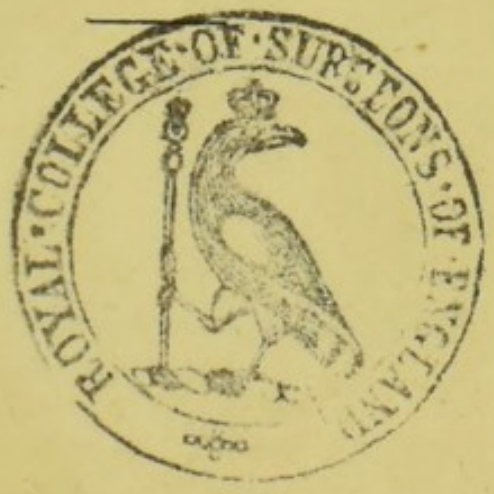
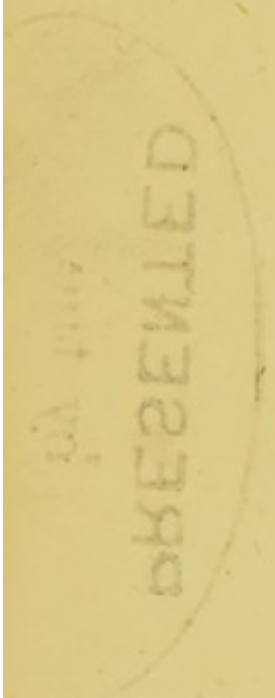
English hospitals in their sanitary aspects : being the annual oration delivered before the Medical Society of London / by George Buchanan.

ENGLISH HOSPITALS

IN THEIR SANITARY ASPECTS.

BUCHANAN.




PRESENTED


ENGLISH HOSPITALS

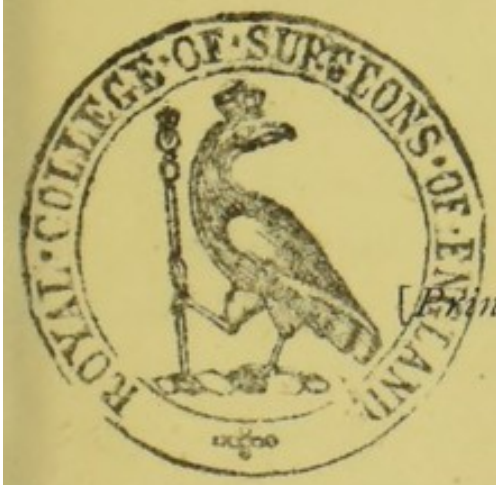
IN THEIR SANITARY ASPECTS.

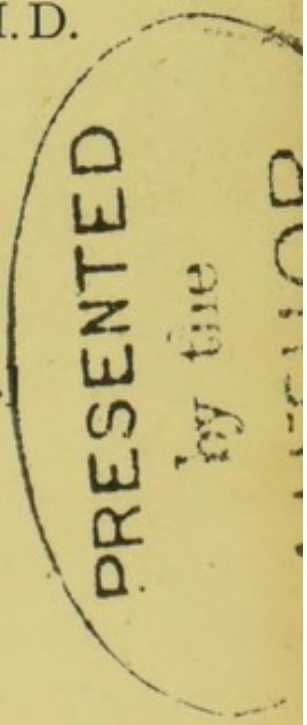
BEING THE ANNUAL ORATION DELIVERED BEFORE

The Medical Society of London.

BY

GEORGE BUCHANAN, M.D.





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1875.

Mr. President and Gentlemen,

It behoves the holder of the Chair, to which I am called by the undeserved preference of your Council, to remember the many classical addresses that have been delivered from it, and to be careful not to challenge comparison between his own efforts and those of former orators. He may best hope to avoid this comparison if he select, as the subject of his address, some topic that has not recently been handled, and on which he shall happen to be less ignorant than on others. He must, however, have a care that his matter shall, in interest and importance, deserve the attention with which this Society has ever received its annual oration.

I have sought to fulfil these conditions by choosing as the subject of to-night's address some points relating to hospitals and the good that can be done by hospitals—a subject which, in certain respects, is of general, indeed of national interest, but which is of more especial concern to our profession; first, as hospitals are essentially medical institutions; and secondly, as the object of doing good is one that commends itself, I venture to say, in a peculiar degree to medical practitioners.

