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HISTORICAL AND STATISTICAL SKETCH
OF THE
PROGRESS OF EPIDEMIC FEVER IN GLASGOW
DURING THE YEAR 1847.

By R. S. ORR, M. D.

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From the Edin. Med. and Surg. Journal, No. 175.

ALL are aware that fever has prevailed, not only in Glasgow, but also generally throughout the country during the past year, to an extent which has been truly fearful, and which is well calculated to awaken the greatest anxiety in the minds of those who have escaped its ravages. All possess some general knowledge of a few of the leading facts connected with this subject, but few are acquainted with the minutiae. They may have read the newspaper notices, and glanced at the figures and statements there exhibited; and there also they may have observed from time to time recorded the deaths from "Fever," from "Typhus," from "Malignant Fever," of those in the upper and middle ranks with whose names they may be familiar, and of none more frequently than the hard-worked and often ill-remunerated members of our own profession. They can, however, form no idea of the hundreds of the poor and destitute who have, during the past year, paid the last penalty to the epidemic visitor which has so recently decimated their numbers, and reduced many of the survivors to a state of the greatest poverty and helplessness. They can form but a small estimate of the labours of those who have been employed in procuring the necessary accommodation for the thousands afflicted with the malady, and of the fatigues of those who have watched over and attended to their numerous wants.

It is with the view of attempting a short sketch of the history and progress of the epidemic of the last year that I now write. Doubtless there are others more competent to the undertaking. But as the position I so recently held in the Royal Infirmary of Glasgow gave me many opportunities of watching the advance of the epidemic during the greater part of its progress; and as, in the way of duty, my attention was constantly called to the subject, and directed to the means which were employed for staying its course, or alleviating the sufferings of those who felt its ravages,—I trust that those who take the trouble to read the following remarks, will believe, that they are dictated by a wish to furnish correct data from which some knowledge of the extent and preva-

lence of the late epidemic may be arrived at, and also a desire to exhibit the means which have been used to stay its progress. My information, gleaned from the experience of the infirmary, and from the very able and valuable report of the managers, drawn up by Professor Thomson, has been verified by my own observations; and the numerical data on which it is founded, were, for the most part, compiled from the records of the institution, which during the greater part of the year I kept, and of which my successor in office, Mr Steele, to whom I am indebted for much valuable information, has since had the charge. For the statistical details and information from the other hospitals and charities, I am indebted to the officials of each, who had the best opportunities of noting the transactions of their respective institutions, and on whose information, therefore, full reliance may be placed.

In the following sketch I have adhered strictly to the returns furnished from the different hospitals, the district surgeons, and other authentic sources, and have purposely refrained from any conjectures as to the numbers of cases which may have occurred, and of which no return has been made, although, doubtless, these must have amounted to a considerable number. I shall endeavour to investigate, as fully as my data will permit, the progress and amount of epidemic fever which prevailed during the year 1847 in the city and suburbs of Glasgow, and also show the means which were employed to meet and combat its effects.

In the summer of 1845, fever was at the lowest point of declination in Glasgow which had been known for many years. The immunity which the city then enjoyed from this malady, which is there generally so prevalent, was matter of great thankfulness to its citizens, many of whom were as much surprised at that period to be told that their fever wards contained, on more occasions than one, only eight patients, as they have been last year when they learnt, that as many hundreds were often accommodated within their precincts. The satisfactory state of the public health at the time above mentioned is specially alluded to by the managers of the Infirmary in their Report for the year 1845, where they particularly call attention to the very small number of fever cases treated—"a number less by several hundreds than it had on any previous occasion, since the opening of the present fever hospital in 1829, fallen to their lot to report."

In tracing the history of fever from this period, when it may be said to have been at its minimum, I shall begin by analysing the data furnished by the statistics and experience of the Royal Infirmary. From these it appears that the present epidemic (for although on the decrease, it cannot yet be said to have terminated) commenced in Glasgow about the end of the autumn of 1846, some months previous to its appearance in Edinburgh, and went on steadily increasing till the summer of last year, when it attained

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its maximum. To illustrate this point, and in continuation of a table I published last year,* showing the progress of fever and its regularity in advancing and retiring, it may be mentioned, that the admissions to the fever wards of the Infirmary amounted in autumn 1846, when the disease began to be severe, to 627; in winter to 942; in the spring of 1847 to 1205; in summer, when it was at its greatest height, to no fewer than 1729; in autumn to 1248, and in winter to 967; showing at first a manifest and steady increase, and latterly as steady a decline.

