

A DOMICILIARY OBSTETRIC PRACTICE 1948-58

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Mildenhall

“ In his own opinion, the best place was the home. . . . In Holland they tried to keep mothers at home with the restriction that there were no medical or social contra-indications. Confinement in one's own home, was of the greatest importance for strengthening family life. The ties between husband and wife grew stronger; a delivery at home was one of the glory points in the lives of a wedded couple.”

Banning, C., Chief M.O.H., Netherlands.

The practice is situated in East Anglia and is entirely rural in character, the only industry apart from agriculture or horticulture being flour milling, though a few women chiefly from the periphery are employed in light engineering and similar work in neighbouring townships. The subjects of this review are almost entirely drawn from classes III and IV of the Registrar General's classification. There are three partners with a total list of 6,600 National Health Service patients. All the partners do some midwifery, but the bulk is done by the author, whose cases alone figure in this paper. The practice is conducted from a central surgery premises in the main village, around which is a ring of satellite villages with populations from 200 to 500 souls and the average visiting distance is probably 3 to 4 miles with extreme points of about 9 miles.

The nearest hospital is 9 miles away and two others are used at 12 and 22 miles respectively. There are no local authority antenatal clinics in the area nor general-practitioner maternity beds. A four-bedded general-practitioner maternity home was available (and most useful) 9 miles away, until it was closed a few years ago due to lack of staff. Since then a ward has been put at our disposal in the nearest hospital but, as we still await staff for that also, it is open only on paper. A private nursing home 11 miles distant has been used very occasionally but not for some years now.

Our effective ancillary staff are the two district nurse-midwives in the main village with three or four others operating in the peri-

pheral villages. Our local nurses, in particular, work with us in very close liaison. At one time, one or both attended my antenatal clinics but for reasons now forgotten this was discontinued. We still work in unison however, and regularly discuss the cases under our mutual charge, while any deviation from normal discovered between the antenatal sessions is immediately reported and arrangements are then made to call with the nurse to see the patient concerned.

Since the inception of the National Health Service the tendency has been for nearly all pregnant women, intending a home confinement, to book a doctor. Although this might seem to restrict the scope of the midwife's authority, there has been no opposition from our nurses on this account, nor to the doctor's attendance at the delivery of normal cases, and, in fact, I attend at every birth unless absolutely prevented by absence or illness. This, I believe, is something that every pregnant woman has a right to expect when she books her doctor, and it is something she does not get in hospital, nor, alas, at home too often. Careful preparation for parturition both medically and emotionally loses half its object if, at the crucial stage for which all this preparation has been undertaken, the doctor is absent.

Procedure in the Average Case

It is usual for the woman to visit me first during an ordinary surgery session to make sure she is pregnant. If she is, she is asked about her preference as to venue for the confinement. Immediately after the inception of the National Health Service there was a marked demand for hospital accommodation, which had to be resisted, not only because hospital has never been considered as the first place to think of for parturition, but also because I had always done a fair amount of home midwifery and I had no intention of being deprived of this most interesting part of general practice because of an ill-conceived idea that "hospital was better". I did not think it was then and nothing has occurred since to alter my views. Pressure in all suitable cases and conscientious attention to those booked has resulted in a local atmosphere favourable to home obstetrics, and if a patient, able to remain at home, expresses a wish to go to hospital, it is done half apologetically and usually by a newcomer to the practice.

Having decided that the patient is pregnant, she is given an appointment for the next antenatal clinic, held four-weekly on a Wednesday afternoon. Ten minute appointments are given from 2 p.m., the last being usually about 4.20 p.m. A separate antenatal clinic was started about eight years ago partly for my own convenience, as it was found disturbing during a surgery to do antenatal

work, and partly for propriety as I do not care to see women big with child sitting in a waiting room alongside male patients. In any case it is far more satisfactory from the women's point of view for it avoids embarrassment and eliminates long waits. On this occasion the patient is told to see and book the nurse as soon as possible.

Depending on the time available, the first opportunity is taken to discuss the pregnancy, answer any questions spoken or unspoken, resolve doubts, and relieve fear of the unknown. Experience convinces me that confidence and lack of apprehension are two of the most important factors in ensuring a healthy pregnancy and confinement, and these desiderata cannot be built up except by time spent at regular clinics where the same doctor is regularly seen and will, the patient knows, be with her at her delivery. The confidence of the doctor in his own ability is equally important and he should not adopt "the concept of parturition as a potentially pathological process" but "give support to the contrary view of pregnancy and parturition as essentially a physiological process which sometimes goes wrong".¹

On her first visit to the antenatal clinic, the patient is given a general examination (unless she is already well known), blood is taken for Rh factor, haemoglobin estimation, etc., and the weight recorded. She is also lent a copy of the booklet *Advice to the Expectant Mother* by Professors Browne and Browne of Edinburgh. This well written publication is usually much appreciated, and the patient is asked to note any points in the booklet she does not understand, or on which she needs more information.

Thereafter, she is seen monthly and it is found that a 10 minute appointment is ample for the routine of the antenatal visit. At the 36th week abdominal and pelvic examinations are carried out, this usually being the only internal examination except for the one at the time of booking, unless symptoms and signs arise which call for it. Between the 36th and 40th weeks the nurse visits the patient, first at the end of the 38th week and thereafter weekly. The nurse has herself seen the woman at regular intervals since being booked.

When labour starts, the nurse is sent for, and she lets me know that she has been called. If in the vicinity of the house during visiting rounds, a call will be made to see all is well. Otherwise a summons is awaited from the nurse when the cervix is fully dilated. Meanwhile, the patient will very likely have had $\frac{3}{4}$ -1 $\frac{1}{2}$ grains of seconal when about half dilated and gas and air if distressed. Having been sent for, I remain with the patient until completion of the delivery.

Postnatal visits are made on alternate days, unless distance is an obstacle, until the 10th day and a further visit is then arranged in

five weeks time for the final postnatal examination and vaccination of the baby.

This is a sketch of what takes place in the average case. Of course, no case is average but it should always be treated as such unless and until signs and symptoms arise, when it will be opportune to use what experience has taught in order to decide whether it is "just one of those things", or whether a serious situation is likely to develop. As with all physiological processes there are wide variations from the average without spilling over into the abnormal and, according to one's ability to evaluate the subtle variations on the theme of procreation, so will one be able either to conduct a responsible domiciliary midwifery practice or fill hospital wards with eclamptics or failed forceps cases.

