Inaugural Address

ON THE

PRESENT TEACHING OF PRACTICAL MIDWIFERY IN ENGLAND.

Delivered before the Obstetrical Society of London,

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MIDWIVES.

OUR late President, in his parting address, alluded to the fact that we, as a Society, had come to the end of our work as an examining body for midwives. The conception of the scheme of examinations and its carrying out to completion is a matter in which our Society may justifiably take the greatest pride. It is not too much to say that, regarding it from a national point of view, the work that this Society has done is a more useful one than has ever before been accomplished by any medical scientific society. I imagine there can be no two opinions as to the use these examinations have been to the whole country. They have elevated the name of midwife to something which had never been contemplated—in the British Isles, at all events—as likely to develop out of its former significance, or, rather, insignificance. Who would now, when the word "midwife" was mentioned, picture to himself the possessor of it as being in any way like the dirty, snuffy old person with whom our fathers were satisfied? On the contrary, he would at once see before him a (usually) younger creature, the pink of cleanliness and purity of linen, eager to carry out all the principles in which she has been trained—those of implicit obedience to the doctor's orders, consistent with the maintenance of strict asepsis; yet able at the same time to manage with success some of the emergencies of labour in the doctor's absence.

In achieving this, ladies and gentlemen, you have educated more than your midwives. There is the English public. For unless you had shown, in the persons of those women who were considered worthy to receive your certificate, what a midwife might be made, the public could not have been stirred to the pitch of discontent with the old type that rendered it necessary to legislate in the matter. It has been stirred, and by the devoted energy of certain Fellows of your Society whose names are too well known to all of you for me to need to mention them. And the result of their unselfish efforts has been the addition to the Statute Book of an Act of which the present Government may be as proud as of any that they have carried through the Houses of Parliament. For the passing of the Midwives Act, whatever may be said in its disparagement by some who are not uninfluenced in their opinions by personal considerations, must infallibly lead to the diminution of septic death and septic illness in childbirth, and of ill-health in the after-lives of the mothers and children.

THE PUERPERAL DEATH-RATE.

The fact that our Society has intervened in matters of public health with such undoubted success induces me to ask you to allow me to pursue the same subject a little further. We know how the matter of death and illness in childbirth stands; it was impressed upon us most forcibly in an inaugural address by one of my most distinguished predecessors, Dr. Cullingworth. He showed, as we shall all remember, how the septic death-rate throughout the kingdom was not falling, but rising. He made some observations as to the cause of this retrogression, and, while allowing that such a disgraceful state of affairs might be to some extent due to the ignorance of midwives, he was of opinion that we ourselves, the medical practitioners of the country, were responsible for a good deal of it. To bring the statistics as nearly up to date as possible, I add the annual returns of the Registrar-General for the years since 1895, the last year with which Dr. Cullingworth dealt. They are as follows:

Deaths per 1,000 Births.

Average, 1896 to 1900—Total, 4.6	Septic, 2.0	Accidents, 2.6.
In 1902	4.47	2.1
In 1903	4.06	1.75

This shows a distinct improvement during 1903, and is a very healthy sign, if we could be sure that the improvement would be maintained. It may be due to the diffusion of educated midwives. The numbers are, however, no better than those of 1876 to 1880 as regards deaths from sepsis, and worse

as regards total deaths. To state the numbers for 1903 in actual figures, and not in percentages, the births in England and Wales were 948,271. The deaths: Septic, 1,668, and from accidents, 2,189. If all the labours had been aseptic, the lives of 1,668 women would not have been sacrificed.

Before we accept without further proof that septicaemia in childbirth is not diminishing, we may briefly examine some more evidence on this point. As regards the registration of deaths in puerperal cases, and its value now as compared with its value when registration of this kind was started and for some time after, it appears from the Registrar-General's returns from 1851 to 1900, as quoted by Dr. W. Williams in his Milroy Lectures of 1904, that, taking the mortality in two groups, as above, namely, those of septic disease and those of the accidents of childbirth, the former group has on the whole increased, and the latter has pretty steadily diminished. Dr. Williams gives this table:

Death-rate per 1,000 Births.

