument Makers and Repairers,	4	4	7	1	1	...	4,649.7	2,074.3
Marble Cutter,	1	1	4	...	2	...	2,415	402.5
Monumental Worker,	1	1	3	...	1	...	5,580	1,895
Opticians and Nautical Instrument Makers,	2	2	6	...	...	...	6,012	2,004
Picture-frame Makers,	5	8	16	4	3	...	2,813.1	978.4
Plumbers,	18	18	58	...	10	...	3,725.7	986.2
Plasterers,	1	1	2	...	3	...	2,625	525
Pipe Makers and Mounters,	2	4	8	4	1	...	4,530.7	1,394
Printers and Paper Rulers,	4	5	11	...	1	...	4,096.8	1,707
Pattern Book Maker,	1	1	2	14	5	...	9,680	475.2
Paper-bag Maker,	1	2	...	2	3	...	1,675.5	670.2
Poulterers,	2	2	18	...	...	...	4,509.5	501
Painters,	3	3	14	...	3	...	2,127.6	375.4
Packing-box Makers,	2	2	4	...	4	...	6,342.5	1,585.6
Preserved Meat Makers,	2	3	1	2	2	...	3,571.6	2,143
Pattern Maker,	1	1	8	...	...	...	10,361	1,295.1
Photographers,	5	5	8	2	2	...	2,914	1,214.1
Rag Sorting and Cleaning,	10	16	3	41	1	...	8,018.7	2,851.1
Shirt Makers,	6	8	...	28	5	...	2,380.1	577
Show-case Makers,	2	2	8	...	...	...	8,568.5	2,142.1
Saddlers,	8	10	20	...	6	...	2,808.4	1,080.1
Sausage-skin and Spice Maker,	1	1	...	3	1	...	1,020	255
Shop Fitters,	1	1	2	...	...	...	2,392	1,196
Shaving-cream Maker,	1	1	1	1	2	...	4,963	1,280.7
Saw Maker,	1	1	2	...	1	...	19,941	6,647
Sack Repairers,	3	3	2	7	...	...	2,936.3	978.7

ABSTRACT of WORKSHOPS MEASURED and REGISTERED during 1904.—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.	Total Number of Children under 14 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
da Spring Maker, ...	1	1	1	...	...	...	1,606	1,606
da Maker, ...	1	1	1	...	...	...	6,092	6,092
deep Dip Manufacturer,	1	1	1	...	...	...	9,042	9,042
ilors, ...	150	206	562	290	113	...	2,662.6	568.3
e and Scarf Makers, ...	2	2	...	43	11	...	11,941.5	442.2
smiths, ...	7	7	26	...	6	...	9,947	2,175.9
le Layer, ...	1	1	3	...	...	...	5,670	1,890
tacco Manufacturers, ...	2	4	2	2	1	...	2,422.5	1,938
cket Writer, ...	1	1	4	...	...	...	6,486	1,621.5
a Dealers and Confectioners, ...	4	5	4	7	1	...	6,673.6	2,780.6
derclothing Manufacturers, ...	5	8	...	31	7	...	2,099.1	441.9
holsters, ...	10	16	30	9	5	...	5,716.6	2,078.7
holstery Trimming Maker,	1	1	1	3	1	...	11,020	2,204
mbrella Makers, ...	4	7	7	16	5	...	2,316.1	579
netian Blind Maker, ...	1	1	2	1	...	...	4,725	1,575
ntilator Makers, ...	2	4	18	...	2	...	16,263.2	3,252.6
olis Maker, ...	1	1	1	...	...	...	1,790	1,790
avers, ...	5	5	22	5	1	...	9,346.6	1,669
ighing Machine and Scale Makers, ...	2	4	9	...	3	...	4,258.7	1,419.5
terproof Manufacturers,	3	5	27	33	2	...	15,310.4	1,234.7
m Winder, ...	1	1	1	1	...	...	6,656	3,328

TABLE XLVII.—ABSTRACT of RESTAURANTS MEASURED and REGISTERED during 1904.

Districts.	Number of Restaurants.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Total Number of Children under 14 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
stral, ...	14	15	5	37	2	...	3,148.4	1,073.3
stern, ...	2	2	...	4	...	...	1,446	723
stern, ...	9	9	3	14	6	...	1,973.8	772.3
stern, ...	16	16	6	39	3	...	1,852.9	617.6
stern, ...	14	15	7	28	1	...	1,718.4	716
th-West, ...	...	8	10	8	...	...	2,002.5	890

UNDERGROUND BAKEHOUSES (SECTION 101).

During the year 528 inspections were made to underground bakehouses, and 106 samples of air were taken from 57 of them. In 29 bakehouses the premises ceased to be occupied as such, and at the close of the year the number remaining on the register was 88. During the year alterations were completed in 29 cases, and the premises certified for occupancy. The details for each ward are contained in the following Table, which shows also the numbers who submitted plans for approval:—

UNDERGROUND BAKEHOUSES.

RETURN OF WORK DONE DURING 1904.

