General Practice Observed

Use by General Practitioners of Obstetric Beds in a Consultant Unit: A Further Report

K. L. OLDERSHAW, J. M. BRUDENELL

British Medical Journal, 1975, 1, 139-142

Summary

Of 1,700 women booked for delivery by general practitioner obstetricians in a consultant unit, 1,399 had uncomplicated deliveries and the co-operation between practitioner and consultant was an obvious advantage for the 257 who were transferred completely to consultant care during pregnancy, labour, or puerperium. The scheme, which started in 1964, has enabled general practitioners to continue to give complete obstetric care to their patients. The number of participating practitioners has, however, declined from 80 to 16 indicating that many preferred to concentrate on antenatal work.

Introduction

In 1968 we described the scheme whereby 500 women were booked by general practitioner obstetricians for delivery in a consultant unit and reported the results.¹ From 1964 to mid-1972 1,700 women have been looked after during pregnancy under the scheme. All women are now delivered at Dulwich Hospital in an enlarged upgraded unit, the unit at St. Giles Hospital having been closed. We are reporting the current results to show that our scheme has continued to provide a satisfactory means for general practitioner obstetricians, working in an urban setting with a 95% hospital inpatient confinement rate, to practise obstetrics to a high standard. Their obstetric abilities are satisfied and their patients receive efficient and convenient maternity care.

Type of Patients and Antenatal Complications

Most patients booked under the general-practitioner-obstetrician (G.P.O.) scheme were nullipara or multipara up to and including para 4. Similarly most patients were aged 30 or less. Some patients of greater parity than 4, or aged over 35, were booked if special circumstances indicated. The following two case histories illustrate this point:

Mrs. A.B., aged 32, nullipara, did not like hospitals and was only persuaded not to have a home confinement if her general practitioner could undertake her care, both during the pregnancy and at delivery.

Mrs. C.D., aged 36, para 5, was a very poor attender at antenatal clinics and only received antenatal care during her present pregnancy because she was booked as a G.P. obstetrician case and was visited regularly at home by her doctor. He subsequently supervised her safe delivery in hospital.

The fact that the antenatal care of such problem patients is to be carried out by a doctor who knows the patient and home background well and who will deliver her in a consultant unit with full facilities and expert assistance readily available is possible because of the flexible approach to booking patients under the scheme.

Most of the commonly occurring antenatal problems were dealt with either by the G.P. obstetrician alone or with consultant advice and help (table I).

TABLE I—Abnormalities Occurring During Antenatal Period

Abnormality	No. of Cases	Management by		
		Consultant Staff	Consultant and G.P.	G.P. alone
Anaemia (haemoglobin 10.3 g/100 mls or less) ..	119	3	2	114
Postmaturity ..	116	23	2	91
Pre-eclamptic toxæmia ..	72	36	0	36
Ante-partum haemorrhage ..	42	35	7	0
Persistent breech presentation	36	22	14	0
High head at 36 weeks ..	19	16	3	0
Pyelonephritis ..	13	3	1	9
Twin pregnancy ..	10	8	0	2
Miscellaneous ..	39	17	6	11

Labour

The G.P. obstetricians were successful in inducing labour. Of the 128 cases induced, all went into labour—112 being delivered within 24 hours.

Of 1,700 deliveries 1,399 were uncomplicated. The complications are shown in table III. The caesarean section and the forceps delivery rates were low. In the latter patients the delivery was performed almost equally by consultant staff and G.P. obstetrician. In eight patients the consultant staff assisted the G.P.O. in completing difficult forceps deliveries complicated by a persistent occipito-posterior position. Four of the 16 breech deliveries and four of the 16 twin deliveries were conducted by experienced G.P. obstetricians after prior consultation with the consultant concerned and with appropriate standby assistance available. A further case of twin pregnancy was diagnosed when a fetus papyraceous was discovered in the membranes (it was not counted as a delivery). The more active modern management of the first stage of labour has led to a low

King's College Hospital, London SE5 9RS

K. L. OLDERSHAW, D.OBST.R.C.O.G., M.R.C.G.P., General practitioner obstetrician
J. M. BRUDENELL, F.R.C.S., F.R.C.O.G., Consultant obstetrician and Gynaecologist