Need for Similar Surveys

I was stimulated to carry out this survey by reading the *Obstetric Survey of the South-west Faculty of the College of General Practitioners*, May, 1957. For the case analyses in this paper the same type of Cope-Chat punch cards was used although many of the section titles are different, due to the fact that their study was of a group of 116 doctors, whereas the present paper refers to my own cases only.

It is a pity that there are not more surveys on the subject, done either by individuals or by groups of general practitioners. A more balanced picture of domiciliary midwifery would then be available to the hierarchy, whose adverse opinions have been based on the results seen in the hospitals of bad or inefficient work. That far more in the way of difficult manoeuvres than is generally accepted can be done at home, and done efficiently and safely is obvious, and it is hoped that this survey will reinforce that fact.

"All skilled observers, obstetricians or midwives, *who have experience of domiciliary work*, seem to agree that the right and proper place for a normal confinement is in the home. The reasons given are that the risks of cross infection are less, the rates for forceps deliveries and postpartum haemorrhage lower and the numbers of breast fed babies greater."²

The extravagant statements made by obstetric specialists and corporate bodies on the danger of domiciliary midwifery, and their treatment of a natural function as a phenomenon so fraught with peril as to need the supervision of a "Fellow" of the highest order were laughable, had it not been that they have gained credence in high places by repetition and by the silence of the reticent and unstatistical general practitioners.

With the appearance of the Cranbrook Report it may be too late

to stem the tide which seems to be flowing in favour of more hospital confinements, but it is hoped that this paper will at least show that responsibility can still be carried and discharged satisfactorily in this vital sphere of general practice. That is the only good reason for its compilation.

The Qualifications of the General-Practitioner Obstetrician

I would like to push out of domiciliary midwifery those who are afraid of it for they have no courage; and those who are not afraid of it for they have no imagination; those who say there is nothing to it and are prepared to do a case now and then, just to keep their hand in, for they have no understanding; and those who have no interest for they have no soul.³

On the whole a sufficiently comprehensive list of those who should not take it up in the first place and one with which we must agree; but erroneous in a way for if one is interested then much of the rest follows. It is surely impossible to be good at anything if interest is lacking and we cannot as surely all be interested in the same things. But given that initial interest in the job, the knowledge one has when qualified is soon substantiated by observation and then by experience. Regular presence at normal confinements is invaluable in the earlier recognition of the abnormal but let it never be forgotten that even greater danger than inexperience lies where familiarity leads to complacency.

My own path to the maternity bed was not indicated by a resident obstetric job nor any other recognized signpost, but I had been out as a student with our local doctor to midwifery cases so I must have been interested even then. In my first assistantship I was left by my old and unwell principal very much to my own devices with the bare necessities of chloroform and forceps in a battered bag. It made one self-reliant and provided two legal opportunities which fortunately have not recurred; that of giving evidence to the coroner in a case where the mother died within minutes of delivery, due to chronic poisoning by lead taken as an abortifacient; and to a magistrate in support of a dying declaration taken from a wretched girl with septicaemia after an illegal abortion.

More is learnt from example than precept, and 18 months as an assistant to two uncles in partnership in a Monmouthshire mining village were invaluable. Between us we did all the midwifery, domiciliary and otherwise; for what proved undeliverable at home went to the local cottage hospital where the younger uncle with an F.R.C.S. was the surgeon. This spell taught me quite a lot about occipito-posteriors, brows, and shaking the protruding foetal hand, but the midwives handled all the normal work, and it was not until I became a partner in Liverpool in 1930 that I was taught how to deliver an occipito-anterior vertex properly flexed and *perineo intacto*. My mentor was the matron (now many years prematurely

dead) of the Bootle Municipal Maternity Home. The five previous years since qualification had not taught me how flexible is the foetal head on the perineum both laterally and antero-posteriorly, nor how it can be persuaded through the eye of a needle; but the matron did, and it was at the same time that I realized the enormous value of a calm nurse on these occasions. Faced with sudden emergency and quick action there is nothing more distressing than a faint hearted assistant. Temerity is most infectious and I have been fortunate in that I cannot recall having been badly let down in this way by any of the many midwives I have worked with. Our own nurses, while vigilant for anything wrong, give the utmost physical and moral support when it is needed.

Special postgraduate qualifications have not been mentioned as necessary to the general-practitioner obstetrician because, gratifying as it is to have acquired these, they are not essential; to get appointments, no doubt, yes; to do good work, no. Interest in the job is the first and last qualification, experience and skill will follow.

Analysis of Cases

Over a period of 10 years from the beginning of the National Health Service 388 women were booked for home confinement. Of these, the records of eight are so meagre as to be valueless, and they are not included in the survey. The remainder were delivered at home, save only for 35 who were delivered either at the closed down maternity home referred to above or the private nursing home. Of the total, eight were transferred to hospital.

It is proposed to review the series in chronological order, i.e., from booking, through antenatal care and labour to the final post-natal examination.

The antenatal period

Age groups. There were 95 primiparae (25 per cent of total) of whom 15 were under 20, 46 between 20-24, 23 between 25-29, eight between 30-34 and three were 35 or over.

The youngest primipara was 15 and the eldest 36.

The multiparae naturally showed a different spread, as follows—three under 20, 53 between 20-24, 87 between 25-29, 83 between 30-34 and 44 were 35 or older. The youngest multipara was 18 and the eldest 45. There were no records in 15 cases. (Table I).

Date of booking and antenatal attendances. The great majority booked in the 2nd and 3rd month of pregnancy—86 per cent of primiparae and 66 per cent of multiparae. Bookings in the 4th/6th months accounted for 13 per cent and 32 per cent respectively, the rest falling later than the 6th month. Of these latter the single

primipara was a girl of 15 who had come into the area late in pregnancy to have her illegitimate child with friends. (Table II).

TABLE I
AGES OF PATIENTS BOOKED

	<i>Under 20</i>	20-24	25-29	30-34	35 Plus
Primiparae	15	46	23	8	3
Multiparae	3	53	87	83	44
	No records in 15 cases				

TABLE II
STAGE OF PREGNANCY AT BOOKING

	<i>2-3 months</i>		<i>3-6 months</i>		<i>6 months +</i>	
Primiparae ..	82	86%	12	13%	1	1%
Multiparae ..	188	60%	91	32%	6	8%

As would be expected the number of antenatal attendances showed a close correlation with the date of booking. Only two women had three or less examinations; 82 (22 per cent) had 4 to 6 and 286 (75 per cent) seven or more. These do not include any house visits for, e.g., induction, version, etc. (Table III).

