Report of the City of Glasgow fever and smallpox hospitals, Belvidere, for the year ending 31st May, 1901 / by John Brownlee ; also, Report, with tables / by Dr. R.S. Thomson, visiting physician, City of Glasgow smallpox hospital.

REPORT

OF THE

CITY OF GLASGOW

FEVER AND SMALLPOX

HOSPITALS, BELVIDERE,

FOR THE

Year ending 31st May, 1901,

BY

JOHN BROWNLEE, M.A., M.D.(Glasg.), D.P.H.(Camb.),
PHYSICIAN-SUPERINTENDENT.

ALSO,

REPORT, WITH TABLES, BY DR. R. S. THOMSON, VISITING PHYSICIAN, CITY OF GLASGOW SMALLPOX HOSPITAL.

Submitted to the Committee on Health, 26th March, 1902, and ordered to be printed.

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INDEX.

PART I.

PART II.—STATISTICS.

APPENDIX.

TO THE CHAIRMAN AND MEMBERS
OF THE HEALTH COMMITTEE.

GENTLEMEN,

I have the honour to submit the Report of the City of Glasgow Fever and Smallpox Hospitals, Belvidere, for the year ending 31st May, 1901. The year has been one of exceptional stress, and, though the number of patients admitted was 4,435, as against 4,932, yet the conditions were very different. In the early part of the year a considerable number of patients suffering from Plague were admitted to the Hospital, and, in addition, a number for observation under suspicion of that disease. The disappearance of this disease coincided with a rise in the number of cases of Smallpox in the City, and during the Hospital year there were admitted 1,730 cases. This is the highest number of cases of Smallpox ever treated in one year in Hospital in Glasgow, the next highest occurring in the year 1873-74, when 1,475 cases were treated. All this threw a strain on the resources of the Hospital such as has never before been experienced. During the year 4,436 cases were admitted, and of these 538 died, giving a mortality of 11·9 per cent., considerably higher than it has been for many years, but due solely to the large number of Smallpox patients, among whom the mortality was high. The relative proportions of persons of different ages was also completely changed from previous years, this being due again chiefly to the Smallpox, more than half the patients being over 25 years of age. The proportion of the cases of Enteric and Typhus to the total number in the Fever Hospital was also somewhat higher than usual, and, as these are diseases which attack early adult and adult life chiefly, this has also helped to disturb the common proportion.

The daily average number of patients has been 510, and the average stay 41·8 days, or about 3 days less than last year, a figure again due to the presence of Smallpox.

Enteric Fever.

The Hospital records during the last year present little worthy of note as regards the ordinary run of cases. The type of the fever, to judge by the results, was of much the same severity which has been the average during the last ten years. Severe cases were fairly numerous. Perforation* occurred in eight cases, in all of which operation was performed within as short periods of the occurrence as possible in the circumstances. Of these cases there was one recovery. The great obstacle to success in this operation is the difficulty of early diagnosis. When perforation of the stomach or the intestines occurs in persons who are otherwise in possession of their faculties, the onset is of so severe and striking a character as to compel the attention of even the most inobservant, but in Enteric the exact opposite is often the case. The patient has been weakened both physically and mentally by a fever which has lasted for at least a fortnight, and oftener much longer. His body no longer responds to the accident which has befallen him, and the damage may easily become so extensive as to be beyond remedy before attention has been drawn to the matter. The early diagnosis must depend on the accuracy of the nurse's observation, and this accuracy can only be gained by actual experience of previous cases; as the opportunity of gaining experience is very limited, it will be seen that the art of the surgeon is severely handicapped. However, I am hopeful that in time better results will be obtained. Several other of the cases operated upon showed very marked improvement after the operation, and in one other at least a favourable result might have been attained had not a second perforation determined a fatal issue.

In addition to this case of successful operation for perforation of the intestine, there was also a case of abscess of the mesenteric glands bursting into the peritoneum, which was successfully operated upon. Thus, out of nine cases in which a fatal result was all that could be anticipated, two completely recovered owing to surgical intervention, giving a recovery rate of 22 per cent.

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* Of these an account will shortly be published.

Removal of Patients Suffering from Enteric Fever to Hospital.—In recent years it has been frequently asserted that patients suffering from Enteric Fever must suffer some injury from removal, especially if it be any great distance. The chief feature of the disease is ulceration of the bowels, and the chief accident likely to ensue upon this perforation and subsequent peritonitis. In addition, it has been alleged by some that removal during the latter half of the second week of the disease and later leads to the patient's great disadvantage. The latter of these opinions is not capable of being satisfactorily answered from the records of the Hospital, inasmuch as though the death-rate among the cases removed to Hospital in the third week exceeds that of those removed in the first and second, yet that result is just as likely to be due to the want of attention received during the earlier stage of the fever, when there is often a great lack of skill and knowledge of nursing. But the second and not less important point can, in a certain measure, be answered from the records of the Hospital. If removal from long distances be of danger to the patient, then the only logical procedure is the establishment of local small hospitals all over the city for the treatment of this disease. If, on the contrary, it does not matter to the patient, if he is to be removed at all, how far he is removed, then a large hospital is clearly indicated both on the grounds of economy and of efficiency.

NUMBER OF CASES OF ENTERIC FEVER FOR AGES 10 YEARS AND UPWARDS REMOVED TO BELVIDERE FEVER HOSPITAL, SINCE THE INTRODUCTION OF PNEUMATIC-TYRED AMBULANCES, FROM EACH MILE ZONE, AND THE CORRESPONDING NUMBER OF DEATHS, WITH THE MORTALITY PER CENT.

Under One Mile.		From One to Two Miles.		From Two to Three Miles.		From Three to Four Miles.		Four Miles and Upwards.	
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
494	107	921	187	751	160	441	93	26	4
21·7 per cent.		20·3 per cent.		21·3 per cent.		21·1 per cent.		15·4 per cent.	

All the persons of ages of 10 years old and upwards removed to the Hospital during the last five years (*i.e.*, since the introduction of rubber-tyred ambulances) have been classified according as they occurred within a radius of one mile of the Hospital, between that radius and one of two miles, between the latter and one of three miles, between those of three and four miles, and a last group containing those who were removed from places outwith the latter distance. The results may be seen in the annexed Table, and from this it is apparent that a person suffering from Enteric Fever may be removed under the present conditions, *i.e.*, in a rubber-tyred ambulance, more than the maximum distance required at present in Glasgow without any injury. It is, indeed, very surprising how uniform the percentage mortality works out in the different groups, which, considering the large numbers involved, practically proves that the result is the representation of a fact, and not an accident due to the chance distribution of a few cases.

Typhus Fever.

In this report I have taken advantage of the fact that a large number of Typhus patients were admitted to Hospital during the year to give a complete history of the fever as far as the Hospital records allow.

In the first place, Tables containing the complete statistics of all the cases treated in Kennedy Street Hospital and in Belvidere are given separately. Thereafter each quinquennial period is given separately for the whole period during which Belvidere Hospital has treated Typhus. For comparison certain other Tables are added.

The conclusions which may be drawn from these Tables are as follows:—It can be observed from the collected statistics that males and females are about equally affected. Out of 11,490 cases treated in Hospital the excess in the number of females is only 484, and this excess is to be partly accounted for inasmuch as 200 cases in all came in the course of a few years from a single female industrial school, reducing the excess by nearly one-half.

The greatest number of cases for both the Glasgo w series of statistics is seen to occur between the ages of 10-15, though the next age-period runs it very close. This conclusion applies to both sexes. It is to be noted that at the earlier age-periods there is a tendency for males to outnumber the females, but that for every age-period after 25-30 years the females are distinctly in excess, numbering 2,097 to 1,734. This can also be observed in the collected Tables given from Murchison. It is probably to be explained by the fact that women confine themselves much more to the house (*i.e.*, the infected centre) than men, and also that they are the nurses of the household. This excess is more marked at the ages of 30-40. No age is seen to be wholly immune, one male and female patient, respectively of ages 80 and 92 years, bringing the table to a close.

The age frequency of typhus may, however, be more accurately measured by a comparison with the actual numbers living at each age. Calculating the numbers of the typhus cases per annum from each thousand persons living at each age period, we obtain a figure which will give some idea of the relative age susceptibility. Taking the maximum—namely, that at 10-15, as 100, we find that 20 is the corresponding figure for 0-5, 65 for 5-10, 100 for 10-15, 82 for 15-20, 52 for 20-30, 47 for 30-40, 42 for 40-50, and 22 for 50-60, while 60 and upwards gives the low figure of 10, which shows that the susceptibility is greatest between 10 and 20 years of age, and thence decreases steadily till old age is reached. Under one year of age demands special notice: here the susceptibility may on the same scale be represented by the figure 1.

The mortality is characteristic. Below five years it is higher than for the next three lustra. The numbers at this period are not sufficiently great to allow sex comparison, but the difference of mortality at each single year of age is very great, so that, unless the age distribution be given in years, comparison between different series of statistics is impossible. As before noticed by Dr. J. B. Russell in his Kennedy Street Reports, nurslings and very young children,

though not readily susceptible to an attack of the disease, develop it in a severe type if once infected. The accompanying Table gives the collected statistics for all the children under five years which have been treated in Belvidere up till the end of May, 1901.

TABLE SHOWING THE NUMBER OF CASES OF TYPHUS FEVER TREATED IN THE CITY OF GLASGOW FEVER HOSPITAL, BELVIDERE, FOR EACH YEAR OF AGE UNDER 5 YEARS, WITH THE CORRESPONDING DEATH-RATES AND MORTALITY PERCENTAGE—

Ages.	Cases.	Deaths.	Per Cent.
0—1	37	5	13·5
1—2	41	3	7·4
2—3	51	4	8·0
3—4	82	2	2·4
4—5	102	2	1·9

It is seen that under one year the mortality has been 13 per cent., while at the ages of one and two years it has fallen to about 8 per cent., and at the next two age periods to between 1 and 2 per cent., a figure maintained through the lustrum of 5-10. It is notable, as before remarked, how few children under one year take typhus, and, while this might be explained on the ground that the attack was likely to escape notice, this does not apply to the marked difference seen between the numbers at from one to two years of age and those of three to five. In all children at these ages the attack is equally likely to escape notice, and yet a definite law of increase in numbers is to be noted. From nothing till about twelve years the increase at each period is continuous.

With the next two lustra we have a continued fall in the mortality, and it is to be noticed that here again the

Glasgow statistics are in accord with those given by Murchison, already referred to, and show that males from 5-15 have a better chance of surviving an attack of Typhus than females of the same ages, though the mortality among the latter is low. From this point there is a continual increase in the mortality in both sexes, but when these age periods are reached when drunkenness has had time to imprint its stigmata of arterial and cardiac degeneration, the male sex makes in general a much more feeble stand against the onslaught of the disease.

MORTALITIES AT DIFFERENT AGE GROUPS FOR EACH FIVE-YEARLY PERIOD, 1870-1901, OF CASES OF TYPHUS FEVER TREATED IN BELVIDERE FEVER HOSPITAL—

Ages.	1870-1876.	1876-1881.	1881-1886.	1886-1891.	1891-1896.	1896-1901.
	1st	2nd.	3rd.	4th.	5th.	6th.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
5—15	1·8	2·7	2·0	2·2	4·0	1·7
15—20	6·5	13·0	4·6	7·7	7·7	11·5
20—25	11·3	12·8	7·1	14·1	11·1	25·0
25—35	16·8	19·5	16·6	20·0	24·6	31·2
35—45	30·1	27·2	22·6	29·2	45·2	30·1

It is a subject of dispute whether Typhus is more fatal in epidemic or non-epidemic years. Consideration of the annual crude death-rates of of Belvidere does not show any correspondence at all between these two factors. In some non-epidemic years the mortality is higher than the average, and in some lower, not even a majority declaring in either direction. But that Typhus really varies greatly in severity in different times may be seen in the above Table, in which the percentage mortalities at different ages are given for the principal age periods side by side for each of the six lustra comprehended in the Belvidere Hospital

statistics. Thus it is seen that, early in the seventies, the mortalities were about the mean; that the later years of the seventies (which corresponded with great trade depression) are marked by a somewhat higher death-rate on the whole. The first quinquennial period of the eighties is that of the lowest general mortality. In the second half of this decade it again had become much more severe, and during the last ten years we have seen on the whole a severer type of the disease than has at any previous time been noted in the City of Glasgow Hospitals. How this occurs is not very clear. Several factors probably take their share in its causation. Firstly, there is now only a small proportion of medical practitioners in Glasgow who have any experience in the diagnosis of Typhus, so that it is likely that a fair proportion of the milder cases are never recognised. Secondly, with the better housing of the working classes, and with the decrease in the slum area of Glasgow, it is possible that the sufferers belong to a much larger extent to that portion of the population who are the wastrels of the community, and who have not the stamina to withstand an attack of an acute specific fever.

