and middle fingers in the vagina touch the presenting head. With the other hand the head should be strongly pressed down into the pelvis. If the head fits the pelvis it will be felt to descend on to the vaginal fingers, while if there is just a little tight fit there will be no descent. If the pelvis should, however, be definitely contracted or the head enlarged, as in hydrocephalus, it will not only fail to descend, but on pressure from above will impinge on the thumb placed on the pubis, thus indicating the presence of definite overlapping. Sometimes, however, it will be difficult or even impossible to feel the presenting part at all, and in such a case, and especially in conjunction with abdominal findings, the suspicion of a malpresentation is greatly strengthened. Finally, in the case in which a head appeared to be palpated at the fundus, a head may also be palpated below. There are two possible explanations here: the first impression may have been a mistaken one, and it may be a normal vertex, or, again, it may be a case of twins. This may be the only sign of twin pregnancy, as in a large proportion of these cases no undue abdominal distension is to be found. In such a case it may be that two foetal hearts beating at different speeds can be auscultated, and this should always be sought for. In doubt in a case of this kind, or in other cases such as suspected breech or suspected extended legs, an x-ray plate should be ordered. X rays constitute an everyday and valuable adjunct to the other forms of physical diagnosis, but it must be used as an adjunct and never as a quick means of seeing that all is well without the trouble of detailed physical examination.

Finally, a complete urinary examination must never be omitted at this stage. If all is normal, good and well, but definite albuminuria may be present without any obvious symptoms, and may lead to an acute disaster such as eclampsia or to the even more formidable chronic nephritis.

I have said enough, I think, to indicate the large number of obstetrical abnormalities which can and should be discovered by ante-natal examination at a time when appropriate and deliberate steps can be taken for their rectification. The nature of the steps is, in many cases, obvious.

While many points and possibilities have been discussed, the examinations I have detailed can be carried out by any general practitioner in a few minutes, and if all is found normal his mind can be at rest with the practically certain knowledge that the labour will be normal, and this is surely worth having.

There are few branches of medicine in which preventive methods can be practised to such good effect as in obstetrics, and it is in this direction that the art is progressing and will continue to progress. How much foetal death can be prevented by the rectification of a breech, especially in a primipara? How much maternal death or morbidity from shock or sepsis can be prevented by the early recognition of a contracted pelvis? How much eclampsia and nephritis can be prevented by the early recognition of albuminuria, the first danger signal of toxæmia? These and other calamities can and should be prevented, and it is in this direction that the State and the public will expect more efficient service from us in the future.

But when labour comes on, in spite of the most careful supervision, unforeseen complications may occur. Rarely, for instance, is a face presentation diagnosed before labour, and often the necessary extension of the head occurs only with the onset of uterine contractions. Again, the gush of liquor amnii at rupture of the membranes may wash down a loop of the cord. Or a case which by all criteria seemed occipito-anterior is found at labour to be occipito-posterior.

These points are mentioned merely to emphasize the fact that extended use of preventive ante-natal methods must never allow our manual dexterity at the actual labour to lack efficiency. Attendance at confinement and the relief which we can give at that time is the sheet anchor of the faith which the pregnant woman has in us, and while our skill in emergency obstetrics of this sort should be supplemented by the acquiring of ante-natal skill, it is to be hoped that the time will never come to the general practitioner when his hand has lost its cunning.

ANTE-NATAL, NATAL, AND POST-NATAL PROBLEMS.*

BY

W. H. F. OXLEY, M.R.C.S., L.R.C.P.,

MEMBER OF THE BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS.

AFTER working for many years at prophylaxis applied to midwifery, I feel convinced that no great progress will be made in this comparatively newly developed art until it is recognized by the profession and impressed upon our governing bodies that the co-operation of all concerned—doctor, midwife, and patient—is necessary. And in our profession itself all branches have their special part to play: the General Medical Council, to see that the student is properly educated; the obstetric specialist, to do the teaching and to help the general practitioner in difficult cases; the members of the public health service, to educate the mother in mothercraft and in the need for taking advantage of the facilities provided for her; and, lastly, the general practitioner, whose duty it is to be ready at all hours of the day and night to help the midwife and to guide back to the physiological path all mothers who show the slightest tendency to deviate therefrom.