Of ten cases there are incomplete records.

TABLE III
NUMBER OF ANTENATAL EXAMINATIONS

7 +		4-6		3 or less		<i>O.S.</i>	
						7 +	2 or less
286	75%	82	22%	3	3%	65%	4.7%

The Rh factor. Of the 95 primiparae, only two (2.1 per cent) were Rh negative and of the 285 multiparae, 12 (3.1 per cent). None of these cases showed antibodies in maternal blood at seven months, and no difficulties were encountered due to a negative factor. The absence of antibodies cannot however ensure absence of trouble for in one Rh negative case with two previous normal children and free of antibodies at the 7th month, the child became jaundiced within 24 hours. It was taken at once to the pathological laboratory

of the nearest hospital where a blood examination revealed that the Rh negative factor was not the cause, and a favourable prognosis was considered reasonable. However, steady deterioration, after its return home, to kernicterus and head retraction made admission within three days inevitable. The final diagnosis was congenital acholuric jaundice with the usual accompaniment of spherocytosis. The child is now a spastic.

Previous obstetric abnormalities. It is always advisable if not imperative to enquire for difficulty or abnormality in previous pregnancies; albuminuria in particular. No less than 139 multiparae out of 285 reported earlier abnormalities, which are noted below.

- 44 had had forceps deliveries, 17 previously confined by me.
- 51 had been stitched, 24 previously confined by me.
- 11 reported albuminuria. 7 of these developed albuminuria subsequently and 5 had been attended before.
- 9 stillbirths—none subsequently.
- 8 postpartum haemorrhage. I had confined 3 before, of which one had needed a manual removal. Postpartum haemorrhage did not recur in any.
- 5 had had previous breech presentations—all subsequently vertex.
- 9 had had congenitally defective children, none of which recurred.
- 3 had had antepartum haemorrhage which did not recur.
- 3 who had been confined in hospital reported puerperal fever, which did not recur.
- 2 had had very long labours (3 days plus). Later confinements were normal.
- 2 reported phlebitis.
- 1 puerperal toxæmia and convulsions which did not recur.
- 1 secondary syphilis which was treated during the pregnancy which I attended.

Complications of the antenatal period. In marked contrast to other published figures only 17 cases are recorded as suffering from albuminuria or hypertension or both—three primiparae and 14 multiparae. These figures of 3 per cent and 3.8 per cent are low, and I do not know the reason. The accepted standards were observed (e.g., blood pressure 140/90, etc.). Careful attention to weight control and prompt treatment in cases showing a rise of more than 4 lbs per month may be partly responsible. Two cases were referred to hospital after rest at home and other measures had proved unsuccessful. The remainder were looked after at home and went to term, or, as recorded below, were induced at 38 weeks.

Malpresentation. Breech presentation in primiparae occurred and was diagnosed before labour in seven cases and missed in two, one of which proved to be premature 2 lbs macerated foetus. Five were successfully turned of which one developed antepartum haemorrhage and was admitted to hospital. Another was turned by a consultant after failure at home and one elderly primipara (aged 35) who had resisted both general practitioner and consultant

efforts at external version also developed antepartum haemorrhage and was delivered of a live child by caesarean section.

In multiparae 15 breech presentations were diagnosed. External version was performed in five. In two twin pregnancies both foetus were breech in the one, and one foetus was breech in the second. External version is not invariably attempted in multiparae for it is felt that, depending on the obstetric history, size of foetus, etc., it is often unnecessary and a multiparous breech extraction is not regarded as holding any special hazard *per se*.

Total incidence of breech presentations	= 6.3%
Total incidence of breech presentations in primiparae	= 9.9%
Total incidence of breech presentation in multiparae	= 5.2%

The diagnosis of an occipito-posterior vertex at the last antenatal visit has been made occasionally but not with that certainty to warrant the inclusion of figures of any value.

No other abnormal positions detected in the antenatal period are recorded.

Other abnormalities. Under the heading Systemic Disease are found a variety of disorders. The seven cases include secondary syphilis, treated under consultant's advice and supervision; severe asthma; disseminated sclerosis; bronchiectasis; neurofibromatosis; paralysis of left leg from old polio; congenital dislocation of the hip and previous nephrectomy for renal aneurysm occurring in one and the same patient.

There were 77 cases of severe varicose veins, including vulval (20.2 per cent), of whom 36 were ordered elastic stockings.

Antepartum haemorrhage occurred in four cases only (1.05 per cent). Two cases, mentioned above, were caused by attempted external version (one by me, one by the consultant) and one was due to a central placenta praevia. These three were admitted to hospital and the fourth antepartum haemorrhage was due to a marginal placenta praevia, and was retained at home and delivered without incident.

Hydramnios was present in two patients—one very acute case being associated with gross foetal abnormality.

Only one hyperemesis gravidarum was met with—controlled by chlorpromazine.

Two women had massive oedema of the legs without albuminuria or hypertension and there were three suffering from prolapse. Two of these had worn ring pessaries for some time and in one a ventrofixation had been performed four years before. In one case an incarcerated gravid womb was corrected.

Iron deficiency anaemia is so endemic in the area in women that most pregnant patients are almost automatically put on iron therapy. Figures are not recorded, but from a guess are probably about 75 per cent.

Excluding albuminuria, hypertension, malpresentation and anaemia, 91 (24 per cent) of cases showed significant abnormality during the antenatal period. (Table IV.)

TABLE IV
COMPLICATIONS OF THE ANTENATAL PERIOD

	Primi- parae		Multi- parae		Total		O.S.		K.	
		%		%		%	Pr.	M.	Pr.	M.
Albuminuria and/or hypertension	3	3	14	3.6	17	4.5	16	9	26a	8.1a
Malpresentation	7	7.4	15	5.2	24	6.4	4		.8	
Varicose veins	7	7.4	70	24.5	77	20.2	2b			
Antepartum haemorrhage	2	2.1	2	.7	4	1.05	2			
Systemic disease	2	2.1	5	1.6	7	1.8	1.6c			
Hydramnios	-	—	2	.7	2	.52				
Oedema <i>sine</i> albuminuria ..	-	—	2	.7	2	.52				
Prolapse	-	—	3	1.05	3	.78				

(a) Classified as moderate and severe toxæmia. The figure here is the average.