It is noticeable that with the disappearance of Typhus the type is changing. The rash is very frequently not of the mulberry character noticed as the most common form in the classical descriptions. In many cases only a small part of it becomes petechial, and the rash, save in its distribution and greater irregularity of form, has little to distinguish it from the rose spots of Enteric Fever.

Typhus Patients who have been treated in the City of Glasgow Fever Hospital, Parliamentary Road, from its opening 26th April, 1865, till 31st April, 1872.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.
0- 5	130	5	3·8	145	16	11·0	275	21	7·6
5-10	424	4	0·9	407	7	1·7	831	11	1·3
10-15	612	5	0·8	560	16	2·9	1,172	21	1·8
15-20	477	34	7·1	523	34	6·5	1,000	68	6·8
20-25	350	42	12·0	328	31	9·4	678	73	10·8
25-30	198	31	15·6	272	40	14·7	470	71	15·1
30-35	145	33	22·8	226	43	19·0	371	76	20·5
35-40	127	36	28·3	221	42	19·0	348	78	22·7
40-45	120	50	41·7	180	55	30·6	300	105	35·0
45-50	89	36	40·4	105	40	38·1	194	76	39·2
50-55	67	30	44·8	48	21	43·7	115	51	44·3
55-60	38	23	60·5	34	16	47·1	72	39	54·2
60-65	14	9	64·3	21	9	43·0	35	18	51·4
65-70	8	7	87·5	8	6	75·0	16	13	81·3
70-75	3	2	66·6	1	1	100·0	4	3	75·0
75-80	...	...	...	...	...	...	...	...	...
Total,	2,802	347	12·4	3,079	377	12·2	5,881	724	12·3

Typhus Patients who have been treated in the City of Glasgow Fever Hospital, Belvidere, from its opening in 1870 till 31st May, 1901.

Ages.	Total Cases 25th December, 1870—31st May, 1901.								
	Males.			Males.			Total.		
	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.
0- 5	161	10	6·2	152	6	3·9	313	16	5·1
5-10	379	6	1·6	367	14	3·8	746	20	2·7
10-15	449	8	1·8	558	11	1·9	1,007	19	1·9
15-20	395	22	5·6	506	51	10·1	901	73	8·1
20-25	391	54	13·8	343	32	9·3	734	86	11·7
25-30	253	45	17·8	233	36	15·4	486	81	16·6
30-35	217	53	24·4	204	37	18·1	421	90	21·3
35-40	132	50	37·8	166	41	24·7	298	91	30·5
40-45	133	51	38·3	164	33	20·1	297	84	28·3
45-50	81	30	37·0	89	34	38·2	170	64	37·6
50-55	61	30	49·2	59	21	35·6	120	51	42·5
55-60	18	10	55·5	31	11	35·5	49	21	42·8
60-65	23	18	78·2	26	13	50·0	49	31	63·3
65-70	5	2	40·0	6	3	50·0	11	5	45·4
70-75	2	2	100·0	3	1	33·3	5	3	60·0
75-80	...	...	...	...	...	...	...	...	...
80-85	1	...	...	...	...	...	1	...	...
85-90	...	...	...	...	...	...	...	...	...
90-95	...	...	...	1	1	100·0	1	1	100·0
Total,	2,701	390	14·4	2,908	345	11·8	5,609	736	13·1

The discrepancy between the total numbers in this table and those already published totals is due to the fact that there is no record of the age for 72 cases.—Among these 19 deaths occurred.

Of the Mortality for different Sexes and Ages in 18,268 Cases of Typhus Fever treated in London Fever Hospital, 1848-1870.*

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.
0- 5	112	9	8·0	122	6	4·9	234	15	6·4
5-10	579	13	2·2	617	30	4·9	1,196	43	3·6
10-15	1,058	17	1·6	1,131	33	2·9	2,189	50	2·3
15-20	1,546	72	4·6	1,386	59	4·2	2.932	131	4·5
20-25	1,304	144	11·0	1,096	104	9·5	2,400	248	10·3
25-30	866	153	17·7	861	109	12·6	1,727	262	15·2
30-35	728	149	20·6	790	163	20·6	1,518	312	20·5
35-40	627	198	31·6	831	180	21·7	1,458	378	25·9
40-45	673	226	33·6	834	238	28·5	1,507	464	30·8
45-50	481	218	45·3	558	224	40·1	1,039	442	42·5
50-55	363	187	51·5	427	205	48·0	790	392	49·6
55-60	196	109	55·6	245	129	52·6	441	238	54·0
60-65	198	138	69·7	202	103	51·0	400	241	60·2
65-70	90	78	86·7	98	64	65·3	188	142	75·5
70-75	34	30	88·2	50	31	62·0	84	61	72·6
75-80	14	12	85·7	18	15	83·3	32	27	84·4
80	2	2	100·0	1	1	100·0	3	3	100.0
Age doubtful	75	5	6·7	55	3	5·4	130	8	6·1
Total (including doubtful cases,	8,946	1,760	19·7	9,322	1,697	18·2	18,268	3,457	18·9

* Murchison's "Continued Fevers of Great Britain."

Of the Mortality for different Sexes and Ages in 2,169 Cases of Typhus Fever treated in the Metropolitan Asylums Board's Hospitals, London, 1871-1895.*

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.	Cases.	Deaths.	Per Cent.
0- 5	40	1	2·5	48	1	2·1	88	2	2·3
5-10	106	1	0·9	139	...	...	245	1	0·4
10-15	170	4	2·3	207	11	5·3	377	15	4·0
15-20	163	10	6·1	197	18	9·1	360	28	7·8
20-25	124	28	22·6	124	22	17·7	248	50	20·2
25-30	77	21	27·2	83	15	18·1	160	36	22·5
30-35	76	25	32·9	85	22	25·9	161	47	29·2
35-40	57	26	45·6	76	21	27·6	133	47	35·3
40-45	75	46	61·3	95	35	36·8	170	81	47·7
45-50	42	21	50·0	54	21	38·9	96	42	43·8
50-55	23	16	69·6	38	21	55·2	61	37	60·8
55-60	14	9	64·3	18	15	83·3	32	24	75·0
60	16	12	75·0	22	15	68·2	38	27	71·1
Total,	983	220	22·4	1,186	217	18·3	2,169	437	20·1

* Metropolitan Asylums Board's Reports.

TYPHUS PATIENTS WHO HAVE BEEN TREATED IN THE CITY OF GLASGOW FEVER HOSPITAL, BELVIDERE, FROM ITS OPENING IN 1870 TILL 31ST MAY, 1901.

AGES.	25TH DECEMBER, 1870—31ST MAY, 1876.							1ST JUNE, 1876—31ST MAY, 1881.						
	MALES.		FEMALES.		TOTAL.		Per Cent.	MALES.		FEMALES.		TOTAL.		Per Cent.
	C.	D.	C.	D.	C.	D.		C.	D.	C.	D.	C.	D.	
0- 5	65	4	61	1	126	5	3·9	43	3	55	3	78	6	7·7
5-10	156	2	144	4	300	6	2·0	77	2	91	3	168	5	3·0
10-15	197	5	207	2	404	7	1·7	103	3	132	3	235	6	2·5
15-20	163	11	205	13	368	24	6·5	89	7	126	21	215	28	13·0
20-25	165	24	136	10	301	34	11·3	99	14	81	9	180	23	12·8
25-30	99	19	82	9	181	28	15·4	58	10	63	8	121	18	14·9
30-35	80	19	89	12	169	31	18·3	53	16	41	8	94	24	25·5
35-40	48	18	69	19	117	37	31·6	23	8	36	8	59	16	27·1
40-45	52	25	63	8	115	33	28·7	32	10	45	11	77	21	27·3
45-50	24	10	30	8	54	18	33·3	23	9	26	11	49	20	40·8
50-55	26	9	21	3	47	12	25·5	15	11	11	7	26	18	69·2
55-60	8	4	10	3	18	7	38·8	4	4	6	3	10	7	70·0
60-65	8	6	6	3	14	9	64·3	8	6	5	2	13	8	61·5
65-70	...	...	4	1	4	1	25 0	...	...	1	1	1	1	100·0
70-75	2	2	2	...	4	2	50·0	...	...	1	1	1	1	100·0
75-80	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80-85	1	...	...	...	1	...	...	...	...	...	...	...	...	...
85-90	...	...	...	...	...	...	...	...	...	...	...	...	...	...
90-95	...	...	...	...	...	...	...	...	...	1	1	1	1	100·0
Total,	1094	158	1129	96	2223	254	11·4	627	103	701	100	1328	203	15·3

TYPHUS.—*Continued.*

AGES.	1ST JUNE, 1881—31ST MAY, 1886.							1ST JUNE, 1886—31ST MAY, 1891.						
	MALES.		FEMALES.		TOTAL.		Per Cent.	MALES.		FEMALES.		TOTAL.		Per Cent.
	C.	D.	C.	D.	C.	D.		C.	D.	C.	D.	C.	D.	
0- 5	35	3	31	1	66	4	6·1	8	...	13	1	21	1	4·7
5-10	65	2	63	3	128	5	3·9	42	...	37	3	79	3	3·8
10-15	84	...	124	2	208	2	0·9	39	...	60	1	99	1	1·0
15-20	66	1	84	6	150	7	4·6	42	3	48	4	90	7	7·7
20-25	59	3	54	5	113	8	7·1	36	7	35	3	71	10	14·1
25-30	47	5	40	6	87	11	12·6	23	3	23	9	46	12	26·1
30-35	38	8	26	6	64	14	21·8	26	3	18	3	44	6	13·6
35-40	23	11	18	1	41	12	29·2	13	4	22	8	35	12	34·3
40-45	16	2	27	5	43	7	16·3	16	5	14	2	30	7	23·3
45-50	18	5	18	5	36	10	27·7	11	4	7	5	18	9	50·0
50-55	13	6	16	5	29	11	37·9	1	...	4	2	5	2	40·0
55-60	4	2	3	...	7	2	28·5	...	...	2	...	2	...	...
60-65	6	5	7	2	13	7	53·8	1	1	6	5	7	6	85·7
65-70	4	1	1	1	5	2	40·0	1	1	...	...	1	1	100·0
Total,	478	54	512	48	990	102	10·3	259	31	289	46	548	77	14·0

TYPHUS.—*Continued.*

AGES.	1ST JUNE, 1891—31ST MAY, 1896.							1ST JUNE, 1896—31ST MAY, 1901.						
	MALES.		FEMALES.		TOTAL.		Per Cent.	MALES.		FEMALES.		TOTAL.		Per Cent.
	C.	D.	C.	D.	C.	D.		C.	D.	C.	D.	C.	D.	
0- 5	4	...	8	...	12	...	...	6	...	4	...	10	...	...
5-10	21	...	19	1	40	1	2·5	18	...	13	...	31	...	...
10-15	11	...	23	2	34	2	5·9	15	...	12	1	27	1	3·7
15-20	26	...	26	4	52	4	7·7	9	...	17	3	26	3	11·5
20-25	18	2	27	3	45	5	11·1	14	4	10	2	24	6	25·0
25-30	19	5	15	3	34	8	23·5	7	3	10	1	17	4	23·5
30-35	15	5	20	4	35	9	25·7	5	2	10	4	15	6	40·0
35-40	13	4	8	3	21	7	33·3	12	5	13	2	25	7	28·0
40-45	11	6	10	6	21	12	57·1	6	3	5	1	11	4	36·3
45-50	5	2	3	2	8	4	50·0	...	...	5	3	5	3	60·0
50-55	3	1	5	3	8	4	50·0	3	3	2	1	5	4	80·0
55-60	2	...	6	3	8	3	37·5	...	...	4	2	4	2	50·0
60-65	...	...	1	1	1	1	100·0	...	...	1	...	1	...	...
Total,	148	25	171	35	319	60	18·8	95	20	106	20	201	40	19·9

PLAGUE.

