Antenatal care in Belfast

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SUMMARY
A questionnaire study of mothers' views of the antenatal care provided in Belfast showed general satisfaction. Retrospective examination of their charts however showed in some cases that insufficient attention was paid to the medical and obstetric history in the selection of type of care made by the women and their doctors. Some women with high risk factors were booked for shared care and some patients at low risk were booked for total hospital care. The reasons for this are unclear.

The mothers felt that continuity of care and communication at the health centre were better than at the hospital. Analysis of the number of hospital attendances showed that shared care patients appeared to be making an excessive number of visits to hospital. Many total hospital care patients also admitted that they were attending their general practitioners. There appeared to be marked duplication of effort as a result of poor communication between patient, general practitioner and hospital.

Alternative ideas for care are suggested — a more integrated system for sharing antenatal care, and the development of general practitioner units within the specialist obstetric hospital.

INTRODUCTION
Obstetric practice in Belfast has undergone major changes in the recent past, the more important being the closure of all the general practitioner maternity units and the subsequent transfer of all confinements to specialised hospital obstetric units. General practitioners, however, continue to provide antenatal and postnatal care in a shared care system. Patients are able to choose the type of care they wish to have — total hospital care, shared antenatal care or private care — but should expect medical advice in making the choice. This study was undertaken to examine the different types of antenatal care provided in Belfast health centres and maternity hospitals, to look at the reasons for a particular choice being made and to assess the opinions of a sample of women on the present types of care available. It was part of a larger study mainly looking at health education topics.1-4

PATIENTS AND METHODS
One group practice from each of the eleven health centres in Belfast was invited to take part. The health centres covered both affluent and deprived areas of Belfast, thus providing a representative sample of women. The general practitioners were...
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asked to identify all their pregnant patients from July 1982 and 70 per cent were randomly selected in order to produce a sample size of 500 patients. Permission for inclusion in the study was obtained prior to interview. The obstetricians in the four Belfast maternity hospitals gave permission to the author to make a historical search of the obstetric records 2 – 3 weeks after delivery.

The fieldwork research assistant (a health visitor, funded by the Friar Fund, Faculty of Medicine, QUB) interviewed the patients in their own homes and completed questionnaires after the hospital booking visit and again approximately 8 – 10 weeks following delivery.

The information was coded and transferred to punched cards. All data processing and statistical analysis was performed using the Statistical Package for the Social Sciences on the Queen’s University ICL 2900 computer. The conventional level of significance (p < 0.05) was used for all statistical comparisons. The chi squared test was used to compare different groups.

Of the initial sample of 500 patients, 380 questionnaires were completed. Twenty-nine patients miscarried and twelve questionnaires were never completed because the patients moved away from Belfast during the study. Seventy-nine patients were unwilling to be interviewed. Forty-six of these came from two health centres situated in West Belfast. The remaining thirty-three who were unwilling to be interviewed were evenly distributed among the other nine health centres. Thus there was a potentially substantial response bias.

The first report of the Maternity Services Advisory Committee\(^5\) identified two categories of medical risk factors. First, those women with a predicted high risk in both pregnancy and labour, (high, high risk). This might have been due to obstetric causes (history of spontaneous abortion, premature labour or low birthweight baby, stillbirth or neonatal death) or medical causes, such as diabetes or hypertension. The Committee suggested that these women needed specialist supervision of pregnancy and labour with delivery in a consultant maternity unit. The second category was women with a predicted high risk in labour (low, high risk), such as those with a small pelvis or multiple pregnancy. They suggested that these women did not need specialist antenatal care throughout pregnancy, but that specialist care should be arranged for the confinement.

The final responsibility for the type of care in Belfast rests with the consultant obstetrician after discussion with the patient and possibly the general practitioner. This medical influence on the choice of care should lead one to expect that the majority of low risk patients would have shared care, and higher risk patients total hospital care. The women in this study were placed retrospectively in the above categories according to their past history recorded in their obstetric charts.