(b) Varicose veins, phlebitis and piles.

(c) Pyelitis, tuberculosis and heart disease.

Consultations. Ten (2.6 per cent) were referred to a consultant at this stage, of whom six were admitted to hospital; two for incipient toxæmia at 36 weeks; one at 3 months for observation (and rest) for 7 weeks for previous toxæmia; one for central placenta praevia and two for antepartum haemorrhage following attempted version. The other four referred to included secondary syphilis, one for advice for her prolapse, one for external version in a primipara, and one for an x ray to confirm twins.

Labour

“If primiparae are to be booked for home confinement it appears that a small number of forceps deliveries must be accepted as inevitable. . . . This being so, it would appear unwise to deliver any primigravida at home. . . . It does not matter where the patient is delivered or by whom provided mother and child are fit and well.”⁴

Of the original 380 cases booked, eight were admitted to hospital for delivery, the six noted in the last paragraph and two, recorded below, after labour had started. In the remaining 372, 16 babies were born before arrival but attendance was achieved before delivery of the afterbirth. In 19 cases no reason for absence from delivery is recorded, but it is noteworthy that of the 35 unattended cases,

20 per cent took place in the maternity or nursing home. 353 (93 per cent) were personally attended or arrived at before the third stage was complete. (Table V).

TABLE V
ATTENDANCE AT LABOUR

	Attended		Absent		B.B.A.		Admitted to hospital		O.S.	Average for local obstetric list
		%		%		%		%	Attended	Attended
Primiparae ..	85	89.4	4	4.2	4	4.2	1	1.0	62.5	} 61.3
Multiparae ..	252	88.4	15	5.2	12	4.2	1	.3	43.0	
At home ..	328	86.3	15	4.5	10	3.0	2	.6		
Maternity or nursing home ..	25	71.4	4	11.3	6	17.1	-	-		

Length of labour. Without statistical support, it is felt that the duration of the average or normal labour is much less than it was, say, 25 years ago. I know of no figures to support this belief but with the marked improvement in the well being of the population it seems not unlikely, long labours by and large being the prerogative of the illnourished, overtired woman.

Most first stages are completed in under 24 hours but 19 primiparae in this series had a first stage of between 24-36 hours and five were over 36 hours. This 25 per cent included a breech, a brow, a persistent occipito-posterior and one post-mature patient. The record is held by a rather stupid and very nervous primipara of 28 with a very low occipito-anterior vertex presentation, poor pains and a rigid os, who spent 45 hours in achieving full dilatation. During this most anxious time she received no less than seconal gr. 6, pethidine 200 mg. and morphia gr. $\frac{1}{4}$. At last, when nurse, patient, and doctor were each nearly exhausted and the cervix still showed a lip all round the head, she was chloroformed, the cervix peeled off manually and a forceps delivery made of a live child with slight facial paralysis which rapidly recovered.

Thirteen multiparae were over 24 hours in the 1st stage and five between 24-36 hours (5 per cent). While a prolonged 1st stage can often be due to nervousness in the woman and inability to relax, a long second stage, especially in multiparae, is much more often due to a malpresentation. Twenty-two (23.2 per cent) primiparae had a 2nd stage of 1 to 2 hours and two presentations were persistent

occipito-posterior while one was a scapho-cephalic brow. But of the five (13.1 per cent) multiparae in the same category, all had malpresentations—three persistent occipito-posterior and two breech.

A few women went even longer. Seven primiparae (7.3 per cent) had a second stage of 2 to 3 hours, of which one had an internal version due to an irreducible occipito-posterior; three (0.7 per cent) multiparae, each with a large foetus, also spent 2 to 3 hours in the 2nd stage. (Table VI.)

TABLE VI
PROLONGED LABOUR

	1st Stage				2nd Stage				3rd Stage			
	24 hrs. +		36 hrs. +		1-2 hrs.		2-3 hrs.		$\frac{1}{2}$ -1 hr.		1-2 hrs.	
		%		%		%		%		%		%
Primiparae ..	19	20	5	5.2	22	23.1	7	7.3	4	4.2	-	-
Multiparae ..	13	4.6	5	1.7	5	1.7	3	1.0	6	2.1	3	1.05
O.S. ..					444	29.8	224	15				

Induction of labour. In 32 cases (8.4 per cent) surgical induction was performed by releasing the forewaters. The reliability of medical induction is not very impressive and surgical induction has been used for many years with but one foetal death (included in this series).

The reason for induction is nearly always one of two—post-maturity or albuminuria and hypertension. Of the 32 cases eleven (33 per cent) were suffering from the latter and were induced at 38 weeks. Thirteen (46 per cent) were induced at term because of a large child and/or gross discomfort of the mother from various causes, such as severe varicose veins in the legs or vulva; and the remainder later than 40 weeks for postmaturity.

The one foetal death, directly attributable to this form of interference, occurred in a multipara who had a surgical induction at 38 weeks for albuminuria, hypertension, and oedema of the legs, and was due to prolapse of the cord. Two other stillbirths occurred in cases who had a surgical induction. One was in an acute hydramnios with a grossly deformed foetus (meningocele, etc.), and the other case was a 20 stone woman in her second pregnancy with a history of a normal first confinement. She had paralysis of the right leg from an old poliomyelitis. As she was huge, post-mature, and very uncomfortable, surgical induction was performed

but, after 48 hours of irregular contractions, she suddenly had a rigor and a temperature of 104°F. Admission to hospital was followed by the normal birth of a dead child, and no satisfactory explanation of her temperature or the stillbirth was ever found.

Forceps deliveries

The incidence of low forceps delivery has greatly increased in recent years. It is being realized more and more that a long second stage may be harmful by stretching unduly the soft parts at the outlet. It is recognized, too, that it is safer for the baby to be born before it has experienced distress, rather than after that has occurred. It is likely that the incidence of forceps delivery given in the South-west Survey—15.4 per cent of primiparae, and 3.4 per cent of multiparae in doctors' confinements—is lower than the ideal.⁵

The use of forceps. A total of 72 (19 per cent of all deliveries) were delivered by forceps. No less than 39 of this total (41.4 per cent of all primiparae) were primiparous. The rate in multiparae was 11.8 per cent.

