Labouring to better effect: studies of services for women in early labour

The OPAL study (OPtions for Assessment in early Labour)

Report for the National Co-ordinating Centre for NHS Service Delivery and Organisation R & D (NCCSDO)

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Executive Summary

Background

Care in early labour has an important contribution to make to clinical and psychosocial outcomes of labour, and to cost-effectiveness of services. Systematic evidence about alternative ways of organising and delivering services in early labour is, however, sparse. The OPAL (OPtions for Assessment in early Labour) study was developed as a suite of mixed-method studies to examine service provision in England and Wales for women in early labour. One specific service was of particular interest: the All-Wales Clinical Pathway for Normal Labour (or the Pathway). This was introduced in 2003 without formal evaluation and includes a structured telephone assessment and the provision of telephone advice around the time of labour onset to women considered at low obstetric risk.

A randomised controlled trial funded by the NHS Service Delivery and Organisation (SDO) programme (ELSA, the Early Labour Support and Assessment trial) is investigating the impact of providing midwifery support to nulliparous women in their own home, in early labour, compared with standard hospital care. OPAL was designed to provide important contextual information against which the findings of this trial could be interpreted.

Objectives

1 To map early labour services in England and explore innovations.

2 To explore the perceptions of Part 1 (the telephone component) of the Pathway among service users and providers.

3 To obtain health care providers' views about using NHS Direct for early labour advice.

4 To inform the interpretation of the results of the ELSA trial.

Data collection

Information about early labour services in 178 units was obtained by postal questionnaire survey to Heads of Midwifery; this was supported by interviews with a purposive sub-sample of 17 who provided additional information about local service provision.

The OPAL study

In Wales, focus-group discussions were held with a sample of 21 midwives and computer-assisted telephone interviews were carried out with 46 new mothers from six NHS Trusts.

Key findings

1 There has been a considerable amount of change to early labour services in England, driven by a need to reduce the number of women attending labour wards who are not in labour. The range of service provision includes contact and subsequent assessment at a maternity unit, home assessment, triage services (areas and telephone) and early labour assessment at Birth Centres, Maternity Units and Day Assessment Units. Change has more commonly been effected in consultant units with a midwifery-led care area and in larger size units.

2 The extent of service change is not matched by evaluation and statistical information about the impact of these changes appears scanty. Robust information related to clinical, psychosocial and workload management impacts of these services is generally lacking.

3 Several of the service innovations require additional staffing, staff training that should include issues of underpinning philosophy, high-quality documentation and evidence-based guidelines to support practice.

4 Midwives in Wales were generally positive about the telephone component of the Pathway. Reasons given included that it: was evidence-based; aided communication and led to women receiving more consistent advice; and 'gave permission' for women to remain at home.

5 Women's experiences of the Pathway were varied. Satisfaction was related to: being treated as an individual and with respect; longer and fewer calls; and antenatal preparation, particularly the expectation of staying at home in early labour.

6 Nearly half the sample of women in Wales were sent home after attending hospital and this was associated with dissatisfaction. Women were also dissatisfied when they did not feel welcome to attend the maternity unit.

7 Receipt of the Pathway leaflet and the opportunity to discuss it with a midwife were associated with satisfaction. Nearly one-third of the maternity units in the Heads of Midwifery services England survey did not offer women any written information about local arrangements for early labour care.

Key recommendations for policy

1 The telephone service provided by NHS Direct should not be extended to include assessment of women in early labour.

2 The potential for Children's Centres to be a further venue for early labour services is not yet known and should be monitored.

3 The impacts on early labour services of changes to the commissioning process should be assessed.

Key recommendations for practice

1 Changes to early labour services should be introduced within robust systems of evaluation that address issues of clinical outcome, impacts on women's experiences and labour-ward workloads.

2 Good practices in change management should be adopted that foster staff involvement and time for discussion of new approaches.

3 The provision of early labour care for women who may not be able to communicate in English requires particular consideration.

4 Any changes to early labour services in England should reflect the philosophy of the maternity module of the National Service Framework for Children, Young People and Maternity Services.

5 Statistical information should be of a quality to support evaluation and monitoring.

6 Clinical guidelines for evidence-based care in early labour are required.

7 Workload-management systems should be utilised to determine impact of service changes.

8 The provision and content of written information about early labour should be reviewed. Women should receive information about local arrangements for early labour care and have the opportunity to discuss it with a midwife during pregnancy so that they also understand the underlying philosophy.

9 The use of discussion boards or other electronically based systems to facilitate the dissemination among providers of service developments, experiences and evaluations related to early labour care should be explored.

10 Documentation should be completed for each episode of telephone assessment; this documentation should be available for subsequent care providers.

11 When women telephone in early labour, or are sent home after attending the unit, they should be given clear advice and criteria for further contact, and the rationale for this advice.

12 Midwives' training needs in conducting telephone assessments should be reviewed and training made available, where required.

Section 1 Background

1.1 Maternity care in the UK

Since the 1990s the maternity services in the UK have been subject to changes of philosophy, location for the provision of particular components of maternity care and in the contribution of different health professionals. The report of the Expert Maternity Group (Department of Health, 1993) encouraged a greater emphasis on choice within maternity care for women, a key role for the midwife in low-risk maternity service provision and an increase in the delivery of services in the community. The aims included maternity service providers working in ways that would provide women with increased continuity of care and more control over the childbearing experience.

The recent National Service Framework for Children, Young People and Maternity Services (NSF; Department of Health, 2005) includes one module related to maternity care. This comprises the current main policy driver for the NHS maternity service provision in England and requires that

> *women have easy access to supportive, high-quality maternity services, designed around their individual needs and those of their babies.*
>
> (Department of Health, 2005: p. 191).

The NSF acknowledges the need for a woman to be supported during her labour as well as receiving high-quality clinical care. In the provision of clinical care and public health practice, clinical guidelines, health technology appraisals and public health guidance issued by the National Institute for Health and Clinical Excellence (NICE) are available to influence and underpin maternity care. Other current policy directives that impact on maternity service provision include those that affect the working conditions of NHS staff, including the European Working Time Directive and Improving Working Lives (Department of Health, 2004a).

Rates of intervention during labour continue to rise, despite concerns among health professionals and groups working with and supporting childbearing women (Downe *et al.*, 2001). In 2004–2005, only 48 per cent of births could be defined as normal births (with the absence of surgical intervention, instrumentation, induction, or regional or epidural anaesthetic). The proportion of unassisted vaginal births has fallen from 78 per cent in 1989 to 65 per cent in 2004–2005 (NHS Maternity Statistics, England, 2004–2005; The Information Centre, 2006). There is currently an emphasis on supporting normality in childbearing, especially during labour, included in the NSF (Department of Health, 2005). This has

manifested in a range of ways that include support for physiological processes during labour (maintenance of upright positions, avoidance of opiates or epidural anaesthesia, minimising intervention in labour) for women at low obstetric and medical risk in, for example, the Royal College of Midwives' Campaign for Normal Birth.

A national survey reported by Smith and Smith (2005), undertaken prior to publication of the NSF, identified some interesting trends in the provision of maternity services. This survey, with an exceptionally high response rate of 97.7 per cent, revealed an increase in home birth in areas with a strong provision of midwifery-led care, and a reduction in the involvement of general practitioners (GPs) in intra-partum care, resulting in the midwife being identified more frequently than the GP as the alternative lead professional to consultant-led maternity care. The numbers of both consultant- and non-consultant-led units fell in England and Wales between 1988 and 2002 (n=306 and 261 respectively). Service changes include the closure of small, stand-alone units, the conversion to stand-alone units of previously consultant-led units with low delivery numbers and the consolidation of consultant-led services onto larger sites. In particular, these large facilities appear to experience difficulties in providing optimal early labour care due to issues of staffing levels and facilities (Dennett and Baillie, 2002).

Most, but not all, maternity services remain under the managerial control of the acute sector of the NHS with shared management of both community and hospital-based midwives by one Head of Midwifery. There are a few exceptions, with Primary Care Trust (PCT)-managed maternity service providers, a small provision of non-NHS maternity care provided by independent midwives available in many areas of the UK and a small number of private consultant-led maternity units, generally in London. Many NHS maternity service provider units and associated community midwifery areas are also approved as training sites for pre-registration students of midwifery, medicine and nursing.

The professions responsible for antenatal and postnatal care continue largely unchanged; however, there is now a greater acknowledgement of the appropriateness of midwives as lead carers for low-risk women and settings. Obstetricians lead medically and obstetrically high-risk care and have an increased presence on labour suites (Smith and Smith, 2005). There are significant regional differences in the proportion of midwives available per woman in the population, with generally higher numbers of midwives available in the north and west of England than other areas (Hannah, 2005). Midwifery vacancies are estimated at 2000 vacant posts, with a requirement for a further 1000 midwives to accommodate increases in midwifery-led care and home birth, and areas such as London report vacancy rates above the national average. More midwives are working part-time and employers have been encouraged to develop

employment practices that improve midwives' working lives (Department of Health, 2004a). Initiatives that have aimed to attract midwives back into NHS practice have met with some limited increase in midwife numbers (Department of Health, 2004a); however, a peak in the number of midwives retiring is expected to occur within the next 10 years with associated challenges for the NHS. For these reasons, the optimal deployment of staff is essential.

The maternity service continues to receive valuable contributions from those in roles that support both women and midwives: health care assistants, support workers and Maternity Care Assistants (MCAs). These people often work in ways that closely support the midwifery role in all settings where maternity care is provided, including hospital, community-based care and Birth Centres and release midwifery time from non-midwifery duties (NHS Employers, 2005). The involvement of support workers, working under midwifery jurisdiction, in providing support to women in early labour has recently been reported (NHS Employers, 2005). The Royal College of Midwives has defined a set of competencies for the role of maternity support workers. Recent policy has encouraged approaches targeted at women and families in situations of poverty and disadvantage (midwives and health visitors work in SureStart partnerships and will subsequently work in Children's Centres) to improve the health of children under five (Department for Education and Skills, 2004). A small proportion of women receive additional support from doulas (an experienced trained helper who provides continuous comfort, companionship and emotional support to a woman during labour and delivery); these are generally hired independently by pregnant women but also available in some pilot SureStart initiatives.

1.1.1 Care during early labour

The importance of the timing of admission to the hospital labour ward is demonstrated in the midwifery and obstetric literature. The importance of avoiding hospital admission for women whose cervix has not reached full effacement or where little dilatation has been achieved comprises one of the lessons learned from workshops conducted in the USA that aimed to share experiences of reducing rates of caesarean section (Flamm *et al.*, 1998). There are suggestions that repeated visits to the labour suite for women at or near term should be viewed as a cause for concern among maternity professionals as they can be associated with a higher chance of caesarean section (Summers *et al.*, 1991). Negative associations with repeated episodes of false labour include subsequent incoordinate uterine action (Schauberger, 1986), increased risk of fetal distress, and augmentation of labour and operative births (Arulkumaran *et al.*, 1987), although Quinn and colleagues (1981) found no such associations if labour onset did not occur within 48 h.

There is limited research available related to care in early labour and the studies that do exist often lack appropriate control groups. Admission to the hospital labour ward at higher cervical dilatation with care provided by certified nurse-midwives was associated with lower rates of unassisted vaginal delivery in a hospital in California (Jackson *et al.*, 2003). Women booked at a UK GP unit where home assessment was a part of the care package used less Pethidine, had fewer epidurals, and less electronic fetal monitoring, augmentation, fetal distress and forceps than women who gave birth at a consultant unit where care did not include home assessment (Klein *et al.*, 1983). The generalisability of the findings of that study is limited by the retrospective nature of the research, small numbers and atypical setting and potential for selection bias. A small Canadian trial evaluated a triage area in a general hospital where delivery-room nurses, following a strict protocol, assessed women on admission (McNiven *et al.*, 1998). Women found not to be in labour were allocated randomly to either the experimental approach where they could return home until labour was established or the standard care that comprised immediate admission to delivery suite. Whereas this study lacked statistical power to detect a difference in caesarean section rates between the two groups, women admitted later in labour were found to have lower rates of augmentation of labour and epidural anaesthesia. A retrospective study of nulliparous women admitted to an Ottawa teaching hospital found fewer amniotomies and episiotomies among women who attended at cervical dilatations between 4 and 10 cm compared to women who attended with a cervical dilatation of 0–3 cm (Holmes *et al.*, 2001). Data collected from a retrospective review of records at a university hospital in Finland found that, following adjustment for speed of labour, women who arrived earlier at the delivery suite had more interventions during labour and a higher rate of caesarean section (Hemminki and Simukka, 1986). There are, therefore, suggestions that timing of admission to a labour ward is important for the subsequent outcome of labour.

The importance of environment is increasingly acknowledged in maternity care. The provision of home-like settings for the entire labour and birth have been evaluated and found to be associated with improved outcomes including less analgesia and less augmentation, increased satisfaction with the childbearing experience and fewer babies delivered using instrumentation (Hodnett *et al.*, 2005). The National Childbirth Trust (NCT) conducted surveys in 2003 and 2005 to determine women's preferred characteristics for the birth environment and have made recommendations for labour and birth facilities that are to be incorporated into NHS building recommendations (Singh and Newburn, 2006).

In the UK, when a woman booked for hospital birth (97 per cent women in the UK) feels that she may be going into labour and requires advice, the usual arrangement for maternity care requires her to telephone the

labour suite of the unit where she is booked to have her baby. The advice given to the majority of women is to attend the hospital labour suite for assessment. At this point, a midwife will take a history of the labour, perform a clinical examination and provide advice on subsequent options for care. The woman may then be advised to either return to her home and await events or remain on the labour suite or antenatal ward to await labour onset or augmentation. These women do, however, require care and this impacts significantly on the work of a labour and delivery suite and reduces the staff available to provide care to women in established labour. Consequently all women may experience a reduced quality of care and units may also have difficulty in achieving the recommended staffing ratios for women in established labour (Royal College of Obstetricians and Gynaecologists and Royal College of Midwives, 1999).

