

The general practitioner accoucheur in the 1980s

M. J. V. BULL, MA, FRCGP, DRCOG
General Practitioner, Oxford

If general practitioners want to practise obstetrics, they must practise modern obstetrics.

Sir Stanley Clayton (President,
Royal College of Obstetricians, 1973-75)

A glance at the title of this essay might prompt the more cynical reader to enquire "but *will* there be any general practitioners prepared to undertake personal responsibility for deliveries by the 1980s?". In the light of trends in obstetrics in recent years, he could perhaps be forgiven. Before the National Health Service started in 1948 it was accepted that practical obstetrics was part of the stock-in-trade of almost every family doctor, and at that time approximately 50 per cent of all births occurred in his care, either at his patients' homes or in private maternity hospitals. When I joined my practice 25 years ago I like to think that one reason why I was selected was because I had just completed a hospital appointment in obstetrics and the partners were anxious that this important and (at that time) lucrative aspect of the practice should be maintained. As the senior partner said to me at my interview: "When you look after a woman in pregnancy and deliver her, you will then have *two* patients for life." With the development of different attitudes and expectations of patients, however, I doubt if that aphorism is as valid nowadays.

Decline and disillusion

The precise extent of general practitioner participation in intranatal obstetrics of recent years has been difficult to quantify. Lloyd (1975) analysed claims for payment made by general practitioners for maternity services and found an almost linear decline over the years 1963 to 1973 in that proportion which included care during the confinement. By extrapolation he concluded that, after 1983, there would be no significant number of patients delivered solely in the care of their own doctor. More recently, Macfarlane (1979) analysed returns for the

Hospital In-patient Enquiry (HIPE) in 1970 and 1975 by type of hospital confinement and concluded that, when her figures for general practitioner care were added to those for home confinements for the relevant years, the totals were in fairly close agreement with those calculated by Lloyd's method. In 1978, general practitioners claimed payment for care during the confinement for some 98,800 patients or 16.4 per cent of total births in England and Wales. Low as this figure may be, one cannot infer that only a similar proportion of practitioners are undertaking full obstetric care. This is a much more difficult figure to ascertain since the known total number of confinements will be the product of the number of general practitioners concerned multiplied by their average annual case-load. No official figures seem to exist in this respect but analysis of one quarter's maternity service (F.P. 24) claims in my own Family Practitioner Committee area (in the Thames valley) in 1979 indicated that approximately 30 per cent of all general practitioners were undertaking responsibility for delivery of some patients and their average case-load was approximately 10 patients per annum. This small sample is probably not representative of the country as a whole, however.

The birth rate

Thus, before proceeding to discuss the prospects for the general practitioner accoucheur in the next decade, I shall examine some of the factors that have been responsible for the decline of general practitioner obstetrics. Firstly, the fall in the national birth rate from the peak figure of close on 900,000 (18.5 live births per thousand population) in 1964 to under 600,000 (11.6 per thousand) in 1977 must be a factor. This fall may in part have been due to socio-economic factors but, probably more significantly, it coincided with the availability of relatively safe and effective contraceptive methods, particularly oral contraception. For the first time, women are able, if they wish, to embark on a rewarding career (either financially or emotionally) without having to face either the responsibilities of early matrimony or the risks of unplanned pregnancy. The

result has been a progressive postponement of the first pregnancy. Added impetus has been given to this trend by the rather liberal Abortion Act of 1967. In my own practice, for instance, mothers now plan their first pregnancy at an average age of 25 years.

Place of confinement

A further major factor in the decline of general practitioner obstetrics has been the marked and progressive change in attitudes (both public and professional) concerning the place of birth. When I first entered practice, 40 per cent of deliveries still occurred at home (many of these being nulliparae), and were performed by the responsibility of the general practitioner. Although bookings were selective and overall results (in terms of perinatal mortality) satisfactory, unexpected complications (such as fetal distress, delay in the second stage, apnoea in the neonate, postpartum haemorrhage or retained placenta) were not uncommon and I, for one, was grateful for a speedy and efficient flying squad. On many an occasion the adage that, in obstetrics, normality is only retrospective was brought home to me and I was thankful when, in 1966, a general practitioner maternity unit opened near our district general hospital. As a result, my experience of domiciliary obstetrics has subsequently declined over the years almost to zero.

In 1959 the Cranbrook Committee, reporting on the maternity services in the United Kingdom (Cranbrook, 1959) recommended that "provision should be made over the country as a whole for a sufficient number of maternity beds to allow for an average of 70 per cent of institutional confinements". This target was already achieved by 1965 and the trend was further accelerated when Hobbs and Acheson (1966) identified the dangers of booking high-risk patients in isolated general practitioner units and especially the hazards of moving women to specialist care during labour. By 1970, 87 per cent of confinements were occurring in institutions and today less than two per cent of all deliveries in the United Kingdom occur in the home. This trend did not require a vast expansion in the number of designated maternity beds, firstly because of the falling birth rate and, secondly, because the post-delivery stay in hospitals has, over the years, progressively been reduced. The Peel Report (1970) recognized this and pointed out that the average lying-in period, which had been 12 days in 1955 and 10 when Cranbrook reported, was, by 1968, down to eight days. Subsequent improvements in housing and social circumstances have currently reduced it to five days on average, and early discharge options are now available in many specialist units. The result of this progressive trend towards institutional confinement and more rapid turnover of deliveries in specialist hospitals is, of course, that there is now even less opportunity for the general practitioner obstetrician to practise his art.