Of this total of 72, eleven (15 per cent) were persistent occipito-posterior positions, including three primiparae, of which nine were rotated manually and delivered as occipito-anterior. The two others descended to the perineum in the posterior position and were delivered as such with difficulty, and an extensive episiotomy. Thirteen (18 per cent) required a forceps delivery for a prolonged 2nd stage and slow advance.

A rare complication was a brow presentation in a primipara. After the head had been flexed and forceps applied, it was delivered with very great difficulty and proved to be scapho-cephalic. Cranioplasty was later carried out at hospital, and the child is now seven years old and doing well. The mother, who had left the district, returned for her second and normal confinement.

One case of failed forceps in 1950 must be recorded. This was in a 4-gravida of 32 in whom the second stage had lasted 3 hours for no good reason. The presentation was occipito-anterior, pretty well down but not on the perineum, and only a stiff pull was anticipated for successful delivery. After a prolonged and fruitless struggle, "faults in the powers" appeared in the arms of the obstetrician, and the patient was transferred to hospital where, the consultant told me later, both he and his house surgeon had to haul for some time to deliver a live 10 lb. child.

The remaining forceps deliveries (48, or 66.6 per cent) were performed to crown the head in cases where it was obvious that delay would occur before natural crowning took place. In this connection it may be said that convenience of the doctor is no indication for the use of forceps, but not infrequently the convenience of the mother coincides in this regard and timely application

can save hours of time, much unnecessary suffering for the woman, and danger to the child. For a high forceps (e.g., after manual rotation of an occipito-posterior position) the Neville Barnes axis traction instrument is used, the traction handle giving a better grip for a strong controlled pull. Simpson's long forceps is usually selected for a low application or to crown the head. (Tables VII and VIII.)

TABLE VII
INDICATIONS FOR FORCEPS DELIVERY

	Of 372 cases		P.O.P.		Delay above perineum		Delay on perineum	
Primiparae ..	39	% 41.4	3	% 3.1	5	% 5.2	31	% 32.9
Multiparae ..	33	11.8	8	2.9	8	2.9	17	6.1

TABLE VIII
COMPARATIVE FORCEPS RATES AND FOETAL MORTALITY FOLLOWING FORCEPS DELIVERY

	Cases in survey	Primiparae	Multiparae	Foetal mortality
Present series	380	% 41.4	% 11.8	% nil
I.C.	168	10	nil	25
O.S.	4277	15.4	3.4	4.5
A.J.O.G.	4906	.22		not recorded

Episiotomy and the torn perineum. Forceps deliveries accounted for 75 per cent of all episiotomies of which there were 32 in the series (8.6 per cent). The remainder included three for the delivery of the after coming head and the rest in normal deliveries where a tear was inevitable. It was performed in 28 primiparae and four multiparae.

The fashionable recommendation of episiotomy for all forceps deliveries is, it is thought, too drastic and puts a premium on lack of skill in manual delivery of a crowned vertex. Generally, the forceps should not be used for the actual delivery. My own practice is to use the instrument, for whatever reason it is applied, to draw down the head and crown it. The blades are then removed and the head maintained in full flexion with the left hand on the occiput, supported by the nurse's hand on the fundus. With the right

thumb and forefinger on the perineum on either side of the brow and the three other fingers under the chin, which is felt in the region of the mother's anus, complete control of the head is usually established. The perineum is automatically supported and the head can be guided through the vulva by a movement most akin to squeezing the kernel out of an orange pip. There is considerable flexibility of the head at this stage and time spent in carefully persuading it to emerge is rewarded by the absence or insignificance of a tear. An inevitable tear can be recognized before it happens by the blanching of the perineal skin from vulva to anus and in this event anticipatory episiotomy can be done unless experience dictates that the injury will be minimal only. The important thing is complete control of the head and I regard a bad tear as a piece of very inferior workmanship.

To prove that theory does not always march with practice it must be noted that 53 tears occurred, 17 of which had occurred in previous labours. Of the 36 left, 16 were in primiparae and except for two in cases of B.B.A. none were worse than 2nd degree. (Tables IX and X.)

TABLE IX
EPISIOTOMY RELATED TO FORCEPS DELIVERIES, ETC.

	Total	Per-centage of all cases	For-ceps	Per-centage of epis.	Breech	Per-centage of epis.	Inevit-able tear	Per-centage of epis.
Primiparae	28	29.4	22	78.5	2	7.1	4	16.4
Multiparae	4	1.4	2	50.0	1	25	1	25

TABLE X
TEARS RELATED TO FORCEPS DELIVERIES, ETC.

	Total	Percentage of cases	Forceps	Percentage of tears	Breech	Percentage of tears
Primiparae . .	16	17	5	31.2	1	6.2
Multiparae . .	37	13.3	8	21.6	1	2.7

Breech delivery. Twenty-two breech presentations were diagnosed before labour. Twelve were turned or otherwise disposed of.

Four primiparae were delivered of a breech presentation. One was a 2 lb. 28 week macerated foetus, one was a case of breech twins in a primipara, one was unrecognized in a primipara until labour began. In this case, difficulty was experienced with the

after coming head and a stillbirth resulted. This should not have happened. The fourth case was an example of wasted effort, where a breech was turned in a primipara at 34 weeks. She went into labour with a persistent occipito-posterior which defied all efforts to correct it. Internal version was therefore performed and a live 8 lb. boy extracted.

Ten breech extractions took place in multiparae. One was still-born for reasons unconnected with the malpresentation and this case is discussed below under stillbirths. Three breech extractions occurred in two twin pregnancies and another was complicated by early prolapse of the cord. Forceps were not used for delivery of the after coming head in any case, though it might have been better if they had been in the primigravid stillbirth. Usually, little difficulty is experienced, for the Burns-Marshall method⁶ is generally successful and delivery of the head fairly simple. Extended arms are also not difficult to deal with if properly handled. They can be a source of considerable, if not fatal, delay, and time should not be wasted in vain efforts to insert the hand alongside the head in order to draw them down. Rotation of the baby's body through at least 25° (and considerably more if necessary), preferably in the direction of the posterior shoulder first of all, has never failed to produce the elbow, when the forearm can be flicked out. Rotation in the opposite direction then completes the manoeuvre. In one case, when a difficult extraction of the after coming head was being done manually, an ominous crack was heard and felt but after delivery this proved to be due to a subluxation of the 1st right metacarpo-phalangeal joint of the obstetrician who has since suffered a mild traumatic arthritis. (Tables XI and XII.)