The consequences of admission to a hospital setting prior to established labour include possible embarrassment for women and their companion if found not to be in labour, increased cost to families of repeated travel or costs to the NHS if an ambulance is required. Women may also feel anxious about being asked to leave the perceived security of the hospital and be unsure of what signs to look for when they had previously considered that there were signs of labour. Staying in hospital prior to established labour brings difficulties in allocating beds and the associated costs to the NHS of an inpatient stay, an increased propensity for intervention either suggested by clinicians or requested by the woman, and a lack of facilities for birth companions to remain with the woman leading to feelings of isolation at a time when support is crucial. Between 10 and 33 per cent of admissions to a delivery suite may be from women not found to be in established labour (category X; Ball 1996). However, women require confirmation that labour has started likely timescales and advice on coping with labour. If the woman is advised to remain in hospital, she may be assessed by either midwifery and medical staff, or both, thus contributing to the work of both staff groups and adding to work that may be avoidable in the context of reductions in junior doctors' hours.

1.1.2 Women's experiences of maternity care

Previous studies of women's satisfaction with maternity care have demonstrated repeatedly that women are usually fairly positive and would wish to use again or recommend the model or components of care already experienced, rather than approaches to care that they have not used personally (van Teijlingen *et al.*, 2003). This offers challenges in measurement of satisfaction and discussion of preferences, for example, for subsequent births.

Recent large-scale evaluations of women's experiences of maternity care have, however, clearly indicated factors that are important to women,

including their perceptions of support and being in control and their involvement in decision-making and choice (Green *et al.*, 1990, 1998). Using qualitative approaches, it has been suggested that women's involvement in decision-making might fall within four typologies; unilateral decision-making on the part of care-givers, contested by women; unilateral decisions made by health professionals with agreement by women; non-engagement in the decision-making process while letting the events of labour unfold and lastly shared decision-making between the woman and her care-giver. Women's responses to the different experiences of involvement had significant impacts on their emotional well-being (Vande Vusse, 1999). Communications that take place between labouring women and their care-givers play a key role in women's overall experience of labour. Continuous midwifery support has been demonstrated to improve obstetric outcomes in terms of less intervention, less pharmacological pain relief and fewer operative births (Hodnett *et al.*, 2005). However, it has also been demonstrated that women may receive less support in certain aspects of intra-partum care than they had hoped for during their pregnancy, for example, in use of coping strategies (Spiby *et al.*, 1999). Research that informed the recommendations of the NSF suggests that significant numbers of women are worried by feeling unsupported by maternity care providers during at least part of their labour (Garcia *et al.*, 1998). Some women may be reassured only by assessment or admission to hospital, whereas others may feel supported at home through house visits by midwives.

The emotional consequences of childbearing remain a significant concern for maternity service providers. Psychiatric illness comprises the most common cause of maternal death in the UK (CEMACH, 2004). Accurate memories of labour and birth and of the impressions of the attitudes of care-givers are retained for many years (Simkin 1991) and these contribute to women's perceptions of satisfaction about their experience of childbearing. Post-traumatic stress disorder related to childbirth is now acknowledged as a distinct disorder with up to 5.6 per cent of women reporting symptoms at 4–6 weeks postpartum (Creedy *et al.*, 2000). Whereas effective treatment is available in the form of cognitive behavioural therapy, posttraumatic stress disorder is a condition that may often remain undiagnosed but impact on women's subsequent decisions related to method of subsequent deliveries (Ryding, 1993) and future childbearing (Goldbeck-Woods, 1996).

Women's views of *early* labour services have previously been largely unexplored in surveys of experiences of care in labour. Smith (2001) reports the development and preliminary use of an instrument designed to measure women's satisfaction with the quality of different models of intra-partum maternity care in the UK. Response rates of 70 per cent were achieved. Dimensions of the labour experience identified as important included professional support, pain in labour, environment and

home assessment in early labour. A statistically significant association was found between absence of a home visit and risk of postnatal depression (identified using the Edinburgh Postnatal Depression Scale). Further testing of the instrument was recommended in groups outside those included during development of the instrument (predominantly middle class, mainly white and moderately highly educated women in supportive relationships). Smith (2001) suggests that this instrument could be used in comparisons of satisfaction with intra-partum care delivered within different models or settings. A national survey of women's experience of maternity care in England is in progress and will report in 2007.

Women booked for low-risk care may sometimes require transfer between settings if labour deviates from the normal or if there are concerns about maternal and fetal well-being. The disappointment felt by women transferred to hospital care following booked community care was described (Creasy, 1997) and women's feelings of loss of choice and control, together with anger and disappointment when transferred to consultant unit care following booking in midwifery–led facility (Walker, 2000). Admission to hospital has been identified as a time of disruption to women's use of coping strategies (breathing, relaxation and postural change) in labour (Spiby *et al.*, 1999). Martin and Jomeen (2004) identified a lower internal locus of control at labour onset among women who had a period of expectant management at home, following prelabour rupture of membranes, compared with those who remained in hospital. Using conjoint analysis, Langworth and colleagues (2001) found that different factors were important for women who chose hospital and home birth. Women who preferred hospital birth valued, among other factors, the avoidance of transfer between care settings if problems occurred with labour.

Women may also need to be referred in labour if a unit has no spare capacity; the closure of units to admission of labouring women occurs in the UK. In a study carried out in Sweden, a group of women for whom this occurred in labour utilised more opiates and epidurals during their labour and had a higher level of episiotomy than a group who received care at their planned birth unit (Wiklund *et al.*, 2002). The women diverted away from their planned birth unit also described more feelings of stress and of not feeling welcome at the unit where they laboured compared with those who gave birth in their planned unit. The perception of being unwelcome at the labour unit was considered by women to constitute a difficult and negative start to their labour and associated with feelings of panic and fear (Wiklund *et al.*, 2002). The points of admission to and transfer between labour settings have, therefore, been demonstrated to contribute significantly to women's experiences of their labours.

1.1.3 Midwives and confirmation of labour

In the UK, the confirmation of labour and provision of advice to women rests within the sphere of practice of the midwife in cases of low-risk maternity. In complicated pregnancies, midwives also provide advice on appropriate times for admission to labour suites for assessment and advice, while working in a multi-disciplinary team. It appears likely that confirmation of labour onset will remain a midwifery role for the foreseeable future, as it is designated within the role of the midwife and supported by secondary legislation (Nursing and Midwifery Council, 2004).

The extent to which midwifery training adequately prepares midwives to provide high-quality care in *early* labour is unclear due to the dearth of recent evaluations. It is also important to state that the emphasis of midwifery training, hitherto, has been on face-to-face assessment and discussion with a woman in labour; this has been the case in both UK and North American pre-registration programmes (DeVore, 1999). Guidance on making such assessments and providing appropriate support and advice by telephone is available in the contemporary midwifery literature (DeVore, 1999; Baston, 2003) but it may be that there is a skills deficit in this area. Baston (2003) details the steps in providing advice by telephone to women in labour. These steps include discussion of coping strategies used and whether alternative methods may be useful, providing advice about when a woman should contact the birth unit again, if she decides to remain at home.

Sookhoo and Biott (2002) explore methods of learning in the clinical setting among midwives. It is suggested that a range of factors including intuition, use of diagnostic markers and confidence in making assessment without using intrusive procedures all contribute to learning and will develop with increasing midwifery practice; the concept of coping with uncertainty is important in this aspect of practice and needs to be developed by novice practitioners.

Additional concerns for midwives if not seeing women face-to-face include those related to negative outcomes for the woman or her baby if there is an unexpectedly rapid labour that culminates in an emergency and a possibly professionally unattended birth. Such births are associated with a higher rate of neonatal morbidity than planned home birth and considerable anxiety and emotional distress for the family. The midwife will have concerns for the family's well-being but may also fear enquiry into her professional practice, complaint or litigation (Webb, 2004). For those reasons, it may feel 'safer' to advise a woman to attend the maternity unit for examination and assessment.

In a focus group conducted predominantly with midwives pursuing a Master's programme, Burvill (2002) explored midwives' confirmation of

labour onset. Issues identified by focus-group participants included difficulties of defining labour onset, the restrictions imposed by terminology, incorporating intuition and using observation of physical signs to arrive at a midwifery confirmation of labour onset. The fact that labour is a continuum, rather than the clearly defined three-stage process conventionally described in the midwifery and obstetric texts, is also highlighted (Burvill, 2002). A recent report identified the various processes and factors that affect midwives' decision-making about labour onset (Cheyne *et al.*, 2006); this work was conducted as a precursor to a randomised controlled trial. Factors that had a bearing on decisions around early labour management included an interaction between the key players of midwife, mother and institution. Some factors were accorded less importance by midwives than by women – for example, passage of the 'show' – and midwives agreed that their decisions were influenced by institutional factors. Further work investigating midwives' decision analysis for labour is in progress in Scotland.

Women's recognition of the spontaneous onset of labour has been explored by Gross and colleagues (2003). A range of symptoms were reported by women as features of their labour onset; for women having their first baby, these included recurrent and non-recurrent pain (32 and 27 per cent respectively), watery or blood-stained vaginal loss (15.9 and 9 per cent respectively) and other systemic and emotional signals. These findings suggest that women experience labour in ways that do not always reflect traditional midwifery or antenatal teaching. These researchers suggest that the time between a women's recognition of labour onset (after possibly several days of discomfort) and admission to the birth unit may influence duration of subsequent labour, but that hypothesis requires further exploration.

1.1.4 Innovations in early labour care

Provider units have responded in a range of ways to managing the significant proportion of women who require early labour assessment. These have included the designation of triage areas, either within or adjacent to main delivery suites where women reporting signs of early labour can be assessed by a midwife and then routed appropriately, increased information about labour and, in Wales, the adoption of a clinical pathway supporting normal labour and birth. Most research related to triage systems is from the USA or Canada.

1.1.5 Triage

Triage systems have their roots in battlefield medicine where the principle was to treat casualties in an order that would maximise the number of survivors, not necessarily by treating the most severely injured first (Mahlmeister and van Mullem, 2000). Triage was first reported in hospital

medicine in the 1950s and 1960s to manage the pressures on North American emergency rooms experiencing high workloads. The triage system was used in those contexts to decide on the urgency of each patient's condition and to determine the order in which patients should be treated in the acute setting, with priority given to the most seriously ill.

Triage is used to describe either approaches to assessment that take place face to face in a designated facility or as a telephone service to screen out enquiries that do not require face-to-face assessment. Triage areas, units and telephone triage have all been reported in North American maternity care. They appear to have been introduced to provide an obstetric emergency facility and also to reduce the volume of patients on main delivery suites (Angelini, 1999a).

In one of the earlier reports of obstetric triage, Austin's view of its purpose appears to differ from that of later descriptions of triage services in the USA (Austin, 1996). Austin suggests that triage-based care differs from that provided in other obstetric settings in that it does not require detailed history-taking, extensive physical assessments or laboratory investigations and that triage is not a setting where treatment will usually be given. The focus appears to be on deciding whether admission to the maternity unit is appropriate and, if so, to which area. DeVore (1999) has a similar approach and stresses that the aim of triage is not to make a diagnosis or decide on treatment but rather to assess whether a more detailed examination is required and the degree of urgency with which it should be carried out.

Triage is described as an activity that can take place in both high- and low-risk maternity contexts in the USA. It is suggested that it is particularly important to have 'meticulous' triage in out-of-hospital Birth Centres (Barnes and Dossey, 1999). These authors comment on the importance of speaking directly to labouring women when conducting telephone triage of calls related to labour and of correctly identifying those who require face-to-face assessment. In larger units, triage provides a facility where all maternity patients may be reviewed, including those with postpartum complications. The services provided in North American triage settings where care is provided by certified midwives, nurse-midwives, attending physicians and residents is reported to include management of early labour, complications of pregnancy and general advice on less-acute conditions. No reports of the introduction of triage within randomised controlled trials have been identified in the literature but protocols for clinical care and the perceptions of benefits to pregnant women, care providers and services are described (Angelini, 1999b).

Using case histories, Mahlmeister and van Mullem (2000) describe clinical and potential legal issues that might arise from triage in the context of North American systems of care (2000). In respect of telephone triage, they report that claims related to negligence occur most commonly due to

a failure to conduct a systematic assessment of the patient's condition, not recognising the condition and its seriousness, incorrect advice or onward referral and delays in responding to calls. The education and clinical competence of service providers, existence of and adherence to protocols and accurate documentation are all seen as factors that would minimise the potential for litigation. Austin and Calderon (1999) address the issue of triage in the context of the latent phase of labour. They see reassurance, communications and information as key, in addition to standard approaches to assessment of maternal and fetal well-being and confirmation (or not) of the start of labour. The importance of clarity related to the timing of labour onset is stressed as subsequent management decisions will flow from that.

One national survey conducted by Angelini aimed to determine and quantify the midwifery contribution to obstetric triage in the USA, identify and describe the midwives' role and work, and investigate particular aspects of triage. Fifty-nine centres fulfilled the preset criteria of being a unit that provided care to 3000 women per annum and included a midwifery component to services. Information was sought in the following areas: details of unit size and facilities available, births per year, midwifery staffing, practice guidelines, extended roles, clinical condition, evaluation of the fetal condition, record-keeping and organisational issues. The response rate for the survey was 71 per cent. The findings included identifying the following issues as important in the provision of a triage service: keeping triage in a separate area, the role of providing care for complicated pregnancies in the latter half of pregnancy, reduced labour-ward volume, prompt assessment of obstetric patients, reduction in unnecessary admissions, savings in time and money, reduced waiting time for patients, improvements in use of resources (both personnel and beds), reductions in the volume of patients seen in emergency rooms, acting as a 'gate keeper' to admissions, supporting a risk stratification for subsequent management and general improvements in obstetric services. The most common presenting conditions managed in the triage area were those related to latent and preterm labour, rupture of membranes at term, reduced fetal movements, management of post-term pregnancy and sexually transmitted diseases and urinary-tract infections. Angelini (1999a) suggests that further research is required to explore midwives' decision-making in triage areas, how the potential for litigation can be reduced and further exploration of the triage-related aspects of the midwifery role.