I should be but a poor exponent of this theme if I proposed to uphold it by illustrations of the advance made by recent generations on the curative skill of their predecessors, if I were to try and show how one or another disease is better understood, how sufferers from disease or injuries formerly deemed beyond the resources of art may now come to our hospitals with

expectation of relief and cure ; how the lessons gained in hospitals have ever more and more enabled physicians and surgeons to benefit the community at large. Such a theme, indeed, involving no less than a review of the progress of medicine and surgery, would risk for me the very comparison which I deprecate ; for reviews of this sort have been among the more favoured subjects of annual orations, and have exercised the powers of some of the most comprehensive and gifted minds in our Society. I may venture, however, to consider before you some of such questions relating to hospitals, in their influence upon patients and upon the community, as fall within my more particular province as a student of sanitary medicine.

Gentlemen, in what are called the "good old times" (the goodness of which consists mainly in the happy fact that they are old and gone), in the times when people died in our great cities faster than children were born there, when every now and then a plague destroyed in a year as many people as all other diseases put together, a hospital, so far from answering to its beneficent idea, as we conceive of it, was either a general poor-house, as in the early days of St. Bartholomew's and St. Thomas's, with little medical element in it ; or, so far as it served for the sick, it must, according to the best information I have of it, have answered rather to Michael's show of a lazar-house, where—

> Despair
> Tended the sick, busiest from couch to couch :
> And over them triumphant Death his dart
> Shook.

Indeed, down to the days of John Howard, a mere

century ago, ignorance and neglect marked the management of these places, typhus fever and small-pox were their constant inmates. In their crowded wards, we are told, no case of compound fracture or of trepan survived.

A beginning of hygienic work in hospitals was made by Howard, and clear views as to ventilation, space, and cleanliness were propounded by him; in some institutions being carried into effect with immediate happy result. But the reform that Howard brought about in prisons he did not live to effect for hospitals. It was in 1789 that his work on Lazarettos was printed. It was in 1790 that he himself, far from home, fell a victim to one of the diseases that infested the hospitals of his time.

While this was the state of civil hospitals, even more terrible stories came to us from military practice. We read of disease encouraged in military hospitals till it slew more men than the sword; and that not in a particular campaign, but habitually; so that "plague and pestilence," it was said, "are rightly put before battle and murder in our prayers." Now and then, indeed, it would happen that soldiers camped out in the cold and wet, because the hospitals were full, healed their wounds with surprising ease, and escaped death from typhus. Or, it would be observed, the first thousand or two of amputations did well, while the after-cases got gangrene among them. But these facts did not at once teach their lesson.

On these times, and on the work that was soon afterwards done in England, and somewhat later in France, in the direction of amending the filth, the

neglect and the crowding of hospitals, I am not a little tempted to dwell; for I might cite Dr. Sims, the very earliest orator of this Society, to tell what was then to him the significance of malignant fevers. I might record the experiences of Sir Gilbert Blane on hospital typhus, hospital gangrene, and the minor influences that retarded the cure of patients, and show how true an insight he had into their causes. And I might recall with pride to this society the work that was done by our own Fothergill in association with Howard, to bring about reform in the healthiness of prisons and hospitals. But I shall do most honour to these great names, if, thinking nothing done while aught remains to do, I ask your consideration rather to some of the shortcomings that are left to our own times, and to the organisation by which we may most certainly rid our own hospitals of all those mischiefs that, with our later knowledge, we have reason to regard as preventable.

The proposition that a hospital has a duty to promote the recovery of its patients by all possible hygienic measures, as well as by the ministrations of the surgeon and physician, has, at least since the times of which I have spoken, commanded a certain vague assent. But down to our own days, practice has been sadly behind principle in this regard; and abundant cases may be adduced of mischief done by hospitals, in civil and in military practice, for the mere want of that incessant solicitude as to sanitary conditions which would be considered inexcusable if it related to therapeutical conditions. Of the fact of this mischief, and of its very wide distribution, it is hardly necessary that I should bring