The total number of cases of fever treated to a termination in the fever wards and auxiliary hospitals under the jurisdiction of the managers of the Infirmary, during 1847, amounted to the very large number of 5244. Of these 4420 were dismissed cured, and 804 died,—exhibiting a mortality of 15.39 per cent. or two deaths in every thirteen cases.

On only one occasion have the cases treated in the fever hospital amounted to anything like the above number; and this occurred, exactly ten years previously, in 1837; when they reached the somewhat higher number of 5387; and on only two previous occasions did the mortality reach the magnitude of 15 per cent., namely, in 1836 and 1839, when it was in the latter 16½ per cent. and in the former nearly 16 per cent.

In consequence of the great number of applicants for admission to the fever wards, these, at the very commencement of the year, were so full, that the managers of the Infirmary were on many occasions compelled to refuse admission. About the end of January, they succeeded in opening in the neighbourhood of the Infirmary a new hospital, which had recently been erected as a lock-hospital, and which afforded accommodation to about seventy female patients. By the middle of February this also was quite full; the applicants for admission were more numerous than before; and the refusals steadily increased in number. At this time, I was requested by the managers to keep an account of the number of patients who applied for admission, but who, from the want of accommodation, were refused. This record was kept daily during the greater part of the epidemic, and when at its height, there were frequently as many as one hundred or one hundred and twenty cases on the list of applicants whose claims it had been impossible to overtake; while, at the same time, I have reason to know, that many were debarred from applying, in consequence of knowing the utter hopelessness of such an appeal.

In anticipation of future epidemics, the managers of the Infirmary had taken steps for the erection of an auxiliary hospital for the treatment of fever, on a piece of ground which they had formerly purchased, and which seemed well adapted for such a pur-

* *Edin. Med. and Surg. Journal*, No. 171, April 1846.

pose, when they were met by the strongest opposition from the neighbouring proprietors. This opposition they did not think it expedient to withstand, and having advantageously disposed of the ground, they purchased a large new building in Bridgeton,—a district where a fever hospital is much required. This building they considered as very advantageously situated, and as capable, with very little alteration and outlay of expense, of being easily adapted to the purposes of a fever hospital. Here again, however, they were met by opposition; one of the principal proprietors in the neighbourhood having applied to the sheriff for an interdict to prevent them from executing their intended purpose. The managers, in the latter instance, resolved on defending their rights, and instructed their law-agent accordingly; it being apparent, that unless they made a stand here, they might be driven from one quarter of the city to another without getting a site for their hospital. A final decision has not yet been given, and the case is still *sub judice*; but in the words of the report of the managers, where an account of these occurrences is given, “the decision is one destined to have a most important influence on the arrangements to be made in future for dealing with fever epidemics.”* The schemes of the managers for the public benefit being twice thwarted in the manner above adverted to, they resolved, although with considerable reluctance, on the erection of a temporary wooden shed within their own grounds, which was accordingly done; and on the 24th of June it was opened for the reception of fever cases. This erection was capable of containing about 140 patients. Above 80 cases were admitted during the two first days, and in a very short period all the beds were occupied. The additional labour and fatigue, both of body and mind, which these arrangements imposed on the hospital staff of the Infirmary, can only be fully appreciated by those who have held similar positions, and performed similar duties. Too much praise cannot be awarded to the managers of the Infirmary for the very spirited and energetic manner in which they met and endeavoured to combat the ravages of the epidemic. The calamity was a crying one, and as such it required that extraordinary measures should be adopted to grapple with it.