The chief points regarding the cases of Plague have already been considered in relation to their clinical and other aspects in the joint-report issued by the Public Health and Hospital officials. There are, however, one or two points which should be briefly referred to in this place. These chiefly concern the administrative measures employed in the Hospital proper. The arrangement of the Hospital is not such as lends itself to the isolation of a nursing staff easily. It has been designed to work as a whole, and not to work in sections. In addition, when the Plague patients appeared there were a number of Smallpox patients in the Smallpox Hospital proper, so that no assistance could be obtained on that side. The nurses were, however, all as far as possible given rooms together, and, in addition, were provided with a dining-room to themselves. The cleaners were lodged in rooms adjacent to the Plague pavilions. Both nurses and attendants when in the wards wore overalls, which they left in the ward when they went to their rooms. All persons in proximity to Plague patients received a protective inoculation of 10 c.c. of the Yersin's curative serum, obtained from the Pasteur Institute at Paris. Of these, as has already been recorded elsewhere, one person, a cleaner in the Plague wards, took an attack of Plague. It was, however, of great mildness, and did not cause more inconvenience than a couple of days' headache to the sufferer. It, however, sufficiently indicates that those in attendance are not by any means immune. In order to assure that there should be no risk in spreading infection, a temporary boiler was erected in the part of the Hospital reserved for Plague. All articles of such materials as would stand boiling were thoroughly boiled before being sent to the laundry, and all other materials, such as blankets, soaked for some hours in a 6 per cent. solution of formalin. Most of the patients' clothes were burned, as consisting of materials so old, filthy, and engrained with dirt, as to be next door to impossible to handle without

risk. All the patients' dejecta were boiled in the autoclave formerly erected when Cholera was anticipated, so that no chance might arise of infecting the rats in the drains. Traps and poison were laid for the rats in the Hospital. The drains themselves were kept free from rats by the placing therein every second day at the most important places tubes of liquid SO_2. All the places where rat runs were suspected were likewise so treated. The result was that soon there were no rats about the Hospital.

The Antitoxin Treatment of Diphtheria in the City of Glasgow Fever Hospital, Belvidere, during Six and a Half Years.

The use of antitoxin in the treatment of Diphtheria has now been on its trial in this country for nearly seven years, and has been the chief method of treatment employed in this Hospital since the beginning of 1895. A short *résumé* of the results attained will, therefore, be not without use, especially as no general synopsis of these results beyond the issue of the hospital statistics year by year has been published since Dr. Marsh's paper, in 1896.

The collective results are shown in Table I. This table consists of four divisions—the first showing the mortalities at different age-periods in the pre-antitoxin days, the second those of the last six and a half years, of all the cases treated in Belvidere. For the purposes of comparison the corresponding figures, taken from the reports of the Metropolitan Asylums Board, London, are also given. From the figures in these parallel columns the value of the remedy can easily be gauged, unless some other factor than antitoxin has been in progress at the same time. The mortality at all ages has been greatly lowered.[1] It is to be noticed that the improvement becomes more marked as the age-period increases from 1 to 10. Thus, the death-rates

[1] This decline in the mortality had not begun before the introduction of antitoxin, the mortality for 1893 and 1894 at each age-period being—83·3 per cent. under 1 year, 64 per cent. at 1-2 years, 60 per cent. at 2-3 years, 47·7 per cent. at 3-4 years, 37·5 per cent. at 4-5 years, 33·9 per cent. at 5-10 years, and above that age 6 per cent.

at the age of 1 in the two periods are respectively 70·6 per cent. and 46·2 per cent—an improvement of 34 per cent.; the death-rates of the two periods for the ages 5 to 10 are respectively 39·9 per cent. and 9·7 per cent.—an improvement of 75 per cent. This difference is the more noteworthy

TABLE I.—Showing the Total Number of Cases Admitted to the City of Glasgow Fever Hospital, Belvidere, 1871–31st May, 1901, in Two Groups—1st, 1871-1894 (Pre-Antitoxin Period), and 2nd, 1895-1901 (Antitoxin Period), with the Corresponding Statistics for the Metropolitan Asylums' Board Hospitals, London, in Two Groups—1890-1894 (Pre-Antitoxin Period), and 1898-1899 (Antitoxin Period).

	Glasgow.						London.					
	Pre-Antitoxin Period (1871-94).			Antitoxin Period (1st Jan., 1895, to 31st May, 1901).			Pre-Antitoxin Period (1890-94).			Antitoxin Period (1895-99).		
Ages.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
-1	17	12	70·6	67	31	46·2	179	116	64·8	510	193	37·8
1-2	91	61	67·0	183	71	38·8	641	396	61·7	1,719	610	35·5
2-3	85	51	60·0	175	41	23·4	896	489	54·5	2,582	684	26·4
3-4	106	49	46·2	184	25	13·6	1,163	546	46·9	3,486	801	22·9
4-5	82	38	46·3	135	20	14·8	1,222	479	39·2	3,666	759	20·7
5-10	233	93	39·9	308	30	9·7	3,461	946	27·3	10,578	1,584	14·9
10-20	93	9	9·6	86	9	10·4	1,959	151	7·7	4,681	248	5·3
20-30	66	6	9·0	59	3	5·1	844	38	4·5	1,154	21	1·8
30-	17	...	...	31	5	16·1	412	35	8·5	659	28	4·2
Total,	790	319	40·4	1,228	235	19·1	10,777	3,196	29·6	29,035	4,928	16·9

as showing that the saving of life has not been so much among the very young as among those of 2 years old and upwards. The high death-rate at the ages of 10 years and upwards merits some remark. It may be in part due to

the smallness of the numbers, but in large measure it is to be explained by the fact, which an examination of the case records made quite clear, that at least one-third of persons dying at the higher ages were admitted in a moribund condition. It would seem that the Hospital did not receive anything like a fair average of the disease at the higher ages, such as seems to be the case with the hospitals in London. The comparative figures for London given in the third section of the table are interesting as showing that the Glasgow mortality compares very favourably with that in the south on the whole. It will be seen that the number of cases at different ages is very different. If a thousand cases be taken at the ages at which they occur in the above table, they will be distributed in the two localities in the manner shown in the annexed table.

It will be seen from Table II. that in Glasgow a much

TABLE II.—Relative Proportion in 1,000 Cases at Different Ages of the Cases of Diphtheria Treated in Glasgow and London, with the Application of the Glasgow Death-rates to the London Age-incidence of Cases.

Glasgow.			London.	
Ages.	Number with Ages of 1,000 Cases.	Death-rate.	Number with Ages of 1,000 Cases.	Proportion of Deaths at the Glasgow Death-rates.
-1	54·6	46·2	17·5	8·1
1-2	149·3	38·2	59·2	22·6
2-3	142·8	22·8	88·9	20·3
3-4	149·4	13·6	120·0	16·3
4-5	108·5	15·0	126·2	18·9
5-10	251·4	9·7	364·3	35·3
10-20	70·2	10·4	161·2	16·7
20-30	48·1	5·1	39·7	2·0
30-	25·3	16·1	22·6	3·6
		19·0		14·3*

* That is, the Glasgow Death-rate corrected to the London figures is 14·3.

larger proportion of the cases occur at the early ages, and, in consequence, that although the crude death-rates shown in Table I. are lower for London, yet that the corrected rate, allowing for difference of age-incidence, is rather in our favour, being 14·3 per cent. as against 16·9 per cent., even although the fatality is so high in Glasgow at ages above 10, and the number of cases at 10 to 20 is less than half that of London.

In order that fuller detail of the difference may be easily seen, the following (Table III.) is annexed, in which the

TABLE III.—Comparative Table of the Percentage Mortality from Diphtheria at Different Age-periods in the Metropolitan Asylums Board's Hospitals, London, and in the City of Glasgow Fever Hospital, Belvidere, 1895-1900.

Ages.	Glas. 1st Jan., 1895, to 31st May, 1896.	Lond. 1895.	Glas. 1896-97.	Lond. 1896.	Glas. 1897-98.	Lond. 1897.	Glas. 1898-99.	Lond. 1898.	Glas. 1899-00.	Lond. 1899.
-1	40·0	38·7	58·3	52·0	60·0	32·3	58·3	33·0	37·5	37·4
1-2	31·2	46·6	33·3	46·2	48·4	31·8	47·0	32·3	29·4	29·6
2-3	12·8	33·1	30·0	31·2	35·7	26·9	28·5	26·1	26·6	21·3
3-4	16·6	30·2	19·2	25·6	14·8	22·8	10·7	20·5	7·8	20·1
4-5	12·5	29·4	8·6	25·2	11·7	20·7	33·3	19·1	10·0	15·5
5-10	6·2	19·5	13·0	18·7	5·8	16·4	10·7	12·7	14·2	11·8
10-15	7·7	8·5	...	8·4	16·6	4·7	9·0	5·1	...	5·3
15-20	10·0	7·3	40·0	5·8	22·2	2·4	...	1·8	...	1·6
20-25	12·5	1·3	...	1·9	25·0	4·2	...	1·2	12·5	·9
25-30	...	3·1	...	1·2	...	3·2	...	...	...	1·4
30-	16·6	2·2	28·3	2·3	...	10·1	14·3	3·4	20·0	2·8

percentage mortalities at each age-period are given in parallel columns for both London and Glasgow since the commencement of the treatment of Diphtheria by antitoxin.

The great difficulty in obtaining uniformly good results

in the treatment of Diphtheria is to be found in the rapidity with which the progress of the disease lessens the chance of successful treatment. As an illustration of this Table IV. is given. In this table the cases admitted last year are arranged in groups, according to the periods at which they came under treatment, and the corresponding death-rates given. Of those treated on the first day of illness all recovered, and those received on the second, 2 out of 22, or 9 per cent., died, while a further delay causes a corresponding increase in the mortality. Thus the paradox: that it is better for a child to become immediately ill, or to take what appears to be a severe attack of Diphtheria and thus come at once under treatment, than to take an apparently milder attack, which, in the parents' mind, is not of

TABLE IV.—Number of Cases of Diphtheria Admitted on each day of Illness, with the Corresponding Mortality.

Day of Disease.	Number of Cases.	Number of Deaths.	Percentage of Mortality.
First, - - - - -	8	...	...
Second, - - - -	22	2	9·0
Third and fourth, - -	58	9	15·5
Fifth and upward, - -	96	19	19·8

sufficient gravity to demand the attention of a medical attendant till the illness has progressed for several days.

Of all the cases received a considerable proportion are, on admission, beyond the reach of treatment. This number varies in different years; in all, it has amounted to 73 in the period of six and a half years. If a child dies within twenty-four hours of admission, it may be fairly said to be beyond medical aid when it is received. I have, therefore, in order that the comparative results of the antitoxin treatment, during the different years since its inception, may become clear, prepared Table V. (p. 26), in which the

TABLE V.—Showing the Results of the Serum Treatment of Diphtheria in Belvidere, 1895-1901. Cases coming to the Hospital Moribund (*i.e.*, Dying within Twenty-four Hours of Admission, are excluded from this Table as being beyond Treatment on Admission.

Ages.	1895-1896.			1896-1897.			1897-1898.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
-1	13	4	30 7	11	6	54·5	10	6	60·0
1-2	25	5	20·0	22	6	27·2	27	10	37·0
2-3	38	3	8·0	17	3	17·6	14	5	35·7
3-4	28	6	21·4	25	4	16·0	27	4	14·8
4-5	22	3	13·6	22	1	4·5	16	1	6·2
5-10	63	1	1·6	43	3	6·9	49	1	2·0
10-	41	2	4·8	26	1	3·8	22	4	18·1
Total,	230	24	10·4	166	24	14·4	165	31	18·7

Ages.	1898-1899.			1899-1900.			1900-1901.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
-1	6	1	16·6	13	3	23·0	6	...	...
1-2	30	12	40·0	30	6	20·0	22	7	31·8
2-3	27	7	25·9	37	7	18·9	32	5	15·6
3-4	28	3	10·7	37	2	5·4	31	1	3·2
4-5	21	5	23·8	30	3	10·0	16	1	6·2
5-10	56	6	10·7	47	5	10·6	41	3	7·3
10-	31	2	6·4	27	2	7·4	24	1	4·1
Total,	199	36	18·0	221	28	12·6	172	18	10·4

Diphtheria cases, deaths, and death-rates, are given for each age-period, after excluding all cases dying within twenty-four hours of admission. It will thus be seen that the

TABLE VI.—Laryngeal Cases of Diphtheria: Pre-Antitoxin and Antitoxin Periods.