RESULTS

Choice of care

Choice of care was defined as the type of care the patient understood she was to have after she had been to the hospital for her initial booking visit. Seventy-seven patients said they were having total hospital care, 290 were having shared care, 12 patients were attending a consultant privately and one patient had arranged to have total GP care. The latter 13 were excluded and the final comparison was confined to the two main groups — total and shared care. When the patients themselves were asked the reason for their choice of care, the majority choosing hospital care said they chose it because it was safer or more convenient; the
The majority choosing shared care said it was because their GP had suggested it, it was less time consuming or more convenient. Patients themselves did not consider risk factors in the choice.

Table I shows the initial choice of care for patients in 'high, high risk', 'low, high risk', and 'low, low risk' groups. There was no significant difference in the choice of care made by the women in the three categories, so that the assumption that selection of care is made on grounds of risk appears to be unsupported in many cases.

**TABLE I**

*Initial choice of care sub-divided retrospectively into high/high, low/high and low/low risk*

|                      | High/High (25.0%) | Low/High (19.8%) | Low/Low (17.9%) | Total |
|----------------------|-------------------|------------------|-----------------|-------|
| Total hospital care  | 26 (25.0%)        | 17 (19.8%)       | 34 (17.9%)      | 77    |
| Shared care          | 76 (73.1%)        | 69 (80.2%)       | 145 (76.7%)     | 290   |
| Private care         | 2 (1.9%)          | 0 (0.0%)         | 10 (5.4%)       | 12    |
| **TOTAL**            | **104 (100%)**    | **86 (100%)**    | **189 (100%)**  | **379** |

One patient (low/low risk) had total GP care. 
Omitting private care $X^2 = 1.753, df = 2, 0.50 > p > 0.30.$

The type of care actually received by each patient during her pregnancy was assessed retrospectively at the second interview (Table II). More patients actually received hospital care (105) than had initially chosen it (77).

**TABLE II**

*Type of care finally received*

| Type of care chosen initially | Total hospital | Shared | Private | Total GP | Total |
|-------------------------------|----------------|--------|---------|----------|-------|
| Total hospital                | 73             | 3      | 1       | 0        | 77    |
| Shared                        | 31             | 256    | 3       | 0        | 290   |
| Private                       | 1              | 0      | 11      | 0        | 12    |
| Total GP                      | 0              | 0      | 0       | 1        | 1     |
| **TOTAL**                     | **105**        | **259**| **15**  | **1**    | **380**|

*Communication*

All the shared and total hospital care patients had been booked at hospital initially. They were asked if they felt that informal discussion was encouraged at the clinic, and if there was time to ask questions of both the doctor and the midwife. Eighty per cent of hospital care patients and 73 per cent of shared care patients felt that informal discussion was encouraged at the hospital booking clinic. Seventy-eight per cent of hospital care patients and 70 per cent of shared care patients felt that there was time to ask the doctor questions and somewhat higher proportions that there was time to ask the midwife questions. When the patients were asked about communication at subsequent hospital antenatal clinics, the responses...
were slightly less positive, but 93 per cent of shared care patients were satisfied with the level of communication at their antenatal visits to the health centre.

The women were specifically asked if they were given explanations for certain clinical procedures which were carried out on them. From their responses it would appear that explanation of the reasons for blood tests was particularly poor for both total and shared care groups. Nearly half of the women said no reason was given. Explanation of the internal examination was better — about 70 per cent of the women were satisfied about the explanation for this procedure. The staff involved in carrying out the ultrasound examination were the most effective. They satisfactorily communicated the reason for the examination to 90 per cent of the patients.

Convenience and efficiency of clinics

At the second interview almost 90 per cent of both groups said that the hospital antenatal clinic was convenient in terms of distance and the time of appointment. However, only 33 per cent of hospital care patients and 42 per cent shared care patients said that they were seen on time at hospital.

Over 96 per cent said the health centre was convenient in terms of distance and 94 per cent that the appointment times were convenient. In contrast to the hospital, 83 per cent shared care patients said they were seen on time at the health centre.