The official maternal death rate has been stationary for many years, and many causes which are beyond the control of the profession are responsible for this—social, such as the reduction in the size of families since the war, and the consequent higher proportion of first labours with their added risk; administrative, such as differences in classification adopted by the Registrar-General from time to time. I have no doubt that such factors mask a fall which has in fact taken place. There is no doubt, however, that avoidable clinical factors are also at work, and I hope to indicate some ways in which improvement in these may be brought about.

The medical student has had in the past, and still has, insufficient practical experience, however good the theoretical teaching may be; and therefore, when he comes into private practice, and is forced by economic pressure to do midwifery under adverse conditions, he is unable to use his knowledge to the best advantage. Nay, more; I would say that the importunities of the patient and of her relations and the handy-woman, the doctor's tiredness of the case through having had many unnecessary calls, his expectation of a busy time next morning, and the many other trials which we all know well, would lead any man who had not an iron will to get the case over, even if doing so should imply a certain lapse from the strictest professional rectitude. I feel convinced that this is the true reason for the many cases of "failed forceps" which are reported in the journals. If that is so, we must see that the teaching is of such a kind as to imbue the student with what may be called an obstetric conscience, and that he will, when qualified, be able to take his part in a national midwifery service, his special duties in which will be defined and the means provided for carrying them out efficiently.

I am lucky in that I have had the advantage of working for many years under such a system as is envisaged in the British Medical Association's national scheme, and I think it may be useful to indicate briefly what this has been able to accomplish.

The East End Maternity Hospital was founded in a small way in 1884, and since then has increased until we now have 56 beds and attend 2,000 cases yearly, about half of which are in-patients and the other half attended in their own homes. There is no resident doctor. The hospital is under the direct management of the lady superintendent, who is a midwife, and the routine work is done by midwives. Doctors selected from among the general practitioners of the neighbourhood form the medical staff, the senior member of which pays daily visits, conducts a clinic for abnormal ante-natal cases, and he or one of the junior men is called by the midwives for abnormalities.

The cases are unselected, no patient is refused except on the ground that she is able to pay for her own doctor, and no patient is sent elsewhere on account of obstetric abnormality. That is to say, it is worked on pretty much the same basis as the service recommended by the British Medical Association and by the Midwives Committee of the Ministry of Health.

* A British Medical Association Lecture delivered to the Gateshead Division of the Association on December 10th, 1929.

Table showing Deaths in the East End Maternity Hospital throughout its History.

IN-PATIENTS :		No. of	No. of	Rate
Period.		Confinements.	Deaths.	per 1,000.
1884-89	...	427	1	2.34
1890-97	...	1,629	12	7.37
1898-02	...	1,278	2	1.57
1903-07	...	1,966	6	3.05
1908-13	...	3,223	6	2.13
1914-20	...	4,970	10	2.01
1921-26	...	6,373	7	1.10
1927-28	...	2,517	3	1.19
		22,383	47	2.10
OUT-PATIENTS :				
1930-37	...	1,548	3	1.94
1898-02	...	1,530	5	3.27
1903-07	...	2,334	1	0.42
1908-13	...	5,597	1	0.18
1914-20	...	7,490	8	1.07
1921-26	...	7,027	2	0.29
1927-28	...	1,608	—	—
		27,184	20	0.74

This gives a death rate of 2.1 in the hospital and 0.74 on the district. On district and in hospital combined the rate is 1.35 for the whole period.

Now if such a system is to come into being over the whole of England and Wales, and to get good results, it follows that every doctor undertaking the work must know how to apply the principles of prophylactic midwifery in all cases, and must have at his finger-ends the technique necessary to deal to the best advantage with those in which prophylaxis has failed. This means technique of a very high order, because, although the number of maternal deaths taken as a whole is large, yet the number of dangerous cases which fall to the lot of any one doctor in the course of a year is few or even none at all, and yet he has to be at concert pitch all the time.

Sufficient stress has not been laid in the past on the prophylactic side of midwifery, with the result that all except the recently trained men have had to learn it for themselves, and perhaps some of them do not even now realize its value. Prophylactic midwifery does not apply only to ante-natal work; it continues throughout labour and the puerperium, and even further, for we know that mistakes made in one confinement may have effects reaching to future pregnancies, and even through the whole of a woman's life. Thus a neglected albuminuria in one pregnancy may lead to concealed accidental haemorrhage and death of the mother in the next, and many instances of the same kind could be cited. We must therefore look upon the process of reproduction as one whole, the problems of each stage overlapping one another. In the title proposed to me for this paper the division into three parts—ante-natal, natal, and post-natal—is made for descriptive purposes only.