It is greatly to be regretted, that the proposed auxiliary hospital had not been erected when first the ground was purchased for this purpose, so that it might have been ready for all future outbreaks of disease. The erection of a permanent auxiliary hospital seems to be a perfectly legitimate method of appropriating a portion of the funds of the Infirmary, because the sum so invested in a permanent building, remains as it were funded capital; and, in times of epidemic disease, the managers would be

* Since the above was printed, a very decided judgment in favour of the managers has been pronounced by the sheriff-substitute, and, on appeal, confirmed by the sheriff-depute.

justified in looking to their fellow-citizens for increased contributions to enable them to meet the pressing emergencies of the times, and defray the expenses of such an additional establishment. But, on the other hand, it appears very questionable how far it is incumbent on the managers of the Infirmary to provide temporary accommodation in the shape of sheds, &c., for the overplus of fever cases which their ordinary accommodation will not receive; and the same remark applies equally in the case of the Edinburgh Infirmary. Such temporary accommodation is the most expensive method in the long run of meeting the evil, and it is generally badly adapted for the purpose, especially in the winter season. Besides this, it cannot be supposed that the Infirmary boards are to grapple with such a disease as epidemic fever, unaided or unassisted. The funds at their disposal are raised for the maintenance of the institution, and, so far as they will go, for the alleviation of epidemic disease, but not for the erection, and support of temporary buildings, which are comparatively useless after the immediate purpose, for which they were erected, is served. In addition to this, it may here be mentioned, that the Infirmary lies under permanent obligations to a number of country parishes, which long ago subscribed to its funds, which have thus acquired a right to recommend patients, and from which no return is now obtained, but whose interests the board are bound to attend to. The building a permanent auxiliary fever hospital seems, then, a proper disposal of a portion of the Infirmary funds, because, as already stated, there it stands a sum invested for the public good. It can easily be conceived that the expending a large sum of money on extensive temporary erections, every time that epidemic fever visits a city like Glasgow, would be a most extravagant waste of money. But, admitting, on the other hand, that this measure was necessary, which, failing all other suitable accommodation, no one at all conversant with the subject will for a moment doubt to have been particularly the case last year, it appears very far from clear, that it was either the duty or the province of the managers of the Infirmary to provide it. A conviction of the truth of this seems to have made them very unwilling to erect the shed on their grounds; knowing, also, as they did, and as the sequel will fully prove, that they could not, even with such accommodation, afford admission to all who would apply.

In the act 8th and 9th of Victoria, cap. lxxxiii., for the amendment and better administration of the laws relating to the relief of the poor in Scotland, (4th August 1845,) it clearly appears to be declared the duty of the parochial boards of the different parishes to afford medical relief to the poor of their districts. In the 69th clause of that act, it is thus enacted, "That in every parish or combination, it shall and may be lawful for the parochial board,

and they are hereby required, out of the funds raised for the relief of the poor, to provide for medicines, medical attendance, nutritious diet, cordials, and clothing for such poor in such manner and in such extent as may seem equitable and expedient." This is a very comprehensive clause, and invests them with great power for the relief of the sick and diseased poor, and indeed requires this at their hands. Now, after the ordinary accommodation for epidemic disease has been filled up, does it not clearly appear to be the duty of the parochial boards to furnish the additional accommodation for the poor of their respective districts, and thus afford the only "relief" which is calculated to have any affect in checking the malady? There is nothing in the act which prevents their erecting and maintaining such accommodation for the treatment of epidemic disease; all that is necessary being, as in the case of the erection of poor-houses, the submitting their plans to the approval of the Board of Supervision. I am aware, that, in a previous clause of the act to the one above quoted, it is enacted, that it is lawful for the parochial boards to subscribe from the poor's funds to any public infirmary, dispensary, &c., such sums as may seem to them reasonable and expedient. This is quite right, and is generally sufficient in times when disease is not more prevalent than ordinary; but, when the contrary is the case, it seems distinctly to be their province to provide the necessary accommodation for the sick and diseased. It is true the Infirmary board have lately, as on former occasions, erected fever sheds and temporary accommodation for those afflicted with epidemic disease, because, before the enactment of the recent poor law, they seemed the only parties to undertake the duty. But now that the law imposes the care and guardianship of the sick and diseased poor, as well as of the healthy, on the parochial boards, the furnishing proper accommodation for them in times of distress when disease is unusually prevalent, appears a very reasonable and proper application of their funds. The justice of these observations seems, after some little delay, to have been acknowledged by the parochial boards themselves, at least in the case of Glasgow, in their ultimately furnishing such accommodation, as will be presently more fully shown in prosecuting the history of the epidemic. In the case of Edinburgh, the task seems to have devolved entirely on those in the direction of the Royal Infirmary. Let any one read the last report of the managers of the Edinburgh Infirmary, and he will find this fact fully confirmed, as well as the apathy of the parochial boards much complained of. No doubt these boards have had their hands full during the past year, which was one of much disease and unexampled distress. The working of the new poor-law system also is yet far from being matured, and the delay that has in many cases occurred, it is to