TABLE II—*Induction of Labour. 128 cases performed by general practitioner*

Indication for Induction*	No. of Cases	Method of Induction	No. of Cases
Postmaturity	91	Low rupture of membranes (L.R.M.)	61
Pre-eclampsia	31	L.R.M. with pitocin infusion	14
Antepartum haemorrhage	1	L.R.M. with buccal pitocin	52
Trial of labour	1	Buccal pitocin alone	1
Unstable lie	1		
Breech presentation	1		
Previous precipitate labour	1		
Social reasons	1		

*Induction/delivery interval: less than 24 hours in 112 cases; 24-48 hours in 15 cases; and more than 48 hours in one case.

TABLE III—*Management of Complicated Deliveries*

	Total	Consultant	Consultant and G.P.	G.P.
Forceps deliveries	111	58	8	45
Breech delivery	16	12	0	4
Twin delivery	16	11	0	5
Vacuum extraction	13	11	2	0
Caesarean section	45	45	0	0
Prolonged first stage	38	23	3	12
Premature labour	16	12	1	3
Prolapsed cord	3	2	0	1
Postpartum haemorrhage	31	6	0	25
Retained placenta	12	8	0	4

incidence of prolonged labour. This is an advantage to the G.P. obstetrician, who finds the management of these patients difficult because of his other commitments outside the hospital. When continuous monitoring and epidural analgesia are employed in such circumstances the patient is then generally transferred to consultant care. In 27 cases of clinical fetal distress consultant staff carried out fetal blood sampling. Eight of these patients were returned to G.P.O. care and had uncomplicated normal deliveries. The remainder were retained in consultant care for continued observation and 11 patients required operative delivery. Postpartum haemorrhage was uncommon, occurring in 2% of patients retained by the general practitioner. Six severe cases, all requiring transfusion, were transferred to consultant care and the remainder were managed by the G.P. obstetrician, five requiring transfusion. Of 12 retained placentas, manual removal was performed by the G.P. obstetrician in four. Eight patients defeated the magnificent efforts of the London ambulance service and were delivered before arrival in hospital, one patient repeating the process in her second pregnancy. Midwives from the hospital brought seven mothers and their babies in after delivery. Two babies were delivered by the Metropolitan Police.

The one maternal death was the result of an overwhelming influenza virus infection, a virus pneumonia in a 32-year-old woman, who developed the condition at 36 weeks gestation. She went into premature labour and was safely delivered of a living child. She was immediately transferred to the intensive care unit of the hospital, where she died five days after delivery. The cause of death was confirmed by post-mortem examination.

Transfer of Patients to Consultant care

Two hundred and fifty-seven patients (15%) were transferred completely to consultant care at some stage during the pregnancy, labour, or puerperium (apart from the 21 patients who had a tubal ligation). The number was higher for primigravida and over the years has risen for all patients. This reflects a greater willingness by the consultant staff to allow G.P. obstetricians to undertake the care of potentially abnormal cases secure in the knowledge that a transfer back will be made whenever appropriate. A further factor has been the more active management of labour in the consultant unit, patients being transferred for such procedures as fetal blood sampling, continuous monitoring, or epidural analgesia. The need for transfer in such cases is

determined by the expertise of the G.P. obstetrician and there is no reason why he should not use these techniques providing he is skilled and practised in their use. The ready availability of expert assistance provides the necessary safeguard. The interest shown by the G.P. obstetrician in the management of labour is reflected in the high attendance rate of the G.P. obstetrician at his patient's delivery. Excluding transferred cases and babies born before arrival in hospital, the G.P. obstetrician was present at 41% deliveries, a figure which compares very favourably with the attendance at domiciliary deliveries in former times, and not unfavourably with medical staff attendance in normal consultant cases.

Family planning

Family planning is an important part of postnatal care. Tubal ligation was performed in 21 G.P. obstetrician patients after delivery and the remaining patients had their family planning arrangements made by the G.P. obstetrician during the puerperium. Pregnancy provides an excellent opportunity for the G.P. obstetrician and his patient to initiate long-term plans for contraception which the doctor can supervise so dispensing with the need for attendance at a family planning clinic.