Analgesia

Seconal ($\frac{3}{4}$ -1½ gr.) was given by mouth to 165 patients (44 per cent) when about half dilated. There is no rigidity about the timing of the dose, this being determined by the discomfort or placidity of the mother. It is found to be a most valuable short acting sedative, one notable result being a much more rapid achievement of full dilatation.

Three hundred and thirteen women (81 per cent) had gas and air analgesia, and of these 40 per cent had had seconal previously. There is no need to comment on this well established and useful analgesic.

Pethidine was used sparingly as seconal usually produces a satisfactory degree of relief and sedation. In the 23 cases (6 per cent) in which it was given, eleven had had seconal as well; in two of these the 1st stage had lasted over 24 hours and in four the 2nd stage had been longer than 2 hours.

TABLE XI
DISPOSAL OF BREECH PRESENTATIONS

	Total	Version		Hospital		Delivered as breech	
			%		%		%
Primiparae	7	5	70%	2	15%	2	15%
Multiparae	15	5	33.3	—		10	66.6

TABLE XII
BREECH EXTRACTION RATES AND COMPARATIVE FOETAL MORTALITY

		Gross total mortality	Foetal mortality after exclusion of premature babies
Present series ..	3.7% for all cases	28.1%	14.2%
I.C.	2.08% for all cases	23.5%	15.7%
O.S.	2% for all cases	22.0%	16.0%
A.J.O.G.	2% for all cases	Not stated	

General anaesthesia. Chloroform is said to be a very dangerous anaesthetic:

Chloroform is more potent than ether as a general anaesthetic. While it has the advantages over ether of more rapid induction of anaesthesia, less excitement and pulmonary irritation, less postoperative nausea and vomiting, better muscular relaxation and non-inflammability, it has the disadvantages of greater cardiac, renal and hepatic hazards (*The Extra Pharmacopoeia*, 1958).

Chloroform "is a particularly dangerous anaesthetic. . . . Sometimes it kills rapidly and suddenly by stopping the heart when only a small dose has been given and sometimes it damages the liver, heart and kidneys so that death occurs a few days later. It is still used because it is easy to administer, rapid in action and not inflammable." (Gaddum, 1953.)

For many years I have been doing maternity work in general practice, and to date the number of instrumental deliveries under general anaesthesia has just turned the 2,000 mark. This does not include breech cases and cases of incomplete abortion which also had a general anaesthetic. The only general anaesthetic used has been chloroform. I have had none of the major complications mentioned above. In some cases there have been slight complications such as sickness and vomiting.⁷

For general anaesthesia, chloroform on an open mask is invariably

used. Seventy-seven women in this series did not have chloroform, and when there are subtracted 16 B.B.A. and 19 patients whom I did not attend, the percentage of those who had chloroform is 89 per cent of those attended.

It is difficult for a practitioner knowing the value of chloroform to understand the furor raised by its use in domiciliary midwifery and the only explanation I can find is that it is carelessly or unskillfully given in those cases where tragedies have happened. And yet how infrequently does one hear of anaesthetic deaths due to domestic chloroform compared with the inhalational deaths that take place in hospitals, replete with the latest "advances" in anaesthesia. In 33 years there has at no time been a suggestion of maternal danger through its use by me, and I have never called for the assistance of a colleague as an anaesthetist. In a recent reference to the dangers of chloroform anaesthesia, it was condemned because it is difficult to learn how to administer it. If this is the type of argument used in its condemnation surely it is time to look at it afresh through the eyes of those who can use it successfully, and who would be glad to instruct others who wish to continue to use this most portable and effective anaesthetic.

The patient is anaesthetized in the left lateral position with the head on a single pillow cradled for comfort and convenience by the abducted left arm. The eyes are protected by a sanitary towel tucked under the lower cheek and the anaesthetic administered from a drop bottle on to an open mask held 2 or 3 inches off the face. Amounts needed vary considerably and according to the manoeuvre contemplated. 240 m. (10.5 ml.) are often enough but up to 480 or more have been given with no untoward results.

Sufficient depth of anaesthesia can be achieved to carry out any of the manoeuvres detailed in this survey. Length of anaesthesia can be accurately gauged, and the mother should be conscious or coming round at, or soon after, the expulsion of the afterbirth. No cases of foetal asphyxia in this series can be ascribed with any certainty to its use, and they are thought to be due to difficult forceps delivery or other manoeuvre.

Obviously, from the figures, many normal cases were actually delivered under chloroform. It is found that with the head on the perineum, a sufficient depth of anaesthesia can be induced to obtain control of the head as described above and many tears can be avoided in the relaxed state thus achieved. A similar state is difficult to achieve under gas and air and, having found chloroform so satisfactory, I have never used trilene and cannot therefore compare it.

Local anaesthesia has been used recently in a few cases, including

a low forceps delivery, but in too few to be of any value in this survey.

Postpartum haemorrhage and the use of ergometrine

Six cases of postpartum haemorrhage (1.5 per cent) are recorded, two primiparae, four multiparae. There was one forceps delivery, one was born before arrival, one suffered from disseminated sclerosis. In each case the 3rd stage was less than $\frac{1}{2}$ hour, three had had ergot in the 3rd stage, and three both then and after expulsion of the placenta. All haemorrhages were easily controlled, and manual removal was not necessary in these or any other cases in this series.

In two primiparae and one multipara in the whole series the 3rd stage lasted between $\frac{1}{2}$ and 1 hours, and in ten multiparae the 3rd stage lasted between 1 and 2 hours.

This comparative freedom from a frightening (and often unnecessary) complication bears a relation to the fact that 62.2 per cent of all deliveries were given intramuscular ergometrine, as follows: 175 (47 per cent) at the end of the 2nd stage, 50 (13.4 per cent) after the 3rd stage, and seven (1.8 per cent) had intravenous ergometrine either to reinforce the intramuscular dose or solo to forestall anticipated bleeding.

When one thinks of the manual removals and the bimanual compressions of the flacid and streaming uterus of the old days, parenteral ergot is indeed a valuable life saving drug. (Table XIII).