be hoped, is to be accounted for on these grounds. The labours and fatigues of the inspectors of poor, and of the officials connected with the Town's Hospital of Glasgow, have during the past year been perfectly unprecedented; these, I have often been told, being frequently protracted to a very late hour.

Having thus gleaned from the experience of the Infirmary so much of the history of the epidemic, and examined the extent to which it has been made subservient in combating the disease, I now proceed to notice briefly the returns made to the Town's Hospital authorities by their district surgeons. These gentlemen are seventeen in number; and it is their duty to afford medical relief to the poor of the City Parish of Glasgow. They have made regular returns of the numbers of fever cases visited by them in each of their districts since the year 1832, and a weekly record is kept of old cases, (that is, I presume, of those formerly reported as under treatment,) new cases, and cases sent to the Infirmary. By the kindness of Mr Hill, who keeps this record, which, it is much to be desired, should be regularly continued, I have been allowed access to it, and have been enabled from it to construct the following table, which shows the weekly *average* number of fever cases reported, as above-mentioned. In examining this table it is particularly necessary to bear in mind that it is the *average* weekly number for each year that is there exhibited, and that the numbers sent to the Infirmary are excluded.

TABLE showing the average weekly number of Fever Cases visited by the City District Surgeons from 1833 to 1847.

Year.	Old Cases.	New Cases.	Total.
1833	12	13	25
1834	16	18	34
1835	10	11	21
1836	21	26	47
1837	50	63	113
1838	10	15	25
1839	3	7	10
1840	13	26	39
1841	15	27	42
1842	7	13	20
1843	392	287	679
1844	60	35	95
1845	10	7	17
1846	38	34	72
1847	230	209	439

It may excite surprise in the minds of those unacquainted with the real cause, to observe from the above table, that there was a much greater amount of fever in 1843 than in 1847; and more especially will this be the case, when they remember that no additional accommodation, beyond what was provided by the ordinary fever hospital, was called into requisition. But the explanation is to

be found *first* in the nature of the fever which was then prevalent. It was a new fever which had not been seen before;—the relapsing fever, as it was called, on account of the almost uniform occurrence of relapse. It was a mild disease, the mortality being only about 4 per cent.; and ran its course much more rapidly than the epidemic now prevalent. According to the mortality bills of the city of Glasgow for the year 1843, drawn up by the late Dr Alexander Watt, the total number of deaths from fever in the city and suburbs for that year amounted to 1398. Taking the mortality as above stated at 4 per cent., this number would indicate about 35,000 as the number of individuals attacked by the disease. The fever of 1847 was, on the other hand, of a much more malignant type, and, as has already been seen, its mortality was very high. I have ascertained from the registers of the above mentioned lamented statist, that the total deaths from fever in 1847 amounted to 4346; but as the mortality of the present epidemic has been 15 per cent., that number indicates only 29,000 as the number attacked. A *second* explanation of the apparent disproportion between the prevalence of fever and the amount of hospital accommodation,—and it is a strong one,—is the fact that there was incomparably less destitution in 1843 than in 1847. By far the larger number of those affected underwent the disease at their own homes; indeed it appears from estimates made at the time,* that only about a tenth part of those affected were sent to hospital. During 1847 there has been the greatest depression and stagnation in trade, with numerous and very extensive failures; and poverty and destitution, caused chiefly by the great influx of Irish paupers, have prevailed to a most fearful and calamitous extent. The fever hospitals were in consequence crowded to overflowing with houseless wanderers; and the number of those marked “houseless” in the Infirmary registers under the head “residence,” exceeded all parallel. In many cases the *residence* given was scarcely worthy the name, and the tenants would with more propriety have been termed *lodgers* than *residents*. Many poor, starved, destitute, and diseased creatures were brought and laid down before the doors of the Infirmary, their relatives, if they had any, not knowing what to do with them; and, in numerous instances, it was destitution and starvation more than fever which was their chief affliction. Numbers also were sent to hospital in such a weak state, that, as appears from a very accurate table kept for me by Mr Brown, the janitor of the Royal Infirmary, of the deaths from all diseases, including fever, occurring in the Infirmary during last year, 133 died within 36 hours after their admission, of whom 107 died within 24 hours, and 50 within 12 hours. In 74 of the