evidence. The thing is too well known; nearly every hospital in the kingdom has had some experience of it. And the habitual relation between the worse experiences of this mischief and broad defects in hospital arrangements is scarcely less notorious. Throughout England, the outbreaks of hospital gangrene and of erysipelas, and the spread of fevers, recorded from time to time in country hospitals as well as in those of large towns, have been, with scarcely an exception, connected with some palpable foulness of ward or with some serious defect of ventilation, or with overcrowding or fault of drainage, or with lack of any provision for isolating infection, or with some of these defects combined. As an extreme instance of such connection, let me mention the case of the York Road Lying-In Hospital, whether perversity rather than carelessness was involved. At this Institution a quarter of a century ago, whether puerperal fever should or should not infest the wards, whether ten women or one should die there, is shown by crucial evidence to have been a mere question of ventilation; a question which, however, the committee chose to decide against the advice and remonstrances of their physician. In army practice, again, as late as the Crimean War, we find hospital gangrene in the ill-contrived barrack hospitals, even more among the collections of amputations in the camp hospitals under Sebastopol, but worst of all among the crowded French hospitals on the Bosphorus.

In truth, it could not be until sanitary medicine had asserted its place as the equal and ally of curative medicine that thorough systematic action for the prevention of unwholesome conditions in hospitals became possible.

And, as the experience of military practice had ever afforded the most conspicuous examples of these conditions, and of their consequences, so it was military experience that led the way to amendment in hospitals, and to the reduction of the diseases engendered in them. Twenty years ago, when, thanks to the zeal of a small band of workers, England was just beginning that series of tentative enactments which now are grown ripe for the handling of the highest statesmanship, the war with Russia gave the opportunity of putting into practice what was then known of sanitary medicine and of acquiring further knowledge, particularly on this matter of hospital healthiness. You all know how greatly these opportunities were used, how our English doctors contrived, in spite of all mischances, to keep the mortality of hospitals far below that of our allies; and how, aided by the noble band of sisters of whom Florence Nightingale was head, they brought home lessons that formed a new starting point for the reformation of hospital arrangements. From that time the old horrors of military hospitals cannot, it may be hoped, again be witnessed. Already the American war has shown a campaign unlike any other in history for its immunity from erysipelas, surgical fever, and kindred affections; and in the last great war in Europe, there was similar escape from the worst forms of hospital diseases. Indeed, looking at the sense that Governments have gained of the ability of sanitary science to influence the power of armies, and at the provision that is now made for the sanitary teaching of the army medical officer beyond anything that is required in the course of general medical education, it concerns those who manage our civil hospitals to see

that they are not distanced in respect of wholesomeness by the military hospitals of the future.

The wholesomeness of a hospital, regarded merely as the appointed dwelling-place of a number of people, obviously demands, to begin with, the observance in a superlative degree of those conditions under which a dwelling-house is wholesome; conditions of dryness, of drainage, of space, of airiness, of cleanliness and filth removal. In a superlative degree, if only because the inmates of the place cannot regulate these things for themselves nor escape from their influences for good or bad. They cannot even go at will from one room to another and leave their chambers to become free from such air-pollution as even the healthiest living body produces. They cannot get into the open air where on the stillest day a new atmosphere equal to the whole bulk of a house would be presented to them every three or four seconds. No; for most of them it is—

> "The weariness, the fever, and the fret,
> Here, where men lie and hear each other groan."

Bed by night, bed by day; utter dependence upon others for their every sanitary environment, even to the allowance of some regulated quantity of such air as is to be had. It is a proposition that would seem self-evident, if it were not continually denied in practice, that it should be somebody's business specially to care for these things.

I will say nothing of original design or construction of hospitals, a matter on which those who are to have the management of the sick in them may or may not have been consulted; but it would be interesting to know,

with reference to the everyday management of these institutions, in how many of them is such a thing as a plan of the drainage to be seen? or, in how many are water-cisterns periodically cleaned out? in how many is there some one responsible for current cleanliness, for the efficiency of water-closets? in how many could the state of the ward air at early morning be vouched for? Admittedly these common things affect, what it is the province of the hospital by all means to care for—the health of the hospital inmates; but too often, I fear, it happens that such matters are treated as the chance concern of anybody out of a dozen officers and servants. It is only when some hospital disease makes its appearance that these everyday sanitary matters are thoroughly looked into, and the records of hospitals abound with stories of how they have been neglected. In one place a dustbin provides matter for some interesting ætiological speculation in connexion with prevalent erysipelas; in another, faults of closets and sinks disturb some deductions about the way of spread of fever; in a third, wards are over a dissecting room; in others, imperfect drainage is found, and so on and so on. And for each such instance of sanitary neglect in connexion with some palpable calamity, how many instances must there be where similar neglect goes undetected, doing its mischievous work, not less surely because slowly, while its results are ascribed perhaps to the "temperaments" of individuals, or to the "epidemic constitution" of the time!