Ages.	1871-1894.			1895-1896.			1896-1897.			1897-1898.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
-1	6	6	100·0	6	4	66·6	6	4	66·6	6	4	66.6
1-2	61	49	80·3	23	10	43·4	15	4	26·6	21	10	47·6
2-3	51	41	80·3	28	6	21·4	16	5	31·2	11	3	27·2
3-4	56	37	66·0	17	5	29·4	11	3	27·2	17	4	23·5
4-5	49	30	61·2	18	4	22·2	15	...	...	6	2	33·3
5-10	82	58	70·7	21	2	9·5	22	4	18·2	18	2	11·1
10-20	10	4	40·0	1	...	...	...	...	...	1	1	100·0
20-30	5	3	60·0	...	...	...	...	...	...	...	...	...
30-	1	...	...	1	...	...	...	...	...	...	...	...
Total,	321	228	71·0	115	31	26·9	85	20	23·5	80	26	32·5

Ages.	1898-1899.			1899-1900			1900-1901.			Total—1895-1901.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
-1	7	6	85·7	11	4	36·3	3	...	...	39	22	56·4
1-2	23	11	47·8	24	6	25·0	16	7	43·7	122	48	39·3
2·3	21	5	23·8	34	6	17·6	20	4	20·0	130	29	22·3
3-4	14	3	21·4	24	1	4·1	22	4	18·1	105	20	19·0
4-5	11	2	18·1	16	...	...	10	2	20·0	76	10	13·1
5-10	31	4	12·9	19	4	21·0	13	1	7·6	124	17	13·7
10-20	...	...	...	...	...	...	...	...	...	2	1	50·0
20-30	1	...	...	...	...	...	...	...	...	1	...	...
30-	...	...	...	...	...	...	...	...	...	1	...	...
Total,	108	31	28·7	128	21	16·4	84	18	21·4	600	147	24·5

disease apparently increased in severity from 1895 to 1898, and since that time has apparently decreased in severity, or has become more amenable to treatment.

There remains to be dealt with at some little length the nature of the cases which have been received into Belvidere in these years under review. By far the most fatal form of Diphtheria is that in which the larynx is affected. Here there is a definite form of obstruction to the breathing, as well as

TABLE VII.—Number of Tracheotomies and Intubations (or both) at different Age-periods—1895-1901.

31st May, 1895-96.			1896-97.		1897-98.		1898-99.		1899-1900.		1900-01.		Total.		Percentage of Mortality.
Ages.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
-1	2	2	3	3	4	4	7	6	2	2	1	...	19	17	89·5
1-2	9	7	8	4	13	9	13	8	13	5	12	7	68	40	58·8
2-3	4	...	5	2	5	2	12	5	21	5	9	3	56	17	30·3
3-4	5	...	2	...	8	4	11	2	11	...	15	4	52	10	19·2
4-5	5	...	6	...	...	...	10	3	13	...	4	1	38	4	10·5
5-10	8	1	8	3	6	2	9	2	12	4	5	1	48	13	27·1
10·20	1	1	...	...	...	...	...	...	...	...	...	...	1	1	100·0
Total,	34	11	32	12	36	21	62	26	72	16	46	16	282	102	36·1

an acute poisoning, and as the effect of the latter is to greatly weaken the heart, it is obvious that the double strain thus imposed on the patient must greatly lessen his chance of recovery. In the pre-antitoxin period these cases were especially fatal. A glance at Table VI. (page 27) will show the marked improvement here attained.

The fatality under one year of age is still very high, and there seems little hope of this being improved unless the

cases can be brought under treatment at a much earlier period of the disease. Sucklings are much more profoundly affected by Diphtheria than even children at the age of one year. In addition, they bear the operation of tracheotomy so badly as to render its use the last resort. Even among these infants, however, there has been a considerable saving of life. As, however, the age increases, this saving becomes more marked, ranging from 50 per cent. at the age of 1 year to 80 per cent. at the ages of 5 to 10. This improvement, as may be seen by reference to the table, has been of fairly uniform character, the years in which the case mortality has been highest being those of 1897, 1898, 1899, the years in which Diphtheria was least prevalent in Glasgow in this decade. Among the laryngeal cases occur those in which tracheotomy or intubation may be required. As the latter operation was not found of much service, and as it was often followed by the graver operation of tracheotomy, the results of both have been gathered together in Tables VII., VIII., and IX. From these tables several conclusions can easily be drawn. It is evident that now the mortality of tracheotomy is only high in the first two years of life. In the pre-antitoxin period it was almost equally useless at all periods of life, only one patient in five surviving the ordeal. Now, with about two out of every three persons recovery takes place. This is a very marked change indeed, and it does not represent the whole truth. Many patients who are so suffocated as to demand operative relief improve so much under the influence of antitoxin as not to require further interference. Another noteworthy point is that the proportion of cases requiring tracheotomy to the whole number has risen very markedly, as may be seen in Table IX. The reason of this is not, as might appear, that the operation is more frequently resorted to at present than formerly. I saw myself nearly all the cases on which tracheotomy was performed in the winter of 1895-96, when Dr. Marsh, who had considerable experience of Diphtheria, was in charge of the wards, and I do not think that during last year there was a single tracheotomy

TABLE VIII.—Total Cases, Deaths, and Death-rates of above Pre-Antitoxin and Antitoxin Periods.

Age.	1872-1894.			1st January, 1895-1901.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
Under 5 years,	93	74	79·5	242	92	37·6
Over 5 years,	42	35	83·3	51	14	27·4

TABLE IX.—Total Number of Tracheotomies, &c., 1895-1901, with the Percentage of such Cases to the Total Number of Diphtheria Cases sent to Hospital.

	1st January, 1895, to 31st May, 1896.			1896-1897.			1897-1898.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
Tracheotomies, - -	46	15	32·6	32	12	37·5	36	21	58·3
Total cases, - -	242	35	14·4	180	38	21·1	174	40	22·9
Percentage of tracheotomies to total cases,	19·0			17·7			20·7		
	1898-1899.			1899-1900			1900-1901.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
Tracheotomies, - -	62	26	41·9	72	16	22·2	46	16	34·7
Total cases, - -	213	50	23·4	235	42	17·8	184	30	16·3
Percentage of tracheotomies to total cases,	29·1			30·6			25·0		

done in which the urgency was less than in the former series of cases. The cause is to be found in another direction. During the same period a great change in the knowledge of Diphtheria has taken place among the medical practitioners who first see the cases, and many cases are now certified Diphtheria which were formerly classified together under the name of Croup. This change is measured by the fact that, while in 1895 73 deaths in the city of

TABLE X.—Showing amount of Diphtheria in Glasgow since the introduction of the Notification Act, and also the Relative Number of Cases treated in the Hospital and at Home, with the corresponding Deaths and Death-rates.

Year.	Case Rate per 1,000,000 Population.	Total Cases in City.	Total Deaths in City.	Percentage of Mortality.	Treated in Fever Hospital, Belvidere.			Treated at Home.		
					Cases	Deaths.	Percentage of Mortality.	Cases	Deaths.	Percentage of Mortality.
1891	822	465	131	28·2	80	31	38·7	385	100	25·9
1892	861	575	195	33·9	78	29	37·2	497	164	33·0
1893	1228	828	246	29·7	153	62	40·5	675	184	27·2
1894	1414	967	290	39·0	245	87	35·5	722	203	28·1
*1895	944	654	137	21·0	179	25	14·0	475	112	23·5
1896	854	601	116	19·3	179	34	19·0	422	82	19·4
1897	647	462	127	27·5	123	30	24·5	339	97	28·6
1898	592	433	113	26·0	203	45	22·1	230	65	28·2
1899	622	465	109	23·5	213	27	12·6	252	82	32·5
1900	715	540	125	23·1	248	50	20·1	292	75	25·6

* First antitoxin year.

Glasgow were registered as simple Croup, in 1900 only 19 were so registered, though the amount of Diphtheria in the city is nearly the same. It is from these formerly wrongly diagnosed cases that the hospital is now receiving its increased number of patients requiring tracheotomy, and the

fact that these show a diminished Diphtheria death-rate argues largely for the potency of the antoxin treatment.

It remains to discuss the relative results of home and hospital treatment, and the function which a modern infectious disease hospital plays in the civic economy. First, the course of the epidemic is given in the first column of Table X. It will be seen that it culminated in the year 1894, that from that year till 1898 there was a continuous fall, and that since then there has been a tendency for the disease to again increase in extent. It has been asserted

TABLE XI.—Showing the Cases Treated in the Hospital and at Home, those Cases which Died within Twenty-four Hours of Admission being classed as Cases Treated at Home.

Year.	Treated at Belvidere Hospital.			Treated at Home.			Deaths in Glasgow certified Croup.
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	
1895	173	19	10·9	481	118	24·5	73
1896	167	22	13·1	434	94	21·6	54
1897	113	20	17·7	349	107	30·6	48
1898	192	34	17·7	241	76	31·5	29
1899	200	14	7·0	265	95	35·8	17
1900	229	31	13·5	311	94	30·2	19

by a French writer that the death-rate in Diphtheria bears a relation to the extent of the epidemic—*i.e.*, if there is much Diphtheria, then not only are there more deaths, but also more in proportion to the number of cases. The only point where the Glasgow statistics show this relation is between 1894 and 1895, but that is the point at which treatment by antitoxin was begun, and it must be noted that the fall in the hospital mortality greatly exceeded the corresponding fall in the cases treated. Though after this the epidemic continued to diminish in extent, yet the mortality in both the cases treated in hospital and at home continued to increase.

Before the introduction of antitoxin the hospital mortality regularly exceeded that outside; since the introduction of that remedy it has as regularly been less. This is not a phenomenon confined to Glasgow, but as may be seen in the accompanying tables, is the rule in large towns. Nor, as I showed earlier, when speaking in regard to tracheotomy,

TABLE XII.—Showing the Amount of Diphtheria in a Number of Large Towns since 1897, and also the Relative Number of Cases treated in the Hospital and at Home, with the Corresponding Deaths and Death Rates.

Year.	Total.			Treated at Home.			Treated in Hosptal.		
	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.	Cases.	Deaths.	Percentage of Mortality.
Liverpool.									
1897	463	125	27·0	265	88	33·1	198	37	18·7
1898	590	148	25·1	492	130	26·4	98	18	18·7
1899	851	218	25·6	586	149	25·5	265	69	26·0
1900	761	163	21·4	491	112	22·7	270	51	19·0
Manchester.									
1897	150	46	30·6	106	36	33·9	44	10	22·7
1898	196	51	26·0	113	36	31·9	83	15	18·1
1899	248	85	34·2	136	51	37·5	112	34	30·3
1900	337	101	29·9	156	66	42·3	181	35	19·4
Aberdeen.									
1897	93	14	15·1	67	12	17·9	26	2	7·7
1898	209	37	17·7	130	33	25·4	79	4	5·1
1899	153	29	18·9	75	21	28·0	78	8	10·3
1900	128	30	23·4	46	24	52·1	82	6	7·3

is it likely that this is due to the fact that the Hospital gets more of the milder cases now. As it was pointed out by Dr. Marsh in his paper in 1896, the cases of wrong diagnosis which are sent to the Hospital as Diphtheria, consisting, as they do, very largely of scarlatina and tonsillitis, have a much smaller mortality than those of Diphtheria, and among the cases left at home those wrong diagnosis serve largely to dilute the death-rate. In addition, a majority of those cases requiring immediate tracheotomy are sent instantly to the Hospital. Both these cases should serve to make the death-rate of the Hospital higher than that of the home-treated cases, but such, as may be seen in Table X., is very far from the case. In addition, if those cases which die within twenty-four hours of admission are subtracted from the hospital numbers and added to those of the outside, the disparity becomes more marked. This, I think, can fairly be done, as the bulk of the moribund cases are received on the third day of illness and upward. On the other hand, the fulminant cases of diphtheria admit of little treatment, and must be put to the credit side of the high outside death-rate. Deceptive enough they are even to those who are in the habit of working with the disease.