England and Wales.	Total Deaths.	Septic Deaths.	Accidents.
Averages of 5 years:			
1851-1855	4.90	1.50	3.4
1856-1860	4.60	1.50	3.0
1861-1865	4.80	1.60	3.2
1866-1870	4.60	1.50	3.1
1871-1875	5.40	2.40	3.0
1876-1880	3.90	1.70	2.2
1881-1885	4.90	2.80	2.1
1886-1890	4.50	2.40	2.1
1891-1895	5.40	2.50	2.9
1896-1900	4.60	2.00	2.6
Last three years:			
1901	4.70	2.20	2.4
1902	4.47	2.10	2.3
1903	4.06	1.75	2.3

Dr. Williams remarks:

During the last twenty years, when a more accurate registration has been adopted, upwards of 40 per cent. of the total childbed mortality has been caused by septic diseases. It will further be seen that this undiminished mortality has been sustained for a period of twenty years, and that the sources of fallacy are not confined to one or to a few years. It will be noticed also that this period (1881 to 1900) of undiminished mortality in childbed coincides with a period in which enormous strides have been made in all matters pertaining to sanitation generally, and with a period of improved certification of the causes of death in connexion with childbirth.

Dr. Williams is of opinion, further, that the absence of diminution in mortality may be partly accounted for by improved registration. I find it difficult to imagine that this plays a very important part in the later years cited, for the table shows that in 1901 the mortality was increasing from septic disease, though decreasing from accidents of childbirth; and that in 1902 and 1903 the mean total cases of death are not at variance with those of previous years by as much as 0.5 per 1,000. Thus I think we must not attach too much importance to incompleteness of registration, since accuracy in this respect cannot be imagined to be in any great degree more conspicuous in the last three years than in the five years immediately preceding them. But so much has been said on this point of a quite convincing nature that I need labour the subject no further.

THE TRAINING OF MEDICAL STUDENTS IN MIDWIFERY.

We must, unfortunately, resign ourselves to accepting the fact that things have not appreciably improved for the last fifteen or twenty years. If the medical men of this country are responsible for any part of this excessive mortality—and there is unfortunately no reason to doubt it—it is obviously the duty of the whole profession, and perhaps of our Society more particularly, to spare no pains to remove such a reproach.

We may, however, just consider for a moment what the share of medical men in this failure to improve really is, since the part played by midwives in the matter has been mentioned. Now, assuming for the sake of argument that the former undoubtedly large share contributed to the puerperal mortality by dirty and unskilled midwives remains what it was, say, ten years ago even, we still shall have to explain why the cases under the care of medical men have not, by a marked degree of improvement, diminished the total number of deaths. We know that the quality of midwives has very appreciably bettered in the last ten years, and we can only imagine that the women attended by them now do better than those attended by former midwives. If

we are correct in our ideas on this point, then the failure to improve must lie at the door of the medical man, unless of course it could be shown that the women employ a midwife alone in very much larger proportion than formerly, and a doctor in a very much smaller. But the contrary is believed to be the case.

I propose this evening to arrive, as nearly as I may, at some way of accounting for this blot on our escutcheon, and, if I feel that my explanation is the right one, to go on to consider the best way to wipe it out.

We none of us have any doubt that, if the necessary precautions are taken, septicaemia can be abolished in midwifery practice. But we know that septicaemia is still rife and is accountable for many deaths and much disease. It is also a fact beyond gainsaying that medical men, who are responsible for a very large proportion of these unfortunate events, are anxious to do the best for their patients. Then why do they not prevent the occurrence of puerperal sepsis in their maternity work? In other words, why do they not put into practice the principles of antiseptic midwifery which have been demonstrated in our lying-in hospitals to be completely adequate?

As regards lying-in hospitals, which are always quoted as showing our power to abolish septicaemia, it may be argued that they are all very well, but that the filthy surroundings of the majority of the poor in towns—and in the country, too—make it impossible to carry out ideal methods among them. This argument is at once met by pointing to the results obtained in the outdoor maternity departments of the same hospitals and of other well-conducted maternity charities. In these the statistics are little, if at all, inferior to those obtained in the wards.

As a matter of fact there are two reasons for this failure throughout the country, and it is no use trying to shut our eyes to them. One is that there are some medical men who do not know how to practise aseptic midwifery; and the other that asepsis is not by a large number of medical men considered a matter to be taken seriously in midwifery practice, although they well know that in surgery it is a most vital element.