General practitioner beds still comprise some 18·5 per cent of all maternity beds, but the evidence is that in many places they are now often very much underused

and have thus become uneconomic. Nationally, maternity bed occupancy in 1965 was 81·8 per cent in consultant units and 71·2 per cent in general practitioner units. By 1977 the rate in the former had declined to 68·7 per cent but the latter almost halved at 39·5 per cent. As an example, in my own area there are four general practitioner maternity units within a 20-mile radius of, and dependent upon, the obstetric department of the district general hospital. During the last 15 years the total number of births occurring annually in these units has dropped from over 1,200 to under 300 and at least one unit shortly plans to close. With an increasingly mobile population no longer reliant on public transport, patients are now prepared to travel considerable distances to be assured of delivery in a unit which can offer a safe and comfortable labour, even for low-risk cases. As a result the rural general practitioner's experience diminishes; confidence wanes with it and many will opt out of intranatal obstetric care forever.

Technology

Then there is the effect of the introduction of technology and sophisticated management methods into obstetric practice. Ultrasound examinations, amniocentesis, external cardiotocography, hormone assays, to name but a few, are performed more and more frequently. Few ordinary general practitioners now would have the expertise to employ these techniques or even interpret the results and, although some might question the necessity for and frequency of some of these investigations, their effect on the family doctor is nothing if not intimidating and a further factor influencing him to "leave it to the experts". Safety in obstetrics has reached the point where maternal mortality has fallen to such a low level that a death is rare even in units with the largest annual turnover, and any such event is properly subjected to intense scrutiny and discussion. Similar critical attention now focuses on perinatal and infant deaths and the corollary of the family planner's aphorism "every baby a wanted baby" now seems (rightly) to be "every baby a perfect baby".

While our national perinatal mortality rate has steadily declined over the last two decades, concern is being expressed because it has not done so as rapidly as in some other developed nations and reasons are being sought. Fetal and neonatal deaths are now divided (as are maternal deaths) into 'unavoidable' and 'avoidable' categories. Losses due to, say, congenital abnormalities and early pre-term births are acceptable; those due to intranatal hypoxia or neonatal apnoea are not. More recently, the medico-legal implications of such attitudes have become apparent, especially in instances where antenatal or intranatal procedures have subsequently been deemed not to have been of the highest standard and have resulted in, for example, permanent brain damage to an infant. A predictable result of this as the

Lancet (1978a) and Singer (1978) have pointed out it is likely to be a trend towards more defensive obstetrics so that the general practitioner obstetrician practising in isolation will feel particularly threatened. If the general practitioner is still contemplating domiciliary deliveries, he or she will not gain much comfort from the work of Curzen and Mountrose (1976) who found that, even in low-risk patients, life-threatening emergencies affecting either mother or fetus occurred in no less than seven per cent of cases. Furthermore, Fedrick and Butler (1978) found that, although the national stillbirth rate has declined progressively over the years, that attributed to home births began to rise steadily from 1970 onwards and by 1977 considerably exceeded the overall rate. This alarming observation may, however, be explained (Tew, 1980) as the inevitable result of an irreducible number of 'accidental' events in the home (precipitate labours, concealed and early pre-term births, etc.) which carry a very high perinatal mortality, outweighing increasingly fewer planned, low-risk births. Thus it seems likely (and in spite of some emotive protagonists) that, in the 1980s, delivery in the patient's own home will remain an anachronism.

Medical education

Next, continuing participation by the family doctor in obstetrics is scarcely encouraged by current trends in medical education. In many medical schools now only one month is allotted to midwifery, including the time spent in the labour wards where competition for normal deliveries with pupil midwives is often keen. Thus few practitioners would now wish to undertake care of their own patients on the basis of this slender introduction to obstetrics although, under current legislation, they are still entitled to do so. Vocational training schemes for general practice with linked appointments in obstetrics and gynaecology would seem to offer a suitable training course for postgraduates, and Drinkwater (1972) in his survey of general practice trainees found that they regarded obstetrics as the next most important specialty after paediatrics. By 1977, however, trainees attending a National Conference at Oxford regarded midwifery as only the sixth most relevant specialty (Howe-Davies, 1977).

Payment

Finally, dare I mention the question of remuneration? It seems ironic that today the reward for responsibility for a mother and baby through anxious hours of labour is currently only a few pence more than that for an easy visit during unsociable hours to, say, a teething infant or a feverish child. General practitioner obstetricians are surely worthy of their hire and their responsibilities should be acknowledged accordingly. Little wonder that many now prefer to stay snug abed and let junior hospital staff (with their units of medical time pay-

ments) bear the load. Whether this reaction is in their patients' best interests is, of course, debatable.

Winds of change

In the latter half of the 1970s, however, there have been a number of changes that could lead to a revival of obstetrics in general practice if practitioners chose to take advantage of the opportunities. In 1978 an upswing of approximately 3.5 per cent occurred in the birth rate and this figure was considerably exceeded in 1979. As the progressively increasing number of female babies that were born in the post-war years up until 1964 become of reproductive age themselves, it seems likely that the birth rate nationally will continue to rise at least until the late 1980s, even if average family size remains only at replacement level. Since the total number of available maternity beds in England and Wales fell by some 1,500 during the 1970s and, since (as already noted) the occupancy rate in general practitioner beds is currently much lower than in specialist units, it seems possible that fuller use of the former could prove a more economic solution to increasing demand than expansion of the latter. Logically there should also be more critical selection of patients for specialist care with more widespread use of community resources for low-risk patients, who still comprise approximately 60 per cent of the reproductive population.