Early Discharge

Only 22 of the first 500 cases were discharged after 48 hours because of difficulties outside the hospital. We thought that when these difficulties were removed many women would opt for early discharge and 95 did in the second 500 cases and 210 in the next 700 cases. This led to the welcome involvement of local authority domiciliary midwives and their pupils, who are now able to attend the antenatal clinics at some of the G.P. obstetricians' surgeries, accompany their patients into hospital, and deliver them and look after them at home after an early discharge.

Only 29 of the babies delivered under G.P. obstetrician care gave cause for concern; of these, 16 were cases of difficulty in establishing respiration, all of which were successfully managed, 14 requiring intubation. Of the remaining 13 babies the commonest problem was neonatal jaundice. The consultant paediatrician gave advice in all these cases and transferred the baby to the special-care baby unit as required. Major congenital abnormality occurred in six babies.

There were 11 stillbirths and six neonatal deaths in the first week of life, a perinatal mortality of 10 per 1,000 total births (table IV).

TABLE IV—*Perinatal Deaths*

Stillbirths		First Week Deaths	
Anencephaly	3	Interstitial pregnancy. 30 weeks 1 lb 14 oz (850 g); baby lived 18 hours	1
Accidental antepartum haemorrhage	2	Premature labour. 24 weeks; 2 lb (907 g)	1
Cord entanglement	2	Normal delivery at term. Tracheo- oesophageal fistula. Died at 6 hours	1
Intrauterine death, severe pre-eclampsia	1	Normal delivery after APH at term	1
Acute intrapartum anoxia	1	Congenital heart lesions. Died on 5th day	1
Maternal gastroenteritis	1	Normal delivery at term. Massive diaphragmatic hernia. Died after 15 hours	1
Intrauterine death at 35 weeks (cause unknown)	1	Congenital cardiac abnormalities. Died at one day old after transfer for cardiac surgery	1
Total	11	Total	6

Discussion

We would agree with Woods² that there appear to be three essential prerequisites for good general practice obstetrics: careful selection of cases, intelligent antenatal care, and close co-operation between G.P. obstetrician and consultant.

SELECTION OF CASES

The criteria for the selection of cases for G.P. obstetrician care have been suggested by successive maternal mortality reports and by the Royal College of Obstetricians and Gynaecologists in 1962. A great objection to such criteria is that no allowance is made for differing experience or ability among G.P. obstetricians, for the very different facilities to which he has access, depending on the place of confinement, nor for the greatly differing physical conditions of women with similar obstetric histories. Certainly close adherence to such criteria in the general practitioner unit at Harlow³ results in little reduction of the necessity to transfer to consultant care during later pregnancy, for nearly half the primigravida and a quarter of the multigravida who were in that study were so transferred.

What does result, however, is a lack of experience for the general practitioner, for in the same study even such a simple procedure as surgical induction of labour was performed only in the consultant unit and it is perhaps not surprising that G.P. obstetricians as a whole preferred not to perform forceps deliveries. We see no reason why the close co-operation between G.P. obstetrician and consultant mentioned as a prerequisite above should not extend to the selection of cases. Selection will be made by the G.P. obstetrician in the first instance for he sees the patient first. By allowing the consultant to see the patient on booking, both patient and G.P. obstetrician have the advantage of a second opinion and the consultant can assess that particular patient in relation to the G.P. obstetrician concerned and the available facilities. Thus, the experienced G.P. obstetrician can look after patients who would have been deemed unsuitable had rigid criteria been applied and as a result he gains in experience and confidence and takes a greater part in total obstetric care.

ANTENATAL CARE

With antenatal care, again, the cornerstone of the successful working of the scheme is co-operation between consultant and G.P. obstetrician. The consultant must feel confident that any serious abnormality developing will be transferred and the G.P. obstetrician must be equally confident that abnormalities with which he can deal will remain under his care. For example, it is right and proper that all cases of antepartum haemorrhage have been transferred for investigation by the consultant. We would suggest that it is equally right and proper for a mild toxæmia at term to be admitted under the care of the G.P. obstetrician for rest and induction of labour.