WARDS.	Number closed previous to 1904.	Total Number on Register at 1st January, 1904.	Number of these closed during year.	Number of Inspections.	Plans of proposed Alterations lodged by Architects.	Plans of proposed Alterations approved.	Number certified during 1904.	Number of Air Samples taken.	Number of Bake-houses from which Air Samples were taken.
1. Dalmarnock, ...	...	1	...	12	1	1	...	4	1
2. Calton, ...	...	4	...	24	4	3	1	5	2
3. Mile-end, ...	...	1	...	7	...	...	...	...	...
4. Whitevale, ...	...	2	1	8	...	...	...	1	1
5. Dennistoun, ...	...	4	1	9	1	2	1	8	3
6. Springburn, ...	...	1	1	...	...	...	...	...	...
7. Cowlairs, ...	...	3	...	7	3	2	...	1	1
8. Townhead, ...	...	7	3	24	2	3	1	1	1
9. Blackfriars, ...	...	10	6	44	3	2	1	5	3
10. Exchange, ...	1	11	1	73	5	5	2	12	7
11. Blythwood, ...	2	5	...	18	3	3	2	5	3
12. Broomielaw, ...	2	6	1	43	4	4	1	3	3
13. Anderston, ...	...	3	2	7	1	1	...	...	...
14. Sandyford, ...	2	10	1	52	4	4	7	18	9
15. Park, ...	...	4	...	16	2	2	2	3	2
16. Cowcaddens, ...	3	11	2	48	...	3	3	9	7
17. Woodside, ...	2	3	1	8	...	1	1	4	3
18. Hutchesontown, ...	...	4	1	11	1	1	2	3	2
19. Gorbals, ...	3	11	7	56	2	3	1	8	4
20. Kingston, ...	...	3	1	16	1	2	...	7	2
21. Govanhill, ...	3	4	...	16	2	2	2	3	1
22. Langside, ...	...	1	...	2	1	1	...	...	...
23. Pollokshields, ...	...	4	...	10	1	1	1	4	1
24. Kelvinside, ...	...	2	...	8	...	1	1	...	...
25. Maryhill, ...	...	2	...	9	...	...	...	2	1
	18	117	29	528	41	47	29	106	57
1903, - -	...	...	...	...	40	30	...	...	...
Totals, - -	...	...	...	...	81	77	...	...	...

COMPARISON OF AIR IN ALTERED AND IN UNALTERED PREMISES.

With the view of ascertaining the actual change produced in the condition of the air of bakehouses by the structural alterations required, 27 samples were taken in 19 unaltered underground bakehouses, and a comparison made with 44 samples taken from the 29 bakehouses certified during the year. In 5 of these latter cases the examination was conducted in the same premises before and after alteration. The contrast may be shown by comparing the numbers presenting increasing proportions of carbonic acid gas thus:—

AVERAGE PROPORTION OF CARBONIC ACID GAS IN PREMISES.

UNALTERED.		ALTERED.	
Parts of CO ₂ per 10,000 of Air.	Number of Samples.	Parts of CO ₂ per 10,000 of Air.	Number of Samples.
- 11	5	- 5	2
- 12	3	- 6	9
- 13	2	- 7	25
- 14	5	- 8	7
- 15	4	- 9	1
- 16	...	- 10	...
- 17	...		
- 18	3		
- 19	...		
- 20	1		
- 21	1		
- 22	1		
- 23	1		
- 24	...		
- 25	1		

The average in unaltered premises is 16·3.

This general contrast is rendered more emphatic when the comparison is drawn between the air in the same premises before and after alteration, as follows:—

PARTS CO ₂ per 10,000.					
Before Alteration.			After Alteration.		
A,	...	10·6	A,	...	6·3
B,	...	10·96	B,	...	7·4
C,	...	11·8	C,	...	6·2
D,	...	14·8	D,	...	6·0
E,	...	20·6	E,	...	6·0
Average,		13·7	Average,		6·5

COST OF ALTERATIONS.

Through the courtesy of the occupiers or owners of premises which had undergone alterations, I have obtained information regarding the actual costs incurred; and particulars of these, together with the method of ventilation adopted, the size of the fan used, and the cubic capacity in feet are given in the subjoined Table.

The average cost per bakehouse is shown to be £118; but if we deduct the cost in one case in which the structural alterations were extensive and out of all proportion to what was necessary in the others, the average of the 28 remaining is £87.

PARTICULARS OF VENTILATION AND COST OF ALTERATIONS OF 29 UNDERGROUND BAKEHOUSES
CERTIFIED DURING 1904.

No.	Cubic Capacity in feet.	METHOD OF VENTILATION.					Cost of Alterations.
		Extraction.		Propulsion.		Without Mechanical Aid.	
		Number of Fans.	Diameter of Fans.	Number of Fans.	Diameter of Fans.		
1	4,565	One	15 ins.	...	...	...	£100
2	6,298	One	24 "	...	...	...	200
3	12,600	Two	24 and 15 ins.	One	24 ins.	...	1,000
4	3,627	...	...	One	15 "	...	54
5	4,436	One	15 ins.	One	15 "	...	70
6	4,564	One	18 "	One	15 "	...	85
7	2,000	One	18 "	...	...	...	100
8	4,134	...	...	One	18 ins.	...	100
9	5,520	...	...	One	18 "	...	120
10	5,460	...	...	...	...	Windows,&c.	10
11	10,994	One	24 ins.	One	24 ins.	...	200
12	9,922	One	24 "	One	18 "	...	100
13	8,871	One	24 "	One	24 "	...	200
14	1,829	...	...	...	...	Windows,&c.	210
15	11,400	One	24 ins.	...	...	...	80
16	2,677	...	...	One	18 ins.	...	75
17	5,097	One	24 ins.	...	...	...	50
18	4,624	One	24 "	...	...	...	250
19	7,349	One	24 "	...	...	...	200
20	15,000	...	...	...	...	Windows,&c.	40
21	2,117	One	18 ins.	...	...	...	150
22	5,000	One	12 "	One	12 ins.	...	200
23	4,106	One	24 "	...	...	...	150
24	3,612	One	18 "	...	...	...	100
25	13,300	One	24 "	...	...	...	120
26	7,000	One	24 "	...	...	...	200
27	4,738	...	...	One	18 ins.	...	50
28	7,371	One	36 ins.	...	...	...	260
29	11,957	One	18 "	...	...	...	150

£3,424 =
£118 per Bakehouse.