* See Dr Perry's Observations on the Sanatory State of Glasgow in 1843, Edin. Med. and Surg. Journal for July 1844. Page 87.

deaths in the fever wards the patients had been less than 36 hours in hospital, and of these 38 died within 24 hours, and 16 within 12 hours after admission.

To destitution, therefore, are we principally to look for the cause which, during the past year, has filled our fever hospitals to overflowing. Hundreds of strangers have undergone the disease in them, who might truly be said to have had no other place where to lay their heads; and many were compelled to seek hospital relief who in ordinary times would have weathered the storm without such aid. The actual number of cases of fever reported by the district surgeons of the city parish in the epidemic of 1843, from the month of May till the end of the year—a period of eight months—is stated by the late Dr Perry (and his estimate is not exaggerated, but the contrary) to have been, in round numbers, 14,000; whereas in 1847 they cannot, in that parish, for the whole year, be estimated at more than 11,000; and yet, the hospital accommodation required in 1847 has been more than five times what was necessary in 1843. The highest number of cases reported weekly in the district surgeons' returns amounted in 1847 to 319, while in 1843 they were frequently above 700, and on one occasion reached the number of 855.

Up till the month of July there was no additional accommodation furnished for the reception of fever patients beyond what has already been mentioned as having been afforded by the managers of the Royal Infirmary. Meantime the epidemic advanced steadily. Some weeks previous to this, however, the parochial board of the City Parish, seeing the fearful strides which the disease was taking, the great ravages it was committing among their poor and destitute, and the complete impossibility of all of them being accommodated in the Infirmary, resolved on having an hospital of their own. They were fortunate enough at this time to secure the old Town's Hospital in Clyde Street for the purpose, though a short time previously they, in conjunction with the managers of the Infirmary, as stated in their report, had failed in obtaining it for a fever hospital. On taking possession of this building, which had been for some time unoccupied, several destitute families were found to have taken up their abode there, for want of any other residence; and as several of the individuals were labouring under fever, it was necessary to remove them to the Infirmary, in order that the alterations necessary for converting the establishment into fever wards might be proceeded with. These arrangements were sufficiently completed to enable the board to open a part of the establishment on the 7th of July. On that day between seventy and eighty fever patients were admitted, and the accommodation, which ultimately numbered 634 beds, was afterwards, as soon as ready, filled

up. The following numerical statements, taken from the records of the institution, and for which I am indebted to the kindness of Mr Hill, will exhibit the amount of benefit which this charity has conferred on the community.

There were admitted, from the period of its opening (the 7th of July) till the end of the year 1847, 4433 patients; of these 3937 were treated to a termination, 3377 having been dismissed, recovered, and 560 having died, and 496 remained under treatment on the 31st of December.

In consequence of the great number of cases of fever which existed in the very large and wide spread Parish of the Barony, of the total inability of the managers of the Infirmary to receive them into their fever hospital, and of the conviction that their being removed from their own abodes to hospital was the only means of staying the epidemic, the Barony parochial board resolved on the erection of a temporary building for their accommodation. This building, which was of wood, they were allowed to erect on a piece of ground in Anderston, belonging to Mr Lumsden, late Lord Provost of Glasgow, who liberally granted them the use of it. It is situated in a district where fever was very prevalent, and where it was consequently much required. There happened to be a large dwelling-house and offices previously on the ground, which were found well suited for the resident hospital staff, for culinary purposes, &c. Wooden sheds were erected which at first contained 150 beds; subsequently, accommodation for 100 additional beds was procured, so that the total number amounted to 250. On the 5th of August this establishment was opened, and from that date till the end of the year, the number of cases of fever admitted was 1806; of these 1601 were treated to a termination, 1414 having been dismissed recovered, and 187 having died, and 205 remained under treatment on the 31st of December. For these statistical data I am indebted to my former assistant in the Infirmary, Mr Paterson, who is now connected with this establishment.