Integration of the G.P. obstetrician into the consultant unit is the keystone of the Dulwich scheme. G.P. obstetricians and consultant staff work side by side in the wards and labour suites so that a free interchange of information and advice takes place between the two. Co-operation becomes a reality, fostered by the feeling that all are part of a single team. It is a sad fact that G.P. obstetric units are often isolated even when they are situated in the same building as the consultant unit. This is because, though lip service is paid to the idea of co-operation, the G.P. obstetrician, for reasons of prestige or lack of experience, does not seek consultant assistance early when unexpected complications arise in labour. The situation is further compounded if the G.P. obstetrician cannot readily get to his patient quickly at any time because of his other general practitioner duties. The consultant for his part, knowing that he can only enter the G.P. obstetric unit by invitation, may adopt a laissez-faire attitude, grumbling when things go wrong, or may insist on rigid rules for the transfer of patients to his care when complications of any sort occur. A stalemate situation then develops in which the patient suffers in the first case because she does not get the advantages of expert advice and sophisticated modern techniques or in the second because she is whisked away from the care of the G.P. obstetrician she knows and trusts for the slightest variation from normal.

Emrys Roberts⁴ suggests that some mothers may feel that a small risk of perinatal death may be worth taking in order to secure the advantages of delivery nearer home, by persons known to them, and who have attended them antenatally. This suggestion does not accord with our experience. The mother's prime consideration in her choice of place of delivery is to obtain the maximum chance of a live healthy baby. During the past 20 years, as more obstetric beds became available, and the stay in hospital became shorter, the proportion of mothers requesting confinement in hospital has risen from 60% to 95%. During the past 10 years mothers have been encouraged in this choice by their family doctors because they are able to attend them in hospital. Past practice has been to site general practitioner units away—possibly many miles away—from the specialist unit. This arrangement cannot give the patients booked for delivery in such units as good care as those in a specialist unit (under G.P. obstetrician or consultant care). Unexpected complications develop especially in late pregnancy and labour even where meticulous care has been taken to book only "suitable" patients. To add to such a complication an emergency ambulance journey cannot improve matters. The use of the obstetric flying squad may bring specialist care to the patient in any outlying unit but it cannot bring the full range of modern specialist facilities and its role in the future will be restricted to that of ensuring that these patients do not bleed to death.

Conclusion

The time has come to question the wisdom of the present arrangements. Are distances of 40 miles or so really sufficient in this day and age to prevent all women being confined in a specialist unit? Experience in other countries—for example, the U.S.A. or Australia, where truly enormous distances are involved, would seem to indicate they are not. Should the G.P. obstetrician of the future expect as a natural result of his wish to participate in obstetrics, to settle in practice in the vicinity of a consultant unit rather than many miles away from it? Is distance truly a barrier for the patient, or is it more a barrier for the doctor? The success of any G.P. obstetrician scheme, such as the one at Dulwich, depends upon the extent to which the G.P. obstetrician concerned is actually participating in it. Attendance on the patient in labour and at delivery are useful criteria and it is interesting to note that, as reported by other authors,⁵⁻⁶ there is among our G.P. obstetricians a considerable variation. A pattern has developed in which the majority of G.P. obstetrician bookings are made by a few group practices in which two or three doctors do most of the obstetrics. The attendance rate in labour and at delivery is highest among these doctors and they develop their obstetric experience and abilities accordingly.

When the Dulwich scheme was introduced 80 local practitioners joined but by the end of the period covered by this report this number had fallen to 32. Recently this number has been reduced again to 16 by offering the alternative of shared antenatal care of consultant cases. In this way those G.P. obstetricians, whose attendance rate is low and who tend to hand over to the consultant most if not all abnormalities or who found that full participation in the scheme was not compatible with their normal practice duties, can confine their activities to antenatal work. The remaining G.P. obstetricians constitute a cadre of really experienced and competent doctors who will play an active and equal part with the consultant in providing first class obstetric care for the district. The present obstetric list covers too wide a variety of obstetric experience and activity. In future it should be confined to those G.P. obstetricians who are prepared to carry the major burden of less complicated obstetrics thereby enabling the consultant team (with perhaps a diminishing number of registrars) to concentrate its special skills on the complicated cases where they are most needed.