Ventilated by extracting fans,	...	...	14
Do. by propulsion fans,	...	...	5
Do. with both systems combined,	...	...	7
Do. without mechanical aid,	...	...	3

A. K. CHALMERS.

APPENDIX.

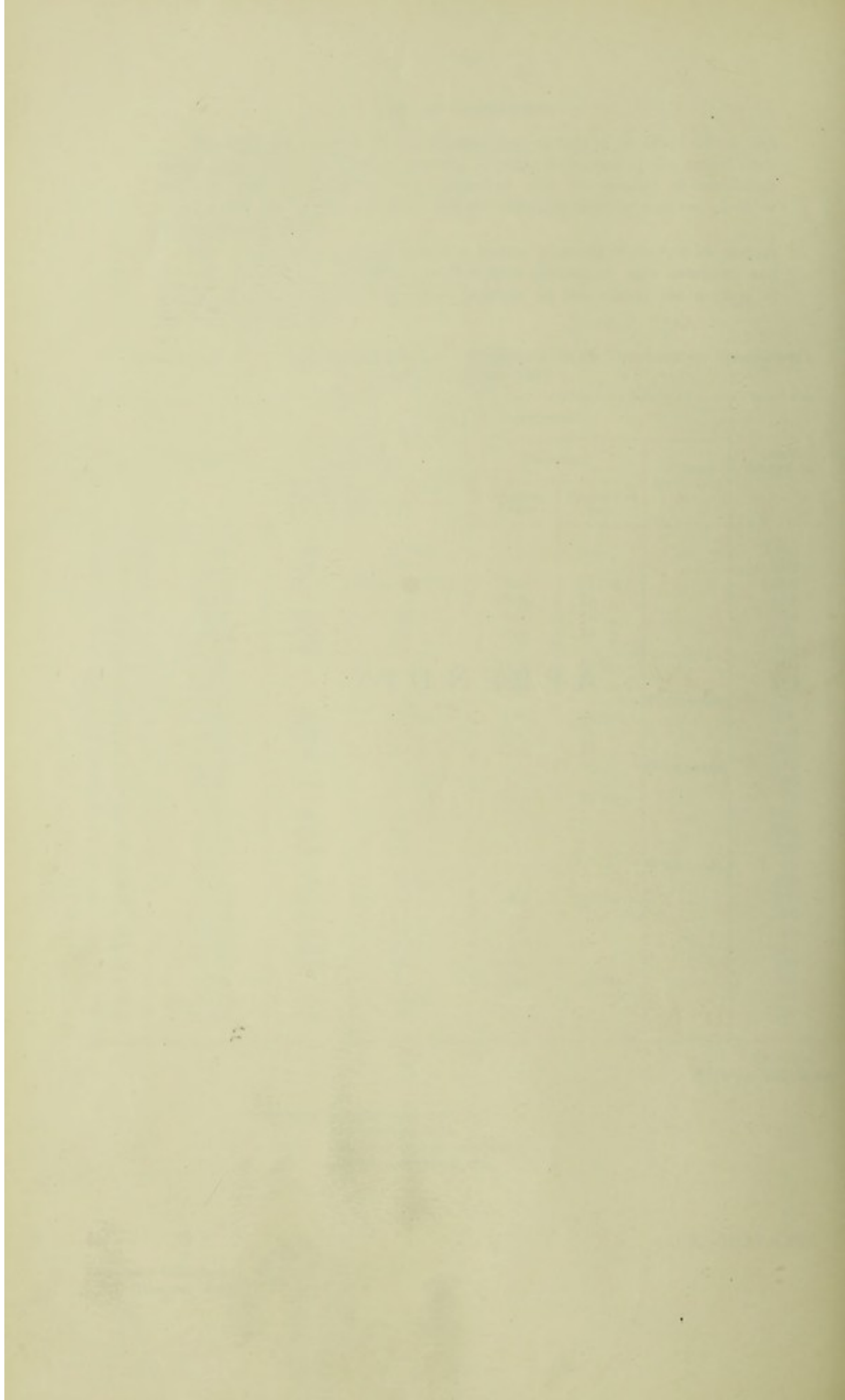


TABLE I.—GLASGOW.—POPULATION; BIRTHS and DEATHS; BIRTH-RATES and DEATH-RATES per 1,000, also DEATHS under 1 YEAR and DEATH-RATES under 1 YEAR per 1,000 BORN, from 1855 to 1904.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year.	
						Number.	Rate per 1,000 born.
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

* Extended City.

The figures in this Table are taken from the Registrar-General's Reports.

TABLE II.—GLASGOW.—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 for the YEAR 1904.