Continuity of care

Table III shows that there is generally poor continuity of care at hospital antenatal clinics, but a greater percentage of the hospital care patients than of the shared care patients said they usually saw the same doctor. There was no difference between the groups in the percentage seeing the same midwife at each visit. Over 94 per cent of shared care patients said they usually saw their own GP at the health centre and 93 per cent of shared care patients usually saw the same midwife.

\[\text{TABLE IIIa}\]

Response to question ‘Did you see the same doctor at each hospital visit?’

|                  | Total hospital care patients | Shared care patients |
|------------------|-----------------------------|----------------------|
| Usually          | 36 (37.1%)                  | 39 (15.1%)           |
| Rarely           | 29 (29.9%)                  | 103 (40.0%)          |
| Never            | 32 (33.0%)                  | 116 (44.9%)          |

\[\text{TABLE IIIb}\]

Response to question ‘Did you see the same midwife at each hospital visit?’

|                  | Total hospital care patients | Shared care patients |
|------------------|-----------------------------|----------------------|
| Usually          | 37 (35.2%)                  | 65 (25.1%)           |
| Rarely           | 36 (34.3%)                  | 94 (36.3%)           |
| Never            | 32 (30.5%)                  | 100 (38.6%)          |

(Nine patients attended the midwife’s couch only)

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Attendance at hospital antenatal clinics

The number of hospital visits is shown in Table IV. There was a significant difference between the two groups, as expected, but 122 (47.1%) shared care patients attended hospital seven or more times and 35 (13.5%) ten or more times. Thus many shared care patients were attending hospital more frequently than the usual 5 – 6 visits. This may have been related to the development of maternal complications in 104 (40.2%) of the shared care patients. However, 47 (45.2%) shared care patients with maternal complications made less than seven visits to hospital. For patients classified as clinically 'at risk' or 'not at risk' according to the criteria mentioned previously, there was no significant difference in attendance between the groups.

| Number of hospital clinic attendances | Total hospital care patients | Shared care patients |
|--------------------------------------|-----------------------------|---------------------|
| <7                                   | 12 (11.4%)                  | 137 (52.9%)         |
| 7 – 12                               | 61 (58.1%)                  | 114 (44.0%)         |
| >12                                  | 32 (30.5%)                  | 8 (3.1%)            |
| TOTAL                                | 105 (100%)                  | 259 (100%)          |

\[ X^2 = 85.460, \text{ df} = 2, \text{ p} < 0.001 \]

Forty-seven hospital care patients also attended their general practitioners for antenatal care or advice; 21 women (20%) said they attended between four and eight times, and eight (7.6%) said they attended their general practitioner more than eight times.

Postnatal care

Attendance at the postnatal clinic is poor compared with antenatal attendance. Only 264 (69%) of hospital and shared care patients had attended for postnatal examination by the time they were interviewed 8 – 10 weeks after delivery and the result was similar in both groups. Sixty-four (36%) shared care patients who had a postnatal examination had attended hospital rather than their health centre for the examination and 28 (37%) of hospital care patients who had had a postnatal examination had attended their health centre rather than hospital. Of the 64 shared care patients who attended hospital, 29 (45%) had no complications which might have justified hospital follow-up. Similarly, of the 28 hospital care patients who attended the health centre, 11 (39%) had had complications which might have justified a hospital follow-up.

DISCUSSION

The majority of patients said they were satisfied with the antenatal care they received. However, there does appear to be room for improvement in communication between staff and pregnant women at hospital antenatal clinics, and an even greater need for explanation of procedures carried out. More women attending their health centres were satisfied with the time allowed for informal

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discussion and questions and most of them said they were seen on time. Similar results have been found in other studies.6-9

An aim of this study was to examine the reasons why pregnant women made a particular choice of care and what factors might have influenced them. The analysis of these findings leads one to question the system of shared care in Belfast in its present form. There was almost no difference in medical terms between the group of patients having total hospital care and the group having shared care, and the decision to go to the general practitioner or to hospital was based on convenience, time factors and other emotional feelings with only occasional reference to possible risk factors. It is widely accepted that predicting the outcome of pregnancy is extremely difficult,10 but more effort should be made to identify high and low risk patients both from medical and equally important social factors.11 The results of this study suggest that the guidelines recommended in the First report of the Maternity Services Advisory Committee 19825 and in the Baird Report 198012 are not always being followed. Some women at low risk are being booked for total hospital care and then, at subsequent visits, being seen only by midwives when they could equally well be looked after by community midwives and general practitioners. More careful planning could help to reduce the overcrowding of already busy hospital antenatal clinics.