Secondly, in the mid- and later 1970s, there came the perhaps inevitable reaction from more concerned and articulate sections of the public against a seemingly mechanistic approach to parturition in general and induction of labour in particular (Robinson 1974a, 1974b). The pros and cons concerning time and place of birth were debated widely in both lay and professional press (*Lancet*, 1974; *British Medical Journal*, 1976) and on television, and the controversy appears to have resulted in a more humanitarian approach to childbirth (Kitzinger and Davis, 1978). Significantly, falling hospital induction and operative delivery rates do not seem to have adversely influenced the steadily declining perinatal mortality figures during recent years, and the implication is that general practitioner obstetricians, offering a style of care typified by better continuity and less intervention, could achieve, in correctly selected groups, good results with much improved patient satisfaction.

Thirdly, through the 1970s, another trend in general practitioner obstetrics has emerged. The number of domiciliary confinements had fallen drastically and, as already noted, so had the number in isolated general practitioner maternity hospitals. However, over the past decade and longer, there has been a contrasting swing toward so-called integrated general practitioner maternity units which exist within (or in close association with) specialist obstetric hospitals. This type of unit originated as long ago as 1953 (O'Sullivan, 1961) and similar units have been described by Rhodes (1968),

Oldershaw and Brudenell (1968; 1975), Bull (1980) and by many others. According to Macfarlane's figures (1979) based on HIPE reports, deliveries in integrated units rose from 6.1 per cent to 9.1 per cent of all confinements between 1970 and 1975. Provided there is continued demand for this style of care (which combines optimum continuity, safety and convenience for both patient and practitioner), an increasing proportion of births could occur in such institutions well into the foreseeable future.

Finally, changes in practice organization and development of the concept of primary care teams over the last decade should make it easier for some family practitioners to be involved in obstetric care. Fry (1977) noted that by 1974 35 per cent of doctors worked in groups of four or more and only 18 per cent were single-handed. This trend towards larger group practices has flourished and has enabled many general practitioners to sub-specialize or follow specific interests. Thus we now often find, in the larger practices, that perhaps two members will accept the obstetric caseload for the whole group. By this means, not only will continuity of maternity care be maintained within the practice, but each general practitioner obstetrician will achieve a sufficient annual case-load to preserve his or her diagnostic and operative skills. Non-participating partners can acknowledge this additional workload by adjustment of financial or duty rota arrangements.

Inclusion of community midwives into the primary care team has further improved quality of maternity care and in many places these midwives now attend not only the occasional domiciliary confinements but also those occurring in general practitioner maternity units of both isolated or integrated variety. They also play an important role in making initial decisions regarding place of confinement, sharing in routine antenatal examinations and attending early discharge of patients either from general practitioner or consultant units. Marsh (1977) has described this style of organization of maternity care and the excellent results, in terms of perinatal mortality and morbidity, that can be achieved, especially in the more disadvantaged social groups.

Prospects for the 1980s

At the beginning of the present decade a fresh pattern for general practitioner obstetrics could be emerging. There seem likely to be three main categories of obstetric practitioner. The majority (perhaps 70 per cent) will provide antenatal and post-natal care only, on a shared basis for patients booked in consultant units for delivery. A minority will be the real general practitioner accoucheurs of the future. They, with their practice midwives, will be responsible for the total care of low-risk mothers delivered at home or in peripheral general practitioner maternity units and for low- to medium-risk patients booked in integrated units. This group will need to be enthusiastic and dedicated and will

require a case-load of the order of 50 patients per annum to maintain their skills and expertise. Thirdly, in perhaps a few particularly isolated centres of population (Shapland, 1979), there may still be a few highly experienced general practitioner obstetricians trained to MRCOG standard and taking responsibility for obstetric emergencies in their units which would normally be regarded as more appropriate to specialist care.

The hospital practitioner grade obstetrician foreseen by Elstein and colleagues (1975), who was to have formed part of the specialist team, does not seem to be evolving. This is probably for a number of reasons: the number of hospital practitioners actually appointed has fallen far below expectation (only 34 in obstetrics by 1978); few applicants could devote (or area health authorities afford) sufficient sessions to make the scheme viable; and (most importantly) that sacrosanct principle, continuity of care from within the practice team, would go completely by the board if such practitioners were supervising their colleagues' deliveries within a specialist unit on a sessional basis.

So what will be the responsibilities of the general practitioner accoucheur in the 1980s? Clearly they should begin long before pregnancy occurs. Most important, his or her patients should not conceive before they intend to do so. Butler and Bonham (1963) demonstrated unequivocally that teenage pregnancy (especially in unsupported mothers) carries considerably increased risk of perinatal mortality, and later work (Lynch and Roberts, 1977) has shown that this kind of pregnancy is also an important predictive factor of subsequent child neglect or abuse. Members of the practice team (especially the health visitor or community nurse) are often best placed to detect a girl at risk of unwanted pregnancy and it is then the family doctor's duty to ensure that appropriate contraceptive advice is available. "Every baby a wanted baby" is an admirable dictum but sometimes difficult to achieve in socially and economically disadvantaged circumstances. Thus a liberal and early interpretation of the 1967 Abortion Act may sometimes be the most appropriate response to premature pregnancy when alternatives have been thoroughly discussed with a teenage patient and her parents.