It is not, however, till we go on to consider the hospital as a place specially devoted to sick and maimed people that we can begin to appreciate the full meaning of "sanitary circumstances" there, or that we can

attempt to realise the need that at every moment exists for a skilled sanitary care.

Now we have to do with people giving off from their bodies not particles of waste merely, but diseased particles that have potency for harm to the body that generated them and to other bodies; and now we see a wholly new significance attaching to those common sanitary demands of cleanliness and dryness. Now we have to do with bowel secretions capable of specifically poisoning the entire sick community, and now we see a quite fresh importance attaching to the common demand for good drainage and for complete excrement removal. Now we are concerned with people wanting in healthy power of resistance to evil influences; themselves, let me repeat, helpless, and their very helplessness clamouring for protection at the hands of their guardians. Under these circumstances, surely the completest solicitude is given to ensure security against all preventable mischief. Surely it is impossible that a patient with consumption should have a case of typhus put in the next bed to him, or a compound fracture be brought into the neighbourhood of an erysipelas. It must be impossible that a disease so preventable as enteric fever should ever appear among hospital inmates; there can never be question of carelessness about dressings, of hands foul from the post-mortem room. Rather the environments of each person are studied with reference to even the remoter chances of injury to him, and considerations of convenience are set aside when there can be question of even small advantage to the patient. With the curative side of hospital treatment we know that this is so: surely it is so also with sanitary care.

But what then is the meaning of experiences, extending over scores of years, showing patients, and not patients alone, but officers and nurses, attacked at intervals by diseases, from sore throats up to gangrene and typhus, that are all more or less related to the sanitary circumstances of hospitals? How come we by stories, full of sad instruction, of erysipelas appearing at one end of a ward and successively attacking each bed till it has reached the other end? How is it we hear of wards overcrowded, and of hospital gangrene "produced" (that is the phrase) in them? Can it be true that there has, within our own times, been a hospital where patient after patient has lain on a mattress never changed and soaked by discharges? How are we to understand observations that "intensity of traumatic atmosphere" has sufficed to engender erysipelas and pyæmia in one and in another hospital? Are all these things affairs of the past, interesting to the student of pathological history, but made impossible in the present day? I wish we could truly say it were so. Even if we are justified in accounting impossible the recurrence of the grosser of these cases of mischief and the grosser of these examples of sanitary neglect, we still find instances where mischief in hospitals occurs under circumstances where sanitary improvement of no occult kind is wanted.

Only the other day, a skilled observer enquiring about erysipelas persisting in an accident-ward, reported the place as kept damp by a laundry, with ashes and house refuse screened beneath its windows, with an adjacent drain imperfectly fulfilling the purpose of a drain; reported the ward as having contained an in-

ordinate number of serious lacerated wounds; reported the want of any definite system of isolating or separating cases of erysipelas; reported that nurses had appeared to carry traumatic infections about them, and the medical attendants to distribute contagion by their hands and instruments. And there still exist I fear, both in town and country, hospitals that only want a skilled observer to detect in them some of these same, or some similar sources of mischief.

What I am sure of, however—and it is this point that I venture to insist on strongly—is, that there are few hospitals in the kingdom of which it can be affirmed that the sanitary arrangements required to fit the institution for the care of a number of sick are thoroughly known to a competent and responsible officer whose business it is to keep the Governing Body informed of the facts. Just as there should be some one charged with the duty of seeing to common drainage and ventilation, so there should be somebody to answer for the more special sanitary arrangements of the place; whose business it should be to make sure, for instance, that stools possibly infective are disinfected before they are discharged into drains, that foul dressings are duly burnt, that patients on their admission are put in the particular wards, and placed under the particular circumstances that shall suit them best; who should be responsible for preventing accumulation of suppurating wounds in a ward, and for separating with all proper precautions any case that threatens to be erysipelas. Surely all these things should be somebody's business. They cannot well be the affair of non-resident physicians and surgeons; they ought not to be

the affair of student-officers; still less ought they to be considered as merely the concern of a steward or matron, or perhaps of a nurse or a servant. Efficient observation and record of the day-to-day sanitary circumstances of the various parts of a hospital, such as I contend it is the duty of every Governing Body to ensure, demands a thorough knowledge of hygiene and pathology, and some experience in the practical applications of those sciences. The officer specially changed with these functions, again, should be a person to command the confidence of the medical officers, with whose province his own would be ever in contact. And he should be capable of enlisting students and others as fellow-workers with himself, and of adding from his special experience to the general store of hygienic knowledge.