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, ...	50,655	508	51,163	2,058	40.6	111	5.4	1,018	20.1	306	181	42	19	28	284	158
2. Calton, ...	37,966	1,967	39,933	1,239	32.6	109	8.8	897	23.6	243	155	43	16	14	268	158
3. Mile-end, ...	43,180	340	43,520	1,742	40.3	103	5.9	947	21.9	299	188	69	24	19	224	124
4. Whitevale, ...	33,087	936	34,023	1,118	33.8	69	6.2	673	20.3	182	113	37	13	11	190	127
5. Dennistoun, ...	34,247	1,584	35,831	1,020	29.8	39	3.8	463	13.5	106	59	19	15	12	136	116
6. Springburn, ...	42,287	1,848	44,135	1,762	41.7	83	4.7	800	18.9	260	191	52	19	24	167	87
7. Cowfairs, ...	30,337	...	30,337	1,123	37.0	52	4.6	509	16.8	137	103	34	13	13	131	78
8. Townhead, ...	39,354	949	40,303	1,257	31.9	94	7.5	731	18.6	158	140	39	14	19	222	139
9. Blackfriars, ...	22,498	880	23,378	733	32.6	53	7.2	493	21.9	114	80	21	13	16	165	84
10. Exchange, ...	2,238	730	2,968	45	20.1	9	20.0	39	17.4	4	4	4	1	2	15	8
11. Blythwood, ...	3,485	324	3,809	40	11.5	6	15.0	58	16.6	15	3	1	1	1	16	21
12. Broomielaw, ...	8,091	1,603	9,694	246	30.4	31	12.6	166	20.5	40	34	6	5	5	42	31
13. Anderston, ...	29,142	1,493	30,635	975	33.5	47	4.8	565	19.4	155	101	21	10	26	143	109
14. Sandyford, ...	25,944	113	26,057	580	22.4	37	6.4	436	16.8	79	71	21	9	9	126	121
15. Park, ...	25,222	813	26,035	298	11.8	23	7.7	272	10.8	26	12	5	6	13	91	119
16. Cowcaddens, ...	38,191	1,150	39,341	1,323	34.6	150	11.3	945	24.7	234	169	49	19	30	283	161
17. Woodside, ...	45,060	...	45,060	1,471	32.6	86	5.8	717	15.9	185	125	27	12	15	219	134
18. Hutchesontown, ...	41,465	77	41,542	1,642	39.6	91	5.5	940	22.7	265	184	53	19	30	238	151
19. Gorbals, ...	36,563	782	37,345	1,076	29.4	79	7.3	660	18.1	162	84	37	20	19	196	142
20. Kingston, ...	34,957	651	35,608	1,034	29.6	55	5.3	624	17.9	144	80	36	24	18	186	136
21. Govanhill, ...	33,884	...	33,884	1,288	38.0	50	3.9	542	16.0	152	68	22	20	14	150	116
22. Langside, ...	32,660	459	33,119	652	20.0	20	3.1	314	9.6	57	25	14	3	7	107	101
23. Pollokshields, ...	17,732	...	17,732	190	10.7	4	2.1	155	8.7	6	8	3	5	6	51	76
24. Kelvinside, ...	19,888	775	20,663	240	12.1	5	2.1	141	7.1	17	7	3	1	5	37	71
25. Maryhill, ...	37,563	1,797	39,360	1,450	38.6	75	5.2	598	15.9	177	108	33	18	23	151	88
— Institutions and Harbour, ...	...	...	...	111	...	79	...	1,091	...	52	45	29	21	22	513	409
CITY, ...	765,696	19,769	785,465	24,713	31.5	1,560	6.3	14,794	18.8	3,575	2,338	720	340	401	4,352	3,068

TABLE III.—GLASGOW.—DEATHS at all AGES from DIFFERENT DISEASES in each MUNICIPAL WARD during 1904.

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and M. Group.	Scarlet Fever.	FEBRILE.			Whooping-cough.	Diarrhoea.	Septic Diseases.	TUBERCULAR DISEASES.		Cancer, Malignant Diseases.	Diseases of Nervous System.	Diseases of Circulatory System.	Croup.	Diseases of Respiratory System.	Violence.	Premature Birth.	Uncertified.	All Other Causes.
					Typhus.	Enteric.	Undefined.				Pathologic.	Other than Pathologic.									
1. Dalmarnock, ...	1,018	17	6	3	...	3	...	44	86	8	76	70	24	95	81	10	238	20	34	2	192
2. Calton, ...	897	4	6	2	1	3	...	41	64	5	78	57	31	70	59	2	215	29	23	8	186
3. Mile-end, ...	947	8	3	6	1	4	...	44	61	8	74	80	20	87	55	5	187	18	33	3	231
4. Whitevale, ...	673	4	2	2	...	4	...	27	46	6	42	49	25	54	59	5	150	12	24	...	150
5. Dennistoun, ...	463	...	3	3	...	7	...	25	19	7	32	37	28	49	35	2	68	11	22	...	112
6. Springburn, ...	800	3	6	5	...	5	...	47	29	4	76	57	14	47	37	3	169	28	32	...	182
7. Cowslair, ...	509	2	4	5	1	2	...	20	27	4	31	37	11	45	43	1	110	12	27	1	102
8. Townhead, ...	731	2	3	2	...	3	...	18	32	7	66	62	26	67	60	5	167	25	24	8	138
9. Blackfriars, ...	493	3	...	3	1	3	...	19	28	3	53	18	20	28	48	...	134	14	15	7	92
10. Exchange, ...	39	...	...	...	...	...	...	...	...	...	3	3	3	1	7	...	6	1	...	...	14
11. Blythwood, ...	58	...	...	...	...	...	...	2	3	1	6	2	2	8	7	...	10	3	5	1	8
12. Broomielaw, ...	166	1	1	...	...	...	...	8	11	2	11	5	5	10	18	1	35	7	2	2	43
13. Anderston, ...	565	3	7	5	...	5	...	27	43	3	47	40	23	42	57	...	101	10	18	...	121
14. Sandyford, ...	436	3	4	1	...	2	...	20	18	...	29	23	17	50	43	...	93	14	13	...	93
15. Park, ...	272	...	...	2	...	2	...	3	6	2	14	9	28	31	43	...	45	5	5	...	73
16. Cowcaddens, ...	945	2	9	2	...	6	...	34	46	4	64	60	31	74	71	...	245	31	22	1	214
17. Woodside, ...	717	...	7	6	...	9	...	27	26	11	56	54	23	62	48	1	147	16	28	...	173
18. Hutchesontown, ...	940	4	5	2	...	10	...	74	35	5	79	64	30	81	62	6	238	26	39	1	158
19. Gorbals, ...	660	3	4	6	1	2	...	23	18	6	57	33	27	63	57	4	166	21	22	...	141
20. Kingston, ...	624	2	4	4	...	3	...	29	25	10	59	53	26	54	57	4	124	17	12	3	128
21. Govanhill, ...	542	2	2	4	...	1	1	23	24	5	49	31	29	49	48	3	110	13	19	...	119
22. Langside, ...	314	...	6	2	...	...	...	1	9	3	20	18	25	43	30	3	45	1	10	...	93
23. Pollokshields, ...	155	...	1	...	...	...	...	...	4	1	8	7	10	22	25	2	12	3	1	...	60
24. Kelvinside, ...	141	...	1	2	...	1	...	3	4	2	2	...	15	18	21	1	23	3	2	1	40
25. Maryhill, ...	598	...	7	1	...	6	...	10	33	3	42	43	17	36	58	1	153	21	36	...	114
— Institutions, ...	1,091	4	...	1	...	3	...	5	8	5	217	38	32	119	125	4	179	31	10	6	289
CITY, ...	14,794	67	91	69	5	84	1	574	705	115	1,291	950	542	1,305	1,254	63	3,170	392	478	44	3,266