Factors such as housing and environmental pollution may be difficult to influence but the adverse effects of smoking, drugs and alcohol should be pointed out to intending parents. Genetic stigmata in families can be identified and specialist advice obtained where there are hereditary traits on either side. Immunity status, especially with reference to rubella, should be established before contraceptive measures are abandoned so that, if required, active immunization can be undertaken at least three months prior to anticipated conception.

When a hoped-for pregnancy occurs, the family doctor is usually the first professional to be consulted. He will have a number of most important decisions to discuss. Firstly, is the patient in fact pregnant? In these

enlightened days a woman often presents hopefully within a week or two of a missed menstrual period. If she has recently discontinued using an oral contraceptive she may still be suffering from pituitary/ovarian suppression and unless speedy and accurate diagnosis of pregnancy can be made, disappointment of the patient and embarrassment of the doctor may be the result. The modern general practitioner should, therefore, be equipped to undertake the immunological detection of gonadotrophins in the urine in his practice premises. This procedure is cheap, rapid and reliable (within four weeks of conception) and can often be delegated to the practice nurse. False positive results are rare and pregnancy diagnosis can often be achieved well before other symptoms or clinical signs become evident.

Pregnancy confirmed, the next important assessment concerns length of gestation. For various reasons (for example, irregular menses, post-pill amenorrhoea, missed abortion, multiple pregnancy) there may be a discrepancy between fundal size and duration of amenorrhoea. According to Chamberlain (1978), estimated dates of delivery calculated solely on the basis of the date of last menstrual period will be unreliable in as many as 25 per cent of patients. Where doubt exists, access to ultra-sound equipment will often solve the problem and some practitioners are already equipped with simple hand-held machines which can detect a fetal heart as early as 10-12 weeks' gestation. However, more sophisticated equipment will be required to detect twins, and beta-sonography techniques are required for accurate fetal measurements for gestational dating. Equipment of this type and appropriate reporting will probably still be available only in district general hospitals during the 1980s but there seems to be no good reason why general practitioner obstetricians should not have access to this service as they presently do for radiology.

The most important decision of all, however, and one that must be made early since it vitally affects the entire organization of antenatal care, concerns the place of booking for the confinement. Broad guidelines were long ago laid down (Cranbrook, 1959) and in essence they remain valid today. Nulliparae below the age of 18, over 30 years or under 152 cm in height, multiparae over 35 years or in their fifth or subsequent pregnancy, any patient with a metabolic disorder (for example, diabetes), a scar on the uterus, rhesus or other antibodies, a history of difficult or complicated delivery or a perinatal death should be booked in the care of a specialist. Home confinement should surely not now be considered for any nullipara and indeed some authors (Cooper, 1969; Geals and Howat, 1977) question whether they should be delivered in general practitioner care at all. Their arguments carry some weight in areas remote from specialist help, since it is apparent that complications (whether in pregnancy or in labour) occur more than twice as frequently in nulliparae and tend to be more difficult to resolve. However, since general prac-

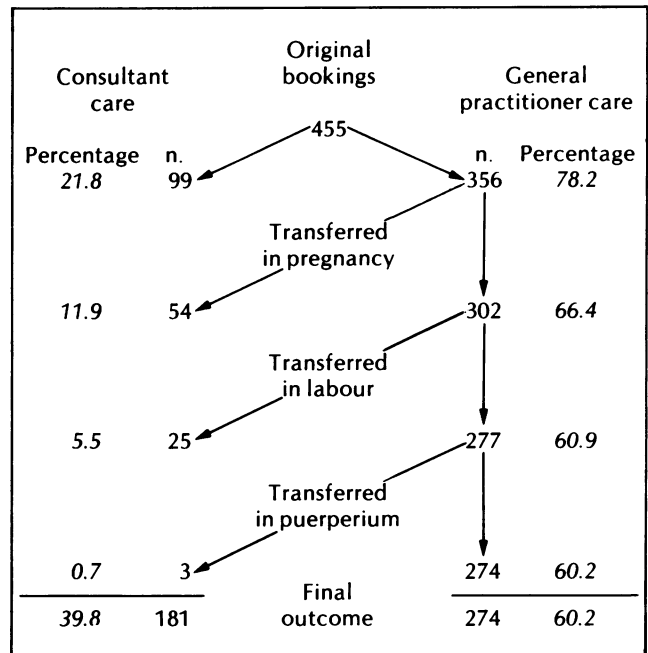


Figure 1. Outcome of all bookings.

tioners in the future are increasingly likely to be functioning in integrated units, a more flexible booking policy could be employed since, in this situation, problems can be discussed promptly with specialist staff and transfer of care safely arranged when appropriate. In this way job satisfaction and increasing experience of the practising general practitioner obstetrician may be achieved to the mutual benefit of doctor, patient and practice. I personally have been fortunate enough to work in such a unit for the past seven years. Figure 1 shows the overall outcome of bookings for all my maternity patients during that time, Figures 2 and 3 the different patterns for nulliparae and multiparae respectively which prompted my preceding observations.

Various risk prediction systems designed to make obstetric booking decisions easier have been described (Haeri *et al.*, 1974; Wilson and Sill, 1973; Aubry and Pennington, 1973), but the sensitivity and specificity of these is such that general practitioner obstetricians are perhaps more likely to be guided by geographical considerations, their personal knowledge of the patient's past history and background and by their own clinical acumen rather than by formalized selection procedures. The latter may ultimately produce broadly correct judgements for large cohorts of patients but the family doctor now, and for the future, will be concerned with what is best for his particular patient in her unique situation. Often the booking decision cannot be made by the general practitioner alone; he or she may need advice from a consultant obstetrician, geneticist or physician and will almost certainly need to confer with the community midwife and health visitor. Factors such as housing, existing family commitments, transport and communication must all be taken into account, yet the plans made must be sufficiently flexible to permit variation should unexpected contingencies arise.