In another report describing the midwifery contribution to obstetric triage in 10 USA settings, a range of activities and services are described in a series of vignettes (Angelini, 1999b). Midwifery responsibilities in triage varied between units but included the opportunity to provide patient education, protocol development, some extended role duties and the opportunity for the clinical teaching of students. Although the interface

with medical staff varied between units, as did the populations served and their access to health care (Medicaid or privately insured), there was a general cut-off point that women less than 16–20 weeks pregnant would receive care within the gynaecology services. Angelini (1999b) recommends triage as a useful primary care role for the midwife, offering a potential to increase multi-disciplinary working, and triage is observed to extend the midwifery role but it is suggested that a greater emphasis on obstetric triage is required within midwifery education. There are significant differences in both professional roles and boundaries between the USA and UK settings and also different financial resourcing and drivers between the two health care systems.

Responding to a range of enquires from pregnant women and their families has traditionally been a part of labour-ward work in the UK but it can cause interruptions to the care of women in established labour. Midwives may feel concerned about responding to requests for advice without face-to-face assessment due to inexperience and concerns about potential litigation (Webb, 2004). Experiences of introducing delivery-suite triage have been reported in UK settings. Telephone triage using a specially developed proforma was seen as a means of dealing with enquires in the context of excessive workload on busy delivery suites with the potential for women to attend, if required. Triage was considered to offer good clinical experience for midwives and a means of providing women with continuity during early labour (Webb, 2004). Dennet and Baillie (2002) reported the introduction of a midwifery triage service in 2001; the objectives of the service were to provide an assessment facility including an out-of-hours service, referral for women with complicated pregnancies, pre-operative care, the provision of advice and reassurance and reduction of workloads on central labour wards. The service was considered to have a beneficial impact on labour-ward workload and to provide interesting midwifery experience.

1.1.6 The All-Wales Clinical Pathway for Normal Labour

Whereas the provision of triage areas has been adopted as one solution to providing appropriate assessment in early labour, a different approach was developed in Wales, supported by funding from the Welsh Assembly Government, and involved midwife, service-user, obstetric and midwifery educator representation. The All-Wales Clinical Pathway for Normal Labour (known as the Pathway) was introduced throughout Wales over 2003–2004 (Ferguson, 2003).

One key component of the integrated care pathway is the collaborative care plan. This aims to optimise care through improved communications among all members of the multi-disciplinary team using a single, shared form of documentation. Information about assessments is shared

between care providers and the plan for care available to all team members. The principle in collaborative care planning is that of reducing documentation to a safe and clear minimum and of documenting in detail only the deviations from usual care or progress (Foster, 2000). Collaborative care planning is now used in a range of UK health care specialties including gynaecology, paediatrics and palliative care. It has been suggested that the utilisation of care pathways is associated with efficient resource utilisation, support for the components of clinical effectiveness including audit and risk management and improvement in the patient experience through better information and the alleviation of anxiety (Fox, 2004).

Based on the clinical-care-pathway approach, and following the successful introduction throughout Wales of a similar pathway for palliative care, the Pathway aims to support normality in childbearing and reduce clinically unnecessary interventions through the provision of evidence-based telephone advice to low-risk women in early labour and a protocol for care in established labour (Ferguson, 2004). The Pathway comprises three components: part one telephone advice; part two initial face-to-face assessment and part three the active labour component that utilises a partogram for recording of labour progress. It was hoped that use of the documentation would reduce midwifery time in completion of documentation while maintaining a high-quality clinical record (Fox, 2004). Following introduction at two pilot sites, an audit was conducted that focused on issues of process and correct disbursement of calls (S. Fox, personal communication, 2004). The Pathway was subsequently introduced throughout Wales and supported by education for midwives. The perceived benefits of the clinical pathway have been reported widely in the midwifery and health services literature. Audit of adherence to the Pathway has taken place at a mainly local (unit) level with progress reviewed by the Pathway's Steering Group that included midwives from each Trust in Wales. There have been no large-scale rigorous evaluations of its impact on health outcomes but an ethnographic study is investigating its introduction in two Trusts in Wales (B. Hunter, personal communication, 2004) and the experiences of women who have accessed the pathway more than once has been evaluated as part of a Master's programme by D. Lucy. These two studies have yet to report. NHS Trusts in England have demonstrated interest in the Pathway approach through invitation for presentations about the initiative at midwifery meetings in England.

Women are provided with information about the pathway during the third trimester of their pregnancy, although one midwifery writer questioned whether that document might be too simplistic and commented on the lack of planning of evaluation of the introduction of the Pathway (Hall, 2003). It was anticipated that the Pathway would be appropriate for 50 per cent of women who give birth in Wales each year (the remaining

considered ineligible due to medical or obstetric risk factors). Early reports reflected varying usage between Trusts to the order of 30–50 per cent of women starting on the Pathway and of the Pathway being used throughout labour for 50–85 per cent of those women for whom its use had been initiated. While no formal evaluations were conducted, early reports suggested that the information leaflet had been warmly received, with more positive reports if discussed with women by midwives (Ferguson, 2004).

1.1.7 Home visits in early labour

Other approaches to providing early labour care in the UK include the provision of home visits, usually from a community-based midwife. The concept of assessment and care for early labour taking place at home has been available previously, albeit in a limited way in the UK through the DOMINO (domiciliary in-and-out) scheme, some of the team midwifery schemes (Flint, 1993) and by some independent midwifery practices (Flint, 1996). While popular with women, this service has not previously been subjected to rigorous evaluation in the UK context, although its use has persisted in some areas. A small randomised controlled trial conducted in Canada compared a home visit by a hospital obstetric nurse with standard care of telephone triage. More women in the home-care group arrived at hospital in established labour and fewer women in the home-care group received opiates, although there were no differences in epidural use and babies of women in the home-visit group were less likely to require admission to a level ll baby nursery (Janssen *et al.*, 2003). A randomised controlled trial of early labour support and assessment, funded by the NHS Service Delivery and Organisation of Care programme, is currently in progress to evaluate early labour support and assessment at home and hospital for low-risk women having their first baby, and will report in 2008.

1.1.8 Education and encouraging physiology

Some units have focused particularly on how women can be best be supported in early labour and offer services such as birthing pools, aromatherapy and postural aids with birthing balls. Anecdotal accounts of units encouraging women to make decisions about place of delivery during their labour following home assessment appear in a minority. Educating women about early labour and having clear criteria for confirming labour onset have been identified as practices that reduce early admission to labour wards (Bonovich, 1990; Lauzon and Hodnett, 1998). Other approaches to improving early labour care include those with education as the focus, for example Birth Talks provided during the third trimester, often in women's own homes, where options for labour

are considered, including a detailed discussion of management of early labour (Sandall *et al.*, 2001).

1.1.9 NHS Direct

The telephone service provided by NHS Direct was introduced in pilot sites in the UK in 1998 and more widely in 2000 with two main purposes of providing health care advice and information (Commission for Health Improvement, 2004). NHS Direct was also seen as a means of ensuring continuing access to the skills and experience of qualified nurses who may be unable to provide direct clinical care, for example, due to back injury. Algorithms were not developed with labour as a focus and the emphasis of guidance to callers requiring advice related to labour is to contact the maternity unit providing their care (E. Povey, personal communication, 2005). Early evaluations of NHS Direct confirmed that the service achieved satisfactory levels for safety and high levels of acceptability among its users; staff providing the algorithm-based service enjoyed their work but identified clear training needs (Munro *et al.*, 1998). An over-cautious approach by its nurses and aversion to possible risk was identified in early evaluations. This was ascribed by those researchers as a 'desirable characteristic' but one that must be weighed against potential inconvenience to patients of referral to other services that may not be necessary and costly to other parts of the NHS. The action by patients on advice provided by NHS Direct has been explored; some patients did less than they were advised and others did more than advised. It was suggested that callers to NHS Direct might view the advice provided as *additional* information for their consideration but take actions on advice based on their pre-existing beliefs about what action would be appropriate. This might, of course, be the case for other telephone advice services.

While generally considered a success, some cautioned against widening use of NHS Direct due to the perceived conflicting policy goals of managing demand and the need to respond to consumers; concerns about negative impacts on the continuity usually provided in UK primary care were also voiced (Florin and Rosen, 1999). However, the widening use of NHS Direct was announced in 2003 and this has subsequently included use by the Retained Organs Commission and for the reporting of suspected drug side effects.

More recent evaluations of the NHS Direct telephone service conducted by the then Commission for Health Improvement suggest a continuing appreciation of the service by users with positive comments on efforts to improve access for those with special needs or from minority ethnic communities; staff satisfaction also remained high. The Commission for Health Improvement (2004) did, however, suggest that risk-management practices within NHS Direct should be developed further. The widening

use of NHS Direct must be seen in the context of a changing NHS where, following contractual changes, the out-of-hours service previously provided by GPs is being delivered in alternative ways by a range of care providers and where some 999 calls are also routed through nurses in NHS Direct. The NHS Direct online web-based enquiry service was introduced in 2001 with advice available on preset topics. Early concerns about this included the potential to increase inequalities in access to service among different groups and the absence of multi-cultural responses (Wilkinson and McPherson, 2001).

1.1.10 Summary

From the review of the literature, it is clear that a range of factors affect and are affected by the provision of early labour care. Issues of workload management, the need to provide a clinically safe and high-quality maternity service that meets the needs of individual women and their families, while avoiding unnecessary intervention, are all considerations for maternity service providers and commissioners. The approaches described above have different theoretical and philosophical underpinnings; these include the provision of information and education, workload management and improved communications through integrated care pathways.

New innovations may rapidly become embedded in practice, often lacking an existing evidence base and without being subjected to evaluation. This research will contribute information to the evidence base by mapping current early labour services in England, exploring new approaches through information provided by Heads of Midwifery services (HoMs) and by the evaluation of one component of a service innovation in Wales from the perspectives of service users and providers.

1.2 OPAL (OPtions for Assessment in early Labour): overview of the project as planned and in practice

1.2.1 Context

A randomised controlled trial funded by the NHS Service Delivery and Organisation (SDO) programme (Early Labour Support and Assessment, or ELSA) is investigating the impact of providing midwifery support to nulliparous women in their own home in early labour, compared with standard care in hospital. Systematic evidence about alternative ways of organising and delivering services in early labour is exceedingly sparse. The OPAL (OPtions for Assessment in early Labour) study was conceived as a further suite of studies that would examine the impact of changes in service provision since the original trial proposal was developed and

provide important contextual information against which the findings of the randomised controlled trial could be interpreted.

OPAL was to be overseen by the same multi-disciplinary team conducting the ELSA trial and the proposal had the support of the Welsh Assembly Government, NCT and Royal College of Midwives. It was intended that it would be conducted in the same time frame as ELSA and would facilitate the interpretation of the results of the trial, and discussion of issues of generalisability and implementation, if the intervention is found to be effective.

1.2.2 Components

Survey of early labour services in England

The research team was aware of developments in early labour services in England, such as triage facilities, to manage the heavy workloads on labour suites. There had, however, been no comprehensive mapping of these nor exploration of services that might have been tried and abandoned and from which others could learn. We aimed to map these through postal questionnaires to all HoMs in England, supported by interviews with a purposive sub-sample. This was designated as Study 3 in the original proposal and is described in Section 2 of this report.

Evaluation of Part 1 of the All-Wales Clinical Pathway for Normal Labour

The All-Wales Clinical Pathway for Normal Labour (AWCPNL), introduced in 2003, includes a structured telephone assessment and the provision of advice around the time of labour onset to women deemed to be at low obstetric risk. We aimed to explore the perceptions of women who had used that service and of their care providers. This was designated as Study 1 in the original proposal and is described in Section 3 of this report.

Feasibility of the use of algorithms in early labour advice and assessment

Based on the results of the above, the plan was that feasibility studies would explore the possibility of incorporating structured telephone assessment into the randomised controlled trial for women allocated to the intervention group who go into labour at night. Additional feasibility studies would explore the development of algorithms, as used by NHS Direct, as none currently have normal labour as a focus. This was designated as Study 2 in the original proposal and is described in Section 4 of this report.

1.2.3 Early changes to the research plans

The project was timed to start on 1 November 2003 and to run for 18 months. Unfortunately delays in the availability of funding meant that we were unable start until mid-April 2004. This had implications for the feasibility studies, described above, because our timetable no longer fitted that of the ELSA trial. This will be discussed further in Section 4.

Staffing

The staff specified in the proposal were two part-time researchers (0.6 whole-time equivalents, wte) and a part-time secretary (0.4 wte). These posts were advertised in February 2004. One suitable secretarial candidate was identified and invited for interview, but she then withdrew her application. The researcher posts were advertised as 0.6 or 0.5 wte, since we thought it possible that we might find candidates who already had a part-time job for whom 0.5 wte was more attractive than 0.6 wte. This proved to be the case.

Four candidates were short-listed and interviewed for the researchers' posts. Two candidates were considered to be appointable and were offered posts, one preferring to work 0.5 wte. Unfortunately, the second candidate subsequently withdrew. To maintain the impetus of the research, we proceeded with the one part-time researcher but also brought in an experienced health service researcher known to the team, on a sessional basis, who provided an additional 1 day per week to the project.

To fill some of the remaining capacity for research assistance and to increase a sense of ownership of the project in Wales, it was felt that a local midwifery research fieldworker based in Wales would be the ideal complement to the Yorkshire-based research team. We advertised accordingly, and subsequently appointed a midwife in Wales who has been seconded to the project for 1–2 days a week and who facilitated local contacts throughout Wales.