TABLE IV.—GLASGOW.—DEATH-RATES PER MILLION FROM DIFFERENT DISEASES IN EACH MUNICIPAL WARD IN 1904.

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and Membranous.	Scarlet Fever.	FEVER.			Measles.	Whooping-cough.	Dysentery.	TUBERCULAR DISEASES.		Cancer, Malignant Diseases.	Diseases of Nervous System.	Diseases of Circulatory System.	Croup.	Diseases of Respiratory System.	Violence.	Feternitate Birth.	Uncertified.	All Other Causes.
					Typhus.	Euteric.	Undeclared.				Phthisis.	Other than Phthisis.									
1. Dalmarock,	20,096	336	118	59	...	59	...	178	869	1,698	1,500	1,382	474	1,875	1,599	197	4,698	395	671	39	3,790
2. Calton, ...	23,626	105	158	53	26	79	...	342	1,080	1,686	2,054	1,501	817	1,844	1,554	53	5,663	764	606	211	4,899
3. Mile-end,	21,931	185	69	139	23	93	...	440	1,019	1,413	1,714	1,853	463	2,015	1,274	116	4,331	417	764	69	5,349
4. Whitevale,	20,340	121	60	60	...	121	...	363	816	1,390	1,269	1,481	756	1,632	1,783	151	4,533	363	725	...	4,533
5. Dennistoun,	13,519	...	88	88	...	204	...	88	730	555	934	1,080	818	1,431	1,022	58	1,986	321	642	...	3,270
6. Springburn,	18,918	71	142	118	...	118	...	1,324	1,111	686	1,797	1,348	331	1,111	875	71	3,996	662	757	...	4,304
7. Cowfairs,	16,778	66	132	165	33	66	...	791	659	890	1,022	1,220	363	1,483	1,417	33	3,626	396	890	33	3,362
8. Townhead,	18,575	51	76	51	...	76	...	407	457	813	1,677	1,575	661	1,702	1,525	127	4,243	635	610	203	3,507
9. Blackfriars,	21,913	133	...	133	44	133	...	178	845	1,245	2,356	800	889	1,245	2,134	...	5,956	622	657	311	4,089
10. Exchange,	17,426	...	...	...	...	...	...	447	...	...	1,340	1,340	1,340	447	3,128	...	2,681	447	...	...	6,256
11. Blythwood,	16,643	...	...	...	...	...	...	...	574	861	1,722	574	574	2,295	2,009	...	2,869	861	1,435	287	2,295
12. Broomielaw,	20,517	124	124	...	...	...	...	494	989	1,360	1,360	618	618	1,236	2,225	124	4,326	865	247	247	5,315
13. Anderston,	19,387	103	240	172	...	172	...	446	926	1,476	1,613	1,373	789	1,441	1,956	...	3,466	343	618	...	4,152
14. Sandyford,	16,805	116	154	39	...	77	...	501	771	694	...	1,118	887	655	1,927	...	3,585	540	501	...	3,585
15. Park, ...	10,784	...	...	79	...	79	...	159	119	238	555	357	1,110	1,229	1,705	...	1,784	198	198	...	2,894
16. Cowcaddens,	24,744	52	236	52	...	157	...	733	890	1,204	1,676	1,571	812	1,938	1,859	...	6,415	812	576	26	5,603
17. Woodside,	15,912	...	155	133	...	200	...	399	599	577	1,243	1,198	510	1,376	1,065	22	3,262	355	621	...	3,839
18. Hutchesontown,	22,669	96	121	48	...	241	...	555	1,785	844	1,905	1,513	723	1,953	1,495	145	5,740	627	941	24	3,810
19. Gorbals, ...	18,051	82	109	164	27	55	...	164	629	492	1,559	903	738	1,723	1,559	109	4,540	574	602	...	3,856
20. Kingston,	17,850	57	114	114	...	86	...	315	830	715	1,688	1,516	744	1,545	1,631	114	3,547	486	343	86	3,662
21. Govanhill,	15,996	59	59	118	...	30	30	295	679	708	1,445	915	856	1,446	1,417	89	3,246	384	561	...	3,512
22. Langside,	9,614	...	184	61	...	...	...	184	31	276	612	551	765	1,317	919	92	1,378	31	306	...	2,847
23. Pollokshields,	8,741	...	56	...	...	...	...	...	...	226	451	335	564	1,241	1,410	113	677	169	56	...	3,384
24. Kelvinside,	7,090	...	50	101	...	50	...	101	151	201	101	...	754	905	1,056	50	1,156	151	101	50	2,011
25. Maryhill,	15,919	...	186	27	...	160	...	373	266	878	1,118	1,145	453	958	1,544	27	4,073	559	958	...	3,035
— Institutions,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CITY, ...	18,835	85	116	88	6	107	1	418	731	898	1,644	1,209	690	1,661	1,597	80	4,036	499	609	56	4,158