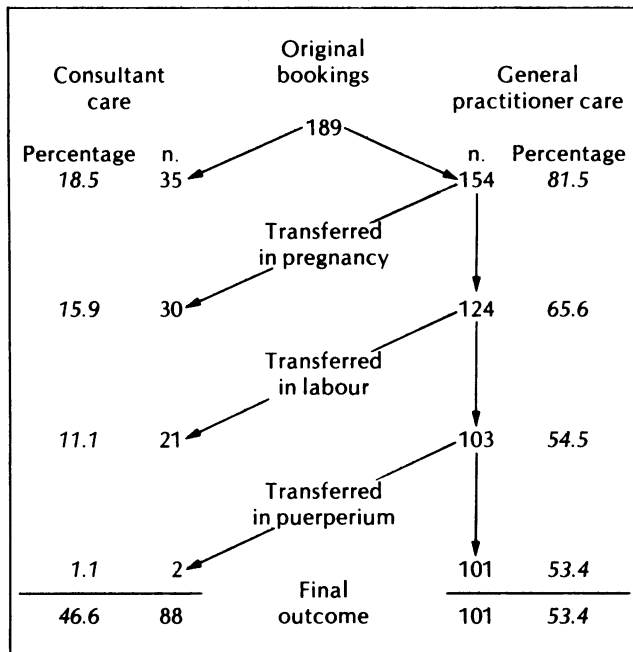


Figure 2. Outcome of bookings — nulliparae.

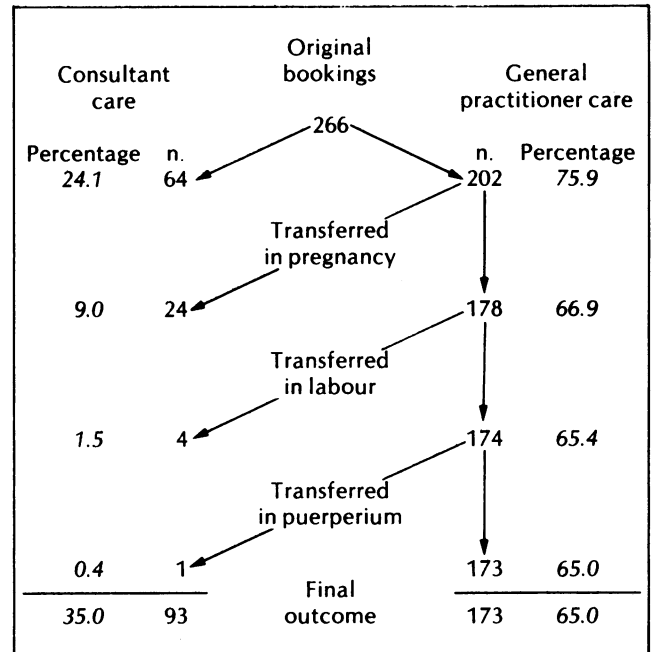


Figure 3. Outcome of bookings — multiparae.

At the general practitioner's booking clinic other considerations, such as the pattern of antenatal care, infant feeding intentions, parentcraft classes, probable duration of stay in hospital and even future family planning methods (especially where sterilization is envisaged), may all be profitably discussed. This, of course, takes time but it is of vital importance that the mother is fully informed and involved in the many decisions concerning her pregnancy so that her confidence in herself and her attendants (and ultimately her physical and emotional satisfaction) can be assured. There is little doubt in my mind that the primary care team, suitably supported, is the best agency to achieve this goal.

Antenatal care

The pattern of antenatal care in the 1980s is likely to continue along traditional lines. Whether provided by the general practitioner and midwife alone or shared with a consultant, the now standardized intervals for routine examination are likely to be continued. The overall goal (Chamberlain, 1978) should be to maintain and improve the health of the mother and the fetus so that both are brought to labour (the point of highest risk to either) in optimum condition. The two main aims are the early diagnosis and treatment of variations from the norm and the detection of asymptomatic disease. While the first will still be approached in conventional ways based on physical examination, the second will be based on increasingly sophisticated screening techniques. Those for anaemia, rhesus antibodies and venereal infection have been routine for many years but, by the 1980s, others will already have become standardized

practice. For example, recent immigrant populations will need to be screened for haemoglobinopathies; the increasing prevalence of hepatitis-B, with its risk of cross infection to attendants, suggests that the blood of all maternity patients should be screened for this antigen; and rubella immunity status (if not already known) must be assessed at the first visit (if the patient is not already immune, there is a good argument for repeating the estimation three to four weeks later, whether or not there has been known exposure to the disease, since sub-clinical viraemia can sometimes occur and it is obviously important to detect such an event in the vulnerable first trimester). Other viral infections, for example, toxoplasmosis, cytomegalovirus and herpes virus, are also potentially damaging to the developing fetus but at present their prevalence may be too low to justify the effort involved in their detection.