On reviewing and summing up the statistical data collected from the records of the three hospitals, of the transactions of which the preceding remarks are a brief sketch, it will be found that the total number of beds appropriated for the reception of fever cases, when the epidemic was at its height, amounted to 1254. The total number of fever patients who have found refuge in the hospitals of Glasgow during the year 1847 has amounted to no fewer than 11,425; of these 10,762 have been treated to a termination, of whom 9211 were dismissed recovered, and 1551 died; and 907 remained under treatment on the 31st of December 1847. These results will, however, be more clearly exhibited in a tabular form, which I therefore subjoin.

TABLE showing the number of Fever Cases treated, &c. in the Fever Hospitals of Glasgow during the year 1847.

	Admis- sions.	Dis- mis- sions.	Deaths.	No. remaining 31st Dec. 1847.	Mort. per cent.
Fever wards of Infirmary,	5186	4420	804	206	15.39
City Parish Hospital,	4433	3377	560	496	14.22
Barony Parish Hospital,	1806	1414	187	205	11.67
	<hr/> 11425	<hr/> 9211	<hr/> 1551	<hr/> 907	<hr/> 14.41

The mortality of the disease, as calculated from these data, amounted to 14.41 per cent., or one death in every seven persons attacked. The greater mortality of the cases treated in the Infirmary is accounted for by its having been larger in the first half year than in the second; but as the other hospitals were not occupied during the former period, no comparison can be made. It further appears from the above table, that the disease was, at the close of the year, far from being subdued, there being at that time no fewer than 907 patients in the three fever hospitals. Of these it is to be remarked, that 496, more than the half, were under the charge of the parochial authorities of the City Parish, and about a fourth under that of the Barony Parish authorities, showing the urgent necessity for the accommodation which these public bodies have latterly so fully furnished. Dr Alison, in his *Treatise on the Management of the Poor*,* relates the case of an Irish widow with four children, who was refused relief from the Charity Workhouse. The consequence of this was, that she and her children lived for some time in extreme destitution, in a close cellar, in a small but crowded close. One of the children took fever, the others soon sickened, and within a few weeks the disease spread to fifteen of the neighbours. He adds, that he has witnessed hundreds of such instances, and remarks, that if this family had been taken into the workhouse, or supported in comfort out of it, he firmly believes this little epidemic would never have occurred. The same reasoning applies to the subject before us. Who can calculate the number of similar little epidemics which the timely removal of the first case to hospital has been the means of checking; and how much more fearfully would the disease have raged and spread through the city had not the additional accommodation of 1024 beds been provided for the poor sufferers?

This seems the proper place to inquire who have been the chief sufferers from the recent epidemic. I now therefore proceed to show, from data derived from the sources from which the information already given has been obtained, that the Irish paupers, who, during the past year, have flocked in such numbers to Edinburgh and Glasgow, have been the principal victims of the disease, and that it is owing to their great influx and destitution that the

* On the Management of the Poor in Scotland, by William P. Alison, M. D., F. R. S. E. Edin. 1840. Page 192.

epidemic attained such a degree of prevalence. The following table exhibits a statement of the numbers belonging to each nation of those treated in the Infirmary fever wards and in the Barony Fever Hospital during the year 1847; but as no record of this nature was kept in the City Parish Hospital prior to the 10th of September, the numbers for that establishment can only be given from that date till the end of the year.

TABLE showing the number of Scotch, Irish, English, &c. treated in the Fever Hospitals of Glasgow during the year 1847.