There are among the professors of medical science in this and in every other country a certain number of men who were educated in the days before any suspicion of the nature of sepsis had arisen. All the more honour is to be accorded to those of this period who have taken the pains to become acquainted with the present standing of our knowledge of septic processes, and the best way of guarding against them. They practise surgery with every precaution, and many of them have acquired the "aseptic instinct"—a most difficult learning. But all, even of this select class, do not practise an equal degree of purity in midwifery work, although they think they do. They have come to look on this branch of medicine as such a familiar and well-understood affair that there seems to be no need for the introduction of any new system or any modification of their well-tried modes of procedure. They have delivered hundreds of women with success, and are apt to ascribe this success to the routine they have come, in course of time, to adopt. It must not be imagined for a moment that I am imputing any blame to them in following this course; it is the one naturally dictated by their own individual experience, and it would be the height of impertinence in me to try to cast the least slur on the older members of our profession. I am proud to say I know very many of them who are as much alive to the importance of, and as skilful in the performance of, every detail of antiseptic midwifery as the most ideal obstetrician among us. I merely venture to point out the practical difficulties that beset them.

But as regards the younger men—those for whose views and practice the teachers of the present day are responsible—it is a different matter, and it is one a full discussion of which seems to me to be imperative. They are inculcated from the first moment at which they begin to handle surgical cases and have to deal with the management of wounds of all kinds with horror at the idea of contamination of any possibly absorbing surface with septic matter. They know also all about the condition of the maternal passages during and after labour. And yet cases of septicaemia occur in their midwifery practice. This is really our weak point, and the point on which we owe to ourselves and to the public our most earnest consideration.

The occurrence of puerperal fever in the practice of a conscientious man is a horrible shock to him. It causes him acute mental discomfort, and probably sleepless nights. This anxiety as to the result of every case he attends after-

wards is simply misery, and must in the end take years off his life.

Then if one of those responsible for his teaching is brought to confer with him in such a case it must be with some feeling of self-reproach that the teacher hears the account of the antiseptic precautions that have been taken, quite complete as they would appear from the history given him. But there has been of necessity some omission of detail, not due to carelessness nor want of the best intention on the part of the medical man, but due to want of thorough training. Despondently may he, the professor, say with Macbeth:

We but teach
Bloody instructions, which, being taught, return
To plague th' inventor. This even-handed justice
Commends th' ingredients of our poisoned chalice
To our own lips.

When the illness has to be explained to the patient and her husband it is not in human nature to candidly tell them that it might have been avoided if proper methods had been employed. They cannot be bluntly told, "This is the fault either of your doctor or of your nurse." But we know that this is practically always the truth. And further, we may be quite sure that the public will find it out for themselves very soon. In trying to discover a way out of this unfortunate state of affairs, and to avoid such catastrophes, we may compare the method for turning out the Complete Accoucheur, as at present adopted, with the training which is considered necessary for the student in surgery. Surgery is no doubt a very much wider subject than midwifery, but as far as medical practice is concerned it cannot be considered a more important one. And surgical cases which involve the management of large fresh wounds are extremely rare in the experience of men in general practice. In midwifery, on the other hand, large absorbent surfaces are of necessity produced at every labour. When such surfaces are untouched, as the placental site is in a labour which has run its normal course and in which no vaginal examination has been made, they heal as aseptic wounds. But either from necessity, or from inability on the part of the physician to desist from interfering, they are often put in the way of being contaminated, and it is quite obvious that aseptic handling is as necessary here as in any surgical case.

But compare the careful instruction which the student is obliged by the Examining Boards to undergo at the hands of the members of the hospital staff—the six months' dressing and the practice of surgery during two winter and two summer sessions—with the casual way in which he is allowed to get his smattering of midwifery. All that is required of him in the way of practice is "attendance on twenty labours." "Attendance" is a word which is capable of a very elastic interpretation, and may be held by some to consist of merely looking on, without making a single examination or performing a single manipulation. Moreover, the certificate may be "signed by one or more legally qualified practitioners"—that is, including teachers who are useful neither by precept nor example. The "practical" work is seen to be—or, at least, it is seen that there is no reason for its not being—simply a farce. Finally, to make matters worse, and to completely show in what esteem the subject of midwifery is held by the Examining Boards, the student is allowed to pass his examination in it

At any time after the completion of the fourth year of professional study at a medical school, not less than one year after the passing of the Second Examination, on production of the required certificates.