These remarks serve to emphasise several points. Firstly, necessity of early diagnosis of Diphtheria. Secondly, that if there be reasonable suspicion that the disease is Diphtheria, a small dose of antitoxin should be administered at once. It will do the child no harm, and will serve to retard the development of the disease. Thirdly, that if the disease be advanced at all when first seen, the patient should be at once removed to Hospital, or receive a sufficient curative dose of the remedy. As this may cost about 10s., it will be seen that it is outwith the resources of many to whom their necessity requires it. If these patients are to be treated at home, then either the city or the parochial authorities should bear the expense, as is done in some of the large towns in England.

Scarlet Fever.

The death-rate from Scarlet Fever was last year slightly lower than in the previous four or five years. The type of the disease differs in no way from that which I have formerly seen in Belvidere. The total number of cases was in all very small compared with that treated in former years in the Hospital, so that comparison is difficult. This is rendered more so, insomuch that the great bulk of these cases were treated under less favourable circumstances than desirable, the amount of overcrowding being in the months of August and September very considerable.

Measles.

The number of cases of Measles treated in the Hospital was very small, nor do they call for any particular notice.

Whooping-cough.

The number of Whooping-cough cases admitted during the year was 363. Of these 61 died. This represents the usual mortality seen among the patients admitted suffering from this disease, and it tells to those whom it interests a story of the hardness of life among a certain portion of the lower classes in Glasgow. That a disease which, among the better classes, has a very small mortality, certainly not more than 3 per cent., should claim as its victims on an average one-fifth of those it attacks speaks volumes regarding the physical state of the children. The great bulk are ricketty, with deformed chests. In addition, most are underfed or improperly fed, the effect of the latter telling more than the former. The "run of the hoose" is the diet often of most danger to the child of the slum. Many of these children are in addition tuberculous, and it needs but the strain of an acute disease like Whooping-cough to give rise to an active in place of a slumbering

focus of this potent scourge. It is thus to be expected, when the violent fits of spasmodic coughing set up a pneumonia, that the lungs, already imperfectly aerated on account of the chest deformity, should prove unequal to providing the amount of oxygen necessary to enable the enfeebled body to maintain its stand against the ravages of the disease.

To many of these children their stay in the Hospital is one of the bright spots of their lives, and porridge and sweet milk represents a delicacy.

Smallpox.

This year was marked by a large increase in the epidemic of Smallpox. In its medical bearings it is discussed in the accompanying report by Dr. R. S. Thomson, but there are certain points which fall to be considered in the Superintendent's Report. In the first place, note must be taken of the conditions under which the reception of cases had to take place. The Hospital, at the usual amount of air space demanded by the Local Government Board, has accommodation for about 170 patients in ten wards. There is accommodation for 40 nurses, the minimum staff for the Hospital if it be full. The accommodation for the cleaners was at the outside equivalent to twelve beds, while the number of men required to work the Hospital at its maximum theoretical complement were no more than accommodated. The kitchen accommodation is fairly sufficient, but the laundry has no equipment for more than the ordinary work of the Hospital. Into this Hospital there was thrown at the beginning of the year a number of patients which it was quite hopeless to cope with in the same manner that is the custom on the fever side. It is not for the purpose of recording past defects that this is written, as Smallpox will soon cease to be a disease treated at Belvidere, but to place on record the lessons which the present emergency has taught. It is absolutely essential in any new

smallpox hospital that the administrative part of the hospital be placed on a fairly large basis, not only because this is necessary for the comfort of the nursing staff, but also because, if these are housed in an inefficient manner, there is a much greater risk of the conveyance of infection outside.

The real difficulty met with was that of housing sufficient persons to adequately cope with the amount of work which had to be done. In consequence of this the whole staff was overworked.

Cross Infection.

With regard to this I mean to report on a future occasion at some length, so that at present I simply append the usual tables, showing those who were incubating the disease on admission, and also those who were infected with other diseases in the Hospital.

Table showing the number of Patients Incubating other Diseases than that present on Admission, with the nature of the second Disease.

Original Disease.	Scarlet.		Measles.		Whooping-cough.		Diphtheria.		Smallpox.	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Scarlet, - - -	...	...	...	...	3	...	...	...	...	...
Measles, - - -	3	...	...	...	2	...	...	...	1	...
Whooping-cough, - -	...	...	1	...	...	...	...	...	...	...
Diphtheria, - - -	3	...	...	...	...	...	...	...	...	...
Smallpox, - - -	...	...	1	...	...	...	...	...	...	...
Total, - - -	6	...	2	...	5	...	...	...	1	...

TABLE SHOWING THE NUMBER OF PATIENTS INFECTED WITH OTHER DISEASES THAN THAT PRESENT ON ADMISSION, WITH THE NATURE OF THE SECOND DISEASE.

Original Disease.	Scarlet.		Measles.		Whooping-cough.		Diphtheria.		Smallpox.		Chicken-pox.	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Scarlet, - - -	...	...	...	...	6	...	3	...	1	...	1	...
Measles, - - -	...	...	...	...	4	...	...	...	...	...	2	...
Whooping-cough, -	2	...	14	...	...	...	...	...	...	...	...	...
Diphtheria, - -	8	...	1	...	1	...	...	...	...	...	...	...
Smallpox, - -	...	...	...	...	...	...	..	...	...	...	...	...
German Measles, -	...	...	1	1	...	...	...	...	...	...	...	...
Enteric Fever, -	...	...	...	...	...	...	...	...	5	2	1	...
Other Diseases, -	1	...	...	...	...	...	...	...	...	...	...	...
Total, - -	11	...	16	1	11	...	3	...	6	2	4	...

In addition, a baby born in the Plague Wards of the Hospital developed Plague.

ILLNESS AMONG THE STAFF.

In all sixteen members of the staff suffered last year from infectious diseases, as is shown in the accompanying Table. One of these patients, a nurse of great promise, died.

Non-infectious diseases have claimed more victims than infectious, two assistant-registrars dying, the one of heart disease and the other of acute rheumatism, while a ward maid succumbed to an attack of acute nephritis.

Infectious Disease occurring among the Staff.

Occupation.	Diphtheria.		Typhus.		Enteric.		Scarlet.		Smallpox.		Plague.		German Measles.	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Doctor, -	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Nurse, -	3	...	2	...	2	1	2	...	...	...	...	...	...	...
Male Servants,	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Female Servants,	...	...	...	...	...	...	...	...	2	...	1	...	1	...
Total, -	4	...	2	...	2	1	4	...	2	...	1	...	1	...

Belvidere Dorcas Society.

Along the line of thirty years this Society has been quietly doing the good work of supplying the deficiencies in the stock of clothing possessed by the poorer patients on their dismissal from Hospital, due care being taken that the cases are necessitous. Of late years it has extended its benefits to Knightswood and Govan Joint-Hospitals, and last year operations were commenced at Ruchill.

The Society's last report—the thirtieth—gives those figures for the year :—1,002 persons were assisted in their need by the gift of 3,804 articles of clothing. This is much below previous years, most of the wards being closed for a time owing to the Smallpox epidemic.

Lectures to Students.

The clinical instruction to students has practically been in abeyance since I took over the charge of the Hospital, this being due to the fact that the large number of cases of Smallpox caused the closing of the Fever Hospital for the reception of fever cases, and consequently classes could not

be held. During the period when the cases of Plague were in the Hospital the cases were demonstrated to a very large number of medical practitioners in the city, to a large number of Medical Officers of Health of Scotland and England, and, in addition, to many distinguished foreigners.

Lectures to Nurses.

During the winter the usual courses of lectures were held, the senior by myself, and the junior by Dr. M'Clure. These were well attended. Owing to the rise of Smallpox the senior course had to be delivered in great part twice over. Twenty-nine certificates were granted after written and oral examinations.

In conclusion, I have to express my thanks to the members of the staff for the way in which they met the emergencies of last year. Neither for Plague nor Smallpox were there any lack of nursing volunteers, while the medical staff undertook much new work with energy and success.

I have especially to express my thanks to Mrs. Sinclair for much assistance in helping me to take up my new duties, and for the manner in which she carried out the rearrangement of the Hospital staff, necessitated by the perpetual disturbances experienced during the year.

I must also express my thanks to Mr. Muir for the zeal and energy which he displayed during the trying times of last year, when it was only by promptness and despatch that the Hospital was so able to meet the strain which was so suddenly thrown upon it.

I have the honour to be,

Gentlemen,

Your obedient Servant,

JOHN BROWNLEE.

STATISTICAL TABLES.

TABLE I.

GENERAL STATEMENT.

Remaining in the Hospital, 1st June, 1900, - -	822
Admitted during 1900-1901, - - - - -	4,435
	5,257
Dismissed—	
Cured, Relieved, and Died, - - - -	5,166
Remaining in Hospital, 31st May, 1901, - - -	91
	5,257

Total Number of Deaths, - 538

Nett Mortality, - - 11·9 per cent.

Daily average number of patients in Hospital, - - 510

Each patient has been under treatment on an average 41·8 days.

TABLE II.

TABLE SHOWING THE MONTHLY DISTRIBUTION OF THE PRINCIPAL DISEASES THROUGHOUT THE YEAR.

	Scarlet Fever.		Diphtheria.		Enteric Fever.		Typhus Fever.		Measles.		Whooping-cough.		Erysipelas.		German Measles.		Puerperal Fever.		TOTAL.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1900.																				
June, - -	75	3	14	1	55	10	...	...	96	7	45	8	6	..	1	...	4	2	296	31
July, - -	22	2	18	8	89	16	2	1	95	15	39	4	2	...	9	...	3	1	279	47
August, -	93	4	12	3	81	11	1	...	33	1	30	5	6	...	1	...	1	1	258	25
September, -	181	7	43	6	72	7	2	1	17	2	35	3	3	...	...	...	2	2	355	28
October, -	91	3	26	1	22	3	5	2	3	...	47	5	15	...	...	...	6	4	215	18
November, -	130	8	29	5	32	3	16	3	6	1	49	12	10	1	4	...	1	...	277	33
December, -	110	8	14	2	42	9	28	4	13	...	54	11	1	...	6	...	2	1	270	35
1901.																				
January, -	58	2	20	3	46	13	7	2	5	...	22	4	1	...	2	...	1	1	162	25
February, -	13	...	6	1	6	...	1	1	2	...	16	3	...	...	1	...	1	...	46	5
March, -	3	...	...	...	4	...	...	...	...	...	15	2	...	...	...	...	...	...	22	2
April, - -	1	...	...	...	...	...	...	...	...	...	9	2	...	...	...	...	...	...	10	2
May, - -	...	...	2	...	1	1	4	1	4	...	2	2	...	...	1	...	...	...	14	4
Total, -	777	37	184	30	450	73	66	15	274	26	363	61	44	1	25	...	21	12	2,204	255

TABLE III.

ENTERIC FEVER.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 5 years, -	16	...	...	9	...	...	25	...	...
5 and under 10,	40	4	10·0	32	...	...	72	4	5·5
10 ,, 15,	35	4	11·4	30	...	...	65	4	6·1
15 ,, 20,	31	7	22·6	31	5	16·1	62	12	19·3
20 ,, 25,	53	11	20·7	20	4	20·0	73	15	20·5
25 ,, 30,	47	13	27·7	17	4	23·5	64	17	26·5
30 ,, 35,	19	6	31·6	13	1	7·7	32	7	21·9
35 ,, 40,	15	5	33·3	4	...	...	19	5	26·3
40 ,, 45,	12	1	8·3	11	3	27·3	23	4	17·4
45 ,, 50,	4	2	50·0	2	...	...	6	2	33·3
50 ,, 55,	3	1	33·3	2	...	...	5	1	20·0
55 ,, 60,	1	...	...	2	2	100·0	3	2	66·6
60 ,, 65,	1	...	...	...	...	...	1	...	...
Total, - -	277	54	19·5	173	19	11·0	450	73	16·2

Five convalescent Enteric Fever patients transferred to Ruchill Fever Hospital.

TABLE IV.