The next table shows the advantage of ante-natal work in lowering the maternal death rate. Although this had been done to some extent from the foundation of the hospital, it was not until after the war that the full benefits of such work were realized, and steps taken to so organize the department that every patient had necessarily to be examined.

Period.	Cases.	Deaths.	Rate.
1884-1913	19,584	37	1.9
1921-1928	17,525	12	0.68

The institution of full ante-natal work with compulsory attendance has been followed by a drop in the already low mortality to a third of its former level.

There is no mystery in ante-natal work. The idea that the average general practitioner is unable to look after the health of a pregnant woman, to search for septic foci, to examine her urine, to gauge the size of the pelvis, and to find out whether the child is lying correctly, is not in accordance with facts. If he is given the incentive to do it, and the advantage of a few demonstrations at a good clinic to see what should be done, the rest depends upon himself. He will make mistakes, especially as to the relative size of head and pelvis, as we all do, but his skill will increase with experience, and this experience will be impressed upon him by the many unnecessary night calls he will get if he shows any tendency not to profit by it.

For this reason it is of the utmost importance that the person who does the ante-natal work should be responsible for the confinement.

It is not only the doctor who has to keep up to the mark—there is the patient, her negligence, and the prejudice of her friends. Patients in the past have been lost to the doctor through insistence on ante-natal care, but now those days are going, and anyone who neglects it will be rightly blamed should untoward results follow. The doctor ought to be well paid for ante-natal work, and the financial provisions should be so arranged that success in preventive midwifery should not reduce his income.

Ante-natal care is the foundation of good midwifery; it can eliminate eclampsia, and has an important indirect effect upon the two other principal causes of maternal deaths; but it is the foundation only, and no amount of ante-natal care can do away with the necessity for really good midwifery throughout labour and the puerperium. One feels that the authorities, acting on the analogy of the child welfare centres, which have done so much to save infant life, have not quite realized that ante-natal work is simply the preparation for an emergency, the labour, and that its full benefit cannot be obtained without complete co-operation with the man who is bound to look after the patient in her emergency. This want of co-operation has been so marked in some quarters that there appears to have been an attempt to side-track the general practitioner altogether. Now, however, that idea has gone, for in the Memorandum on Ante-natal Clinics, recently issued by the Departmental Committee on Maternal Mortality, and in the report published this year by the Ministry of Health on infantile mortality, definite recognition is made of the possibility (it is only a possibility at present) that the general practitioner may have to take over a large part of the examinations now being done by the ante-natal clinics, leaving to them the work which they can most usefully do, such as the teaching of mothercraft, the following up of cases, and work of that nature. The reason for this is clear: that the general practitioner must, from the very nature of things, be the man upon whom the nation must depend at the crucial time, and anything which tends to diminish his skill or his interest in midwifery, however good it may be in itself, is bound in the long run to raise maternal mortality. Unless the general practitioner is to be cut out of midwifery altogether, which is impossible, any new service that is devised must depend for its success upon increasing his skill and interest.

Although forced to cast strictures upon part of the present working of ante-natal clinics as often conducted, nothing but praise can be given to the consultative and educative clinic. The aims of this are well known in the North of England through the work now being carried on by Dr. Farquhar Murray and his colleagues. Such a clinic will play a most important part in the midwifery service of the future, one of its chief duties being the helping of general practitioners to become efficient in this branch of the work. I am also pleased to see that the somewhat thinly veiled antagonism between general practitioner and medical officer of health has now, in most areas, been broken down, and that the two are now anxiously awaiting a lead as to how the necessary co-operation can best be obtained in practice.

Let us now consider what part the general practitioner can play under this new midwife-doctor-hospital system in diminishing the three chief causes of maternal mortality—eclampsia, haemorrhage, and sepsis.

Elimination of Eclampsia.

I use the word elimination advisedly, for, under the treatment we employ at the East End Maternity Hospital, out of the last ten thousand consecutive confinements we have had only one slight case. This occurred in a patient who had escaped the ante-natal net for three weeks. She had one fit after delivery and an uneventful recovery.