This staffing arrangement, although not the one that we had originally envisaged, overall worked well. The three researchers represent an excellent skill mix, and the midwifery secondment provided career development for the post-holder. However, it does represent less than the 1.2-wte capacity around which the project was planned. In November 2004, the two Principal Investigators moved from the University of Leeds to the Department of Health Sciences at the University of York. Due to the inability to appoint to the contract researcher posts in the configuration that we had planned, both co-Principal Investigators have devoted more time to this research and one of the Research Officers and the midwifery research fieldworker extended their involvement with the project during the extension agreed by SDO.

1.3 Identification of related research

Through our preparatory work in Wales, we became aware of two other ongoing research projects in Wales that are evaluating aspects of the All-Wales Pathway. Dr Billie Hunter, University of Swansea, is carrying out an ethnographic study observing the use of the Clinical Pathway for Normal Labour documentation tool in two maternity units. At the University of Glamorgan, Debbie Lucy, and her supervisor Dr Sandy Kirkman, are planning to conduct 10 interviews with women who have experienced care on the All-Wales Pathway. Their particular interest is in women who have accessed the All-Wales Pathway more than once. We co-ordinated our research timetable with those of the other researchers to avoid overload at particular clinical centres. We have recently learned that research related to midwives' decision-making in situations of variation from Part 2 of the All-Wales Clinical Pathway for Normal Labour has recently commenced (C. Dowling, personal communication).

1.4 Timetable

The feasibility studies (Study 2, see Section 1.2.2) were timetabled both to dovetail with ELSA and to be informed by the findings from the All-Wales Pathway (Study 1). The delays in issuing the contract for OPAL, in addition to the delays with governance processes described subsequently compromised that and meant that the project's timetables and objectives required revision.

Section 2 Early labour services in England – a survey of HoMs

2.1 Methodology

2.1.1 Identification of the sampling frame

To ensure that all Heads of Midwifery services (HoMs) in England were included in our survey a variety of data sources were used to compile a database. Initially, the statutory mechanism of supervision of midwifery was used, and all Local Supervising Authority Midwifery Officers were contacted and asked to provide information of HoMs in their area. A second phase was to cross-reference this with the information held in the Binleys Online database (www.binleysonline.com). Finally, the third phase of the process was to obtain details of the units within the HoM's jurisdiction. This information was obtained through Trust websites and also through contacting the midwifery departments by telephone and e-mail. Many HoMs have responsibility for more than one maternity unit and service reconfigurations make this level of up-to-date information hard to find.

2.1.2 Data-collection tools

To reduce the burden on respondents we wished to produce a questionnaire that was easy to complete and which could be delegated by the HoM if desired. This seemed particularly important where a HoM was responsible for more than one unit. We considered the possibility of designing a questionnaire that could be answered for more than one unit, but this idea proved impractical since unit-specific information was required. On the other hand we did want to ask HoMs (rather than those they delegated to) a small number of specific questions related to different forms of telephone advice to women in early labour, specifically the All-Wales Clinical Pathway for Normal Labour and the use of NHS Direct. We therefore produced an eight-page questionnaire, which was to be completed for each maternity unit by whoever the HoM designated, and a one-page cover sheet, which was to be completed by the HoM in person. The cover sheet asked the HoM to confirm the units for which they had responsibility in order that the sampling frame could be verified and to supply the contact details for the person who would complete each questionnaire.

2.1.3 Pilot study

Introduction

The main aim of the pilot study was to test the questionnaire to be sent to all HoMs in England. We were keen to establish how the various documents (cover letter, information sheet, cover sheet and questionnaire) would be perceived by the person who was likely to open the package, and as such we targeted questions specifically in these areas. The **cover letter** requested participation in the study and explained what the separate sheets of paper were about; the **information sheet** was a summary of the OPAL study with related details specific to HoMs; the **cover sheet** checked information regarding the Trusts/units for which the HOM was responsible, who was likely to complete the questionnaire and questions specific to the HOM regarding use of NHS Direct for early labour services; the **questionnaire** covered such areas as the background of the Trust, services for women in early labour, changes to early labour care services and the monitoring/evaluating of early labour services.

Pilot-study methods

Eight Heads of Midwifery were approached for participation in the pilot study. They were sent an overall covering letter explaining the purpose of the pilot, together with copies of the various documents that would be in the package (as above). Contact was made via their secretaries to arrange a telephone interview. Telephone interviews, lasting no more than 20 min, were used to identify problems, for example any questions that were unclear or ambiguous, response options that were inappropriate and areas or topics that were missing, and to determine whether the general flow of questions was appropriate. We also asked specifically about certain questions in the questionnaire about which there was some uncertainty, for example the definitions of different models of midwifery care. Heads of Midwifery were not asked to complete the questionnaire (as we would wish to include them in the main study) but to read through it and discuss with the researcher any areas of difficulty or concern.

Pilot-study findings

Seven telephone interviews and one face-to-face discussion were conducted. The main feedback was that the questionnaire was relatively straightforward to complete, the instructions in the cover letter were clear and the general approach was appropriate. Specific areas and questions were amended; in particular, questions that asked for activity figures (as percentages) were changed, so that where data were not routinely collected the respondent could indicate this and offer an estimate. Other questions had options added or expanded. An additional question regarding other local services that women in early labour could access

was inserted on the advice of respondents. The majority of the questionnaire remained unchanged.

2.1.4 Main study methods

Data-collection tools

The final format of the survey was as described above: an eight-page questionnaire (Appendix A), one per maternity unit which could be completed by a suitable deputy, and a single-page cover sheet (Appendix B) that each HoM was asked to complete in person. To help distinguish these two tools, the eight-page questionnaire was printed on mauve paper and each had a sticker attached specifying the maternity unit that it concerned. Cover sheets were individually printed on white paper with "To be completed by the Head of Midwifery Services for <name> Trust" in red across the top.

These were accompanied by a covering letter that raised the possibility of subsequent contact for a telephone interview to seek further details of particular services. Our letter indicated that we would wish to conduct follow-up interviews with a maximum of 20 HoMs whose units had reported particular experience of innovation in early labour services (see below).

2.1.5 Sample size

A total of 163 trusts were identified and the HoM was sent a package containing a cover sheet (for the HoM to complete) and a mauve questionnaire (for HoMs or delegates to complete) for each of the units under that HoM's jurisdiction. The total number of mauve questionnaires sent out was 241.

Reminder strategies

To maximise response rates, a number of reminder strategies were employed. Initially e-mail reminders were sent 3 weeks following the initial mailout to those HoMs who had not returned the cover sheet. A second e-mail contact was sent to all HoMs via the Royal College of Midwives (a co-investigator to the research) thanking them for their contributions so far and encouraging response. A third e-mail reminder was sent out 7 weeks following the initial mailout. An additional paper mailout was sent at this time to those Trusts who had sent back neither a questionnaire nor a survey cover sheet. In the e-mail reminders HoMs were given the option of completing the cover sheet and questionnaire via e-mail. In addition, telephone calls were made to non-responders to check they had received the initial or second paper mailout and these were subsequently re-sent by e-mail or post if earlier mailings had not reached them.

Data analysis

The majority of the data collected at this stage were quantitative. In addition to the quantitative data, the HoMs also provided some qualitative data in the form of their open responses to survey items and the explanatory notes offered. These data were coded and analysed manually, primarily to develop themes to add context to, and increase the understanding of, the quantitative data. All data were entered into an SPSS database. Frequencies and cross-tabulations are presented as appropriate.

Follow-up interviews

Letters were sent to a purposive sample of 17 HoMs selected for follow-up interviews; HoMs were chosen based on reports of innovative services, both successful and otherwise. The services that we tried to explore further included the following:

- triage units that had not been widely reported previously: a successful one and a discontinued one;
- Birth Centres that provided assessment of all women in that geographical area regardless of booking for birth;
- Day Assessment Units;
- 'drop-in' services;
- units where home assessment of early labour was offered to all women;
- units that reported risk-assessment strategies;
- a telephone helpline;
- if exploration of the use of NHS Direct had been reported on the cover sheet;
- discontinued services.

Letters were sent to a purposive sample of HoMs asking if they would be willing to take part in an interview. In total 17 HoMs were interviewed during August and September 2005; however, contact with one HoM was difficult and the interview was finally conducted slightly later. All interviews were tape-recorded and analysed thematically.

2.2 HoMs England survey findings

This section presents the main findings; additonal tables can be found in Appendix C. The questionnaire is reproduced as Appendix A. This and the next section are sub-divided into the following sub-sections: response; background to Trust and service provision; provision of early labour care; changes to early labour services; home assessment in early labour; triage services; additional options for early labour services; recommendations to

other HoMs introducing home-/community-based assessments; recommendations related to the introduction of triage areas and telephone triage; recommendations relating to additional options for early labour care.

2.2.1 Response

A total of 145 (89 per cent) Trusts returned data, although the data-set from some Trusts was incomplete. Two-thirds (110) of Trusts returned the complete data-set. Cover sheets were returned from 132 HoMs, a response rate of 81 per cent. Of the 241 questionnaires sent out, a total of 182 (76 per cent) were returned, representing information on 182 maternity units (including birthing centres and midwifery-led units). Four, however, were subsequently excluded from the analysis because they did not pertain to NHS hospitals in England.

Twelve respondents chose to return data by e-mail: five returned a mauve questionnaire and a cover sheet, five the cover sheet only and two the questionnaire only. The response rate for returning all questionnaires, at Trust level, was 73 per cent (119/163), with an additional 7 per cent (12/163) sending some of their questionnaires back. One-fifth of Trusts (20 per cent) failed to return any questionnaire. Responses cover the whole of England, with all areas represented.

2.2.2 Background to Trust and service provision

The following sections provide information related to unit characteristics, the model of midwifery care in operation and population served.

Characteristics of the units

Table 2.1 Frequencies of the different types of maternity unit in the sample

Type of unit	Frequency	Percentage
NHS consultant unit including a midwifery-led care area	77	43.3%
NHS consultant unit without a midwifery-led care area	64	36.0%
Stand-alone Birth Centre	32	18.0%
Birth Centre alongside a consultant unit	5	2.8%
Total	178	100.0%

Table 2.1 shows the frequencies of the different types of maternity unit in the sample. It is very difficult to know to what extent these are representative of England as a whole, first because such information is not available in any easily accessible form and second because, as previous surveys have shown (Smith and Smith, 2005), there is constant change as units are reconfigured. The number of stand-alone birth units may appear high, but, cross-referencing against those listed on the

website www.babycentre.co.uk/pregnancy/labourandbirth/planningyourbabysbirth/birthcentre/birthcentresbyregion/ suggests that, if anything, they are slightly under-represented in our sample. Hospital and community midwifery services were reported to be managed by the same Head of Midwifery in 167/178 cases (93.8 per cent).

Table 2.2 Births per annum by unit size

Births per annum	Frequency*	Percentage	Cumulative percentage
<1000	40 (16)	22.5%	22.5%
1001–2000	24 (27)	13.5%	36.0%
2001–3000	49 (56)	27.5%	63.5%
3001–4000	34 (49)	19.1%	82.6%
4001–5000	18 (27)	10.1%	92.7%
>5000	13 (12)	7.3%	100.0%
Total	178 (186)	100.0%	

**Figures in parentheses are national figures.*

Table 2.2 shows the number of births in units per annum. Again, comparison with national figures is difficult. The website www.igreens.org.uk/maternity_unit_mergers_in_the_nh.htm cites figures which it credits to the Office of National Statistics (ONS) statistics for 2004–2005 (The Information Centre, 2006). The ONS source document does not in fact present these data as a table and there are some inaccuracies in the way that data have been extracted. Furthermore, the ONS does note that 'only a very few Trusts currently provide information that enables different sites to be distinguished'; in other words, ONS data are mainly at the Trust level and should not be relied upon as a source of information about small, individual units. This would appear to be the explanation for the fact that we received responses from 40 small units (i.e. <1000 births per annum) when the data given in the ONS report identify fewer than 20. This under-representation of small units by the ONS leads to consequent overestimation of the number of births taking place in some consultant units, making these data of very limited value. The survey by Smith and Smith (2005), which achieved an excellent response rate, did not, unfortunately, report data on unit size, and is in any case now somewhat out of date. It may therefore be that the data that we present here on small units are unique and the best available at this time. In view of this, it is worth noting that 90 per cent of the small units (20.2 per cent of the whole sample) in fact had fewer than 500 births per annum (see Appendix C for details). Thirty-seven of the 40 small units are Birth Centres and three are consultant units, one with midwifery-led care and two without.

Number of category X admissions

Category X is the term used to refer to women admitted to the labour ward who are not in labour. Such women have been identified as making a major contribution to labour-ward workload (Ball and Washbrook, 1996). The majority of respondents were unable to supply information about category X rates or numbers for their unit. Only 10 per cent said that they knew the figure and an additional 21.3 per cent were prepared to supply an estimate. This lack of knowledge seems surprising in the context of the apparently widespread use of Birthrate plus (a maternity workload-management system). Figures for 2003 were supplied by 39 respondents and for 2004 by 50. The actual figures supplied ranged from less than 10 per cent to over 100 per cent, with the modal range being between 10 and 50 per cent. All of those who provided a figure over 100 per cent for either 2003 or 2004 were providing estimates rather than recorded numbers.

Characteristics of the area and population served

We sought only minimal information from respondents about the characteristics of the area and the population served because the questionnaire was already lengthy. The majority of respondents (61.2 per cent) said that their unit served a mixed urban/rural population, with 27.0 per cent saying 'mainly urban' and 11.8 per cent 'mainly rural'. Further details concerning the ways in which respondents characterised their populations are given in Appendix C.