I trust the time is not far distant when an officer specially charged to look after the sanitary welfare of the institution will be found at every hospital in England. The duty is one that essentially pertains to a medical officer, and far preferably to a resident officer. Vaguely, no doubt, some such duty is now expected from most of those who, under the title of "house surgeon," "resident medical officer," or "medical superintendent," are entrusted with the general professional headship of the establishment; but this duty of sanitary superintendence is at best regarded as an incidental, or second-rate matter, and neither the responsibility nor the authority needful to its efficient discharge is definitely imposed upon this officer, or on anyone else by the Governing Body of the hospital. Obviously in regard of duty of this sort vagueness is the very thing to be avoided, and the present want of system must, as soon as the importance

of hospital sanitary regulation is appreciated, give place to definite responsibility imposed on one person having the style and functions of a sanitary medical officer.

I have incidentally made mention of typhus spreading in hospitals, and I wish to say a few more words on the reception of infectious cases as influencing the wholesomeness of hospitals. And to begin, I would observe that any professed refusal of such cases nowise lessens the demand for incessant care respecting infection, for first, it will often happen that infectious diseases get admitted during their incubation period, or before their real nature is discovered, and provision against the spread of such disease is of urgent consequence to other patients. Secondly, we cannot, it will be admitted, draw a broad line between what is, and what is not capable of spreading by infection. Certainly some diseases, like erysipelas, that can begin without a previous case are able thus to extend, and it must be held as an essential rule of hospital practice that such diseases should be treated like any other contagious disorder, with the utmost practicable isolation of them from all susceptible persons. Thirdly, what ordinary inflammations are able to diffuse themselves after some similar fashion is a question to which no positive answer can yet be given, and as to which therefore our practical rule must be to watch that they shall not produce injurious effects on other patients. For, as a distinguished pathologist tells us, "there is ample reason to question the popular impression that only 'specific' inflammations are communicable; much reason for suspecting it, on the contrary, to be a generic

and essential property of inflammations that its actions, or some of them, are always in their kind, to some extent, contagious." In regard of certain of these inflammations, ophthalmia and sore throat, for example, it is hardly doubtful that they are, apart from any question of specific quality, capable of communicating themselves; and it would seem that as our knowledge extends, more and more of such diseases are likely to be recognised; notably if we can have observation of the behaviour of the diseases made by a skilled hospital officer.

In contending that a completely equipped general hospital should have the means of treating in due isolation any case of accidentally introduced contagion, and any other case of disease that is capable of seriously injuring neighbouring patients, I state no principle but that which we all recognise in our private houses. If any of us got an infectious fever in his home he would make these means by giving a separate room, or a separate floor to the sick person, and by providing him with separate nursing and attendance. It is not too much to ask that, in a great house specially destined for helpless sick people similar means of isolation should exist; and that these means, when needed for use, should everywhere and always be found in readiness.

With respect to the professed admission into a hospital of dangerous disorders, acknowledgedly infectious, the rule that the welfare of all the patients has to be consulted, requires that there shall be no unnecessary proximity of these cases to other people susceptible of their ill effects. Medical opinion has differed as to the point at which risk from this proximity commences, and

while few would ever have regarded as safe the reception of cases of smallpox into general wards, there have been and I believe still are, authorities who would permit the mixture of typhus or of scarlatina with the general sick. These authorities must either, I think, take a different view from myself respecting the duty of a hospital to its patients, or they must fail to give what I regard as due weight to the evidence which Dr. Murchison has accumulated as to the danger of the practice they would allow. It is no slight thing, to take only one of Dr. Murchison's instances, that in six months seventy-one cases of typhus originated in the wards of six general hospitals of London, into which cases of typhus had been received from outside. It is a small set off to this mischief that a modicum of good was done to the admitted cases, and a modicum of danger to outside neighbours avoided. These benefits, such as they were—and they were of inconsiderable amount—might have been gained without giving typhus to some scores of miserable hospital patients.—The story of scarlatina in hospitals is, of late years at least, the story of risk less voluntarily encountered. Recent experiences about it come chiefly from children's hospitals, where scarlet fever patients are habitually kept out of general wards, and extension of the disease has generally been due to insufficient severance of those wards from others, or insufficient separation of the *personnel* or linen of the scarlatina ward. It is to the credit of the London and of the Birmingham children's hospitals that they well recognise these risks, and take unceasing precautions against them.—I would say, then, that so far as hospitals profess to take in cases of dangerous infectious fevers, they should do so in separate

wards, and preferably in separate buildings. Never, for want of means so obvious as these, ought the taunt to be heard against our hospitals, that they tend to be "merely pathological observatories and medical schools."