The first link in the chain is the regular examination of the urine by the midwife at least every fortnight, and the reference to the doctor at once of all cases of albuminuria, however slight. At present she does not always do so, arguing to herself that slight albuminuria means

a slight illness. It must be clearly laid down that what concerns her is simply the fact that albumin is present. The case is abnormal and one for the doctor. The next link is the admission of the patient to hospital. Home treatment, especially among the working classes, is extremely unsatisfactory. All cases should be admitted at once, with the possible exception of women at term who show no physical signs or symptoms and have no rise of blood pressure (albuminuria of labour).

In hospital energetic eliminative treatment must be carried out—hot baths, packs, castor oil, Epsom salts, enemata, and starvation. Nothing is so impressive as the effect of this treatment. A patient waterlogged, passing only one or two ounces of urine, solid with albumin, and with a blood pressure of 180 mm. or more, in most cases presents an entirely different picture in twenty-four hours and is on the high road to recovery. In a private house, surrounded by her friends, the patient will not stand the treatment.

A few cases do not clear up altogether; the symptoms disappear, the blood pressure goes down to normal, but a cloud of albumin remains. The danger of eclampsia has gone, but now comes the question how long this condition can continue without causing permanent damage to the kidneys—either a definite chronic nephritis or such slight impairment as to show itself only as a recurrent toxæmia when the kidney has to undergo the increased strain of another pregnancy. A complete answer cannot be given at present, but a rough guide which has been adopted at the East End Maternity Hospital is to induce labour at the end of a fortnight. There is a temptation to wait a little longer for the sake of the child, but it is a mistake to do so. If induction is delayed it will nearly always mean a stillborn child or permanent injury to the kidneys. In a pre-eclamptic patient induction is indicated if improvement does not take place in twenty-four hours. Albuminuria occurs frequently in multiparae, but as it does not give rise to pronounced signs it is apt to be overlooked. Energetic treatment of the first toxæmia diminishes its recurrence.

Whether or not it will be found practicable in the new service for general practitioners to continue in charge of their patients in hospital, I am sure it is an end to be aimed at, for these patients do dislike removal, and this dislike would be much diminished if their own doctor were to continue attendance. Eclampsia is nearly always due to neglect on the part of the patient, and if things are not made easy for them there will be no chance of eliminating it.

Ante-partum Haemorrhage.

Although we cannot at present do much in the prevention of ante-partum haemorrhage, we can do a little. Efficient treatment of toxæmia does reduce the number of those horrible cases of concealed accidental haemorrhage connected with albuminuria in which the uterus is so riddled with haemorrhages that if the mother is delivered alive she dies from post-partum haemorrhage owing to the inability of the damaged uterus to contract.

The greatest attention should be paid to all slight haemorrhages in the last two months of pregnancy. All such cases should be removed to hospital and treated by rest in bed. If left at home they may get a severe haemorrhage at an awkward time. The same principle applies when the bleeding is severe; a case loses half its terrors when once admitted to a well-equipped labour ward. Many patients, however, are not seen until they are too ill to be removed, and must be treated at home. If the bleeding is still going on it must be stopped—that is an essential; but in many cases the doctor will find on arrival that the patient is collapsed and pulseless, and that there is no actual bleeding at the moment. Here I should like to put in a warning about the danger of intrauterine manipulations in a collapsed patient. Judgement must be used in each individual case, for if version is done at once in such a patient, especially if the os admits only two fingers, the shock and the fresh bleeding, which goes on all the time the foot is being coaxed through the os, are sufficient to turn the scale against the patient. The right thing to do in such cases is to treat the collapse with blankets, hot-water bottles, and saline injections. The

doctor should remain with the patient. Unless the bleeding recurs intrauterine treatment should be put off until she has recovered from her collapse. A restless patient should be given morphine, because if she exposes herself to cold by kicking off the bedclothes she will die.

The value of saline injections under the breasts for all cases of haemorrhage can hardly be overestimated; they are so simple to give, and the apparatus, consisting of a rubber douche bag and a couple of needles, should be carried in every midwifery bag. The filling of the subcutaneous tissues with two to four pints of saline should in most cases be started before the intrauterine work is begun. The fluid acts as a reservoir upon which the tissues can draw at need. Blood transfusion is not of much value in private practice. The technique is complicated, a donor is not always handy, and the apparatus is likely to be out of order when wanted.