Routine care aimed at detection of abnormalities such as anaemia, pre-eclampsia, malpresentation, multiple pregnancy, cephalopelvic disproportion, etc., will of course continue as before but, since the three chief causes of perinatal mortality and morbidity are now (Chamberlain, 1977) congenital abnormality, pre-term birth and intra-uterine hypoxia, efforts will be redoubled to detect or prevent these particular problems. The greatest advances in the last decade have perhaps been made in the field of pre-natal diagnosis of congenital defects, particularly those affecting development of the neural tube system—anecephaly and spina bifida. Defects of this type occur in approximately three births per thousand (Scrimgeour and Cockburn, 1979) and, with congenital heart lesions, may thus be the most common serious defect experienced in obstetric practice. The realization (Brock and Sutcliffe, 1972) that

such flaws in embryonic development give rise to raised levels of alpha-feto-protein in both amniotic fluid and maternal serum has led to the introduction of routine serum screening programmes for women during the second trimester. By 1979 these were available in 46 per cent of Regional Health Authority areas and are likely to become nationwide. The family doctor may thus be involved in the necessary blood sampling procedures and in the unenviable task of explaining an abnormal result to an anxious patient and in arranging for further investigation by ultrasonography and amniocentesis in a specialist department. Although amniocentesis is not without risk (*Lancet*, 1978b), the advantage, in terms of diminished human distress, of early detection and subsequent abortion of fetuses with serious congenital abnormalities seems now to be well established. Chromosomal abnormalities, sex-linked and enzyme defects may also be detected by sampling the amniotic fluid, and the practitioner will have to consider carefully factors such as family history, maternal age, history of previously affected child, etc., before referring a woman for genetic counselling or investigation. As a guideline, the Clinical Genetics Society Working Party (1978) on pre-natal diagnosis in relation to genetic counselling suggests that only when the chances of an abnormal fetus are statistically greater than one in 100 should amniocentesis be recommended, that is, the risk of the fetus bearing a serious congenital defect should be greater than the additional risks of investigation.

A more recalcitrant problem is that of premature birth (now defined as birth occurring before the 37th week of gestation and referred to as pre-term delivery). Over the past 20 years, and in spite of advances in other fields, the incidence of this complication has remained constant at about six per cent of all births. Pre-term deliveries account for some two thirds of all first week neo-natal deaths, the bulk of the remainder being due to lethal congenital abnormalities. In nearly 40 per cent of cases the cause is unknown (*Rush et al.*, 1976), but multiple pregnancy, maternal infection, placental abruption, cervical incompetence and previous amniocentesis as well as socio-economic disadvantage all seem to be related factors (*Fedrick and Anderson*, 1976; *Ritchie and McClure*, 1979). A previous history of pre-term delivery may be particularly significant and *Fedrick* (1976) has attempted to devise a 'risk-score' system for identifying women in this category. Thus the role of the general practitioner obstetrician will be to refer early in pregnancy cases he suspects to be at risk, especially those likely to be suffering from cervical incompetence (previous pre-term deliveries, mid-trimester abortions, etc.), who might, therefore, benefit from cervical cerclage. Otherwise his only recourse will be the prompt admission of a patient in premature labour, if possible to a hospital with a special care baby unit. Suppression of labour with beta-adrenergic agonists and the prevention of hyaline membrane disease with steroids is clearly the domain of the specialist, but

even so perinatal mortality in pre-term deliveries overall is 80-120/1,000. However, if labour can be postponed beyond the 32nd week, over 70 per cent of infants in special care will survive. Remarkably, elective pre-term delivery for medical reasons carries a much lower risk of fetal mortality.

Finally, the general practitioner obstetrician must be alert for fetal growth retardation in the third trimester of every pregnancy—the 'small for dates' syndrome. This is a consequence of intra-uterine hypoxia due to poor placental function and, in the absence of overt causes such as maternal hypertension or placental abruption, can be insidious in its development. *Fedrick and Adelstein* (1978) identified predictive factors and found that they were very similar to those associated with pre-term birth, with the addition that growth retardation was more common in nulliparae, patients with severe toxæmia and mothers working in early pregnancy. They concluded, however, that it was not possible to predict accurately which women will produce infants of low birth weight at term and suggested that the intuitively derived methods of the clinician might well be as effective. The general practitioner obstetrician will perhaps first be alerted to the possibility of growth retardation by poor maternal weight gain associated with unsatisfactory enhancement of fundal size. Reduction in fetal activity may also be prognostic (*Pearson and Weaver*, 1976), and subjective monitoring of fetal movements by a patient which are recorded daily on 'count to ten' charts can give a progressive indication of fetal vigour. Objective evidence of fetal growth may be obtained by serial measurement of the fetal skull bi-parietal diameter by means of beta-sonography, and placental function can be monitored by serial total oestrogen estimations in 24-hour urine specimens. In the latter weeks of pregnancy total urinary oestrogen should rise progressively and failure to do so, especially when associated with any other feature of growth retardation, makes a strong case for referral for specialist opinion and more definitive tests of fetal well-being, such as external cardiotocography. It is thus clear that the responsibilities of the doctor, especially in the last trimester, are indeed considerable, and if overall results are to continue to improve he or she must be assured of both technological and consultative support.

The delivery

We must now discuss the definitive role of the general practitioner accoucheur. It might be unwise to be too specific, since experience, skills and enthusiasm may vary widely. If, however, general practitioner obstetricians opt to provide intra-natal care, one should assume that their function will be complementary to that of practice midwives and that their skills, both operative and diagnostic, will be of a higher order. Basically general practitioners must, of course, be able to undertake a normal delivery, resuscitate the neonate

and repair the perineum—the midwife may not always get there first! More usually, however, their role will be supervisory and they will be chiefly concerned with monitoring the progress of the labour and ensuring the well-being of the fetus. Their other commitments as family practitioners may in many instances prevent their continued presence throughout labour but, during the first stage, they should maintain close communication with the midwife and must make every effort to attend the actual delivery. The second and third stages of labour are the points of maximum risk for fetal hypoxia and maternal haemorrhage, and intervention, when indicated, cannot be delayed.