TYPHUS FEVER.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 5 years, -	1	...	...	1	...	...	2	...	...
5 and under 10, -	9	...	...	4	...	...	13	...	...
10 ,, 15, -	5	...	...	4	1	25·0	9	1	11·1
15 ,, 20, -	1	...	...	6	2	33·3	7	2	28·5
20 ,, 25, -	4	2	50·0	1	...	...	5	2	40·0
25 ,, 30, -	1	1	100·0	7	1	14·3	8	2	25·0
30 ,, 35, -	2	...	...	4	2	50·0	6	2	33·3
35 ,, 40, -	2	1	50·0	4	1	25·0	6	2	33·3
40 ,, 45, -	2	1	50·0	2	...	...	4	1	25·0
45 ,, 50, -	...	...	...	...	...	...	...	...	...
50 ,, 55, -	2	2	100·0	1	...	...	3	2	66·6
55 ,, 60, -	...	...	...	3	1	33·3	3	1	33·3
60 ,, 65, -	...	...	...	...	...	...	...	...	...
Total, - -	29	7	24·1	37	8	21·6	66	15	22·7

TABLE V.

PLAGUE.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 5 years, -	1	...	...	3	1	33·3	4	1	25·0
5 and under 10, -	1	...	...	1	1	100·0	2	1	50·0
10 ,, 15, -	1	1	100·0	3	...	...	4	1	25·0
15 ,, 20, -	3	...	...	...	...	...	3	...	...
20 ,, 25, -	2	1	50·0	3	1	33·3	5	2	40·0
25 ,, 35, -	1	...	...	2	...	...	3	...	...
35 ,, 45, -	...	...	...	3	...	...	3	...	...
45 ,, 55, -	2	2	100·0	...	...	...	2	2	100·0
55 ,, 65, -	2	1	50·0	...	...	...	2	1	50·0
65 ,, 75, -	...	...	...	...	...	...	...	...	...
Total, - -	13	5	38·4	15	3	20·0	28	8	28·5

TABLE VI.

DIPHTHERIA.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 1 year, -	3	1	33·3	4	...	...	7	1	14·3
1 and under 2,	14	7	50·0	12	4	33·3	26	11	42·3
2 ,, 3,	19	3	15·8	14	3	21·4	33	6	18·2
3 ,, 4,	14	1	7·1	21	4	19·0	35	5	14·3
4 ,, 5,	8	1	12·5	9	1	11·1	17	2	11·8
5 ,, 10,	12	1	8·3	30	3	10·0	42	4	9·5
10 ,, 15,	3	1	33·3	3	...	...	6	1	16·6
15 ,, 20,	2	...	...	2	...	...	4	...	...
20 ,, 25,	3	...	...	5	...	...	8	...	...
25 ,, 30,	1	...	...	2	...	...	3	...	...
30 ,, 35,	1	...	...	2	...	...	3	...	...
Total, -	80	15	18·7	104	15	14·4	184	30	16·3

TABLE VII.

SCARLET FEVER.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 1 year, -	3	...	...	2	1	50·0	5	1	20·0
1 and under 2,	11	4	36·4	8	...	...	19	4	21·0
2 ,, 3,	29	4	13·8	22	3	13·6	51	7	13·7
3 ,, 4,	35	3	8·6	34	4	11·8	69	7	10·1
4 ,, 5,	42	3	7·1	40	2	5·0	82	5	6·1
5 ,, 6,	35	1	2·9	48	2	4·2	83	3	3·6
6 ,, 7,	29	1	3·4	45	2	4·4	74	3	4·1
7 ,, 8,	24	1	4·2	35	1	2·9	59	2	3·4
8 ,, 9,	31	1	3·2	33	...	...	64	1	1·6
9 ,, 10,	18	...	...	17	...	...	35	...	...
10 ,, 15,	52	2	3·8	70	...	...	122	2	1·6
15 ,, 20,	20	...	...	25	1	4·0	45	1	2·2
20 ,, 25,	15	...	...	16	1	6·2	31	1	3·2
25 ,, 30,	13	...	...	8	...	...	21	...	...
30 ,, 35,	5	...	...	5	...	...	10	...	...
35 ,, 40,	2	...	...	1	...	...	3	...	...
40 ,, 45,	...	...	...	2	...	...	2	...	...
45 ,, 50,	...	...	...	1	...	...	1	...	...
50 ,, 55,	...	...	...	...	...	...	...	...	...
55 ,, 60,	1	...	...	...	...	...	1	...	...
Total, -	365	20	5·5	412	17	4·1	777	37	4·8

Twenty-nine convalescent cases of Scarlet Fever transferred to Kennedy Street Hospital.

TABLE VIII.

MEASLES.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 1 year, -	8	...	...	13	6	46·1	21	6	28·6
1 and under 2,	15	1	6·7	24	8	33·3	39	9	23·1
2 ,, 3,	21	3	14·3	16	3	18·7	37	6	16·2
3 ,, 4,	17	...	...	20	1	5·0	37	1	2·7
4 ,, 5,	15	...	...	15	2	13·3	30	2	6·7
5 ,, 6,	12	1	8·3	10	...	...	22	1	4·5
6 ,, 7,	7	...	...	9	1	11·1	16	1	6·2
7 ,, 8,	6	...	...	8	...	...	14	...	...
8 ,, 9,	2	...	...	1	...	...	3	...	...
9 ,, 10,	1	...	...	5	...	...	6	...	...
10 ,, 15,	...	...	...	1	...	...	1	...	...
15 ,, 20,	5	...	...	6	...	...	11	...	...
20 ,, 25,	17	...	...	10	...	...	27	...	...
25 ,, 30,	2	...	...	5	...	...	7	...	...
30 ,, 35,	1	...	...	1	...	...	2	...	...
35 ,, 40,	...	...	...	...	...	...	...	...	...
40 ,, 45,	...	...	...	...	...	...	...	...	...
70 ,, 75,	1	...	...	...	...	...	1	...	...
Total, - -	130	5	3·8	144	21	14·6	274	26	9·5

TABLE IX.

WHOOPING-COUGH.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 1 year, -	14	3	21·4	21	1	4·7	35	4	11·4
1 and under 2,	26	7	26·9	32	8	25·0	58	15	25·9
2 ,, 3,	37	8	21·6	31	10	32·2	68	18	26·4
3 ,, 4,	29	3	10·3	40	7	17·5	69	10	14·5
4 ,, 5,	19	4	21·1	27	4	14·8	46	8	17·4
5 ,, 6,	16	1	6·2	20	1	5·0	36	2	5·6
6 ,, 7,	9	...	...	14	2	14·3	23	2	8·7
7 ,, 8,	7	...	...	9	...	...	16	...	...
8 ,, 9,	1	...	...	5	1	20·0	6	1	16·6
9 ,, 10,	2	...	...	2	...	...	4	...	...
10 ,, 15,	2	1	...	...	...	...	2	1	50·0
Total, - -	162	27	16·7	201	34	16·9	363	61	16·8

Twenty-four cases of Whooping-cough transferred to Ruchill Fever Hospital.

TABLE X.

ERYSIPELAS.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 5 years,	...	...	...	...	...	...	...	...	...
5 and under 10,	...	...	...	...	...	...	...	...	...
10 ,, 15,	2	...	...	...	...	...	2	...	...
15 ,, 20,	3	...	...	2	1	50·0	5	1	20·0
20 ,, 25,	...	...	...	4	...	...	4	...	...
25 ,, 30,	1	...	...	1	...	...	2	...	...
30 ,, 35,	3	...	...	3	...	...	6	...	...
35 ,, 40,	2	...	...	5	...	...	7	...	...
40 ,, 45,	6	...	...	2	...	...	8	...	...
45 ,, 50,	...	...	...	...	...	...	...	...	...
50 ,, 55,	2	...	...	5	...	...	7	...	...
55 ,, 60,	1	...	...	2	...	...	3	...	...
Total, -	20	...	...	24	1	4·2	44	1	2·2

TABLE XI.

GERMAN MEASLES.

Ages.	Males.			Females.			Total.		
	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.
Under 1 year, -	2	...	...	1	...	...	3	...	...
1 and under 2,	1	...	...	..	...	...	1	...	...
2 ,, 3,	1	...	...	1	...	...	2	...	...
3 ,, 4,	2	...	...	3	...	...	5	...	...
4 ,, 5,	2	...	...	2	...	..	4	...	...
5 ,, 10,	1	...	...	1	...	...	2	...	...
10 ,, 15,	...	...	...	...	...	...	...	...	...
15 ,, 20,	1	...	..	...	...	...	1	...	...
20 ,, 25,	1	...	...	3	...	...	4	...	...
25 ,, 30,	...	...	...	2	...	...	2	...	...
30 ,, 35,	...	..	...	...	...	...	...	...	...
35 ,, 40,	...	...	...	1	...	...	1	...	...
Total, -	11	...	..	14	...	...	25	...	...

TABLE XII.

UNCLASSIFIED DISEASES.

(1) INFECTIOUS.

Diseases.	Cases.	Deaths.
Puerperal Fever,	21	12
Anthrax,	3	1
Influenza,	2	..
Febricula,	6	...
Tuberculosis (General),	4	4
,, Meninges,	4	4
,, Hip Joint,	1	...
,, Bowels,	1	1
,, Phthisis,	4	3
,, Lymphatic Glands,	1	...
Cerebro-spinal Meningitis,	1	1
Vaccinal Fever,	1	...
Malaria,	1	1
Syphilis,	3	2
	53	29

UNCLASSIFIED DISEASES.—*Continued.*

(2) NON-INFECTIOUS.

Diseases.	Cases.	Deaths.
Pneumonia,	19	4
Broncho-pneumonia,	11	3
Bronchitis,	5	...
Appendicitis,	6	1
Septic conditions other than Erysipelas,	56	2
Tonsillitis,	10	...
Nephritis,	4	1
Glandular Swellings resembling Plague,	11	...
Peri-carditis,	1	1
Pernicious Anæmia,	1	1
Cancer,	2	...
Meningitis,	1	...
Enteritis,	2	...
Marasmus,	1	1
Migraine,	1	...
Mastitis,	1	...
Gastric Catarrh,	1	...
Acute Rheumatism,	1	...
Phlebitis,	1	...
Urethritis,	1	...
Pharyngitis,	1	...
Alcoholism,	1	..
Erythemata,	5	...
Labour,	1	...
Nil,	11	...
Nursing Mothers,	33	...
	188	14
Members of Staff warded for Non-Infectious Diseases,	22	2

The following is a list of the donors of toys, books, money, &c., for the children in hospital at Christmas and New Year, 1900 :—

Lady M'Onie, Heath Bank, Pollokshields.
Bailie Carswell, 50 St. Andrew's Road.
W. Jarvie, Esq., Bluefield, Thorn Road, Bearsden.
Mrs. Hope, St. Mary's Isle, Kirkcudbright.
Peter Miller, Esq., 19 St. George's Place.
Miss Highet, 7 Newark Drive, Pollokshields.
Miss Adam, Lefler, Skelmorlie.
Miss Craig, 56 Newark Drive.
Mrs. A. G. Brown, 18 Royal Terrace, W.
Mrs. Herbert, 376 Great Western Road.
Miss Adams, 10 Queen's Crescent, W.
Mrs. Ure, Cairndhu, Helensburgh.
E. M. Lamont, Stationer, Pollokshields.
Copland & Lye, 165 Sauchiehall Street.
Miss M'Kirkslip, 148 Garthland Drive.
Mrs. Logan, Heathcot, Milngavie.
William Manson, Ivy Bank, London Road, Tollcross.
Mrs. Dallachy, 145 Greenhead Street.
Murdoch, Gracie, and Jim Clement, Cliff House, 28 Albert Drive.
The Children at Strathclyde House, Dalmarnock.
J. Shearer, Esq., 6 Great Clyde Street.
Mrs. M'Lennan, 1213 Pollokshaws Road.
—. Calderwood, 15 Clyde Street, Port-Dundas.
Thos. Flint & Co., 397 Sauchiehall Street.
James Herbertson, Esq., 85 Bedford Street.
Mrs. Murray, 13 Dunard Road, Rutherglen.
Mrs. Whitelaw, 13 Dunard Road, Rutherglen.
Miss Hamilton, 11 Prince's Square.
Miss Imrie, 41 Garthland Drive.
A. Thomson, Esq., Wandsworth, Carmyle Avenue, Carmyle.
Matthew Gilmour, Esq., Fernbank, Cambuslang.
Mrs. M'Brayne, 11 Park Circus Place.
Mrs. W. Wotherspoon, 9 Park Circus.
Mrs. Miller, The Manse, Shandon.
Mrs. Colville, 4 Drumsheugh Gardens.
Robert Sloan & Sons, 217 Argyle Street.
Mrs. Anderson, Averley, Kelvinside.
A. Waddell, Esq., Fernbank.
Miss Turner, 3 University Gardens.
Mrs. Campbell, 135 Wellington Street.
A. Robb, Esq., 16 Melville Street, Pollokshields.
North British Rubber Company, Limited, 60 Buchanan Street.
Mrs. Robert Huthieson, 2 Comrie Place, Shawlands.
Gilbert Dodd, Esq., 61 Westmoreland Street.
R. Anderson, Esq., 4 Melrose Gardens.
Claremont Street U.P. Church, per the Rev. Dr. M'Ewan, 25 Woodside Place.
Sydney Place U.P. Church, per John Inglis, Esq., 710 Gallowgate.
Junior Branch Y.M.C.A., per Miss A. H. Watson, 4 Saltoun Gardens.
Junior Branch Christian Endeavour Society, per W. H. Rankin, Esq., 34 Queen Square, Strathbungo.
Three Little "Burmans," Crieff.