Organisation of local midwifery services

Table 2.3 Predominant organisation of midwifery services

Organisation type	Frequency	Percentage
Traditional, some rotation	79	44.4%
Traditional, no rotation	32	18.0%
Team midwifery: integrated teams with some core staff in hospital	32	18.0%
Team midwifery+core staff in hospitals	15	8.4%
Team midwifery	8	4.5%
Group-practice midwifery	2	1.1%
Mixed, none predominant	2	1.1%
Caseload midwifery	1	0.6%
Other: mainly community-unit model	7	3.9%
Total	178	100.0%

The midwifery workforce can be organized in various ways and it may be that some of these approaches support particular models of service provision. This information was, therefore, collected to act as a basic baseline descriptor and also to support the interpretation of the findings of the ELSA trial. Thirty-nine respondents gave more than one answer to this question, for example there may have been different answers for hospital and community or for different groups of community midwives. Thirty-one respondents gave two answers and eight gave three. 'Traditional' organisation with some rotation was the modal response. Table 2.3 shows the frequencies of the organisational model that was said to be predominant.

2.2.3 Provision of early labour care

This section draws on the early labour care section of the questionnaire to provide descriptive information about the ways in which early labour services are provided across the country. Home assessment, triage and additional options for early labour care are each discussed at greater length in subsequent sections, drawing on both questionnaire and interview data.

When a woman feels that she may be in labour, where does she phone?

Given that the focus of the study was early labour, we were particularly interested to know what variation existed in the first point of contact for a woman who thinks that she may be in labour. Respondents were therefore asked 'When a woman feels that she may be in labour, where does she phone?'.

Four response options were given:

1 central labour and delivery suite,

2 community midwife/team midwife,

3 triage unit/area,

4 other, please specify.

Birth units have been excluded from this analysis since these options are not generally applicable and women will generally phone the unit directly. Two of the remaining 141 respondents gave no answer, seven gave three answers, and 53 gave two: responses are shown in Table 2.4. Only 8.6 per cent of respondents did not include the central labour and delivery suite in their answer. Four of these gave community midwife/team midwife as their first answer and six gave triage.

Table 2.4 When a woman feels that she may be in labour, where does she phone?

Response	*N*	Responses (%)	Cases (%)
Central labour and delivery suite	127	61.7%	91.4%
Community midwife/team midwife	56	27.2%	40.3%
Triage unit/area	18	8.7%	12.9%
Other, please specify	5	2.4%	3.6%
Total	206	100.0%	148.2%

Multiple responses were allowed. Birth Centres were excluded.

The most common response overall was to say that the central labour and delivery suite was the default but that some midwives or teams of midwives gave women the option of phoning them directly. Many of those giving multiple responses described different mechanisms at different times of day or for 'high-risk' and 'low-risk' women. In a small number of cases respondents specified that there was a 'hotline number' so that a woman had just one phone number that she needed, which would be routed to different areas at different times of day or dependent upon staffing.

Table 2.5 When a woman feels that she may be in labour, where does she phone? by type of unit

Response	Type of unit		
	NHS consultant unit including a midwifery-led care area	***NHS consultant unit without a midwifery-led care area***	***Total***
Central labour and delivery suite	33 (80.5%)	35 (92.1%)	68 (86.1%)
Community midwife/team midwife	1 (2.4%)	3 (7.9%)	4 (5.1%)
Triage unit/area	5 (12.2%)	0 (0.0%)	5 (6.3%)
Other, please specify	2 (4.9%)	0 (0.0%)	2 (2.5%)
Total	41 (100.0%)	38 (100.0%)	83 (100.0%)

This table excludes birth units and is limited to respondents who gave only one answer.

To avoid the ambiguities associated with multiple responses, Table 2.5 is restricted to those respondents who gave just one answer and cross-tabulates this with type of unit. Here we can see that NHS consultant units with midwifery-led care are more likely to designate a point of contact other than the central labour and delivery suite (χ^2=7.96, 3 df, *P*<0.05) and that triage as the initial point of contact for all women occurs only in such units.

Additional facilities available to women in early labour

We were interested to know to what extent changes in the wider NHS such as walk-in centres, new GP contracts and the spread of new service models might be having an impact on the services available to women in early labour. This was an open-ended question with no preset response options which was answered by 73 respondents (41 per cent). Table 2.6 shows the range of answers given based on *post-hoc* codings and indicates a relative dearth of emerging community-based services.

Table 2.6 Additional facilities available to women in early labour

Type of facility	Frequency	Percentage
Birth Centre/midwifery-led unit	34	19.1%
Hospital-based	24	13.5%
Triage	5	2.8%
Drop in (location unspecified)	4	2.2%
Community drop in	2	1.1%
ELSA	1	0.6%
Sure Start	1	0.6%
Walk-in centre (3 days midwife input)	1	0.6%
Walk-in centres; not used	1	0.6%
Total responding	73	41.0%
Missing	105	59.0%
Total	178	100.0%

In Table 2.6, triage was allocated a separate coding to other hospital-based facilities to reflect the fact that some triage areas are designated, separate areas within a maternity unit. However, a few respondents indicated that women could access community and satellite services or 'drop in' at a local Birth Centre, even if planning birth in the consultant unit. Similarly, others indicated that, for example, the hospital's Day Assessment Unit could also be accessed on a drop-in basis. There was little evidence of midwifery involvement in NHS walk-in centres with midwifery support reported for only one centre.

Cross-tabulation with type of unit confirmed that the response 'Birth Centre/midwifery-led unit' was largely being given by the Birth Centres with comments indicating that women are welcome to use the Birth Centre as a drop-in centre, such as 'Women see the Birth Centre as a 24-hour advice centre either calling in or phoning' (#73). However, nine other respondents also gave this answer, including six consultant units. These tended to be larger units in rural or semi-rural areas where midwifery-led units were regarded as a community resource for all low-risk women, not only those planning to give birth there:

> *Some women can access local birthing units to be assessed if they are low risk but choose to deliver at main consultant unit.*
>
> (#69)

> *Yes, women may visit their local midwife led units at any time for advice/guidance on any issue relative to their pregnancies.*
>
> (#113)

Early labour advice to low-risk women

Respondents were asked to consider the following scenario: 'A low-risk nulliparous woman phones at 9 am to say that she has had a show and is having contractions every 5–7 minutes. Her membranes are intact. She is not distressed and she has her own transport. What would the midwives in this unit normally say to her?'

The response options were:

- it's time you came in now,
- make your way in when you feel ready,
- come in for a check and bring your bag just in case,
- phone again later,
- a midwife will come and visit you at home,
- other, please specify.

Four respondents omitted this question, and 42 gave more than one answer. Multiple responses are shown in Table 2.7.

Table 2.7 Advice in early labour (multiple responses)

Advice	Responses		Percentage of cases
	N	*Percentage*	
It's time you came in now	5	2.3%	2.9%
Make your way in when you feel ready	79	36.6%	45.1%
Come in for a check and bring your bag just in case	9	4.2%	5.1%
Phone again later	89	41.2%	50.9%
A midwife will come and visit you at home	11	5.1%	6.3%
Other	23	10.6%	13.1%
Total	216	100.0%	123.4%

Place of assessment of women in early labour

We were aware of considerable re-configuration currently in progress including efforts to review non-labouring women outside the labour ward. Respondents were therefore asked, 'Once a woman has come into the unit thinking that she may be in labour, where would she be normally be assessed?' Response options offered were:

- central labour and delivery suite,
- midwife-led unit/Birth Centre,
- triage room/area,
- assessment/admission area,
- ante-/postnatal wards,
- day care unit,
- antenatal clinic,
- other, please specify.

As before, we have omitted Birth Centres from this analysis because they do not generally have the range of options. No respondents omitted this question; 39 gave more than one answer. Up to four answers were coded. Table 2.8 shows the responses given (multiple responses). A number of respondents said that it would depend on the time of day and which areas were busy. Central labour and delivery suite was the most frequent response, but it will be seen that a quarter of the sample did not give this as one of their responses.

Table 2.9 shows these data but coding only the predominant response for each unit, and cross-tabulates this by type of unit. Overall, nearly one-third of consultant units were carrying out early labour assessments predominantly in locations other than the labour ward; units with

midwifery-led care areas are somewhat more likely to do this than those without (39.0 compared with 25.0 per cent).

Table 2.8 Location for early labour assessment (multiple responses, Birth Centres excluded)

Location	Responses		
	N	***Percentage***	**Percentage of cases**
Central labour and delivery suite	105	54.7%	74.5%
Midwife-led unit/Birth Centre	26	13.5%	18.4%
Triage room/area	20	10.4%	14.2%
Assessment/admission area	16	8.3%	11.3%
Ante-/postnatal wards	12	6.3%	8.5%
Day-care unit	9	4.7%	6.4%
Antenatal clinic	2	1.0%	1.4%
Other	2	1.0%	1.4%
Total	192	100.0%	136.2%

Table 2.9 The usual place for labour assessment by type of unit (Birth Centres excluded)

	Type of unit		
Where assessed	***NHS consultant unit including a midwifery-led care area***	***NHS consultant unit without a midwifery-led care area***	**Total**
Central labour and delivery suite	47 (61.0%)	48 (75.0%)	95 (67.4%)
Midwife-led unit/Birth Centre	6 (7.8%)	1 (1.6%)	7 (5.0%)
Triage room/area	6 (7.8%)	2 (3.1%)	8 (5.8%)
Assessment/admission area	7 (9.1%)	5 (7.8%)	12 (8.5%)
Ante/postnatal wards	1 (1.3%)	3 (4.7%)	4 (2,8%)
Day-care unit	1 (1.3%)	0 (0.0%)	1 (0.7%)
Other	9 (11.7%)	5 (7.8%)	14 (9.9%)
Total	77 (100%)	64 (100.0%)	141 (100.0%)

Advice for women who attend the unit in very early labour

Respondents were asked to consider a second scenario concerning the advice that would be given to a woman attending the unit in very early labour.

A low-risk nulliparous woman is assessed in the unit at 9 am. Her membranes are intact and contractions are every 10–15 minutes. She is not distressed and she has her own transport. What would midwives in this unit normally say to her?

The response options offered were:

- you are fine to go home but contact us again when you need to,
- you can go home and a community midwife will come and visit later in the day,
- you should stay and be reviewed again in a couple of hours,
- other, please specify.

Responses are shown in Table 2.10. It will be seen that very few would want to keep the woman in the unit and most would advise her to go home and contact the unit again later.

Table 2.10 Advice for women attending the unit in very early labour

Advice	Frequency	Percentage
You are fine to go home but contact us again when you need to	154	86.5%
You can go home and a community midwife will come and visit	3	1.7%
You should stay and be reviewed again in a couple of hours	9	5.1%
Other	10	5.6%
Missing	2	1.1%
Total	178	100.0%

Information provided in the explanatory notes indicated that the following factors would also be considered in offering the woman advice:

- the woman's wishes,
- findings on vaginal examination,
- geography and distance from unit,
- invitation to contact the unit again,
- whether a home visit could be provided by a community or caseload midwife.

Respondents were then asked, 'If this woman were sent home, what would she be told about what to do next?' Response options offered were:

- ring back when contractions feel stronger and 5–10 min apart or if you experience spontaneous rupture of membranes (SROM), need pain relief or have any concerns (e.g. blood loss, reduced fetal movements),
- come in when contractions stronger, and 5–10 min apart, or if you experience SROM, need pain relief or have any concerns (e.g. blood loss, reduced fetal movements),
- a midwife will visit you later,
- a midwife will telephone you later,
- other, please specify.

Responses are shown in Table 2.11. Again there is a clear consensus that the woman would be asked to phone back when labour was more advanced.

Table 2.11 If this woman were sent home, what would she be told about what to do next?

Advice	Frequency	Percentage
Ring back when contractions feel stronger and 5–10 min apart	147	82.6%
Come in when contractions stronger, and 5–10 min apart	24	13.5%
A midwife will visit you later	1	0.6%
A midwife will telephone you later	2	1.1%
Other	2	1.1%
Missing	2	1.1%
Total	178	100.0%

The following question asked, 'If this woman remained in the unit, where would she stay?' The responses offered were:

- ante-/postnatal ward,
- central labour and delivery suite,
- midwife-led unit/Birth Centre,
- triage room/area,
- assessment/admission area,
- other.

Responses are shown in Table 2.12. Three respondents omitted this question, but 33 gave two or more answers, so multiple responses are shown. The majority indicate that women would go to an ante-/postnatal ward, the main exceptions being the Birth Centres.

Table 2.12 If this woman remained in the unit, where would she stay? (multiple responses)

	Responses		Percentage of cases
	N	***Percentage***	
Ante/postnatal ward	116	53.2%	66.3%
Central labour and delivery suite	36	16.5%	20.6%
Midwife-led unit/Birth Centre	45	20.6%	25.7%
Triage room/area	4	1.8%	2.3%
Assessment/admission area	9	4.1%	5.1%
Other	8	3.7%	4.6%
Total	218	100.0%	124.6%

The explanatory notes to this question elaborated that women remaining in the unit may stay in a number of settings; these include bays designated for women in early labour, single birthing rooms on the maternity unit, antenatal or mixed ante- and postnatal wards, the sitting room or canteen. Respondents indicated that the workload in the unit at that time would be a significant factor in this decision, although areas that allowed women to be mobile, have privacy and access to facilities were identified. Two respondents indicated that there were no antenatal facilities on their site and that the woman would be asked to return home.

Provision of information to women about early labour care

It might be thought that it will be easier for a unit to implement its early labour assessment policy if women are aware of it, for example if they know who they are meant to phone and when. Respondents were therefore asked how information was provided to women about local arrangements for early labour care, choosing from a list of options. As Table 2.13 shows, most respondents gave multiple responses, which reflects the different services that women may access, for example, labour-ward tours and antenatal classes, where information will be repeated. Further analysis showed that 55 units (30.9 per cent) give women no written information about local arrangements for early labour care. Of the remainder, 27 (15.1 per cent) cited both the unit booklet and an information sheet; 72 (40.4 per cent) the unit booklet but no information sheet and 24 (13.4 per cent) an information sheet but no unit booklet.