For stopping the bleeding in placenta praevia turning is still the most useful form of treatment; it gives one such a sense of security, and rightly so, for a pull on the leg will always control any further bleeding. Champetier de Ribes's bag often leaks when wanted, and is difficult to sterilize in emergency. Willet's forceps are of value in cases where the os is not sufficiently open to allow of turning, but are somewhat difficult to apply in just those cases. Some cases in multiparae, or where the labour is premature, are best treated with pituitrin. For emergencies any method which requires fingers and not instruments always has the advantage.

After turning it is tempting to hurry proceedings, but that may be fatal. The uterus should be allowed to empty itself, even if it takes some hours, and no attempt at extraction should be made, with the exception of a 2 lb. weight attached to the leg to keep it *in situ*. The doctor must be within call all this time, as his presence is absolutely necessary when the baby is delivered in order to check the slightest tendency to further haemorrhage. I have never seen a mother die from her first haemorrhage, but even half a pint coming after delivery may prove fatal in an already exsanguinated mother.

No case has occurred within the history of the hospital which could not be successfully treated by one of these methods. The foetal death rate is high, but if we thought more of the foetus I doubt whether we should show an unbroken series of maternal recoveries.

We have lately been adopting a procedure for central placenta which has been successful in saving the life of the foetus.

If the patient is first seen with an os too small to allow of turning, the placenta is separated around the lower uterine segment with the finger. This causes smart haemorrhage, which soon stops with rest in bed and morphine. In the course of a day or two the os will be found sufficiently dilated to allow of turning. When doing this the placenta is held down with tissue forceps, and another pair is used to make carefully a hole in it for the finger. As no further separation of placenta takes place there is no bleeding during this operation, and sufficient placenta remains attached to allow of the foetal respiration.

In accidental haemorrhage the bleeding is stopped in nine cases out of ten by rupturing the membranes and applying a tight binder, again using saline injections to replace the fluid which has been lost. In only a very few cases is it necessary to plug the vagina.

The next table gives the cases of ante-partum haemorrhage which occurred during the last four years and were

Cases of Ante-partum Haemorrhage treated during the Years 1925-28.

	1925.	1926.	1927.	1928.	Total.
Placenta praevia:					
Number of cases	9	14	14	6	43
Maternal deaths	0	0	0	0	0
Foetal deaths	2	10	10	0	22
Accidental haemorrhage:					
Number of cases	15	14	10	15	54
Maternal deaths	0	1	0	0	1
Foetal deaths	5	7	5	4	21

treated on the principles I have just described. The one maternal death was an unbooked case of concealed accidental haemorrhage. On the arrival of the midwife the patient was collapsed; she was delivered alive, but died of post-partum haemorrhage.

Avoidance of Sepsis.

No doubt the only certain method of avoiding sepsis is to follow the full surgical procedure of guarding against the admission of germs by all possible routes. This includes the bathing of the patient, the sterilization of cervix and vagina by some such preparation as brilliant green, the wearing of sterile stockings to the thigh, the shaving of the vulva, the wearing of sterile gown, gloves, and mask, with the possible exclusion from the labour room of any person found on bacteriological examination to be harbouring haemolytic streptococci. The patient should then be restrained from movement lest she touch any unsterile article, and the whole process have to be gone over again. This sterile life should last from the first labour pain until the raw placental site has become covered with fresh mucous membrane. The above procedure is simply bringing things to a logical conclusion, or (considering the number of emergencies which occur in midwifery) perhaps I should say "illogical." We may have to do it all, but before we go so far I venture to think that we may do many things to obviate its necessity.

In the first place, it seems to me that the predisposing causes are not sufficiently foreseen and guarded against. With us nearly every case of septic absorption occurs after a difficult or prolonged labour, perhaps terminated by manual rotation or forceps, and with an unsatisfactory third stage due to uterine exhaustion. In other words, the problem is largely one of ante-natal care combined with careful midwifery during labour. Avoid trauma and exhaustion, and see that the uterus is empty, and cases of morbidity will be few. Low forceps carefully used is not followed by more morbidity than is normal labour.

The next table shows clearly the relation of abnormal labour to sepsis. Sepsis is here taken to be any rise of temperature to 100.4° for twenty-four hours which cannot be accounted for by physical signs elsewhere than in the genital organs. It will be seen that it is over twenty times as frequent after abnormal as after normal labour. Incidentally, this table shows the greater incidence of sepsis in primiparae—nearly three times as much. I think this is probably due to the trauma inevitable in a first labour.