TABLE XIII
ADMINISTRATION OF ERGOT

	<i>Intramuscular</i>		<i>Intravenous</i>
	<i>End of 2nd stage</i>	<i>After 3rd stage</i>	
Of all cases	47%	13.4%	1.8%

Pituitary extract. This was used in 24 cases (6.4 per cent) in 18 of them for primary inertia or after surgical induction, in three after full dilatation for weak and/or irregular contractions. A forceps delivery was necessary in one case only after the use of pituitary extract.

Stillbirths and neonatal deaths

In the whole series of 380 cases (i.e., including those admitted to hospital) there were ten stillbirths, three neonatal deaths in the

first week, and none in the first 2—4 weeks.

Three stillbirths were premature (28–31 weeks); another was in a case admitted to hospital with incipient toxæmia who bore a stillborn child at 36 weeks; one mother had a full time stillbirth after admission to hospital for p.u.o. soon after commencement of labour; two occurred in consecutive pregnancies in one case which is discussed below; there was one meningocele.

The three neonatal deaths were all 28 week premature babies admitted to hospital immediately after birth, including 1 case of twins.

Excluding these, which are felt to have been inevitable or at least not due to avoidable causes, there remain two for which responsibility must be accepted namely: an undiagnosed breech in a primipara and a prolapsed cord after surgical induction, both of which have already been described. It is only on the occasion of an avoidable tragedy of this nature that realization of one's inadequacy and responsibility comes. Both women, it is pleasant to record, have since been delivered by me of living children.

The perinatal death rate for all cases is 34.2 per 1,000. Excluding premature infants it is 15.7 per 1,000.

The case in which two consecutive stillbirths happened was that of a woman, Rh positive, who had a normal living child in 1946. Following a normal pregnancy in 1948, she gave birth after an easy labour to a recently dead child. Referred to hospital later, she was advised to seek pregnancy again as no reason could be advanced for the mishap. Pregnant again in 1952, another normal antenatal period followed by a normal labour had the same result. Further advice was sought and it was recommended that a subsequent pregnancy should be terminated at 38 weeks, followed by caesarean section if labour did not supervene. This, in fact, took place, and after ineffectual surgical induction at home, she was delivered of a live child 48 hours later by caesarean section. She has not become pregnant since.

No stillbirths followed forceps delivery. (Tables XIV, XV and XVI.)

TABLE XIV
CAUSE OF STILLBIRTHS AND NEONATAL DEATHS

	Total	Per 1000	Pre-maturity	Breech presentation	Toxæmia	De-formity	Pro-lapsed cord	Un-known	Total
Primiparae ..	2	21.04	1	1	—	—	—	—	2
Multiparae ..	11	38.4	5	—	1	1	1	3(a)	11

Six stillbirths occurred in hospital.

(a) Investigated at hospital but cause undiscovered.

One primiparous breech presentation was undiagnosed until labour commenced.

TABLE XV
COMPARATIVE PERINATAL DEATH RATES

	<i>Total per 1000</i>	<i>After eliminating premature babies</i>
O.S.	33.9 (1956)	21.1
I.C.	37.6 (1954)	21.2
Present survey	34.2 (1948-58)	15.7
County rural district	31.6 (1958)	
Area of S.W. Faculty	39 (1954)	
A.J.	27.7 (1955)	

TABLE XVI
SEX AND WEIGHT OF BABIES

	<i>lbs.</i> — 5	<i>lbs.</i> 5—8	<i>lbs.</i> 8—10	<i>lbs.</i> 10+	<i>Male</i>	<i>Female</i>
Primiparae ..	2	74	14	1	173	202
Multiparae ..	4	168	93	8		
	No records in 16				No records in 5	

Foetal asphyxia. There were no cases of white asphyxia. Nine (2.3 per cent) babies suffered from blue asphyxia—two in primiparae, seven in multiparae. Both primiparae had long and difficult labours—one of 39 hours and a forceps delivery, the other an internal version and breech extraction. In the multiparae there were four breech extractions, one long second stage and one forceps delivery.

Abnormalities and disease in babies

Considering the generally accepted high incidence of congenital abnormality in East Anglia there were very few foetal abnormalities. The rate was 1.3 per cent for all births and the cases were one meningocele with bilateral talipes, one cretin, two mongols, and one scaphocephaly.

Two babies only developed jaundice of more than transient duration. One, already discussed, was due to congenital acholuric jaundice, and the other was in a cretin who was admitted to hospital at about 6 weeks for investigations which proved inconclusive. The condition gradually resolved without treatment. Two babies

had facial paralysis, which recovered, after difficult labours, and one breech showed an Erb's paralysis which resolved under treatment.

Consultations

So far as mothers were concerned, three were admitted to hospital after labour had commenced. These have already been dealt with, viz.: one failed forceps, one who developed pyrexia of unknown origin after surgical induction and the case with consecutive stillbirths admitted for caesarean section.

Consultant advice was sought for three babies—two with jaundice (*vide supra*) and one with Erb's paralysis.

The Puerperium

So far as possible and always after a difficult labour, the mother is visited the day after delivery and thereafter on alternate days until the 10th, unless conditions demand more frequent supervision. In every case, including the most extensive episiotomy or tear, activity is encouraged immediately, all patients being expected to rise as a matter of course and use the water closet instead of the bedpan. Most are sitting up out of bed by the 5th day, but, although local activity is practised, one does not allow the woman to go downstairs until the end of 14 days. This is because most of them do need a rest before coping with household duties and a new baby, and once the mother appears dressed and on the groundfloor she is expected to get on with it. One tries, therefore, while letting her move around upstairs, to ensure a thorough rest in the puerperium.

Postnatal pyrexia. One case of pyrexia due to breast sepsis is recorded, occurring on the 11th day and easily controlled. There were three cases of pyrexia due to urinary infection and two due to superficial thrombosis in the leg (1.5 per cent). One patient with puerperal mania was removed to a mental hospital on the 6th day.

TABLE XVII
VISITS AND ABNORMALITIES DURING THE LYING-IN PERIOD

	Visits 6 +		Visits 5 +		Breast Infection		Urinary infection		Phlebitis		Puerperal mania		Total	
		Per-centage		Per-centage		%		%		%		%		%
Cases delivered	57	15.3	310	83.3	1	.27	3	.81	2	.54	1	.27	7	1.9

No records in 5

Final postnatal examination

It was found from previous experience that many women will

not bother to attend at the surgery for the final postnatal examination. Therefore, at the last "lying-in" visit a definite appointment is made for a final visit at the house in 5/6 weeks time, and enquiry made simultaneously whether the baby is to be vaccinated. If "yes", this will be done during the same visit.