In medicine and surgery, after passing the second examination, and before he is allowed to be examined in those subjects, he has very properly to spend two winter and two summer sessions in receiving clinical instruction. This extraordinary arrangement as regards the midwifery led to an examiner being gravely informed by a candidate that he could not answer a certain question in this subject—the particular one being a simple question on albuminuria—"because he was not going to do his medicine till next year." A delightfully simple and refreshing way of looking at the purposes for which qualifying examinations were instituted, but quite a logical one!

To find a parallel in history to the treatment of our unfortunate subject we must go back in imagination to the favourite heroine of our earliest youth, and remember how she was very badly treated and kept in the background by her two elder step-sisters; and how, on the occasion of a certain festivity she was only able to be taken there in a most furtive manner, and after extraordinary difficulties had been got over. She, of course, got there very late, while her step-sisters had

been there for a long time; and even then, although she had a great success, she was obliged to leave in a hurry before the party was over. It would be sad to pursue the story any further, when we think how the beautiful garments and the coach and horses that she had had given to her turned back again into ugly things, and how she became poor Cinderella once more. But we might hope that the happy ending of the story will come true; except, of course, the humiliation of the elder sisters, for we do not at all want medicine and surgery to be deposed from their important position.

In Ireland midwifery is treated with more respect—at least, the arrangements sound better. The student is obliged to attend a recognized midwifery hospital or maternity for six months, and he has to be present at 30 labours. This requirement is, at all events, a recognition of and some sort of an aspiration towards better things. It is also of great importance in prescribing a definite period during which the student must be attending to midwifery. But it can be made quite futile if the student likes, for he can easily "attend" at the hospital in such a way as to get signed up for six months' attendance and 30 cases, and never get one particle of good from it all.

So much for the minimum required by the Examining Boards. Let us see what is done in actual practice. At any time after passing his second examination the student may take his 20 cases. They are most commonly taken in the outdoor maternity of his own hospital. If the rules of the hospital are obeyed—and they are entirely gratuitous rules from the point of view of the Examining Boards—he is accompanied to at least his first case by the resident obstetric assistant, whose moral support enables the student to bear without discomposure the rather startling episodes of a labour witnessed for the first time. It depends entirely on the senior man whether the student learns anything of real value or not on this occasion. In most instances, since the senior has himself been taught in the same haphazard way, he is unable to convey to the pupil anything of the fundamental principles of the subject. When the next case comes the student knows probably little more than how to maintain an appearance of self-possession; and if it happens to be one of, say, contracted pelvis there is no reason why he should recognize it, and he naturally allows the woman to proceed on her dangerous course until the head has become impacted and she suffers from the perils of obstructed labour; or in a normal case he will forget, in the excitement of the moment, to be careful about his antiseptics. Such possibilities may be indefinitely multiplied. Supposing he has to deal with nothing but normal cases in his series, he is, perhaps, even worse off than if half his patients had been the subjects of dangerous complications, for he will go on his way into the world without ever having the chance of learning to recognize the presence of abnormality, much less the chance of seeing how it should be treated. It is, of course, the learning to recognize abnormal conditions at once that is almost the whole battle in midwifery, for when they are recognized early the treatment of them in nearly all cases is comparatively easy.

It may be said that the independent charge of cases in this way is likely to engender habits of self-reliance, and under different circumstances this would be true; but if self-reliance is acquired on a basis of ignorance the result can only be disastrous. The different circumstances would exist if he had been thoroughly taught to know natural and unnatural conditions when he saw them.

And so after all the days and nights spent in repulsive surroundings, and in still more repulsive society, the average fully-qualified man enters the profession with a very imperfect knowledge of practical midwifery; he has not even seen most of the phenomena of which he has heard in lectures or read in books, and he has to acquire his experience by his mistakes. In the process of establishing his position as a reliable practitioner, and of earning his living, mistakes are very expensive—ininitely more expensive than a few months devoted, before he is out in the world, to the acquisition of sufficient knowledge and skill to make such mistakes impossible. Looked at from his patient's standpoint the loss to the woman of health, it may be for years, or the loss of her life, valuable to her family and the community, makes them a more serious matter still.

When the public fully appreciate the state of affairs, as they must infallibly do before long, the position of the medical profession in general, and of such a society as this, the leading authority in the country, will, if no effort has been made to remedy the evil, not be one to be altogether proud of.