Table 2.13 How is information provided to women about local arrangements for early labour care? (multiple responses, in order of frequency)

	Responses		Percentage of cases
	N	***Percentage***	
Antenatal class	160	21.5%	90.9%
Provided verbally one to one by a midwife during routine antenatal appointments	149	20.0%	84.7%
At discussion of birth plans	143	19.2%	81.3%
Labour-ward tours (separate from those in antenatal classes)	123	16.5%	69.9%
Maternity-unit information booklet	99	13.3%	56.3%
Information sheet about labour and birth	51	6.8%	29.0%
Poster in ward/clinic	6	.8%	3.4%
Trust/maternity unit's website	6	.8%	3.4%
Other	8	1.1%	4.5%
Total	745	100.0%	423.3%

Availability of guidelines, policies and protocols

There are various professional and organisational requirements for guidelines, policies and protocols to be available to those providing clinical care. These include the Clinical Negligence Scheme for Trusts and clinical governance. In the light of these powerful drivers, it is therefore interesting to note that guidelines, policies and protocols were not available in 38 per cent of units responding. Table 2.14 shows responses to the question, 'Does this unit have any clinical guidelines, policies or protocols that relate to early labour care?'

Table 2.14 Availability of guidelines, policies or protocols

	Frequency	Percentage
No	67	37.6%
Yes, clinical guidelines	92	51.7%
Yes, protocol	4	2.2%
Yes, midwifery-led guidelines	3	1.7%
Yes	2	1.1%
Yes, guidelines, protocol and policy	1	0.6%
Missing	9	5.1%
Total	178	100.0%

Additional information about the guidelines available included use of a labour pathway, that guidelines were under development, that guidelines were available but that these were not specific to early labour care and that NICE guidelines related to the management of pre-labour rupture of membranes had been implemented.

Copies of guidelines, audits and evaluations were requested and 26 respondents provided documents including parent information leaflets, care pathway documentation, telephone record proformas, hospital inpatient episode and Birthrate Plus data. Guideline documents included incorporation of evidence in the majority provided (12/14) and reference to national guidance in 50 per cent (e.g. NICE clinical guidelines; 7/14). One unit's documentation acknowledged the influence of the Pathway. Whereas some guidelines for care in normal labour had drawn on other sources, considerable effort in total appeared to have been expended in developing Trust or unit-specific guidelines.

Additional methods to provide women with information about local arrangements for early labour care include the use of videos, the maternity unit's own website, information in the maternity record carried by the woman and at the pre-labour discussion and birth planning around 36 weeks of pregnancy.

Monitoring and evaluation of early labour services

The final section of the questionnaire concerned monitoring and evaluating early labour services.

Table 2.15 How is use of early labour services routinely monitored? (multiple responses)

	Responses		Percentage of cases
	N	*Percentage*	
Not routinely monitored	90	33.5%	52.9%
Informally via feedback from user groups or the Maternity Services Liaison Committee	60	22.3%	35.3%
Satisfaction questionnaires to women	58	21.6%	34.1%
Audit	39	14.5%	22.9%
Uptake of service measured	13	4.8%	7.6%
Other	9	3.3%	5.3%
Total	269	100.0%	158.2%

Table 2.15 shows the multiple responses given. Informal feedback from user groups or the Maternity Services Liaison Committee and satisfaction questionnaires to women were each reported by over one-third of the sample. Only 13 respondents (7.6 per cent of the sample) said that uptake of service was measured and 39 (22.9 per cent) mentioned audit.

Consultant units (with and without midwifery-led care areas) were more likely to be engaged in monitoring services than Birth Centres (χ^2=8.76, 1 df, *P*=0.03; see Appendix C, Table C18), which is consistent with the findings of Smith and Smith (2005). Table 2.16 shows that audit was more likely to occur in consultant units with a midwifery-led area (χ^2=8.57, 1 df, *P*=0.04) than in those without, and was least likely in Birth Centres.

Table 2.16 Is audit used to routinely monitor early labour services?

	NHS consultant unit including a midwifery-led care area	NHS consultant unit without a midwifery-led care area	Stand-alone Birth Centre	Birth Centre alongside a consultant unit	Total
Audit	24 (31.2%)	12 (18.8%)	3 (9.4%)	0 (0%)	39 (21.9%)
No audit	53 (68.8%)	52 (81.3%)	29 (90.6%)	5 (100.0%)	139 (78.1%)
Total	77(100.0%)	64 (100.0%)	64 (100.0%)	5 (100.0%)	178 (100.0%)

Forty-four respondents (24.7 per cent) said that specific evaluations of early labour services been undertaken, although only seven provided any findings, including one who enclosed a report. Of these seven, six were consultant units with midwifery-led care and the seventh was a consultant unit without midwifery-led care; no Birth Centres were represented.

2.2.4 Changes to early labour services

An aim of this part of the OPAL study was to gather information on the extent to which services are changing and to learn from the experiences of those who have made changes. We were interested in services that had been discontinued as well as those that had become established.

Changes to early labour services in the last 5 years

Table 2.17 shows the number of respondents choosing each of the four options: new service introduced and still in use; new service introduced but discontinued; discontinued previous service; no change. Eight respondents failed to answer the question and five gave two responses. Seventy-six respondents had introduced new services in the past 5 years (43.5 per cent), 12 of whom had then discontinued them. Another 12 (7.1 per cent) had discontinued existing services.

Table 2.17 Have there been any changes in your early labour services in the last 5 years? (multiple responses)

	Responses		Percentage of cases
	N	***Percentage***	
New service introduced and still in use	64	36.6%	37.6%
New service introduced but discontinued	12	6.9%	7.1%
Discontinued previous service	12	6.9%	7.1%
No change	87	49.7%	51.2%
Total	175	100.0%	102.9%

Characteristics of units that had introduced changes

Table 2.18 Service change by type of unit

	Service change: yes		
Type of unit	***N***	***Percentage***	**Total**
NHS consultant unit including a midwifery-led care area	46	62.2%	74
NHS consultant unit without a midwifery-led care area	25	41.7%	60
Stand-alone Birth Centre	11	35.5%	31
Birth Centre alongside a consultant unit	1	20.0%	5
Total	83	48.8%	170

Table 2.19 Service change by unit size

	Service change: yes		
Size of unit (births pa)	***N***	***Percentage***	**Total**
<1000	13	33.3%	39
1001–2000	11	47.8%	23
2001–3000	22	46.8%	47
3001–4000	13	40.6%	32
4001–5000	13	76.5%	17
>5000	11	91.7%	12
Total	83	48.8%	170

As Table 2.18 shows, the likelihood of changes to early labour services varied with the type of unit. Change was most frequent in consultant units with midwifery-led care (62.2 per cent) and least likely in alongside Birth Centres (18.0 per cent; χ^2=10.76, 3 df, *P*=0.013). Similarly change was more likely in larger units, as shown in Table 2.19, with all but one of the largest units (91.7 per cent) having made changes compared with only one-third of the smallest units (χ^2=18.71, 5 df, *P*=0.002).

Type of service change

Respondents were asked to give details of the service changes that they had made. These were then grouped into *post-hoc* codings as shown in Table 2.20. The first three of these: home assessment, triage and use of a structured telephone tool, were the main categories to have appeared in the literature and represent the main possibilities for change specific to early labour. These will each be discussed in separate sections below. The remaining categories represent the other answers given. Structural change refers to changes in organisational structures, for example team working, which respondents felt had implications for early labour care. Clinical refers to changes in clinical guidelines which similarly had implications for early labour care. All but one of the examples coded in this way concerned guidelines for women with spontaneous rupture of membranes. A further grouping of responses referred to a change in policy (not always formalised) to delay admission until a woman was in established labour. The final grouping referred to changes in local facilities, such as moving to new premises or the establishment of a Day Assessment Unit which again had implications for early labour care.

Table 2.20 Details of service changes

	New, continuing		**New, discontinued**		**Existing, discontinued**	
	n	***%****	***n***	***%****	***n***	***%****
Home assessment	8	4.5	4	2.2	4	2.2
Triage	15	8.4	2	1.1	-	-
Telephone tool	2	1.1	1	0.6	-	-
Structural	5	2.8	3	1.7	1	0.6
Clinical (mainly re: SROM)	12	6.7	-	-	-	-
Policy to delay admission until established	5	2.8	-	-	-	-
Facility change	9	5.1	2	1.1	6	3.4
Total	56	31.5	12	6.7	11	6.2

**These are percentages of the whole sample.*

Table 2.20 shows the categories of service which had been newly introduced and/or discontinued for those respondents who provided details. Triage was the most frequently introduced service (n=15) followed by clinical policy changes particularly with regard to spontaneous rupture of membranes. Home assessment and facility changes were the most likely services to be discontinued.

Plans for changes to early labour practice in the near future

In addition to questions about services changes that had already occurred, respondents were asked 'Do you have plans to make (further) changes to your early labour assessment and care practices in the near future?' Ninety-three respondents, 52.2 per cent of the sample, answered yes to this question, indicating that early labour services are in a high state of flux.

Characteristics of units planning changes

As with changes already implemented, consultant units were much more likely than Birth Centres to be planning changes (χ^2=20.06, 3 df, P<0.001; see Appendix C, Table C14). NHS consultant units without a midwifery-led care area were the most likely to be planning changes (71.7 per cent). Similarly, there were statistically significant relationships with size of unit (χ^2=23.82, 5 df, P<0.001; Table C15): small units were much less likely to be planning changes than medium-sized or large units. Explanations for this could include the likelihood that small units were more likely to be purpose-built, both in terms of facilities and model of care. Additionally, large units appear more likely to experience as a problem the high proportion of category-X women compared to smaller units, where a 'drop-in' ethos was more frequently reported.

Type of planned service change

Eighty-nine of the 93 respondents who said that they planned service changes gave details. Responses were coded into the same categories as above for changes already implemented. Only one was coded per respondent. Where more than one change was mentioned, priority was given to those that were specific to early labour (home assessment; triage; telephone tool) and, within those, to the change with greatest organisational change implications (home assessment>triage>telephone tool). Table 2.21 presents these responses alongside the corresponding figures for service changes already implemented. It will be seen that more than half as many again are planning changes in the areas of home assessment, triage, or use of a telephone tool as have already made them (28.1 compared with 18.0 per cent). These three areas constitute the majority (56.2 per cent) of the planned changes described. The other large category was structural change; for example, the introduction of teams or caseload holding. The categories of clinical guidelines, policy to

delay admission until established and facility change were mentioned only rarely compared to those that had already been implemented.

Table 2.21 Summary of details of service changes implemented and planned

Service change	Change introduced (including then discontinued)		Change planned	
	N	*% of whole sample*	*N*	*% of whole sample*
Home assessment	12	6.7%	19	10.7%
Triage	17	9.6%	25	14.0%
Telephone tool	3	1.7%	6	3.4%
Structural	8	4.5%	26	14.6%
Clinical (mainly re: SROM)	12	6.7%	2	1.1%
Policy to delay admission until established	5	2.8%	1	0.6%
Facility change	11	6.2%	4	2.3%
Other	–	–	6	3.4%
Total	68	38.2%	89	50.00%

Table 2.22 shows that 27 per cent of the sample (*n*=48) had both made changes already and planned further changes. Only 23.6 per cent of the sample (*n*=42) said both that they had not made changes and that no changes were planned, although 9 per cent (*n*=16) failed to answer one or both questions. Changes, either implemented or planned, were reported by 67.4 per cent of the sample (*n*=120).

Table 2.22 Service changes made by plans to make (further) changes

	Q20 Do you have plans to make (further) changes?			
Q19 Changes already made	***Yes***	***No***	***Missing***	**Total**
No change	40 (22.5%)	42 (23.6%)	5 (2.8%)	87 (48.9%)
Service change	48 (27.0%)	32 (18.0%)	3 (1.7%)	83 (46.6%)
Missing	5 (2.8%)	0 (0.0%)	3 (1.7%)	8 (4.5%)
Total	93 (52.2%)	74 (41.6%)	11 (6.2%)	178 (100.0%)

Reasons for introduced/planned changes

Details of reasons for service changes are given in Appendix C. 'Local/unit based factors' were cited by nearly two-thirds of the sample. Both 'service users' and 'implementation of research evidence' were cited by 43.4 per cent of the sample. Unfortunately few respondents gave details of the

nature of the research evidence that they were implementing although this might have been local audits or evaluation. The survey was conducted between April and July in 2005. During that period, Birthrate Plus, a workforce management tool was widely used by maternity units to determine casemix and required midwifery staffing establishments. It might therefore have been expected that Birthrate plus would be cited more frequently as a reason for making changes.

Advantages and disadvantages of service changes

Respondents were asked to outline the main advantages and disadvantages of their introduced or planned changes, both for service providers and service users. Many respondents left some or all of these blank and, conversely, those answering often gave more than one response. In addition, many had made, or planned more than one change, creating ambiguities which made the data less informative than we had hoped. We will not therefore be presenting these data.

Monitoring service changes

Some 52.5 per cent of those who had made service changes reported some form of monitoring compared with 42.9 per cent of those who had not (see Appendix C), although this was not a statistically significant difference (χ^2=1.53, 1 df, *P*=0.22). Specifically, those who had made changes were twice as likely to report the use of audit (28.9 compared with 14.9 per cent), and this difference was statistically significant (χ^2=4.87, 1 df, *P*=0.03).

Implications of service changes

The final part of this section of the questionnaire asked: "Do any of these service changes:

- require additional staffing?"
- release staff to other areas?"
- require additional non-staff resources?"
- enable a skill-mix review?"
- release non-staff resources?"
- require staff training?"
- require changes in documentation of care?"