The modern general practitioner accoucheur will need to be conversant with up-to-date management systems for labour, and in this instance the concept of the partogram, a continuous graphical record of progress, is most apposite. Devised by Philpott (1972) in Rhodesia, it was elaborated by Studd (1973) and adopted by O'Driscoll and colleagues (1973) as the basis for a system of active management of labour. The chart plots cervical dilatation and descent of the presenting part against time, as well as recording other factors such as the quality of the contractions, fetal heart rate, state of the liquor, maternal pulse and blood pressure, so that the whole picture of the progress of labour can be seen at a glance. Once labour has entered its active phase, dilatation should normally proceed at the rate of approximately one centimetre per hour (Friedman, 1967). Philpott (1972) used this standard as a basis for his concept of 'alert' and 'action' lines on the chart as criteria of progress and as a cue for intervention in the event of inefficient uterine action. Similarly Studd (1973) developed stencils for nomograms which could be superimposed on the graphic record for either nulliparae or multiparae at any stage of dilatation which would indicate the likely progress from that point on. If labour is inefficient and thus liable to be prolonged, the line representing cervical dilatation will fail to parallel the nomogram (Studd's method) or will cross Philpott's 'action' line. At this point (cephalo-pelvic disproportion having been excluded), augmentation of uterine activity is indicated by means of carefully titrated oxytocic intravenous infusion. Augmentation of labour is a technique that should be within the competence of the present-day general practitioner accoucheur and his or her practice midwife should be trained to supervise it. With the adoption of these methods it should be possible to ensure efficient progress in the majority of labours and achieve a high incidence of normal delivery, usually within a period of less than 12 hours.

The contemporary general practitioner accoucheur must also be familiar with modern techniques for monitoring the fetus in labour. Traditionally this has been done by auscultation at intervals of varying frequency throughout labour with the Pinard stethoscope, although this simple instrument is now often replaced by the more sophisticated portable ultrasonic detector.

Edington and colleagues (1975) advocated continuous fetal heart monitoring for all women during labour, since it is not always possible to predict fetal distress in labour from maternal risk factors. Using continuous monitoring techniques they demonstrated a significant fall in perinatal mortality in two consecutive years with, surprisingly, a fall in the incidence of caesarean section. The logistic problems of continuous monitoring are such, however, that universal adoption does not seem likely in the near future, and O'Driscoll and colleagues (1977) assert that the condition of the fetus can be judged with a fair degree of accuracy by the state of the liquor amnii. To this end (and in the interests of active management) they advocate rupture of the membranes as soon as labour is established. Clear liquor equates with fetal well-being and conventional auscultatory surveillance can then be employed. Meconium-stained liquor (or no liquor) suggests a fetus at risk due to impaired placental function and is thus an indication for continuous monitoring. This may first be achieved by direct fetal cardiography via a transvaginal scalp electrode coupled to an external uterine activity transducer. By this means the effect of contractions on fetal heart rate can be continuously displayed in graphical form; the general practitioner obstetrician should be competent to set up the equipment. If the fetal heart rate remains steady, labour may proceed uninterrupted but dips in the trace (Type II dips) delayed beyond a contraction have sinister significance and more complex methods such as fetal blood sampling (the realm of the specialist) should then be sought.

The degree to which operative delivery should be the province of the general practitioner obstetrician is more debatable. Most will confine their activities to lift-out forceps delivery performed under perineal infiltration or pudendal block analgesia. Where more complicated manoeuvres (for example, rotation, breech, twins, etc.) are indicated, a request for assistance from specialist staff may be prudent, but the continued involvement of the general practitioner will prove a valuable educational experience for the doctor and a comfort to the patient. Such are the advantages of midwifery in a fully integrated general practitioner maternity unit with ready access to specialist operative skills, regional analgesia and paediatric expertise!

Induction of labour is another contemporary and emotive topic. General practitioner obstetrics has traditionally been non-interventive and many indications for inductions will be for medical conditions more appropriately consigned to consultant care. However, one situation that can frequently confront the general practitioner in the absence of more sinister connotation is that of post-maturity. Butler and Bonham (1963) showed that delivery at 42 weeks' gestation carried a 50 per cent increase in risk of perinatal death, which at 43 weeks was double and at 44 weeks treble that of delivery at or near term. Presumably these findings are the result of placental ageing and diminished function with conse-

quent fetal hypoxia; there is thus an obligation to ensure delivery before 42 weeks. Induction of labour by means of artificial rupture of the membranes augmented by oxytocic infusion should be within the competence of the general practitioner provided certain criteria are met. These are:

1. There should be no reasonable doubt concerning the duration of gestation.
2. The presentation should be cephalic.
3. There should be no suspicion of cephalo-pelvic disproportion.
4. The patient should be informed and in agreement.
5. The cervix should be favourable.

In respect of the last criterion, Bishop's method (Bishop, 1964) of assessing the state of the cervix can be recommended. A points system based on dilatation, effacement, consistency and position of the cervix is related to the station of the presenting part and gives a good indication of cervical readiness. Patients with a high score will labour after simple rupture of the membranes, those within a middle range will require augmentation with intravenous oxytocin, while those with a very low score should pause to consider whether all the criteria for induction are fulfilled or, alternatively, whether the indications for induction are, in fact, absolute.