Incidence of Sepsis.

	Hospital.		District.		Total.	
	Cases.	Sepsis.	Cases.	Sepsis.	Cases.	Sepsis.
<i>Cases following normal labour.</i>						
Primiparae	1,769	8	294	0	2,063	8
Multiparae	2,672	3	3,275	4	5,947	7
Total	4,441	11	3,569	4	8,010	15
<i>Cases following abnormal labour.</i>						
Primiparae	212	11	20	0	232	11
Multiparae	170	7	74	2	244	9
Total	382	18	94	2	476	20

The incidence of abnormal labour is 5.6 per cent.

The incidence of sepsis following normal labour is ... 0.19 "

Multiparae 0.13 per cent.; primiparae 0.38 per cent.

The incidence of sepsis following abnormal labour is... 4.2 "

Secondly, there is a wealth of evidence showing that the risk of contagion to normal cases in hospital is one that cannot be ignored. This risk is especially great in those hospitals which take in infected or potentially infected cases, but it is by no means absent in others. It must always be considered before advising admission in

abnormal cases whether the benefit derived from the increased facilities for doing good work in hospital outweighs this added risk. It seems as though until we have discovered some certain routine to avoid infection, the normal case is more safely treated at home.

The third point concerns sterilization of the hands. The wearing of gloves in domiciliary midwifery is not quite comparable with their use in surgical operations. The doctor has necessarily during the course of labour to touch many things which are not sterile, and therefore the most important thing, whether gloves are worn or not, would seem to be to recognize the necessity of frequent rewashing and dipping of the hands in an effective solution such as mercury perchloride 1 in 1,000.

Here let me refer to the importance of thorough investigation of the state of the vaginal mucous membrane after every forceps case. We all know that the application of forceps is often accompanied by the appearance of a trickle of bright red blood from the vagina, but do we all realize that this means a tear of the upper part of the vagina which may need repair? These vaginal wounds are less frequent if really thorough lubrication is carried out. I often think there was a good deal of reason for the practice of old obstetricians who stuffed the vagina with butter before introducing the hand.

When the temperature rises it is important to regard it as due to sepsis until the contrary is established. I often try to hoax myself that it is due to loaded bowel or some other cause, only to be proved wrong later on. I am a great believer in thorough examination of the patient in the lithotomy position in every such case. I know that many obstetricians do not agree with me, but I have not found that there is any risk in careful washing out of the uterus with iodine and in digital exploration and removal of retained products. Such treatment, in cases where there is doubt, will time after time result in the removal of decomposing debris or in the letting free of lochia, retained in the uterus owing to anteversion or retroversion. Raised temperatures due to retained lochia occasionally occur fairly late in the puerperium—say from the eighth to the twelfth day—and are very puzzling; the midwife correctly says that the uterus is not felt, and yet several ounces of offensive discharge may be let out on straightening the cervical canal. If the finger at this stage can be insinuated into the cervix without stretching there is something there which should be removed.

That is a brief outline of our procedure, and it seems to show that prevention of trauma and exhaustion, and the obtaining of an empty uterus, together with careful washing and the use of plenty of mercury perchloride, are of more importance than the full surgical ritual.

As I was one of the first to start a post-natal clinic, it will not be misunderstood when I say that, given good midwifery all through, there is no need to make a vaginal examination in normal cases. In fact, I think the chief value of the post-natal consultation advised in the British Medical Association scheme is that it will act as a check on the work of the midwife. To this end the perineum of every primipara should be inspected, the general and special health of the mother should be inquired into, and if this interrogation discloses possible subinvolution, retroversion, injury to urethra or vagina, or other abnormality, further examination should be made and the appropriate treatment given. If the examination is made too searching it will defeat its own ends because the women will cease to attend. In fact, for both ante-natal and post-natal examination a thorough following-up scheme will be necessary.

I have tried in this lecture to show that the problem before us is by no means insoluble. If you agree that the stationary position of maternal mortality is due not wholly to want of progress in midwifery but to social causes, if I have made it clear that the deaths from the three great causes can be very largely reduced under the general practitioner-midwife-hospital combination, my lecture will not have been given in vain. Much has to be learned by research, but I see no reason for holding a "non possumus" attitude, and firmly believe that, even in the present state of our knowledge, well-considered administrative action will result in a drop in the true maternal mortality rate of over 50 per cent.