It must not be supposed, however, that no one has realized the imperfection of the midwifery education in this country until now. On the contrary, efforts to amend it have been made but without the least success. The General Medical Council, which is supreme in matters pertaining to the education, qualification, and subsequent professional behaviour of the medical men of the kingdom, has been petitioned on the subject, and has on one occasion, as it would appear, been spontaneously stirred to look into the matter, but the results, for various reasons, have been practically nothing. It will seem strange to most of us that until 1902 there had never been a teacher of midwifery on the Council. We are now fortunate enough to be represented by Sir John Williams, and we may hope for better things.

A report of the Education Committee of the General Medical Council on the subject was drawn up and adopted in 1896. It was to the effect that a student's practical work might consist of three months' attendance on the indoor practice of a lying-in hospital, or of being present at twenty labours, five of which must have been conducted under the direct supervision of a registered practitioner. There is no definition of what is meant by "supervision," and, in fact, it can be interpreted at the supervisor's pleasure into no conduct at all. And here again the quality of the teacher is evidently a matter of no importance. The matter, however, went no further.

There is yet one more point to be noticed in the teaching of midwifery as prescribed by the Boards. In medicine and surgery the student has to lay a foundation of anatomy and physiology before he begins pathology. Now, although the two fundamental subjects are taught in a very complete way in so far as they serve the purposes of the two branches I have named, the anatomy of the pregnant uterus and its contents and the physiology of pregnancy and labour and the lying-in period receive no attention. In consequence of this these elementary subjects are all left to the lecturer on midwifery, who has to teach this part of the subject in the most detailed manner before he can begin upon the mechanism of labour and the pathology of the whole subject. It is obviously impossible to do this in a three-months course.

If these deficiencies in the theoretical teaching of midwifery could be made good by practical work they might not be considered of vital importance. But, as things stand, they cannot, and many students embark on their career without having learned even how to pronounce the names of many processes and many of the diseases which may later on spring on them. Let us see now in what opinion our methods of teaching midwifery are held by an authority on the subject in another country. I quote from a short but important article on this subject written by Dr. Herman in the *Practitioner* for April, 1896. The extract has already been quoted by Sir William Sinclair in an address on the same subject. It is Dr. A. Martin, of Berlin, from whom Dr. Herman translates. Dr. Martin says:

The arrangements of the medical schools in England for midwifery education are very imperfect. If we look away from the long renowned lying-in hospital, the Dublin Rotunda, and the very limited similar opportunities in Edinburgh and Glasgow, we find that the medical student has nothing analogous to our midwifery clinics. The student is taught midwifery theoretically. He learns practice among the out-patients. To these the professor of midwifery hardly ever goes. In London, for instance, these professors live in the far West, miles away from their hospitals and from the midwifery out-patient departments attached to them. The teaching in midwifery is almost exclusively in the hands of young assistants, who have been qualified one or at most two years, live away from the places in which the patients are delivered, and are, or should be, called if the labour does not go on naturally. It depends, therefore, entirely on the pleasure of these young assistants whether the student is or is not clinically instructed in the mechanism of labour, the aseptic management of childbed, and all further questions. It is to be considered also that there is at hand no trained midwife or monthly nurse. The student must more or less instruct himself. It says much for the value of the theoretical teaching that these young men do not have more disastrous experiences than in fact actually happen.

In Germany, the regulations for the course in practical midwifery previous to the State examination are that a candidate shall have attended regularly two half-year courses in a lying-in hospital, and have personally delivered four women in the presence of the teacher or the assistant physician.

In France, the corresponding rule is that the student shall have attended a course of three months in a lying-in hospital recognized by the Faculty of Medicine.

A SCHEME FOR BETTER TRAINING.

There is no need for me to say more on this aspect of the case. I think we may, perhaps, agree that our teaching is

quite inadequate to the importance of the subject, and the question to consider is whether any attempt ought to be made to better it. I think there can be only one opinion about that. How far a society such as ours should go in the politics of medicine is a matter for argument. We have taken part in such politics in an indirect but very decided manner, as we know; and the founders of our examinations for midwives, who were the members of a committee of our Council in November, 1870, thereby established a precedent of a kind. It was, of course, not a strictly parallel case to that of our society taking steps to obtain an alteration of the regulations for the education of students in midwifery. But their action had without doubt the very greatest influence in bringing about a far more radical change than a mere modification of existing rules, for it led to the passing of an Act of Parliament. Bacon says:

I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to be a help and ornament thereunto.