	Scotch.		Irish.		English.		Foreign-	Un-
	No.	Per cent.	No.	Per cent.	No.	Per cent.	ers, known.	No.
Fever Wards of Infirmary,	2094	=40.08	3106	=59.45	15	=0.28	9	...
City Parish Hospital from } 10th September, . . }	896	=39.64	1326	=58.67	38	=1.68	...	...
Barony Parish Hospital,	890	=49.28	884	=48.89	25	=1.38	2	5
	3880	=41.76	5316	=57.22	78	=0.83	11	5

This table shows, that of the above numbers of patients, considerably more than one-half were natives of Ireland, who, strictly speaking, have no legal claims on the parochial authorities for such an amount of medical relief. It certainly does appear hard, that a city like Glasgow, already sufficiently burdened with the poor of its own country, should be compelled, it may be said in self-defence, to afford relief to such a multitude of strangers. In many cases, after the Infirmary fever wards were completely full, it was often extremely painful to be obliged to refuse admission when those applying for it belonged to one's native country, knowing, at the same time, how many beds originally intended for their use were filled by the natives of another. The results obtained from an examination of the above table, show that the number of Scotch who were treated could quite well have been accommodated in the fever wards of the Royal Infirmary, without any additional accommodation. I have elsewhere* given a tabular statement of the numbers of the natives of Ireland who for several years back have received the benefits of treatment in the Infirmary fever wards. From that table it appears that during the last eight or ten years they have increased from 25 and 30 per cent. to 47 per cent. of the whole number treated. Last year, however, they will be found to have reached nearly 60 per cent., while the natives of Scotland amount to only 40 per cent. of those treated. Here, then, there appears to have been a complete change as regards the numbers treated belonging to each country, the Irish having now taken the place in our hospitals which the Scotch occupied ten years ago, and *vice versa*; and this frequently to the

* Edin. Med. and Surg. Journal for April 1846.

exclusion of the latter. These circumstances, however, speak very highly for the liberality and charity of the citizens of Glasgow, who have thus, by means of their hospitals, furnished such a great amount of relief to the distressed sufferers from the sister island.

It has been supposed* that the present epidemic is an imported disease, and this chiefly because of the immense number of Irish who have suffered from its ravages. To this opinion I do not feel inclined to subscribe. I readily admit that a very large number of its victims have been imported, and this appears to me to be the more correct way of viewing the subject. Hundreds of the poor distressed Irish who last year flocked to Glasgow and the other large towns, were, from their very circumstances, in a state which rendered them peculiarly liable to be attacked by fever. They were in utter destitution and poverty. Many of them half-starved; they came from their own country in this state; many of them from the rural districts, and were located, on their very first arrival, in the dense, overcrowded, ill-ventilated lodging-houses of Glasgow, from which, it is well known, fever is seldom absent. There, before their constitutions became accommodated to such an atmosphere, they met the epidemic, and themselves furnished the *materiel* on which it has committed such ravages, instead of, as has been supposed, communicating it to those they found there. Another argument in favour of this view of the subject is derived from the fact of the regular periodical appearance of epidemic fever. This has, by the most accurate observers, been remarked to recur every ten years in the city of Glasgow; and we have records of its occurrence in 1817, 1818, and 1819; in 1826, 1827, and 1828; in 1836, 1837, and 1838; and now we have it prevailing in 1846-1847-1848. This periodical prevalence of fever seems therefore totally independent of any importation of the disease, which has raged as extensively, as regards actual numbers, among the Scotch residents as formerly, although the great influx of Irish to the hospitals has, in calculations on the subject, tended to diminish the per centage of the former.

I have already hinted at the labours and fatigues of those who, during the past year, have been engaged in attending on the sick. The following particulars will show the very hazardous nature of the employment of these individuals.

In the City Parish seven out of the seventeen district surgeons took fever, of whom three died. In the Barony Parish, of the seven district surgeons three died of it; I have not been able to ascertain the total number attacked. In Govan Parish, one district surgeon had the disease, but recovered. In the Royal Infirmary, Mr Steele informs me, four hospital clerks had fever, of whom one died; and thirty-six individuals, including nurses, servants, and two

* Report on the Mortality of Edinburgh and Leith, by James Stark, M. D. Edin. Med. and Surg. Journal, July 1847, pp. 260, 261.

matrons (of whom one died), had the disease, and of this number five died; the total number of servants, &c. employed in the fever department of the Infirmary being about forty-five. Of the Town's Hospital officials, eleven, including inspectors of poor, &c., had fever, of whom five died. In the City Parish Fever Hospital, two medical officers had fever, and one died; thirty nurses and servants also were attacked, and of these six died,—there being altogether about sixty employed. In the Barony Parish Fever Hospital one clerk had the disease and recovered, and thirteen nurses and servants, of whom one died. This establishment employs about thirty servants, &c. Two Inspectors of the Poor in the Barony Parish died of the disease; but I have been unable to ascertain the number attacked. Four officials connected with the management of the poor in Govan Parish were attacked with fever, of whom one died, and three connected with the Gorbals Parish, and of these two died.