APPENDIX.

APPENDIX.

REPORT BY THE VISITING PHYSICIAN

OF THE

CITY OF GLASGOW SMALLPOX HOSPITAL

FOR THE

Year ending 31st May, 1901.

On the 1st of June, 1900, there were in the Hospital 41 cases of Smallpox, 2 cases of Chickenpox, and 3 cases of other diseases. In addition, 1961 cases were admitted during the year. This total consisted of—

	Cases.
Smallpox,	1,730
Chickenpox,	88
Chickenpox and Whooping-cough,	11
Chickenpox and Enteritis,	1
Chickenpox and Broncho-pneumonia,	1
Vaccinal Fever,	9
Measles,	1
German Measles,	4
Whooping-cough,	1
Typhus Fever,	1
Febricula,	3
Catarrhal Pneumonia,	1
Influenza,	1
Rheumatism,	1
Syphilis,	4
Chronic Alcoholism,	1
Various skin diseases, including—Eczema, Dermatitis, Erythema, Pemphigus, Lichen, Herpes, Acné, Scabies, Phtheiriasis, Medicinal Rash,	16
Nursing Mothers—no illness,	10
Babies with Mothers—not Smallpox,	48
Nil,	29
	1,961

Among the total admitted there were 242 deaths, giving a death-rate of 12·34 per cent. of all cases treated during the year.

Smallpox.—In the Report for last year were noted the commencement of the present epidemic, in April, 1900, and the admission to Hospital of the first 68 cases, in April and May. The present Report deals with the additional 1,730 cases admitted during the further progress of the epidemic throughout the Hospital year.

Of these (1,730) cases 115 were unvaccinated, of whom 56 recovered and 59 died, giving a mortality of 51·3 per cent. It is noteworthy that almost half of the unvaccinated cases —viz., 50 out of 115 cases—were children under five years of age, and that this class furnished more than half the total number of deaths, viz., 33 deaths out of 59. Over 50 per cent. of these unvaccinated cases—viz., 61 out of 115 cases—were confluent, and 4 were "hæmorrhagic," that is to say, 56 per cent. of the cases were of a very severe type.

In 42 cases admitted during the year vaccination was "doubtful," that is to say, vaccination was alleged to have been performed in infancy, but of this there was no evidence on admission.

Of these, 24 were confluent and 5 were "hæmorrhagic,' that is, 69 per cent. were of a very severe nature, while 23 died, giving a case-mortality in this class of 54·76 per cent.

Among the 1,573 vaccinated cases 147 deaths occurred, a mortality of 9·35 per cent., which contrasts very strikingly with the mortality which prevailed among the unvaccinated and doubtful cases. Only two of the patients who died were under 20 years of age. One was a weakly child, aged 1 year and 9 months, with a very small non-foveated vaccination mark, measuring ·04 of a square inch. The other was a girl of 14, with a very slightly foveated scar, measuring ·57 of a square inch, and in her case Smallpox was complicated by an attack of Pneumonia. These two deaths, occurring among 241 cases below 20 years of age give a death-rate up to this age of ·83 per cent.

Of 246 patients between 20 and 25 years of age 12 died, a mortality of 4·9 per cent.

Above the age of 25 years the protective influence of a primary vaccination becomes progressively diminished, and we find accordingly that among 1,086 patients over 25 years of age 133 deaths occurred, giving a case-mortality of 12·3 per cent.

Of all the vaccinated cases, 237 were confluent and 45 were hæmorrhagic, that is, 19·3 per cent. were of a very severe type, as compared with 69 per cent. and 56 per per cent. among the doubtful and unvaccinated cases respectively.

Chickenpox.—There were admitted during the year 88 cases of uncomplicated Chickenpox, all of whom were dismissed well. There were also 11 cases of Chickenpox complicated with Whooping-cough, of whom one died; also one case of Chickenpox with Broncho-pneumonia, and one case of Chickenpox with Enteritis, both of whom died.

Errors in Diagnosis.—In addition, there were sent into Hospital as cases of Smallpox 73 patients who were found not to have that disease. Of these 28 were cases of various febrile diseases, including Vaccinal Fever, Measles, German Measles, Typhus, Catarrhal Pneumonia, Influenza, Rheumatism, and Syphilis. In this class, one death occurred from Catarrhal Pneumonia. Sixteen were cases of skin diseases, whose eruption more or less closely resembled that of Smallpox, including Eczema, Dermatitis, Erythema, Pemphigus, Lichen, Herpes, Acné, Scabies, Phtheiriaris. In this class one death occurred from Pemphigus in a debilitated subject. The remaining 29 cases showed no discoverable disease. With the two exceptions named all these 73 patients were dismissed well. In addition, 10 mothers, not affected with Smallpox, were admitted to nurse their infants, who suffered from that disease. These 10 were dismissed well.

Finally, 48 infants, not suffering from Smallpox, were admitted along with their mothers, who had the disease.

Of these, 40 were dismissed well and 8 died from Asthenia, of whom 2 were aged about four weeks, and the others were under one week old.

Demonstrations to Practitioners and Students.—During the year demonstrations of the cases were frequently given by the Visiting Physician, and were extensively taken advantage of by practitioners and students.

R. S. THOMSON, M.D., D.Sc.(Glasg.),
Visiting Physician.

TABLE I.—City of Glasgow Smallpox Hospital, Belvidere.—Cases treated from 1st June, 1900, to 31st May, 1901, classified as to Vaccination.

Age-Periods	Vaccinated.		Vaccination Doubtful. (*No Scar visible.*)		Unvaccinated		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases	Deaths.
0 to 5, ...	1	1	3	...	50	33	54	34
5 ,, 10, ...	29	...	1	...	12	2	42	2
10 ,, 15, ...	89	1	1	...	12	4	102	5
15 ,, 20, ...	122	...	2	1	6	2	130	3
20 ,, 25, ...	246	12	3	2	6	4	255	18
25 ,, 35, ...	602	41	11	8	11	5	624	54
35 ,, 45, ...	329	50	11	6	12	4	352	60
45 ,, 55, ...	113	25	7	4	6	5	126	34
55 ,, 65, ...	29	13	2	1	...	...	31	14
65 and over,	13	4	1	1	...	...	14	5
	1,573	147	42	23	115	59	1,730	229

TABLE II.—City of Glasgow Smallpox Hospital, Belvidere.—
classified as to Age, Character, and

Age Period.	Area of Scars.		One Scar.								Two Scars.							
			Foveated.				Unfoveated.				Foveated.				Unfoveated.			
			Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.
0—5	– ·25 sq. in.	Cases,	...	1	(Age		1 9/12	. S	car	·04	sq.	in.)	...	...	...	...	...	...
		Deaths,	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·25 – ·5 ,,	Cases,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·5 – 1· ,,	Cases,	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1· and over ,,	Cases,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cases,	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5—10	– ·25 sq. in.	Cases,	6	...	...	...	6	1	1	...	1	1	...	...	1	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·25 – ·5 ,,	Cases,	...	1	...	...	4	...	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·5 – 1· ,,	Cases,	1	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1· and over ,,	Cases,	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cases,	7	1	...	...	13	1	1	...	1	1	...	...	1	1	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10—15	– ·25 sq. in.	Cases,	3	1	...	...	5	1	...	...	...	...	...	...	1	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·25 – ·5 ,,	Cases,	6	1	...	...	14	2	2	...	...	...	...	...	6	1	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·5 – 1· ,,	Cases,	5	1	1	...	13	3	1	...	2	...	...	...	6	1	...	...
		Deaths,	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
	1· and over ,,	Cases,	...	1	...	...	2	1	...	...	1	...	...	...	...	1	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cases,	14	4	1	...	34	7	3	...	3	...	...	...	13	3	...	...
		Deaths,	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...

ACCINATED CASES TREATED FROM 1ST JUNE, 1900, TO 31ST MAY, 1901;
DIMENSIONS OF SCAR; WITH RESULTS.

Three Scars.								Four Scars and Over.								Total.	
Foveated.				Unfoveated.				Foveated.				Unfoveated.					
Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Cases.	Deaths.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	6	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	.	...	...	1	...	...	...	...	...	...	5	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	29	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	35	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	34	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	9	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	...	...	...	5	1	...	...	...	...	...	...	89	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1

TABLE II

Age Period.	Area of Scars.		One Scar.								Two Scars.							
			Foveated.				Unfoveated.				Foveated.				Unfoveated			
			Sparse.	Abundant.	Confluent.	Haemorrhagic.	Sparse.	Abundant.	Confluent.	Haemorrhagic.	Sparse.	Abundant.	Confluent.	Haemorrhagic.	Sparse.	Abundant.	Confluent.	Haemorrhagic.
15—20	– ·25 sq. in.	Cases,	...	1	...	...	4	..	1	...	1	...	1	...	1	...	1	..
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·25 – ·5 ,,	Cases,	6	1	...	...	4	2	2	...	2	...	...	...	...	2	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	·5 – 1· ,,	Cases,	9	1	2	...	12	4	...	...	8	2	...	...	4	3	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1· and over ,,	Cases,	6	5	...	...	3	1	...	...	5	...	...	...	3	2	...	..
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Cases,	21	8	2	...	23	7	3	...	16	2	1	...	8	7	1	..
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
20—25	– ·25 sq. in.	Cases,	...	2	2	...	8	3	3	...	...	...	...	...	...	...	...	..
		Deaths,	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	..
	·25 – ·5 ,,	Cases,	6	6	2	1	19	6	6	...	4	1	...	...	4	4	...	
		Deaths,	...	1	...	1	...	...	3	..	...	...	...	...	...	...	...	
	·5 – 1· ,,	Cases,	16	6	...	...	9	7	1	...	7	3	1	...	19	9	1	
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	1· and over ,,	Cases,	9	3	2	...	4	4	1	...	9	3	1	...	9	6	2	..
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Cases,	31	17	6	1	40	20	11	...	20	7	2	...	32	19	3	
		Deaths,	...	1	2	1	...	...	4	...	...	...	...	...	...	...	...	
25—35	– ·25 sq. in.	Cases,	7	5	1	1	15	16	9	3	2	...	...	...	5	4	2	
		Deaths,	...	...	1	1	...	1	4	3	...	...	...	...	...	...	2	
	·25 – ·5 ,,	Cases,	17	13	2	..	27	17	10	5	6	4	...	...	22	4	4	..
		Deaths,	2	...	2	...	...	...	1	5	...	...	...	...	...	...	2	.
	·5 – 1· ,,	Cases,	24	19	4	...	43	6	11	1	24	15	7	...	37	18	9	
		Deaths,	...	...	1	...	...	...	3	1	...	...	2	...	...	...	2	
	1· and over ,,	Cases,	10	4	3	...	10	9	3	...	20	12	5	...	18	19	2	.
		Deaths,	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	.
		Cases,	58	41	10	1	95	48	33	9	52	31	12	...	82	45	17	
		Deaths,	2	1	4	1	...	1	8	9	...	...	2	...	...	1	7	

continued.