Gentlemen, if I have been critical on some points in which the management of our hospitals may be bettered, it has been in that spirit that craves for perfection where love is given—for we are all proud of our English hospitals, and proud of our own share in the good work they do. I therefore reckon confidently on your sympathy in the further thesis that I propose to myself on this occasion, viz., to place before you some considerations respecting the need of hospitals as a standing part of the sanitary defences of the country.

Well-meaning people, both within and without our profession, talking freely about preventable diseases and the duty of the community to repress them, have not hitherto always completely understood how large a part in their scheme would be played by an organised system of sanitary hospitals, supported by the community as a duty to itself, and used alike for the purpose of curing the sick and of staying the extension of disease. I am now, of course, thinking of hospitals specially for the reception and management of infectious diseases, and notably of those infectious diseases against the epidemic extension of which we know no safeguard but careful isolation and disinfection. Such diseases constitute a very large part of the sickness that is commonly spoken of as preventable. And they are preventable. But how? By leaving the infected patient at his own home, when that home affords him no separate room—

it may be no separate bed? By leaving him to be nursed by a person who has to tend her family as well? By giving directions as to cleanliness and disinfection where cleanliness and disinfection are impossible? No. Here the notion of disease prevention is seen to be indissolubly connected with the notion of isolation of the sick; and isolation of the sick is seen, for large masses of the population, to involve the notion of a hospital.

Whether or not provision of a hospital for the cure of poor and ill-lodged people is regarded as a matter of Charity or of State, assuredly, as soon as infection is seen to be in question, and the safety of husband, wife, children, and of the larger community, is thought of, the notion of a hospital presents itself as an affair of general interest to the public. This notion of a hospital need not be of a great institution like our London hospitals; but, for the object that is in view, it must provide means of care for the invalid and means of safety to others. In a village that has a case of scarlet fever brought into it, the cottage of some decent woman who for a small sum has kept a room or two at the disposal of the sanitary authority sufficiently fulfils the idea of a hospital, and such a provision, if ready beforehand, would often save the village from a desolating epidemic. For larger communities, more developed hospitals are wanted.

Of one kind or another, infectious diseases, wanting isolation to prevent their spread, may be reckoned, after exclusion of mere infantile disorders, to cause some half-million of cases of illness in England every year, and I find that to meet the wants of these cases, there existed in England and Wales at the last census only some 2,040 beds, including all the temporary provision that

happened at that date to be made against the prevalent epidemic of smallpox. Let us regard these beds as sufficing for 25,000 patients, and we find that about one in twenty of the sufferers from those contagious diseases that need hospital provision might have their wants supplied. If we believe, what is probably about the truth, another two in twenty of the sick population to be so housed either at their homes or in workhouses as not to be endangering their neighbours, there remain out of every twenty cases seventeen people with such diseases as small-pox, scarlatina, diphtheria, and fevers, who, having caught their disease for want of means of isolation, are kept at home in circumstances to communicate their infection to others.

Now suppose every community desirous of providing beds for infectious diseases, as a matter of insurance against the speed of infection, it would of course make this provision on a scale adapted to its particular requirements, but let us try to estimate what average provision would suffice for the protection of the average community. Let us think of a population of a thousand persons living in a village or in adjacent hamlets. To say nothing of mere children's ailments, except that the first introduction of them might sometimes be prevented by the same means that are being considered for more serious infections, and to say nothing of any infections originating *de novo*, let us think of the chances of dangerous infectious disease being now and again introduced by strangers or tramps, by people going to market, by sons and daughters sent home ill from business or service, and so forth, and let us ask whether one single bed available against infection brought by such

means as these would be an unreasonable standing provision for a thousand people even in the country. Or, let us think of our thousand people as forming part of a town population, among whom let us say are many people insusceptible of an infection by reason of previous attacks, but among whom the opportunities for the introduction of infection are far more numerous than in a village, and where undetected cases of disease have greater opportunity of spreading; and let us ask whether provision at the rate of one bed to every thousand inhabitants would appear to be an over-large standing insurance against the danger of infection in the town. In neither case could the question, I think, be answered in the affirmative.