Lack of continuity of care in hospital antenatal clinics is a common criticism. The high rate of turn-over of junior hospital doctors and midwives, particularly in teaching hospitals which all these patients attended, sometimes prevents the establishment of good staff/patient rapport, and contributes to the lack of communication. Poor communication is a criticism which can also be directed at many general practitioners in that they often do not include in the referral letter information about the patient which is important for the obstetrician. Co-operation cards, although widely used, contain the minimum of information and are an inadequate form of communication. When shared care patients are admitted to hospital during a routine antenatal appointment and then subsequently taken over by the hospital team, the general practitioner is often not informed. The Royal Maternity Hospital has very recently started to allow its patients to carry their own antenatal records between hospital and general practitioner. It is hoped this will improve communication.

The excessive number of antenatal visits made by shared care patients and the over-subscribing of hospital postnatal clinics is another possible reflection of lack of communication and continuity of care. It could also be a reflection of lack of confidence of obstetricians in the standard of antenatal and postnatal care given by general practitioners.

Although only 10 per cent of patients said they were officially transferred to total hospital care, the amount of visits which some other shared care patients made would suggest that the number was much higher. In general practitioner units where selection policies are strictly adhered to, about 30 per cent of patients are transferred to specialist care.13, 14, 15

One major problem is the sheer volume of work which hospitals attract and it has been suggested that many of the criticisms of the service could be met if a proportion of the work could be undertaken elsewhere. A closer examination of the service could lead to significant improvements and greater satisfaction for the women and the professions concerned. There are many financial pressures on the National Health Service and it has been suggested that many improvements could be made by changes in attitude and reorganisation of procedures which do

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not involve additional expenditure. The obstetrician is a scarce resource; the skills of the consultant team should be devoted primarily to the care of those women in greatest need of specialist advice. There is a need for greater flexibility in the use of the professions who undertake antenatal care. An integrated specialist and general practitioner service such as that described by Zander and colleagues from St Thomas's Hospital Medical School 16 or low risk obstetric care and confinement in a general practitioner maternity unit within a maternity hospital as described by Roseveare and Bull 13 could be considered.

The results of this study do not justify criticism of the medical care that individual patients received. There is no evidence here to suggest that certain patients might have done better with a different type of care from the one they received. It is criticism of the way the system is run rather than of the service provided. Shared care as it exists in Belfast cannot be tidily defined. Interpretation often rests with the obstetrician who may apply differing criteria according to personal knowledge of individual practitioners. If improvement is desired, it is up to general practitioners and the community team to meet with the obstetricians and hospital team to work out a new and better system.

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Invited commentary.
The editor has requested this comment from Professor W Thompson in view of the controversial nature of some of the conclusions.

The main criticism of this paper is the interpretation by the author of the guidelines for shared care set down in the First report of the Maternity Services Advisory Committee published in 1982. The author has interpreted these guidelines that patients with a high-risk past history must undertake continuous surveillance by a hospital team. Most obstetricians who work in the area covered by this paper interpret the guidelines in a different manner. Patients identified as having a high-risk past history must be booked for confinement in the consultant obstetrician’s unit, but their antenatal care can have intermittent surveillance by a hospital team. This makes some of the conclusions of the report difficult if not impossible to assess. I feel it would have been better for the author to have clarified the criteria for shared care from the consultants concerned prior to the study.

However, the paper is interesting in that it highlights the duplicity of examinations and investigations on antenatal patients, the poor communication at times between the general practitioner and the mother, and the occasional haphazard approach to organising antenatal visits for hospital patients.

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