TABLE V.—GLASGOW.—CASES OF INFECTIOUS DISEASE REGISTERED IN EACH MUNICIPAL WARD, SHOWING THOSE TREATED IN HOSPITAL, FOR THE YEAR 1904.

MUNICIPAL WARDS.	INFECTIOUS DISEASE (NOTIFICATION) ACT, 1892.										OTHER INFECTIOUS DISEASES.										ALL CAUSES.		TOTAL VISITATIONS.							
	FEVERS.										Measles.	Whooping-cough.		Chickenpox.		Phthisis.		Anthrax.												
	Typhus.		Enteric.		Continued and Undefined.		Puerperal.		Smallpox.												Scarlat Fever.			Diphtheria and Membranous Group.		Erysipelas.				
	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,	35	...	2	...	9	1	162	2	49	3	34	6	23	35	40	456	41	88	12	19	3	40	1	...	411	650	11,612	17
2. Calton, ...	6	...	37	...	1	...	1	...	47	...	55	9	23	6	8	42	40	224	61	66	5	4	4	37	...	288	388	7,206	23	
3. Mile-end, ...	2	...	30	...	1	...	4	1	119	2	62	3	25	3	26	34	23	341	55	68	9	5	8	49	...	364	506	9,194	70	
4. Whitevale, ...	...	...	27	1	...	...	4	2	36	...	42	7	9	3	12	35	22	165	31	32	3	5	1	29	...	187	279	5,125	30
5. Dennistoun, ...	1	...	19	5	...	...	1	1	12	...	45	36	12	10	7	23	9	120	21	40	...	7	2	27	...	129	269	8,041	20
6. Springburn, ...	...	...	19	3	...	...	4	...	33	...	58	6	19	4	10	24	38	1,235	29	87	4	5	4	44	...	218	1,408	11,925	228
7. Cowhairs, ...	6	...	17	2	...	...	1	1	7	...	38	4	26	5	7	30	41	785	9	57	...	2	2	15	...	154	901	7,639	266
8. Townhead, ...	...	...	20	1	...	...	3	...	21	...	89	4	20	7	11	40	52	379	26	66	15	37	4	49	...	261	584	6,418	37
9. Blackfriars, ...	1	...	16	...	2	...	4	1	34	...	43	2	16	1	18	24	20	72	33	51	15	13	1	24	...	203	188	5,978	3	
10. Exchange, ...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	1	4	2	...	2	...	...	...	...	8	4	179	...
11. Blythwood, ...	...	...	...	...	...	...	...	...	3	...	3	...	2	2	...	3	...	3	4	4	...	...	...	2	...	13	14	121	...
12. Broomielaw, ...	...	...	14	...	1	...	1	...	24	...	9	...	1	1	3	9	...	83	8	3	3	7	...	8	...	73	111	2,887	12
13. Anderston, ...	4	...	19	3	...	...	1	...	12	...	88	7	20	9	5	34	25	452	15	33	2	16	5	32	...	196	586	4,234	38
14. Sandyford, ...	...	...	5	5	...	...	1	...	18	...	36	11	15	5	6	25	14	314	6	43	2	6	2	20	...	105	429	5,298	18
15. Park, ...	...	...	8	4	...	...	1	1	3	...	43	49	9	7	1	25	14	99	2	5	2	3	...	10	...	83	203	1,552	6
16. Cowcaddens, ...	...	...	42	4	1	...	7	2	26	...	44	...	24	11	9	28	64	294	47	70	4	7	5	45	...	273	461	10,193	31
17. Woodside, ...	...	...	60	2	...	...	...	2	17	1	90	5	34	10	16	39	29	319	33	92	2	13	3	35	...	284	518	7,327	23
18. Hutchesontown, ...	...	...	64	1	1	...	6	...	44	1	80	4	19	4	19	45	69	438	69	193	2	13	2	58	...	375	757	9,535	117
19. Gorbals, ...	2	...	29	2	...	...	2	4	36	...	46	1	18	8	8	45	13	137	25	66	1	14	3	48	...	183	325	7,853	27
20. Kingston, ...	...	...	22	1	...	...	4	1	37	...	45	5	14	3	5	44	17	171	32	46	4	2	3	49	...	183	322	7,003	28
21. Govanhill, ...	1	...	9	1	...	...	6	1	30	...	97	11	25	7	7	33	19	191	3	74	...	4	...	37	...	197	359	6,282	27
22. Langside, ...	...	...	9	1	...	...	...	2	6	...	98	37	26	40	2	23	10	282	...	17	1	1	1	21	...	153	424	4,937	11
23. Pollokshields, ...	...	...	1	2	...	...	...	...	2	...	24	26	4	8	1	15	18	81	2	1	...	1	...	6	...	52	140	4,324	16
24. Kelvinside, ...	...	...	...	...	...	...	...	...	...	...	25	23	9	21	1	11	20	29	...	10	...	3	...	2	...	57	106	1,716	15
25. Maryhill, ...	...	...	32	8	1	...	3	5	3	...	55	12	34	14	7	29	28	896	18	166	3	37	5	36	...	189	1,203	9,811	159
— Institutions, ...	4	...	35	...	1	...	1	...	128	1	43	...	14	...	60	4	130	7	...	...	53	...	2	...	...	516	12	534	...
— Harbour,* ...	...	...	5	...	17	...	...	...	1	...	...	...	...	...	1	...	6	...	...	...	...	...	...	1	...	30	1	341	...
CITY, ...	27	...	575	53	30	...	64	25	802	8	1,308	265	452	195	274	699	771	7,577	617	1,378	144	224	60	724	1	5,185	11,148	157,285	1,222	

* Of these, 19 were removed from ships in harbour within the municipal area and 12 from harbours beyond.