Of the 380 cases, 21 were not examined postnatally. Two had left the district and eight were examined at the hospital whither they had been transferred; i.e., 97 per cent of possible cases had a final postnatal examination. (O.S. = 88 per cent).

In three primiparae the perineum had not healed satisfactorily but two of these examined 12 to 18 months later, when again pregnant showed good scars. No multiparae are noted as having an unsatisfactory perineum, but perhaps one's critical assessment in them is not so keen.

Four multiparae had prolapses; two mentioned in the antenatal section of this paper, a third who was severely torn in her previous B.B.A. labour and a fourth who carried 15 lb. of twins in her 5th pregnancy.

No primiparae showed prolapse and there were no cases complaining of stress incontinence.

The symptomless, well-contracted, mobile retroversion is disregarded as a postnatal abnormality. It is a common finding at this time, and possibly the position is normal to the individual.

In two patients who had exhibited hypertension during pregnancy, their blood pressure was 160/118 and 170/110 respectively and both, years later, are still under treatment (and, now, well controlled by inversine and saluric). A third hypertensive was transferred to hospital on her 16th day for persistent albuminuria, hypertension and oedema (since dead of malignant cerebral tumour).

The percentage of abnormalities at final postnatal examination is 2.7 per cent.

One grand multipara was referred to hospital for perineorrhaphy and sterilization, and another woman with two consecutive stillbirths for advice.

The last three cases referred to were the only ones sent for consultant advice at this stage.

High parity and multiple pregnancies

Thirty-five (9.4 per cent) had had four or more viable births. Difficulty was encountered in only one—the failed forceps case noted above. Six (23 per cent) needed pituitary extract for poor pains. There were no stillbirths or neonatal deaths in this group. The

patient with the highest parity was a 6 gravida who had a B.B.A. in $2\frac{1}{2}$ hours.

I have confined 108 patients twice, 36 thrice, 12 four times, 4 five times, and one six times.

Only four twin pregnancies occurred (1.05 per cent). One a primigravida of 34, who had been under my care for some time because of infertility, was delivered at home of twin girls.

In the three multiparae, one pair was premature and both died in hospital in the 1st week. Of the other two pairs three babies presented as breech.

Summary and Conclusions

A domiciliary obstetric practice in a purely rural area is the subject of this survey. Methods of work are described and 380 cases which were booked during the decade 1948 to 1958 are reviewed. 372 cases were delivered outside hospital, and eight were transferred to hospital for treatment and delivery. 353 were personally attended at delivery. Total references to consultants at any stage, including mothers and babies, were 19 (5 per cent). There were no maternal deaths, and the perinatal death rate (excluding premature babies) was 15.7 per 1,000. Certain common obstetric manoeuvres as practised by the writer are described. Details of such individual cases as are interesting or illustrate a particular point are given. So far as they are cogent and the cases sufficiently numerous, the figures in the various groups are reduced to percentages and tables are provided for easy reference.

Although, in general, published papers on domiciliary obstetrics stress the advisability of a very strict selection of cases, it would appear that more latitude could be given without prejudice to mother or child. Some writers will not admit even the application of forceps at home. Carried to its logical conclusion this attitude will permit the home delivery only of those cases which could be as easily dealt with by the midwife, and would eventually remove the general-practitioner obstetrician entirely, for he would be redundant, unless, indeed, he was provided with more hospital beds, of which there appears to be no likelihood at present. In any event, the essential character of general-practitioner obstetrics is delivery at home, and to many practitioners hospital beds would not compensate them for the loss.

Some obstetrical procedures are described in this survey which would not be countenanced at home by consultants and by some general practitioners. But the perinatal death rate compares not unfavourably to others published, and mothers and children do not

appear to have suffered as a result of the manoeuvres having been done at home instead of in hospital. The success of domiciliary obstetrics depends on success, and inefficient or slapdash work is quickly reflected in the attitude of patients. An earnest plea is made for more general-practitioner obstetric surveys on the same lines, in order to refute the prevailing views on the subject.

I should like to express my thanks to the county medical officer of health, the regional hospital board, the executive council of our nurse-midwives for access to records.

REFERENCES

1. Warwick, Elspeth (1955), *J. roy. sanit. Inst.*, **62**, 348.
2. Chetwynd, Eve (1955), *J. roy. sanit. Inst.*, **62**, 352.
3. Russell, C. S. (1956), *Lancet*, **1**, 681.
4. Macgregor, W. G. (1958), *Med. Wld. (Lond.)*, **88**, 422.
5. Claye, A. M. (1959), *Brit. med. J.*, **2**, 106.
6. McCartney, Jno. (1959), *Practitioner*, **183**, 206.
7. Burns, J. S. and Marshall, C. M. (1934), *J. Obstet. Gynaec. Brit. Emp.*, **41**, No.6, 923.

-
- O.S. = Obstetric Survey of S.W. Faculty of College of General Practitioners, May, 1957.
- I.C. = Cookson, Ivor. Domiciliary Obstetrics (1954), *Brit. med. J.*, **1**, 841.
- A.J. = *American Journal of Obstetrics and Gynaecology* (1955), **69**, 178.
- K. = Kennedy, G. L. (1957), Domiciliary Midwifery, *Brit. med. J.*, **2**, 1216.
-

The Drinking Driver. SIMON FREEMAN, T.D., L.R.C.P. & S., L.R.F.P.S.
Brit. med. J., 1960, **2**, 1513.

This report deals with certification of unfitness to drive a motor vehicle due to intoxication, and covers a period of about two years in Manchester. Dr Freeman followed the method of examination laid down in the British Medical Association's publication *Recognition of Intoxication*. He found that fine lateral nystagmus was present in 67 of 69 certified cases, but in only two of those examined but not certified. Another striking feature was that the age group found unfit to drive was from 20 to about 50 years. Teenagers were conspicuous by their absence; and the older age-groups seemed either too mature to become involved, or without a taste for excessive public drinking.

Dr Freeman concludes with a tribute to the patience of the police officers who have to deal with humanity when it is not on its best behaviour.