References

- ¹ Oldershaw, K. L., and Brudenell, J. M., *British Medical Journal*, 1968, 3, 112.
² Woods, J. O., *British Medical Journal*, 1971, 4, 803.
³ Banwell, G. S., and Hamilton, I. G., *Journal of the Royal College of General Practitioners*, 1970, 19, 282.
⁴ Emrys Roberts, R. M., *British Medical Journal*, 1972, 3, 237.
⁵ Rhodes, P., *British Medical Journal*, 1968, 4, 509.
⁶ Barnard, M. J., et al., *Journal of the Royal College of General Practitioners*, 1970, 19, 211.

Occasional Survey

Spina Bifida Children Attending Ordinary Schools

HEBE WELBOURN

British Medical Journal, 1975, 1, 142-145

Summary

From September 1971 to September 1973 a policy was actively followed in South Gloucestershire of placing spina bifida children in ordinary schools wherever possible. This was achieved successfully in 14 cases out of a possible 24. Special attention was paid to the selection of children and schools. The main contraindications to attendance at ordinary school were: below average intelligence, special perceptual problems, the need for intensive physiotherapy, and problem incontinence—particularly infaecal continence. Success often depended on special provisions—for example, transport, aids to mobility, peripatetic physiotherapists. Personal attendants (welfare assistants) could be allocated to each of the more severely handicapped children. The lack of facilities for handicapped pupils in comprehensive schools is a matter needing urgent review.

Introduction

In 1969 the Department of Education and Science suggested¹ that special facilities might be provided to enable many of the increasing number of surviving spina bifida children to attend ordinary schools. Most major centres for the treatment of spina bifida began follow-up studies of the progress and probable educational needs of children surviving to school age. These studies²⁻⁷ commented on the difficulties to be expected in ordinary schools but gave no details about the schools or the children's progress in them. Lawrence⁸ reported on 17 children handicapped by spina bifida attending ordinary primary schools because special schools were too far away. No special facilities were provided for them. Their progress was, understandably, disappointing. Anderson,⁹ in a special study of 99 variously handicapped children (including some with spina bifida) attending ordinary schools, emphasized the importance of "making ordinary schools special" in order to provide facilities for handicapped children. Until quite recently a choice of school for physically handicapped children was often made without any psychological assessment. The notion that spina bifida children were handicapped only "below the belt" was a

reason for pressing their acceptance in ordinary schools. But it has been shown^{10, 11} that many spina bifida children, particularly those with hydrocephalus, suffer from specific educational difficulties.

The present paper describes the selection of spina bifida children to attend ordinary schools, the criteria on which the children and the schools were selected, and the special facilities provided.

Children

The children lived in the Bristol fringe area of south Gloucestershire and attended the spina bifida unit at Frenchay Hospital. I saw them as school medical officer with special responsibility for the handicapped. During the period under review, September 1971 to September 1973, there were 40 children with spina bifida resident in the area. Fourteen of the 40 had been born before September 1966 and were already attending an ordinary or a special day or residential school. Ten children had been born between September 1966 and December 1968 and reached the age of 5 and entered an infants' school during the period under review. Of 16 children born after December 1968 two had died. All the 14 remaining children born after December 1968 had attended playgroup or nursery school at the spina bifida unit from the age of about 18 months, and two very handicapped children daily attended the physically handicapped assessment unit at Claremont School, Bristol.

Unless otherwise stated, admission to infants' school was at the age of 5 years. Promotion to junior school took place in the September of a child's 8th year, and to secondary school in the September of his or her 12th year.

Criteria for Selection for Ordinary School

SELECTION OF CHILDREN

Assessment was along the lines adopted by Hunt *et al.*⁶ Each child was visited at home by me. Except for a few of the older children, examination included a Stanford-Binet intelligence test or a developmental assessment. Possible difficulties in perception, motor control, or comprehension could be observed qualitatively if not quantitatively. Developmental testing was based at first on the methods of Sheridan¹² and Egan *et al.*¹³ Later the Griffiths tests^{14, 15} were used in preference because of their compactness, convenience, and ease of reporting. The older children were also tested by educational psychologists. A psychologist with experience in the developmental observation of babies and preschool children was available only during

Gloucestershire County Council

HEBE WELBOURN, M.D., D.C.H., Departmental Medical Officer