In this spirit, having done with criticism of the destructive kind, I venture to ask you to consider how we may be a help as well as an ornament to our profession, and what we can do to improve it in midwifery practice.

Undoubtedly the best way for a student to learn practical midwifery is to do his work in a lying-in hospital, where there is a teacher who devotes himself entirely to the charge of the hospital and the pupils, and is a recognized and distinguished authority on the subject. This is impossible in London at present, for there is no such hospital accommodation for all our students. It may be possible in other towns. The next best thing, and the only way I see out of the difficulty as things are, is for every teaching hospital to have a lying-in ward. The reasons for abolishing lying-in wards in general hospitals now no longer exist: we do not fear the worst the surgeons can do to our cases, nor need they apprehend any danger from us. Lying-in wards do exist at two of our hospitals, and I understand that they are to be shortly introduced into others.

The number of lying-in beds would have to be in a certain proportion to the average number of students trained annually, after it had been settled how many cases a student should be required to attend in hospital before he undertook work in the outdoor maternity. For the combination of a thorough training in the hospital with the subsequent charge of cases outside seems to me to be the best possible arrangement. The whole service, inside and out, would have to be under the charge of a man of some experience, and one selected especially for this purpose. He would be under the direct control of the obstetric physicians. The appointment might be one of somewhat the same standing as the present one of obstetric tutor, at a reasonable salary. Then, in place of the present rule, demanding attendance on twenty cases only of labour, which can be vouched for by any person possessing a medical qualification, it ought to be made compulsory for every candidate to have attended regularly the practice of a lying-in hospital or of the lying-in wards of a general hospital for three months; to have personally attended thirty cases of labour in the following way:

Six cases must have been attended in the hospital, the candidate having made all the necessary examinations, abdominal and vaginal, and performed all the manipulations of delivery under the supervision of a recognized teacher.

Full notes are to be made in each case, in a manner satisfactory to the teacher, of the patient's previous history, of the pregnancy, labour, and lying-in period, and of the progress of the child.

The remainder of the 30 cases may be attended outside the hospital, under the control of the teacher, full notes being kept as before.

I should suggest that the 30 cases be taken in the student's fifth year, not less than two years after passing the second examination. He would then go up for his final examination in all three subjects—medicine, surgery, and midwifery—which he will certainly have to practise simultaneously, at the end of his fifth year.

The attendance in the gynaecological wards and at clinical lectures on the diseases of women might remain as at present.

Further, if it were considered advisable, and I think it is, the student should be obliged to attend two courses of lectures on systematic midwifery; the first course, to be attended in the third summer session, to be on the anatomy and physiology of pregnancy, labour, and lying-in, and of the newborn

child; and the second course, in the fourth summer, on the pathology of the same.

I have named 6 cases as the number to be attended in the hospital, but if this seemed impracticable, a fewer number might be allowed, for even 1 case properly and thoroughly done would be worth more to the student than 20 or any other number attended in the way which now obtains; but there ought to be no great difficulty in managing 5. It depends, of course, on the number of lying-in beds obtainable in proportion to the average number of students trained in each year. I calculate that ten beds, arranged in three wards so as to allow for cleansing between every two batches of patients in each ward, would accommodate about 180 cases a year, and if each student took 5 cases that number of beds would be enough for thirty-six students. If there were more beds a larger number of cases per bed per annum would be possible, as the ward-cleansing could be arranged with more economy of time. A labour ward would be required for every ten or twelve beds.

The duties of the teacher in this department would be: To supervise every labour in the wards, and to see that the student to whom the case was allotted took every advantage of the opportunities for making examinations and for becoming familiar with all manipulations and details in the management of labour; to see that each case was fully reported, and to go round the cases with all the students at stated times; to accompany every student to his first case outside, and to show him how to adapt his now very adequate knowledge to the conditions of outside practice; to go to every case where the student found any important abnormality, and see that appropriate treatment was applied, judging when it was necessary to send for the member of the hospital staff in principal charge of the department.

The obstetric physicians would visit the wards regularly and teach on the cases. It would be no loss to a teaching hospital to devote such a number of beds as I have mentioned to lying-in cases, for students, other things being equal, would certainly choose hospitals so equipped in preference to those devoid of such opportunities for learning; and if all the teaching hospitals of London had these wards there would be a strong inducement for students generally to come to this city rather than go elsewhere.