No fewer, therefore, than 117 persons employed in the treatment and care of the sick have been ascertained to have been affected with the epidemic, and of this number 30 have died: so that, while the disease has cut off one in every seven among the poor afflicted by it, it has been fatal to one in every four of those in attendance upon the sick who were attacked, and nearly one-half of the medical officers attacked have died of it. The following table exhibits these results.

TABLE showing the number of Medical Officers and Officials of the different Charities in Glasgow who suffered from Fever in the year 1847.

		Medical Officers			Officials.			Totals.		
		No.	Cured.	Died.	No.	Cured.	Died.	No.	Cured.	Died.
City Parish	{ District Surgeons	7	4	3	..	...	..	7	4	3
	{ Town's Hospital	...	...	...	11	6	5	11	6	5
	{ Clyde St. Hospital	2	1	1	30	24	6	32	25	7
Barony Parish	{ District Surgeons	3	..	3	2	2	2	5	...	5
	{ Fever Hospital	1	1	...	13	12	1	14	13	1
Govan Parish	.	1	1	...	4	3	1	5	4	1
Gorbals Parish	.	...	...	...	3	1	2	3	1	2
Infirmary Fever Wards	.	4	3	1	36	31	5	40	34	6
Total,		18	10	8	99	77	22	117	87	30

I shall only in conclusion advert to two indications having reference to future outbreaks of disease, which seem to flow from the experience of the present epidemic; and which it appears very important should be attended to. The first of these regards the erection of district fever hospitals in, or rather near, the localities of the city and suburbs where fever is most prevalent. The

propriety of this was long ago urged by the late Dr Cowan, and it is particularly alluded to by the managers of the Infirmary in their last report. What is 230 beds, which is the ordinary accommodation of the fever hospital, for a city like Glasgow, with its population of 344,200? We have seen that 1250 beds have scarcely been sufficient on this last occasion. Permanent, not temporary fever hospitals, should therefore be got ready as soon as possible, so that, when an epidemic appears, they may be made immediately available for the treatment of the disease, instead of having to be sought for or erected, while, in the meantime, the disease makes progress without any check being given to it. The managers of the Infirmary may be said to have already pledged themselves to have an auxiliary hospital without loss of time. Let the parochial authorities of the City and Barony parishes, and I may add, those of Govan parish also, each erect a similar establishment for the relief of their own poor in times of epidemic disease, and I will venture to predict, that by thus separating the sick from the healthy, and making an early impression on the disease, they will deal with the next epidemic in a much more economical and efficient manner than they have done lately, and save themselves not only from expense, but also from great labour and anxiety.

The second indication to which I would advert is equally important. It refers to the necessity of having the houses, apartments, and bedding of those removed to the fever hospitals thoroughly cleansed and purified. This appears a self-evident proposition. The removal of fever patients to hospital will have little effect in checking the disease, if the very beds in which they lay are the same night to be occupied by another set of *victims*, as they may be called; and these too, it may be presumed, often very unsuspecting victims. At the commencement of the present epidemic, and indeed after it had raged for a considerable time, little or no attention was paid to this point; and, there can be little doubt, the disease spread much more, in consequence of this neglect, than it would have done, had the very important measure I am now advocating been adopted. Lately, however, it is satisfactory to think, that it has been attended to, and that there are now individuals employed, whose duty it is to white-wash and fumigate the houses of those infected with fever, and wash and purify their bedding. It would be well, if each of the fever hospitals had a regular staff of white-washers and fumigators attached to it, to whom the addresses of those brought to the hospital should be communicated as soon as they arrive, in order that they might at once proceed and commence their work of cleansing and purification.

These means of removal and separation of the sick, and purification of their abodes, may be considered the most efficient

measures for checking the prevalence of epidemic disease, and for preventing, so far as human means can do so, a recurrence of the distresses so recently experienced.

Dunoon, February 1848.

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