I would beg you, then, to note the difference between any such ideal standard of infectious hospital provision and the reality. I have said that in 1871 there were in permanent and in temporary hospitals together some 2,040 beds for infectious diseases in England and Wales. On the scale of one bed to every thousand of the population, there would have been a permanent standing provision of 22,586 beds, or eleven times the actual number. In effect there was, instead of one bed to every thousand people, only one bed to every eleven thousand. London, indeed, is comparatively well off in this respect. The Smallpox Hospital, established in the middle of last century, and the Fever Hospital at the beginning of the present, were the first institutions of their kind in England; although some general hospitals both in London and in the provinces, warned by the mischief done to other patients by the admission of infectious diseases, had established separate fever wards.

To the example set by these two institutions, London is largely indebted for the legislation that created the Metropolitan Asylums Board, and to that Board she is indebted for her present advantageous position in regard of infectious hospitals. Of the 2,040 infectious disease beds that existed in 1871, no less than 1,470 were in the metropolis, leaving only 570 in the rest of England. So that, if London be put out of consideration, the proportion of infectious beds to population in the provinces is no longer even one to eleven thousand, but actually only one to every thirty-four thousand people. Great towns and whole counties exist without any such provision whatever. It should be, you will agree with me, a foremost object with every sanitary worker to use such influence as he may possess to alter this state of things, and to make people see their interest in providing and using hospitals for infectious diseases.

Respecting the actual power of these hospitals to prevent the extension of infection among the community, it is inevitable that there should be hitherto but scanty statistical proof, seeing that the opportunities of gathering evidence have heretofore been so few. But there is some evidence on the point, and I think it is of cogent value. My friend, Dr. Blaxall, has put one instance on record. In the two adjacent towns of Plymouth and Devonport smallpox made its appearance in 1871. In Plymouth it lasted as an epidemic over eighteen months; in Devonport over eight only;—the difference in duration seeming to be directly related to the difference in the hospital provision of the two places. In Devonport, soon after the epidemic began, beds, in the proportion of two to every thousand of the population, were provided.

In Plymouth a wholly insufficient provision was at first made; three additional hospitals in succession had to be built while the epidemic was going on, and in all the accommodation for the sick hardly exceeded the half of what Devonport had provided by a single effort. Had there been some standing hospital ready to receive the earliest cases, it cannot be doubted that both places would have escaped with a much shorter epidemic and a much smaller smallpox mortality. I myself had occasion to compare the behaviour of this same disease in Birmingham with its behaviour in London and Coventry, and I found that Birmingham, having no infectious hospital except what was used almost exclusively by paupers, and that being on a scale of about a quarter of a bed to every thousand population, had smallpox going on and on for some three years, while its neighbour, Coventry, providing by an effort and for all classes three times the proportion of accommodation that Birmingham made, put out a sharper epidemic almost immediately; and even London, also having about three times the amount of accommodation of Birmingham, and using it for all classes, got rid of its epidemic in about half the time that it lasted in Birmingham, the subsidence beginning very soon after this amount of hospital provision had been made.

A neat illustration of the same thing comes to us from Cheltenham, for which town a smallpox hospital has been provided by private benevolence. This instance is the most apposite to my argument in favour of there being a ready-made provision for cases of infection introduced from without. Here fourteen beds are permanently provided for smallpox cases in an admirable little

hospital that is devised to suit the wants of well-to-do people, as well as of those who may be sent to it by the public authorities. In six months of last year smallpox was brought into Cheltenham no less than six times, from Gloucester, from Birmingham, from Liverpool, and elsewhere. Seven persons ill of the imported disease were taken without delay to the Delancey Hospital, and except one individual, who was also removed to the hospital, nobody in the town caught the disease from these seven centres of contagion. There was literally no other smallpox in the town. How much there would have been if in the absence of the hospital the seven importations had been allowed to spread their contagion in a widening circle round each, can of course only be matter of surmise.