In this very imperfect address I have tried to show the weak points of our present system of training students in practical midwifery. It is a system which was contrived many years ago, when midwifery was not in anything like the scientific position in which it is to-day. The system has not been improved in spite of all the advances that have been made in obstetric science, nor in spite of the addition of an extra year to the curriculum. I am very certain that there is a strong feeling among the teachers of obstetrics in this country that students are not properly taught, and they go out into the world without having obtained what we profess to give them, and that in consequence a great many lives are unnecessarily lost. I know also that the men who are in active practice throughout the country are convinced that the teaching they had as students, however recent their student-ship may have been, was entirely inadequate.

If I am accused of washing our dirty linen in public, I can point to others who have adopted the open-air laundry method before me. At least three teachers of midwifery have put on record in a decided manner their feelings on the subject, and have each suggested improved methods of teaching, all of them practical.

Dr. Herman, in an article in the *Practitioner* of April, 1896, already alluded to, asks what would happen if the teachers of medicine and surgery were to see as little of the cases from which the students had to learn as the teachers of midwifery do at present; and if the students were left to make the diagnosis, and when in doubt call in the house-physician or house-surgeon; and, finally, if this officer asked the assistance of the visiting staff only in cases of great difficulty or danger. He points out that, as I have already said, midwifery cases require the most skilled attention in the early stages of conditions that may develop into difficulty, and he recommends that a teacher should go with the student directly labour has begun, and show him how to ascertain that the conditions are normal. If they are normal the student could be left to finish the case. If they are abnormal he should be shown how to do what is necessary. Dr. Herman discusses only the modification of the existing out-patient method of practice, but I am sure from what he says that he would approve of teaching in wards.

Sir William Sinclair delivered a very important address at the

Owens College in 1903 on the same subject. He mentioned, among many other points, the fact that the examining standard and the teaching standard are at very different levels in this country, and that a student is unable to properly bring himself up to the height of the former by the thoroughness of the latter. We may hope with him that this is an evolutionary stage of a completely developed system. He quoted from a letter addressed by the Dean of the Owens College to the General Medical Council in 1896 the following suggestions: (1) That the Council insist on three months' attendance at a lying-in hospital; (2) that the practical work should be supervised by a member of the hospital staff; and (3) that certificates of instruction in midwifery should not be received from a private practitioner any more than for clinical medicine or surgery.

These regulations seem to me to be most wise, but, as we know, there has been no attempt on the part of the body addressed to bring any such regulations into force. Sir William Sinclair recommended lying-in wards in general hospitals in default of teaching in lying-in hospitals, and was in agreement with what I have already said in recommending that the student should do his practical work in his final or clinical year.

Dr. John Edgar, the Professor of Midwifery in Anderson's College, Glasgow,¹ has spoken very decidedly on the same lines. He recommends the appointment of a special teacher in midwifery, who shall devote himself entirely to this subject, taking only consulting work outside his hospital duties, pretty much as is done in the German universities. He objects strongly to the certificates of attendance on cases being signed by any medical man other than a teacher of a hospital, and considers that the first six cases should be indoor, the student being drilled in the whole aseptic management of labour.

Surely all the weight of opinion I have adduced, and the discontent which I assert is prevalent among all members of the profession, must lead to something. It only needs the spark to fire the train. It seems to me that we ought not to wait to be shamed into action by pressure from outside, but with the confidence inspired by the successful result of our patient work in improving midwives, we ought seriously and with set purpose to think about setting our own house in order.

REFERENCE.

¹ *Glasgow Medical Journal*, September, 1893.

SOME REMARKS ON PUERPERAL INFECTION.

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THE frequency of severe puerperal infection has shown little diminution during the last forty years, and constitutes a grave reproach to the present practice of midwifery in the British Isles, and indeed all over Europe. During the last twenty-five to thirty years surgical practice has been revolutionized, and infection is almost abolished both in hospitals and in the private practice of surgeons. This cannot be said of midwifery, except in lying-in hospitals where the mortality has been reduced to a minimum. In the five years 1851-5 the puerperal death-rate from all causes was 4.9 per 1,000, and in the five years preceding 1901 it was 4.6 per 1,000. The figures since 1881 are more accurate as a more complete system of registration was then adopted; these, however, show no diminution in the puerperal septic mortality, which still causes over 40 per cent. of all deaths in childbirth, and amounts to 2 per 1,000. Lancashire heads the list with a death-rate of 2.3 per 1,000 from sepsis. This by no means expresses the whole truth, for a much larger number of women suffer from inflammatory pelvic disease after delivery rendering them more or less invalid, and forming a considerable proportion of the patients under treatment at women's hospitals and elsewhere.