TABLE VII.—GLASGOW, 1904.—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.		Under 1 year.		1 and under 5 years.		Under 1 year.		1 and under 5 years.	
	Under 5 yrs. & up.		Under 5 yrs. & up.		Under 5 yrs. & up.		Under 5 yrs. & up.		Number.		Number.		Number.		Number.		Number.	
	Under 5 yrs. & up.	Under 5 yrs. & up.	Under 5 yrs. & up.	Under 5 yrs. & up.	Under 5 yrs. & up.	Under 5 yrs. & up.	Under 5 yrs. & up.	Under 5 yrs. & up.	Certified.	Certified.	Certified.	Certified.	Certified.	Certified.	Certified.	Certified.	Certified.	Certified.
1. Dalmarnock, ...	480	528	...	1	5	2	2	...	306	299	181	181	172	172	32	31	9	9
2. Calton, ...	378	484	13	11	6	4	1	...	243	226	155	152	136	136	33	28	17	16
3. Mile-end, ...	469	456	7	2	11	2	...	...	299	282	188	187	177	177	32	27	10	10
4. Whitevale, ...	281	376	3	2	8	...	3	...	182	171	113	110	107	107	23	22	3	3
5. Dennistoun, ...	163	298	1	...	1	...	...	...	106	105	59	58	56	55	7	7	3	3
6. Springburn, ...	440	349	1	...	6	...	4	...	260	256	191	184	181	175	23	23	10	9
7. Cowlands, ...	235	266	1	1	2	...	2	...	137	133	103	102	101	100	14	13	2	2
8. Townhead, ...	291	421	3	12	1	...	3	...	158	153	140	138	134	132	23	21	6	6
9. Blackfriars, ...	186	290	4	7	2	2	2	...	114	107	80	79	75	74	16	14	6	5
10. Exchange, ...	8	31	...	...	...	...	...	...	4	4	4	4	4	4	...	...	...	...
11. Blythwood, ...	17	39	...	...	1	1	...	...	15	14	3	3	3	3	1	1	...	...
12. Broomielaw, ...	68	88	1	2	4	2	1	...	40	35	34	33	29	28	7	6	5	5
13. Anderston, ...	245	307	...	1	7	1	4	...	155	146	101	99	95	94	11	11	6	5
14. Sandyford, ...	145	280	...	4	2	2	3	...	79	76	71	69	66	66	10	10	3	3
15. Park, ...	36	234	...	...	1	...	1	...	26	24	12	12	12	12	5	4	...	...
16. Cowcaddens, ...	371	522	1	7	19	11	12	2	234	206	169	165	155	151	31	27	14	14
17. Woodside, ...	294	401	...	2	13	4	3	...	185	170	125	124	120	120	12	12	4	4
18. Hutchesontown, ...	439	484	1	4	5	3	4	...	265	256	184	183	174	173	27	25	10	10
19. Gorbals, ...	234	412	5	1	3	...	4	1	162	153	84	81	77	74	18	16	7	7
20. Kingston, ...	213	395	1	3	7	1	3	1	144	134	80	79	78	77	12	11	2	2
21. Govanhill, ...	218	320	1	2	1	...	...	...	152	150	68	68	68	68	10	9	...	...
22. Langside, ...	82	232	...	...	...	...	...	...	57	57	25	25	25	25	2	2	...	...
23. Pollokshields, ...	14	140	...	1	...	...	...	...	6	6	8	8	8	8	...	...	...	...
24. Kelvinside, ...	23	116	...	1	1	...	...	...	17	16	7	7	7	7	4	3	...	...
25. Maryhill, ...	277	301	6	11	2	1	...	...	177	169	108	108	101	101	26	24	7	7
— Institutions and Harbour,	96	970	1	17	...	7	...	...	52	52	45	44	37	37	23	23	8	7
CITY, ...	5,703	8,740	50	92	108	43	52	6	3,575	3,400	2,338	2,303	2,206	2,176	402	370	132	127

TABLE VIII.—GLASGOW, 1904.—DEATHS in FRIENDLY SOCIETIES in each MUNICIPAL WARD.