Three Scars.								Four Scars and Over.								Total.	
Foveated.				Unfoveated.				Foveated.				Unfoveated.					
Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Cases.	Deaths.
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	11	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	24	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	...	...
1	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	49	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	1	...	2	...	...	...	7	2	...	...	...	...	...	...	38	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	2	1	...	5	...	1	...	8	2	...	...	...	1	...	...	122	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	19	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
1	1	...	...	1	...	...	...	...	...	...	1	1	...	...	...	65	...
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	7
...	...	...	...	1	...	...	...	3	...	...	...	1	1	1	...	88	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
5	...	...	...	1	3	...	...	5	1	...	...	5	...	1	...	74	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	1	...	...	3	4	...	...	8	1	...	1	7	1	2	...	246	...
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	12
...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	76	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
1	...	...	...	4	...	...	1	1	...	...	...	...	1	...	...	139	...
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	13
1	1	2	...	8	3	2	...	3	1	2	...	...	2	...	...	244	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	. .	...	10
7	1	...	...	5	2	1	...	7	1	...	...	...	1	3	...	143	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
9	2	2	...	18	7	3	1	11	2	2	...	...	4	3	...	602	...
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	41

TABLE II

Age Period.	Area of Scar.		One Scar.								Two Scars.							
			Foveated.				Unfoveated.				Foveated.				Unfoveated.			
			Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.
35—45	– ·25 sq. in.	Cases,	1	6	6	...	15	15	15	...	...	...	1	...	5	4	2	...
		Deaths,	...	..	4	...	...	2	8	...	...	...	...	...	...	...	1	...
	·25 – ·5 ,,	Cases,	8	14	2	2	13	13	18	7	4	4	4	1	10	8	1	1
		Deaths,	...	1	2	2	...	...	6	7	...	...	...	1	...	...	1	1
	·5 – 1· ,,	Cases,	4	10	1	...	12	6	6	1	14	7	6	...	21	12	2	1
		Deaths,	...	1	...	...	...	...	1	1	...	...	3	...	2	1	2	1
	1· and over ,,	Cases,	3	1	1	...	...	2	1	...	2	6	3	...	4	2	...	1
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Cases,	16	31	10	2	40	36	40	8	20	17	14	1	40	26	5	3
		Deaths,	...	2	6	2	...	2	15	8	...	...	3	1	2	1	4	3
45—55	– ·25 sq. in.	Cases,	2	...	...	...	4	6	8	...	...	1	...	...	3	1	2	..
		Deaths,	...	...	...	...	...	1	5	...	...	...	...	...	...	...	1	..
	·25 – ·5 ,,	Cases,	1	4	...	...	9	5	3	4	4	2	1	...	3	...	3	..
		Deaths,	...	1	...	...	1	1	...	4	...	...	1	...	...	...	2	..
	·5 – 1· ,,	Cases,	2	2	1	...	3	4	4	...	...	5	1	1	1	6	1	1
		Deaths,	...	...	1	...	...	...	1	...	...	1	...	1	...	1	...	1
	1· and over ,,	Cases,	1	...	...	...	...	...	1	...	2	1	...	...	4	1	1	..
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
		Cases,	6	6	1	...	16	15	16	4	6	9	2	1	11	8	7	
		Deaths,	...	1	1	...	1	2	6	4	...	1	1	1	...	1	4	
55—65	– ·25 sq. in.	Cases,	...	...	...	...	1	1	1	...	...	1	...	...	...	...	...	
		Deaths,	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
	·25 – ·5 ,,	Cases,	...	1	1	...	4	...	2	2	...	...	...	...	4	..	1	..
		Deaths,	...	1	1	...	...	...	2	2	...	...	...	...	...	...	1	..
	·5 – 1· ,,	Cases,	...	...	...	...	1	...	1	1	...	...	...	...	1	1	...	...
		Deaths,	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...
	1· and over ,,	Cases,	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
		Deaths,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
		Cases,	...	1	1	...	7	1	4	3	...	1	...	...	5	1	1	
		Deaths,	...	1	1	...	...	...	4	3	...	...	...	...	...	...	1	

continued.

Three Scars.								Four Scars and Over.								Total.	
Foveated.				Unfoveated.				Foveated.				Unfoveated.					
Sparse.	Abundant.	Confluent.	Haemorrhagic.	Sparse.	Abundant.	Confluent.	Haemorrhagic.	Sparse.	Abundant.	Confluent.	Haemorrhagic.	Sparse.	Abundant.	Confluent.	Haemorrhagic.	Cases.	Deaths.
..	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	71	...
..	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	16
..	1	...	...	1	1	2	...	...	...	...	...	...	...	...	...	115	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21
2	1	...	...	1	3	...	...	...	...	...	...	1	1	...	...	112	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12
1	...	...	...	1	1	...	...	...	1	...	...	...	...	1	...	31	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3	2	...	...	3	5	2	...	1	1	...	...	1	1	1	...	329	...
..	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	50
..	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	28	...
..	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	39	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
..	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	34	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
1	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	113	...
..	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
..	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	16	...
..	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	8
..	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	7	...
..	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	29	...
...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	13

TABLE II.

Age Period.	Area of Scar.		One Scar.								Two Scars.							
			Foveated.				Unfoveated.				Foveated.				Unfoveated.			
			Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.
65 and over	– ·25 sq. in.	Cases,	1	5	…	…	2	…	…	…	1	…	…	…	…	…	…	…
		Deaths,	…	3	…	…	…	…	…	…	…	…	…	…	…	…	…	…
	·25 – ·5 ,,	Cases,	2	…	…	…	…	…	…	…	…	…	…	…	1	…	1	…
		Deaths,	…	…	…	…	…	…	…	…	…	…	…	…	…	…	1	…
	·5 – 1· ,,	Cases,	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
		Deaths,	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
	1· and over ,,	Cases,	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
		Deaths,	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
		Cases,	3	5	…	…	2	…	…	…	1	…	…	…	1	…	1	…
		Deaths,	…	3	…	…	…	…	…	…	…	…	…	…	…	…	1	…

continued.

Three Scars.								Four Scars and Over.								Total.	
Foveated.				Unfoveated.				Foveated.				Unfoveated.					
Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Sparse.	Abundant.	Confluent.	Hæmorrhagic.	Cases.	Deaths.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4

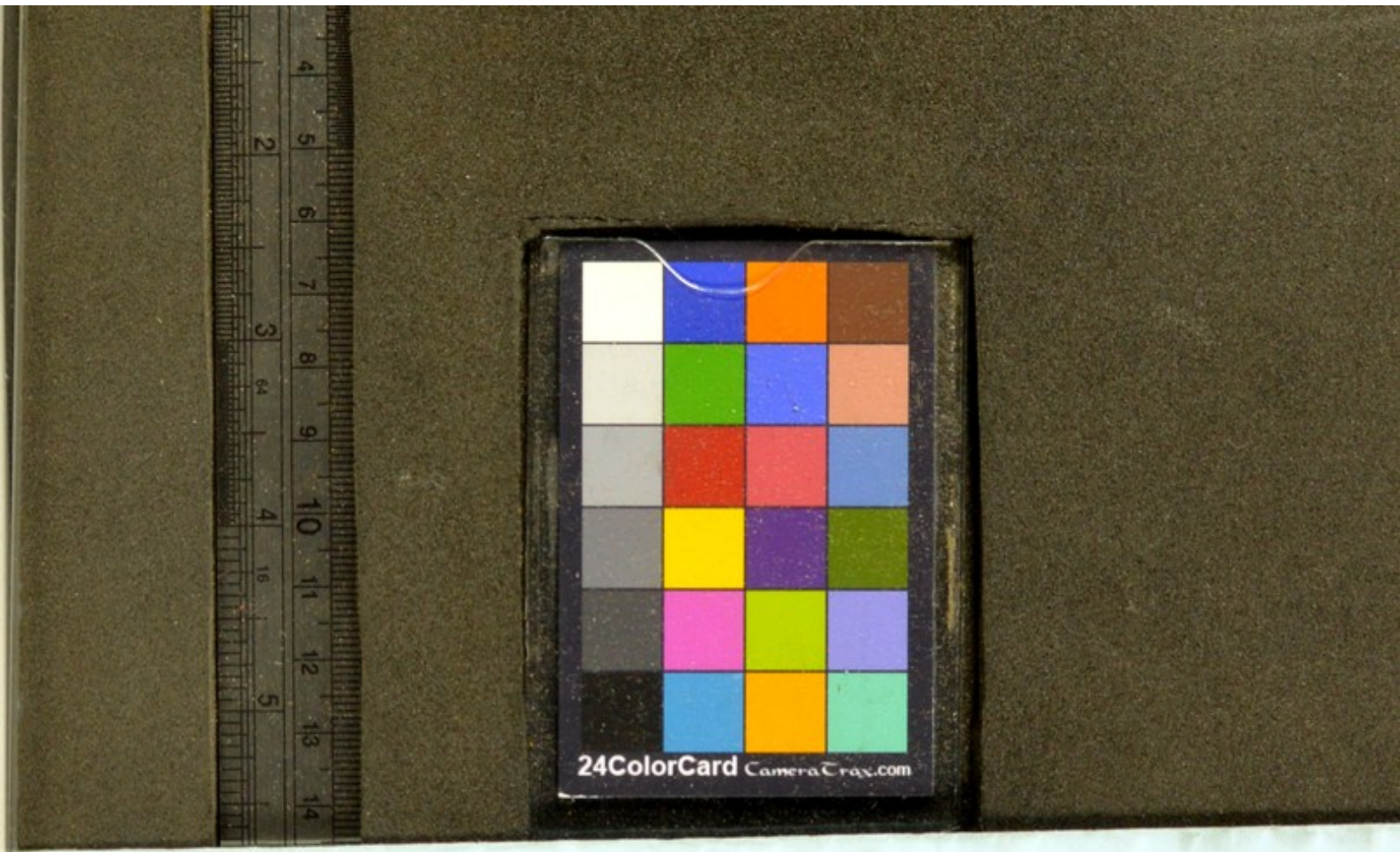
TABLE III.—City of Glasgow Smallpox Hospital, Belvidere.—"Doubtful" and Unvaccinated Cases treated from 1st June, 1900, to 31st May, 1901; classified as to Age and Character of Attack; with Results.

Age Period.	Unvaccinated.									
	Sparse.		Abundant.		Confluent.		Hæmorrhagic.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0—5, - -	3	1	24	9	23	23	...	...	50	33
5—10, - -	1	...	4	...	7	2	...	...	12	2
10—15, - -	2	...	2	...	7	3	1	1	12	4
15—20, - -	...	...	3	...	3	2	...	...	6	2
20—25, - -	...	...	1	...	5	4	...	...	6	4
25—35, - -	...	...	3	...	7	4	1	1	11	5
35—45, - -	2	...	2	1	6	1	2	2	12	4
45—55, - -	1	...	2	2	3	3	...	...	6	5
55—65, - -	...	...	...	...	...	...	...	...	...	...
65 and over, -	...	...	...	...	...	...	...	...	...	...
Total, -	9	1	41	12	61	42	4	4	115	59

Age Period.	Doubtful.									
	Sparse.		Abundant.		Confluent.		Hæmorrhagic.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0—5, - -	1	...	1	...	1	...	...	...	3	...
5—10, - -	1	...	...	...	...	...	...	...	1	...
10—15, - -	...	...	1	...	...	...	...	...	1	...
15—20, - -	...	...	1	...	1	1	...	...	2	1
20—25, - -	...	...	...	...	2	1	1	1	3	2
25—35, - -	2	...	1	...	7	7	1	1	11	8
35—45, - -	...	...	2	...	8	5	1	1	11	6
45—55, - -	1	...	1	1	3	1	2	2	7	4
55—65, - -	...	...	...	...	2	1	...	...	2	1
65 and over, -	...	...	1	1	...	...	...	...	1	1
Total, -	5	...	8	2	24	16	5	5	42	23

TABLE IV.—Showing Number of Smallpox Cases admitted each Month, June 1st, 1900, to May 31st, 1901.

June,	98
July,	41
August,	23
September,	19
October,	36
November,	29
December,	74
January,	419
February,	389
March,	430
April,	137
May,	35
	1,730



TABLE(S)
RUN INTO
GUTTER