Respondents were asked to indicate 'yes', 'no' or 'not sure' for each. Despite the 'not sure' option, these questions were selectively missed by many respondents who had reported service changes. Nevertheless, it is apparent that the early labour service changes undertaken or being contemplated have many implications. Over one-third of the sample (*n*=61) described changes that required additional staffing and 70 (39.3

per cent) said that their changes required staff training. Over one-quarter require additional non-staff resources (*n*=49) and changes in documentation (*n*=45). On the other hand nearly a quarter of changes released staff to other areas (*n*=43) or enabled a skill-mix review (*n*=44). The question where respondents had the greatest uncertainty was around the release of non-staff resources (*n*=14 not sure); only 9 per cent (*n*=16) thought that non-staff resources were released whereas 18 per cent (*n*=18) thought that they were not.

Table 2.23 shows responses separately for the three main types of service change, showing a recognition that all require staff training. This table needs to be read with caution because the columns represent all the respondents who made the change in question, which means that respondents who had made more than one change are counted twice and it is not always clear which service they are referring to. Table 2.24 therefore presents the same data limited to those units where only one service change had been made; this does inevitably mean that percentages must be interpreted with caution due to the small numbers involved.

Table 2.23 Resource implications by type of service

	Home assessment *n*=29		**Triage *n*=35**		**Telephone tool *n*=8**	
	N	***%****	***N***	***%****	***N***	***%****
Require additional staffing?	14	48.3	21	60.0	3	37.5
Release staff to other areas?	16	55.2	15	42.9	5	62.5
Require additional non-staff resources?	13	44.8	15	42.9	3	37.5
Enable a skill-mix review?	14	48.3	14	40.0	4	50.0
Release non-staff resources?	3	10.3	3	8.6	2	25.0
Require staff training?	20	69.0	19	54.3	6	75.0
Require changes in documentation of care?	11	37.9	13	37.1	5	62.5

**Percentage of those making this change saying yes.*

Table 2.24 Resource implications by type of service, limited to those who only reported one change

	Home assessment *n*=14		Triage *n*=15		Telephone tool *n*=5	
	N	***%****	***N***	***%****	***N***	***%****
Require additional staffing?	8	57.1	9	60.0	2	40.0
Release staff to other areas?	8	57.1	6	40.0	3	60.0
Require additional non-staff resources?	6	42.9	7	46.7	1	20.0
Enable a skill-mix review?	7	50.0	7	46.7	3	60.0
Release non-staff resources?	3	21.4	1	6.7	1	20.0
Require staff training?	11	78.6	9	60.0	3	60.0
Require changes in documentation of care?	5	35.7	6	40.0	3	60.0

**Percentage of those making this change saying yes.*

2.2.5 Home assessment in early labour

Home assessment in early labour is the intervention being investigated in the ELSA trial. We were therefore particularly interested in knowing how widespread this was in current practice, the characteristics of units offering home assessment and the issues that had been encountered.

Availability

Table 2.25 shows the reported availability of home assessment in early labour. Seven units (3.9 per cent) were offering home visits routinely to all, 24 h a day, and a further 79 (44.4 per cent) said that they offered it selectively.

Table 2.25 Availability of home assessment in early labour

	Frequency	Percentage
Offered selectively	79	44.4%
Routinely offered to all, 24 h/day	7	3.9%
Not available/only for home births/DOMINO	92	51.7%
Total	178	100.0%

Characteristics of units offering home visits to all

Home visiting was not associated with a particular type of unit but there were some relationships with unit size. While selective home visiting was found in units of all sizes, universal visiting did not occur in larger units. Selective home visiting was also distributed across the range of ways in which midwifery services were organised but six of the seven units offering universal visiting were organised in teams. Surprisingly, the only unit whose predominant form of organisation was described as the caseload type did not offer home visits.

Criteria for selective home visiting

Respondents who indicated that home visiting was selective were asked to expand on this by indicating which of a list of determinants applied. Responses are shown in Table 2.26. The most frequently endorsed response was that it was up to individual midwives, and over a third also mentioned differences in the practice of different midwifery teams. The most frequently mentioned formal limit on home visits was time of day (i.e. daytime only), but limits to women at low obstetric risk were also frequently mentioned. As will be seen from the table, many respondents gave more than one response; for example, it might be the up to the individual community midwife, but only during daylight hours.

Table 2.26 Criteria for selective home visiting (multiple responses)

	Responses		
Criterion	***n***	***% of responses***	***% of cases***
Time of day	32	19.8%	42.1%
Distance	16	9.9%	21.1%
'Obstetric risk'	29	17.9%	38.2%
Parity	4	2.5%	5.3%
Variation between individual midwives	40	24.7%	52.6%
Variation between teams	26	16.0%	34.2%
Other	15	9.3%	19.7%
Total	162	100.0%	213.2%

Some respondents indicated that home assessment was available in parts of their service – 'some teams do it' – but that it was not offered routinely due to resource constraints.

Percentage of women having early labour assessment at home

Respondents were asked 'Do you know approximately what percentage of women have early labour assessment at home, excluding women booked for home births?' Responses offered were yes; no, but I can provide an

estimate; and no. Seventy-five respondents (42 per cent) failed to answer this question. These were primarily the units where home visiting was not available, but also included one unit that offered it selectively and eight where home visits were only available for home births and DOMINOs. Eleven respondents who said that their unit did not offer home visits *did* answer the question in order to tell us that the answer was zero.

Over two-thirds of those responding (68.9 per cent), said that they did not know the percentage of women receiving a home visit. Only six respondents (5.8 per cent) said that they did know, the remaining 26 (25.2 per cent) saying that they could provide an estimate. Knowing the percentage did not appear to be related to the basis on which home visiting was offered.

The next question asked for the actual figure, whether known or estimated, and this was answered by 32 respondents: of the six who had said 'yes' they knew the percentage, three gave the answer zero, the remaining three offering 10, 46 and 50 per cent. Of the 26 respondents offering an estimate, 15 suggested 5 per cent or less, with the remainder offering estimates ranging from 6 to 95 per cent. As might be expected, the highest estimates were from units who offer a 24-h service to all, and all the respondents answering 10 per cent or less were offering a selective service or none at all except for home births and DOMINOs. However, those offering a selective service clearly covered a wide range of possibilities with the figures offered ranging from 1 to 46 per cent. Returning to the explanations given for the basis for selective home visiting revealed very little pattern to explain the range. The two 'selective' units that were apparently visiting a substantial number of women (#79, #106) said that visits were offered to low-risk women, and mentioned no time or other constraints. Respondents who said that home visits were only available at certain times often offered other constraints as well, and tended to report only a small percentage of women receiving home visits.

Cross-tabulation by size of unit indicates that it tends to be smaller units who visit a high percentage of women: all five of the units that were visiting 60 per cent or more had fewer than 2000 births per annum. This is in keeping with the finding that offering home visits to all tends to be less prevalent in larger units. However, those units where only a small percentage of women were visited were spread across the size spectrum.

Discontinuation of previous home visiting

Eight respondents reported discontinuation, or reduction, of home assessment for early labour. These are summarised below.

Table 2.27 Units which discontinued or reduced existing home assessment

Ref	Type of unit	Unit size	Midwifery organisation	Type of area	Additional information
#31	Consultant unit, with no midwifery-led care area	4001–5000	Traditional, some rotation	Mix of urban/rural	Team midwives had previously provided home assessment and subsequently accompanied labouring women into the unit. Now selectively 9 am–5 pm and further service changes planned.
#33	Consultant unit, with midwifery-led care area	2001–3000	Traditional, no rotation	Mix of urban/rural	Home assessments had been offered to all in team midwifery scheme which had been discontinued. Now selectively 9 am–5 pm. Planned to move towards community-based assessments in two Birth Centres.
#152	Consultant unit, with midwifery-led care area	2001–3000	Team midwifery - integrated teams _ some cores staff in hosp	Mainly urban	Universal home visiting discontinued due to staffing difficulties, now selective. Exploring triage.
#164	Consultant unit, with midwifery-led care area	2001–3000	Traditional, no rotation	Mainly urban	Home assessment had been offered as part of DOMINO service, which had been discontinued due to funding constraints and concerns for midwives' security when doing home visits at night. Now offered selectively (9 am–5.30 pm).

Table 2.28 Units which introduced home assessment and then discontinued or reduced

Ref	Type of unit	Unit size	Midwifery organisation	Type of area	Comments
#32	Consultant unit, with no midwifery-led care area	1001–2000	Team midwifery: integrated teams, some cores staff in hospital	Mix of urban/rural	One team had previously provided home assessments but this had been discontinued.
#62	Consultant unit, with midwifery-led care area	3001–4000	Team midwifery	Mix of urban/rural	Home assessment had previously been offered by a community team but this had been discontinued.
#101	Consultant unit, with midwifery-led care area	>5000	Team midwifery: integrated teams, some cores staff in hospital	Mix of urban/rural	Selective home assessment offered; would prefer universal but could not due to a need for increased staffing that was unavailable due to resource pressures.
#160	Consultant unit, with midwifery-led care area	2001–3000	Traditional, some rotation	Mix of urban/rural	Team midwives had previously provided home assessment but the teams had been disbanded as it was considered that they were not working.

One other unit had tried to provide home assessment in early labour (#118) in one of the urban areas within its large geographical catchment. It had subsequently been discontinued because caseloads were too heavy to sustain this. The HoM felt that caseload size was a key determinant of whether home visits could be provided during early labour and reported that despite official discontinuation, some women would still telephone their community midwife directly, who may offer home assessment if time permits. Women booked to give birth in that unit could consult their community midwife about early labour at the end of the midwife's antenatal clinics, but this was an *ad-hoc* arrangement.

Home- or community-based assessment in early labour: interview data

Interviews with five senior midwives provided additional information about home- or community-based assessments during early labour.

Home visiting during early labour had been available for some time at one unit (#114); this unit also tries to offer a labour discussion around 36 weeks of pregnancy:

> *Pre-birth visits are made to give more details and discuss options for labour at around 36 weeks. The partner may or may not be present; it is not arranged specifically so that the partner is present. It means women have a better idea of what is going to happen, it helps clarify for low-risk women that they can chose home birth if they want to but they don't have to decide until they are in early labour. We do get some women who have already made their mind up but we encourage them not to make their mind up until they are in labour.… Our home birth rate is 11 per cent. The impact of home assessment is not necessarily keeping women at home longer, it is more that we get those who hadn't thought about home birth deciding to stay at home to birth.*
>
> (#114)

Another senior midwife indicated that all women were offered home visits and that feedback from women about this service was very positive. This unit was also planning a triage facility and modifying the Pathway for local use. The advice of this senior midwife was to involve midwives in the change process and to consider their job satisfaction. This unit served a predominantly rural area and was also exploring the involvement of MCAs in early labour support.

> *We introduced offering home assessment to all women in the last 6 months. We have changed our model of care from traditional to integrated approach. Currently we are running at approximately 75 per cent of women having home assessment, it is not 100 per cent due to cross-border areas. If a woman has not received a home assessment it is discussed in professional forum, why not? The managers are very keen, and women like it, as do most of the midwives.… We are wanting to get MCAs trained to NVQ level 3 so that there can be one MCA per team, we want to get them out to home assessments with the team midwife, with the possibility of leaving the MCA with the woman in early labour for the team midwife to return later, but we are checking on the legality of this. The midwife accompanies the woman to hospital in labour and stays with her…*
>
> *We are now getting lots of letters from women who were very positive about their experiences of home assessment.*
>
> (#153)

Home assessment in early labour was also provided by midwives working in group practices that provided care to a multi-racial population in an urban area (#60). This Head of Midwifery described the provision of early

labour services and also beneficial impacts on students' learning experience:

> *Group practices cover around 35 per cent of the population. We have eight in total, three of which are close to caseload, five to six community midwives work with a caseload total. Out of the eight group practices, those that work best are the individual caseloading, with 40 women per community midwife. Women are more likely to stay at home in group practices.... Home assessment is only available to those women in group practices.... Group practices are based on geography and social need, occurring in more deprived/high-social-need areas...*
>
> *Also, at 36 weeks, each community midwife has a birth talk with the woman and partner, so that they are both clear about the onset of labour, they know that it's Ok to phone the community midwife as often as they need to, and it is Ok to stay at home. The birth talk was developed by the community midwives.... Our home birth rate is 8 per cent....*
>
> *The main impact on staff training is that students working with community midwives in group practices see positive systems for advice and communication.*
>
> (#60)

Another respondent (#126) reported an integrated team midwifery approach operating in conjunction with a Birth Centre. This service provided home visiting in early labour and was involving MCAs in the support for women in early labour:

> *The team midwifery service was started in June and is attached to the Birth Centre. There are two teams and each midwife is attached to a GP practice. Women in early labour will phone the unit or community midwives, they are offered a home assessment, now available during the night, or to come into the unit for assessment. If they are in early labour they go home, it depends on the time span. If they go home we phone them back or they can come in.... All midwifery care assistants work in pairs; they have training in all areas and are more involved than in the past. They are involved with women in early labour but are not responsible for them. Since team midwifery, there has been an increase in admissions to the Birth Centre, women are more likely to change to the Birth Centre from consultant-led unit.... It is formally on offer to have a home assessment whereas we previously offered women to come in. Now, we say they can have a home assessment and in most cases that happens. Women are staying at home for longer in early labour....*
>
> *The changes to home assessment were introduced as part of the change to team midwifery, and also we were struggling to cover a midwife at night in the Birth Centre. We have two MCAs manning the Birth Centre, and from 7.45 am to 9 pm there is a midwife present. Out of these hours there is an on-call midwife who comes in when needed. We have needed the backing of the MCAs; they are there caring for the postnatal women.*
>
> (#126)

One Trust was at the point of change and considering community-based changes including team midwifery, exploring assessment at community

clinics and introducing a Care Pathway. There was currently no home assessment of women in early labour.