In speaking of the provision made for the isolation of infectious diseases in England, it may be observed that I have included all poor law provision that is made in separate hospitals, but not that which is given within the walls of workhouses. I have not included that given in workhouses, because it is meant for, and is almost exclusively used by the pauper class, forming less than 4 per cent. of the entire population; and I have included that made in such hospitals as those of the Metropolitan Asylums Board, because that provision has been practically used by all classes, and the hospitals have been to a great extent sanitary hospitals. On the subject of the severance of infectious hospital provision from the poor law I hold a strong opinion. It is probably only in London, and under the special circumstances of the Asylum Hospitals, that the association of hospital provision with pauperism could be ignored or

treated as a joke. Everywhere else the fact that isolation could not be had except on the condition of being pauperised has operated to prevent patients from leaving their homes. I shall have, I am sure, your sympathy in declaring that people are right in not consenting to ignore this social aspect of the hospital question, and that if the interests of the community demand that patients suffering under dangerous infectious disorders be taken even from poor homes into hospital, the community has no right to attach to such removal the stigma that rightly belongs to pauperism.

But it is said there already exists at many workhouses a fever building for the use of paupers, and this building, provided to meet the average wants of fluctuating disease, has often empty beds which cannot be turned to better purpose than by using them for non-paupers who chance to become infected. Why should such people, therefore, not be admitted, and afterwards, if they please, remove from themselves the taint of pauperism by repaying the expenses incurred in their treatment? Consider again, I may be told, the expense of having two hospitals, one for paupers and one for non-paupers, both requiring to be on a scale and with arrangements adapted to the management and classfication of infectious disease, both requiring to be kept ready at all times, yet both perhaps standing empty for months in the interval of epidemics. To all this the reply is easy :—

First, as to the amount and nature of the existing hospital provision at workhouses, that is not often beyond the requirements of the mere workhouse, and of the 1 per cent. of the total population that may be

residing there. Usually it may be considered to resemble the spare room of a private house, serving when occasion of infection requires, but not therefore to be used for people from outside. Again, the quantity of spare space afforded by existing hospital buildings at workhouses rarely exceeds what on other grounds it is desirable that a workhouse should have at command ; for the purpose, namely, of observing suspected cases ; for the separation of any case of ophthalmia or like disease ; and for various purposes of classification, desirable in a medical view point and perhaps not completely attained in the body of the workhouse or in its general infirmary. Once more, a great many of these workhouse fever blocks are not adapted to the requirements of two or more infectious diseases at the same moment, or have no due provision separate from the general provision of the establishment, for cooking, washing, disinfecting and the rest—that should be the separate affairs of the infectious hospital proper. Secondly, as to the contention against two hospitals, it is undoubtedly true, but is wholly irrelevant as an argument for putting those who are not paupers into pauper wards. By all means, let there be but one hospital for a district that cannot support two, and let it serve for as many sorts of people as want it, for the very reason that classification on the basis of the several sorts of contagia is an essential element of the institution, and that other classification cannot properly be allowed equal consideration. But let the district hospital for infectious diseases be, in its inception and management, a sanitary provision, dissociated utterly from every trace of pauperism. Whether people live in a mansion or in the corner of

a lodging-house, if they cannot otherwise be kept from injuring the community when they are ill, let this hospital be ready to receive them, and let the relief authority pay for the poor who ought to be separated from others, just on the same principle that every master would pay for his sick servant. Without this dissociation from the poor law, sanitary hospitals can be of little use to that 96 per cent. of the population that keeps itself without having recourse to the poor rates.

Gentlemen, in making these pleas for the perfection of our hospitals, and for the completeness of our hospital system, I have been encouraged by the thought of him in whose place I stand to-night, and by knowing that I have been handling, however imperfectly, themes which would have found in him a hearty advocate. Let me remind you that want of exact and responsible supervision of sanitary arrangements may have been the cause of that strange and mortal epidemic in the investigation of which Dr. Anstie met with his death. Of him it is true—most true in the circumstances of his death—that "he being dead yet speaketh." I will not trust myself to utter words of eulogy on a man who not only died the death, but, up to his measure, lived the life of a Howard. The President of the College of Physicians has lately shown him to us inciting to the thing best worth doing that the College did in a twelvemonth ; the acceptance, namely, of a design of his to benefit the poor of London and other great towns: a design—one of many such—struck out of the man's clear head and loving heart, carried by him against

"many" who felt they were "transgressing the course of action usually pursued by the College." A small, but a typical illustration of our friend's character. We have him no longer with us, working for the good of his fellow men against ignorance and selfishesss, enlisting others in his work in spite of apathy and routine. Verily,

> "The good die first,
> And they whose hearts are dry as summer dust
> Burn to the socket."

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