This high mortality and morbidity exists in spite of great improvements in sanitation, in our knowledge of the importance of asepsis and the best methods of attaining it, and with the object lesson afforded by maternity hospitals where severe sepsis is practically unknown. A study of the incidence of puerperal sepsis shows that it occurs mainly amongst women confined in their own homes largely attended by midwives and supervised sometimes by medical men. In England and Wales midwives attend 60 per cent. of confinements, and in some districts as many

as 80 per cent. Recent figures published by Dr. Williams in his Milroy Lectures show conclusively that in South Wales infection occurs most frequently among women attended by untrained and ignorant midwives; density of population, climatic influences, and even the presence of zymotic diseases, such as diphtheria and scarlet fever, having little influence in producing puerperal sepsis. It must, however, be acknowledged that puerperal infection is far too frequent in the practice of medical men, especially after complicated and instrumental delivery. Each man should realize his responsibility in attending midwifery, and should spare no effort to control so far as is possible all the factors which if neglected so readily conduce to infection. This is often peculiarly difficult, especially amongst the poor. The doctor is often called in at the last moment, to find possibly an ignorant or meddlesome woman in charge who may have worked much mischief before his arrival. The patient has had no preliminary cleansing; the bed linen and clothing is dirty, the house often insanitary, and conveniences for aseptic measures are wanting. After delivery the principles of nursing are neglected, and the medical man is quite unable to control all the small details so essential to a normal puerperal period. If anything goes wrong he has to bear the odium, and incurs all the responsibility. Midwifery practice under present conditions is certain to be attended by some amount of infection. The insufficient and unskilful attendance provided for women, the necessity for midwives undertaking menial details of nursing, the ignorance and carelessness of women themselves, are all potent causes of infection. Although the vast majority of cases of infection arise in women attended by ignorant midwives, whether a doctor has been in attendance or not, there is still far too much sepsis among patients even of the better classes attended throughout by medical men. The gravity of interference by the hand, or the use of instruments, cannot be too strongly insisted upon. All manipulations in midwifery require those precautions which are taken before a surgical operation, the same attention to detail, and the same care in repairing any injuries which may unavoidably follow. This is possible in almost every case. The essential points are few in number, and largely comprised in the words "surgical cleanliness." The fact that many patients recover in which these measures are not adopted is no argument, especially when we remember the great frequency of puerperal morbidity and its consequences quite apart from the immediate risk to life.

PUERPERAL MORBIDITY.

Although severe infection has been practically abolished in maternity hospitals, patients by no means always progress smoothly to convalescence. The morbidity, that is, the proportion of cases in which a rise of temperature beyond 100.4°F. takes place, varies from 10 to 15 per cent. in even the most perfectly equipped maternity hospitals both in England and on the Continent. Edgar, of New York, in an analysis of 2,300 cases, finds a morbidity of 18.4 per cent. The morbidity rate in 1,000 consecutive cases in the Manchester Maternity Hospital was 11 per cent.; a rise of temperature occurred in 110 cases, a figure which compares favourably with other hospitals. The most recent figures are those of Zweifel, of Leipzig, which show a morbidity excluding pulmonary and other complications of 3.3 per cent. Ahlfeld states that in 8,000 labours in the hospital at Marburg there was only one death from sepsis after natural labour, and in that case the woman had examined herself. In the whole number there were only 20 deaths from sepsis, a percentage of 0.28. Of course, a large number of the cases of puerperal pyrexia are due to causes other than sepsis, such as gastrointestinal disturbances, breast troubles, or some intercurrent affection, but the figures show a great liability to pyrexia in puerperal women, even under the best possible conditions. It is certain that the morbidity rate is very much higher than this in private practice, especially amongst the poor, but it is not possible to obtain exact figures.

ETIOLOGY.

We all now know that puerperal fever is a wound infection, nearly always the result of the introduction of organisms from without. The conditions under which many women are delivered render it at first sight surprising that infection is not more common. Nature, however, has provided very efficient means of protection, and every interference with spontaneous delivery violates these to some extent. The vagina normally contains many bacteria, none of which in health are pathogenic, but probably possess distinct resisting