MUNICIPAL WARDS.	Under 1 Year.		1 and under 5 Years.		5 Years and over.	All Ages.
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.		
1. Dalmarnock,	129	5	144	2	454	734
2. Calton,	105	5	103	5	384	602
3. Mile-end,	133	5	146	9	398	691
4. Whitevale,	85	2	88	2	307	484
5. Dennistoun,	36	3	38	2	218	297
6. Springburn,	108	4	144	6	302	564
7. Cowlands,	57	1	82	1	218	359
8. Townhead,	69	3	110	3	349	534
9. Blackfriars,	40	1	50	1	217	309
10. Exchange,	1	...	3	...	23	27
11. Blythswood,	2	...	2	...	11	15
12. Broomielaw,	5	...	22	1	61	89
13. Anderston,	63	2	74	1	232	372
14. Sandyford,	25	...	51	1	185	262
15. Park,	7	...	9	...	106	122
16. Cowcaddens,	92	4	119	6	319	540
17. Woodside,	69	...	101	4	271	445
18. Hutchesontown,	116	3	138	5	394	656
19. Gorbals,	62	1	49	3	286	401
20. Kingston,	63	...	56	...	298	417
21. Govanhill,	53	1	52	...	231	337
22. Langside,	9	...	8	...	47	64
23. Pollokshields,	2	...	3	...	43	48
24. Kelvinside,	1	...	1	...	5	7
25. Maryhill,	54	3	64	...	218	339
— Institutions and Harbour,	3	1	5	1	355	365
CITY,	1,389	44	1,662	53	5,932	9,080

TABLE IX.—SHOWING 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	644	1.1
1900	200	390	150	440	1,180	755	1.6
1901	200	390	235	440	1,265	798	1.6

In addition to the above, 5 temporary pavilions, with accommodation for 75 beds, erected at Belvidere during the smallpox epidemic of 1900-01, are available.

Parliamentary Road Hospital was closed in November, 1901, and has since only been in occasional and part use for Reception-house purposes. In September, 1904, two pavilions, each containing two wards of 16 beds (or 64 beds in all), were removed from the north-east corner of the site in order to allow the erection of the new Baird Street Reception-house.

TABLE X.—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

N.B.—The above calculations of cost do not include interest on capital expended in erecting Hospitals.

Year.	SCARLET FEVER.			ENTERIC FEVER.			WHOPPING-COUGH.			TYPHUS.			MEASLES.			OTHER INFECTIOUS DISEASES.*			SMALLPOX.			ALL OTHER DISEASES.†		
	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	£ s. d.	Average Resi- dence (Days).	Average Cost per Patient.	
1883-84	51.7	6 11 10.0	44.4	58.9	7 10 2.3	35.8	35.8	4 11 3.5	34.8	4 8 8.9	...	...	27.5	£ s. d. 3 10 1.5	26.4	£ s. d. 3 7 3.8						
1884-85	50.2	7 6 5.0	45.1	44.4	6 9 6.0	35.2	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	36.2	7 3 3.5	31.5	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	44.3	6 0 8.6	31.3	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	42.1	6 4 10.7	33.2	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	50.1	6 19 10.3	34.2	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	53.0	7 3 11.8	34.9	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	40.3	5 1 3.0	32.4	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	43.8	6 10 10.0	31.3	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	42.6	6 1 1.1	32.8	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	51.0	7 15 0.0	34.8	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	61.0	8 16 8.4	34.8	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	54.1	7 18 4.5	33.1	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	53.5	7 19 11.0	28.8	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	58.1	8 6 1.2	43.1	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	54.9	7 1 9.3	35.7	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	54.4	6 15 8.7	33.4	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	51.1	9 7 5.2	33.2	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	58.9	13 8 8.2	30.4	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	60.8	14 19 4.7	44.0	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	49.2	10 8 11.7	33.9	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								

* Includes Erysipelas, Diphtheria, Croup, and Puero-peral 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.

From P. 97 - here should be in 1904.

TABLE XII.

City of Glasgow Fever and Smallpox Hospitals.

RETURN BY THE MEDICAL OFFICER OF HEALTH Shewing Number, Average Residence, and Cost of Treatment of Patients, 1904-1905.

ORDINARY EXPENDITURE, as per Treasurer's Statement * :—

Fever Hospital, Belvidere,	£23,846 4 9
Smallpox Hospital, Belvidere,	2,875 16 2
Fever Hospital, Ruchill,	25,836 10 5
	<u>£52,558 11 4</u>

* 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, ...	262
Average daily number of Patients in Smallpox Hospital, Belvidere, ...	41
Average daily number of Patients in Fever Hospital, Ruchill, ...	273
Average daily number of Patients in Hospitals,	<u>576</u>

	FEVER HOSPITAL.	BELVIDERE SMALLPOX HOSPITAL.	RUCHILL HOSPITAL.	TOTAL.
Patients remaining at 31st May, 1904,	201	117	333	651
Patients admitted during 1904-1905,	2,263	352	2,218	4,833
Total under Treatment, 1904-1905,				<u>5,484</u>
Average Residence,			36.3 days.	

Average Daily Expenditure,	£143 19 11.06
Average Daily Cost per Patient,	0 5 0.00
Average Cost of Treatment per Patient,	9 1 5.00
Average Cost of Bed per Year,	91 5 0.00

STATEMENT SHEWING PATIENTS CLASSIFIED AS TO DISEASE, AVERAGE RESIDENCE IN EACH CASE SO FAR AS DISMISSED UP TO 1st JULY, 1905, AND AVERAGE COST AT THE DAILY RATE GIVEN ABOVE—

DISEASE.	No. ADMITTED.	AVERAGE RESIDENCE.	AVERAGE COST.
Scarlet Fever,	1,036	54.3 days.	£13 11 5.00
Enteric Fever,	470	57.3 "	14 6 5.00
Whooping-cough,	971	43.4 "	10 17 0.00
Typhus Fever,	36	32.0 "	8 0 0.00
Measles,	923	27.0 "	6 15 0.00
Other Infectious Diseases,*	900	34.5 "	8 12 5.00
Smallpox,	156	27.3 "	6 16 5.00
All other Diseases,†	341	29.2 "	7 6 0.00
All Cases,	<u>4,833</u>		

* Includes Erysipelas, Diphtheria, Chickenpox, and Puerperal Fever.

† 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.