For the future, however, a less irrevocable and invasive method for induction may be used. MacKenzie and Embrey (1977) described the use of intra-vaginal prostaglandins (PG E₂) for the ripening of the unfavourable cervix and later noted (MacKenzie and Embrey, 1978) that, by the use of this technique, formal induction by amniotomy and oxytocin was avoided in 65.9 per cent of nulliparae and 87 per cent of multiparae. The following year, Shepherd and colleagues (1979) used pessaries containing measured doses of PG E₂ in the routine induction of labour and reported a high success rate with only one complication (uterine hypertonus) related to the method in over 500 patients. MacKenzie (1979) has subsequently designed a protocol for the use of PG E₂ pessaries for both nulliparae and multiparae with either favourable or unfavourable cervixes and such is the simplicity of the scheme that (after due evaluation) it may prove to be the most appropriate method of induction available to the general practitioner obstetrician in the next decade.

The puerperium

In the puerperium there will be a more traditional role. The first priority, of course, will be the examination of the neonate for congenital defect or functional disorder and consultation with a paediatrician if necessary. Screening for phenylketonuria will probably be accompanied by routine tests for hypothyroidism, since the two conditions have the same incidence. Hyperbili-

rubinaemia must be monitored and, while cases of physiological origin will respond to simple treatment such as phototherapy, babies with evidence of haemolysis of antigenic origin will need to be referred promptly to specialist care.

The practitioner will supervise the involutational processes in the mother and be alert for physical or psychological abnormalities. He or she will support the midwife in efforts to promote breast feeding and infant/parent bonding, particularly to ensure that there is no unreasonable separation of child from mother. Thirdly, the doctor will have an important role of prophylaxis. He or she must ensure that Rhesus negative mothers are screened for potential Rhesus D sensitization within 36 hours of delivery and that anti-D globulin is administered if appropriate. The puerperium is also the appropriate time to immunize women known to be still susceptible to rubella and to explore the mother's wishes regarding future pregnancies. Family planning advice can then be offered in good time and, at the final post-natal examination, cervical cytology can also be undertaken.

Training and audit

Now what of training and continuing education in obstetrics? For intending general practitioner accoucheurs, surely six-month senior house officer appointments in a recognized obstetric unit should be mandatory? During that period of intensive experience they will encounter the great majority of problems that they will meet in their subsequent professional practice. They will develop practical skills and, perhaps more important, recognize personal limitations. Achievement in the field of midwifery may perhaps be accredited by the Diploma in Obstetrics but paper credentials can be no substitute for practical experience. Continuing education is a topical subject and perhaps periodic refresher courses may be a mandatory requirement for retention on the Obstetric List. In my view, however, expertise is best maintained by continuing involvement with one's own cases, especially when they are transferred to specialist care, and then by informal discussion with consultants and perhaps by supervised participation in operative deliveries.

Audit too is important, both for setting standards and monitoring performance, either of individuals or institutions. Obstetrics, with precise indices of outcome and well-defined problems, readily lends itself to such procedures and simple systems are not difficult to devise. The results of general practitioner obstetricians (given that their patients are selected because they are potentially normal) should always be superior to those in specialist institutions that have to take the rough with the smooth, but even so results can be misleading. It is not difficult to transfer to specialist units prior to delivery those cases in which unforeseen complications arise and which result in fetal mortality. Such transfers

are detrimental to the statistics of the specialist unit rather than to those of the general practitioner. For this reason, as Woods (1971) has pointed out, it is more relevant to measure the outcome for patients booked originally for general practitioner care rather than for those actually so delivered. For the 1980s we may hope to see the introduction of a standardized audit system for general practice obstetrics whereby the achievements of general practitioner maternity units (if not of actual individuals) can be compared, weaknesses identified and performance thus continually improved. For the present, participation of general practitioners, midwives and consultants in case reviews, perinatal conferences and regular audit meetings must suffice to maintain standards and the enthusiasm without which progress cannot occur.

Conclusion

In summary then, general practitioner accoucheurs in the next decade will provide personal and continuing obstetric care for patients within their practices. They will work closely with other members of the primary care team to bring their patients' pregnancies to a safe and happy conclusion. They will be sensitive to the wishes of their patients (and those of their partners) and will involve both in their plans and decisions. Although they should remain autonomous, they will have access to and employ up-to-date investigation and management techniques and will freely confer with, and refer to consultants. Although home confinements need not be refused in appropriate circumstances, deliveries will increasingly occur in general practitioner maternity units integrated within specialist hospitals. In this way they will combine continuity of care with maximum safety for mother and child.

In return the general practitioner accoucheur should achieve a high degree of personal satisfaction, the respect of colleagues and the affection of patients. The experience of the prolonged labour proceeding under heavy opiate sedation in isolated circumstances and culminating in the difficult delivery of a moribund infant from an exhausted mother will be thankfully relegated to history. During the 1980s the general practitioner accoucheur will still have a role but heroics in his or her field will no longer be appropriate.

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Dr M. J. V. Bull, East Oxford Health Centre, Cowley Road, Oxford OX4 1XD.

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Source: Sinan, K. & Hillary, I. (1980). *British Journal of Psychiatry*, 138, 131-133.

The

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Diagnostic Quiz

The answer to the April quiz is as follows:

The ECG trace showed the Wolff-Parkinson-White syndrome with atrial fibrillation.

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The ECG trace will be reprinted together with a commentary on the diagnostic features and treatment of this condition in the July issue.

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