> *It's the logistics in relation to 110 square miles of community area, a lot is rural. If a woman is to be assessed, it is better to set up an assessment centre at a health centre and aim for a woman to be assessed at the health centre rather than the midwife travel great distances. It is about being cost-effective, if it's in a health centre that the majority of women can get to (not necessarily on public transport), we would be able to see more there. We have not done feasibility studies with the PCTs yet to see which health centres could be used. It could be in community centres. There would be no scanning facilities but it would be closer to women in their community and may be able to reach and engage with women who are less likely to get into antenatal services. There are some rooms in new children centres….*
>
> (#31)

2.2.6 Triage services

Introducing triage areas

Heads of Midwifery or their designated deputies were interviewed from two sites that identified introduction of triage areas in their questionnaire responses (#4, #28). One unit (#4) was part of a Trust that provided maternity services on two sites, the other was a single-site Trust. Both were large units (approximately 4500 births per annum) serving a mixed rural and urban population. The introduction of these triage areas had been prompted by use of the Birthrate Plus workload-management system and the numbers of admissions to delivery suite of women found not to be in labour who were described as 'crippling the delivery suite' and 'fragmenting service'.

> *The monthly birth rate at [unit] is approximately 370, but we always found nearly 1000 visiting labour ward.*
>
> (#4)

In both cases the triage initiative was led by the interviewee (not necessarily a HoM), one of whom had experience of introducing triage in a previous post and the other a consultant midwife. Both respondents recounted the need to 'sell' the idea of triage to other members of staff, including midwives, doctors and managers:

> *People did need a lot of convincing.*
>
> (#28)

Both interviewees described a specific, dedicated area for triage although the size, location, staffing establishment and facilities varied considerably: one is a six-bedded daycare 'ward' in the antenatal services area (#28) where the beds can be used when daycare closes (7 pm–8 am), and a triage-dedicated couch and recliner chair plus any vacant beds during daycare opening hours (8 am–7 pm); the other (#4) is located in

an area built as a recovery area near theatres (with its own entrance away from the labour ward and a seating area). One unit has five dedicated staff (wte) employed in addition to the labour-ward staff with one midwife and one support worker per shift (#28) and is now open 24 h a day, 7 days a week (initially hours were limited to 12 h/day). In the other Trust, a team of three dedicated staff was deployed from the delivery suite without any apparent problem (#4), which enables staff to move between delivery suite and triage. This rotation between areas, which was viewed as 'healthy – not feeling too embedded' (#4), was staffed by one midwife per shift and open between 9 am and midnight. Lack of funding prevented the availability of a 24-h service.

The triage area quickly made an impact in both cases:

> *Within a month the midwives suddenly recognised that the labour-ward activity was much more manageable. And when triage isn't working it feels manic.... We are now at 60 per cent seen by midwife only in triage.*
>
> (#4)

> *It's gone fantastically well, it's got all the activity off delivery suite, the women know they are there so if they've got a problem in the middle of the night, we have extended it so we deal with postnatal problems via the telephone during the night as well, so the community midwives aren't disturbed...women waking up in the night can come in and get checked over, there is a lot of telephone triaging goes on, our admission to our inpatient ward hasn't increased, our ratio of women attending triage and going home is very high. We worked out that midwives spent 40-odd hours last week just on the telephone triaging. It's keeping women away from the hospital that aren't needing to come.*
>
> (#28)

Telephone triage is part of the remit of the triage area; this is seen to take a considerable workload from the delivery suite; a specific phone number is given for the 24-h triage service. Not all women who telephone the triage area will subsequently attend, but having a dedicated person to call back later was seen as helpful:

> *It seems to be quite nice for women if the midwife says 'I'm on duty until 5 o'clock, call me again if something has changed or you want a chat' and that seems to work really well.*
>
> (#4)

However, at unit 28, if a woman phones a second time after remaining at home after the first call, she would be encouraged to attend:

> *...because she is obviously not comfortable ... and we need to see her. And often it's reassurance they need really.*
>
> (#28)

At both sites, triage is available to all women but there are clear guidelines and criteria as to those who cannot be seen there, for example,

women at high obstetric risk or in established labour (#4), women complaining of severe headache, blurred vision, haemorrhage, who have collapsed or who are contracting every 2 min (#28).

The ability of the triage midwife to make decisions, both on the phone and in the triage area, is vital to the smooth running and success of the triage area and delivery suite:

> *you know … if a woman's in labour on the phone, and that's getting better and better because the girls are so skilled at it now.… So the women on delivery suite are the labourers or the ones that need to be there, the rest are in triage.*
>
> (#28)

In addition, the triage midwife has a key role in training:

> *And she is a great teacher … she has a team of midwives who work with her … and there is good teaching and hand over to them all.… We try and get student midwives to work in there as it's a good opportunity for them to do decision-making and just to see the sort of queries that women have.*
>
> (#4)

Introducing a triage service also had an impact on overall training, in the long term as well as the short term:

> *There has been a positive impact on training, [antenatal services] they are no longer the Cinderella of the service, having the triage makes everyone aware of the need to update, get training, improve skills, etc., whereas before antenatal services wouldn't have thought about doing that.… It had implications with midwives doing something completely new, something they had not thought of before. Some had done triage over the phone on delivery suite but the easiest thing was to tell them to come in because they had not got the time to sit and listen to them. Midwives are not just fire-fighting on the phone, as they might have done on delivery suite; the skill is to tease out the important stuff. We need to train, get the midwives into a different way of thinking. For me, the training was about the triage tool and getting the right triggers to ask. Triage is far better now, a year on.*
>
> (#28)

Documenting the care provided in triage is seen as important, but it was suggested that appropriate documentation can be developed over time and should not be seen as a barrier to initially implementing change:

> *There is no formal tool or documentation. The midwife makes notes … but since I changed notes and records already since being in post and after two Trusts merged, so to give them another piece of paper seemed a bit mean. I am hoping that midwives will come up with the solution themselves, they think that documentation would be really helpful if we had x, y, z. It's more important to get the service started and the midwives confident to be looking after the women, the documentation can come later.*
>
> (#4)

Introducing the triage services had not been without teething problems.

> *Women were used to phoning delivery suite direct. We initially had to offer a two-tier service, some women just turned up on delivery suite whilst others came through triage.*
>
> (#28)
>
> *If there is no-one in triage, or it's quiet, triage can get hijacked by day-unit activity, which is always a problem with maternity services, we need to mix and match a bit.*
>
> (#4)

Staffing one unit overnight had also proved a challenge, but had been overcome:

> *…I think it's [triage] had too much of a positive effect to stop but if you had asked me 3 months ago I might have said 'I don't know'. I thought 3 months ago that the 24-h opening was creasing us, there was a lot of sickness initially because people didn't want to work the nights, but I've managed those with sickness problems and they are now in there doing the nights. I am confident now that if we can keep the staff numbers in there that we can keep it open as a viable option.*
>
> (#28)

Overall, the introduction of triage in these two Trusts had been positive and the long-term commitment to it was clearly evident. One positive aspect that both interviewees reported was that they were much closer now, after the introduction of triage, to achieving the desired one-to-one ratio in providing care for women in established labour.

Factors associated with discontinuation of triage units

Some respondents interviewed reported only very short trials of triage units or areas (two for less than 1 week each). In those units who had discontinued triage (#118, #149) this was attributed primarily to a failure to convey the philosophy and aims of a triage area to staff, leading to a lack of support and rejection by delivery-suite staff (#118, #149); location of triage in an area that subsequently was confirmed as inappropriate (#118, #149); a feeling that delivery-suite midwives had less control over the area and workload (#118); and misunderstanding of the role of the triage midwife, who was viewed only in terms of being taken off the delivery suite (#118, #149) rather than as seeing women who would otherwise have required labour-suite assessment. A further problem related to staff working in isolation at night, albeit only a short distance away from another clinical area (#149).

> *There was no space on delivery suite for a triage system. The floor above had a gynae day-case ward. We knew that triage patients usually came after 5 pm (if they came in the day they would come to the Fetal and Maternal Assessment Unit). As gynae day unit closed at 5 pm, we thought we'd use their space for triage from 5 pm–7.15 am. We just looked at patients and sent them home. It was very successful but the main problem was location, the midwife was based upstairs on her own (and overnight),*

> *the lone worker issue. There was also the problem of taking a midwife away from delivery suite – reducing core staff on delivery suite. We ran it for a week on the gynae day-case ward. We saw 56 patients. Two were in labour, the rest were not, so there were a lot of women not going onto delivery suite that otherwise would have.*
>
> (#149)
>
> *Sisters on the labour ward felt they didn't have control over it, they didn't know who was coming in so it was abandoned … after less than a week. A lot of it was cultural, the way they are used to working. There are a lot of staff that have been here a long time so any change we implement is usually fraught with challenges.*
>
> (#118)

Despite being a success in terms of the number of women seen and 'removed' from delivery-suite activity, there remained a problem in terms of understanding the role of the triage midwife by the delivery-suite staff:

> *There were no problems selling the idea of triage – midwives were behind the idea. Nine team leaders have been to see other units and had brought back ideas, etc. It was an easy thing for us to do it was just using the day-case ward upstairs….*
>
> *The midwife who went and staffed it thought it was a great little job just seeing all the antenatal admissions all night. But the other midwives on the delivery suite were a bit peeved because it was depleting the staff on delivery suite and we are a very busy unit with a lot of high-risk women.*
>
> (#149)

This demonstrates the importance of making sure the staff on delivery suite are fully prepared for, and informed about, the implementation of triage, as well as the ideas or philosophy behind it. Furthermore, the triage midwife needs to be fully aware and confident in her role if triage is to work:

> *To us, we felt that we got a lot of women home that would otherwise have been admitted by the [Senior House Officer], and you have got to have senior, confident midwives who can make the decision that the patient is fine and can go straight home.*
>
> (#149)

The importance of staff acceptance and location were major factors in the discontinuation of triage (#118):

> *Introduced 2–3 years ago, after we looked at audit of category X on labour ward – we tried to take it away from labour ward, but because it's a purpose-built unit now (only 12 years old) there was no capacity/arranged area for triage. We tried to use existing rooms – triage area in a four-bed room on ante-/postnatal ward (attached to day room) also with single room attached. Staff didn't like it because it was away from labour ward, even though on the same floor…. It was more difficult to relocate staff if they are not busy…. There was a six-bedded ward for early labourers on an interconnecting room next to labour ward and antenatal/postnatal ward.*

(#118)

A number of factors prevented establishment of triage units elsewhere; these included financial constraints at Trust level (proposed mergers, and possible change of location, cost of adapting existing buildings) and staffing costs (deployment of a health care assistant to address the lone-worker issue). However, there was a balance to be reached:

> *You've got to weigh up how many would be seen in triage versus how many would have been seen on delivery suite and sent home anyway.*
>
> (#149)

In one unit, it appears that little positive impact on workload was perceived. This became apparent as, following an audit, it was felt that many of the women seen in a triage area within the delivery suite could actually be seen in the Early Pregnancy/Fetal Assessment Unit (EPFAU). This unit planned to extend the times when EPFAU was open to incorporate triage activity (#40), together with a policy of active encouragement to women found not to be in labour to return home.

Telephone triage

Telephone triage has been introduced in a number of Trusts, although for many it was a case of formalising and documenting what was already taking place in telephone conversations between women and midwives. In one Trust (#1), a comprehensive telephone triage tool was used extensively at each possible point of contact with a woman in early labour: maternal fetal assessment unit, delivery suite, midwife-led birthing unit and with community midwives. For some Trusts, telephone triage accompanied the introduction of on-site triage, where a dedicated midwife would handle all calls. Reasons for introducing telephone triage included high numbers of category-X women, prevention of BBAs (born before arrival), standardising advice/training tool for staff answering the telephone and clinical risk management.

One unit had introduced a telephone triage approach in 2005, where a senior labour-ward midwife uses a locally developed protocol and specific documentation for giving women advice related to early labour. This had been instigated to increase the use of clinical judgment, achieve more consistent advice and formalise the process for telephone calls. Specific documentation was developed to support this and, again, this was seen as supportive for the training of junior midwives. A review of the number of women attending delivery suite was anticipated at the time of interview. Institution of the telephone triage system was not perceived to have any effect on staffing levels, allocation or use of non-staff resources (#142).

> *In the past there had been occasions of ward clerks giving out advice over the phone and junior midwives were uncertain as to what to say. There was a tendency for allowing women to come in without using much clinical*

> *judgement. We wanted to take steps to formalise how phone calls were handled and as an aid for training.*
>
> (#142)
>
> *We are all giving phone advice now but in the past different midwives gave different advice (for example, junior midwives versus senior midwives) and we needed to standardise it. It is also useful for tracing calls, and advice given out in case anything untoward happened – for example, if it is suggested a woman calls back but they don't and something went wrong we have got the evidence that the woman had been asked to call. It's really for the protection of midwives as much as anything, as well as standardising the advice so that all women get the same advice … one of the reasons why we introduced the phone advice/assessment tool was that a patient had said she had phoned up and said she was told something by the midwife and the midwife denied it. But it's your word against theirs.*
>
> (#149)

In another Trust, it was noted that the PCT had an impact on a change in practice, which has resulted in other areas of maternity care being reviewed:

> *The PCT are interested in reducing unnecessary admissions, we are now undertaking a maternity services review with the PCT, it is likely that we will increase the hours of the Day Assessment Unit (currently used for postnatal, reduced fetal movement, hypertension, etc.) and increase the numbers going through there, together with any community-based changes.*
>
> (#142)

Telephone triage was involved, but was not necessarily the focus, of changes to practice in two Trusts interviewed. One Trust (#116) had introduced a policy of telephone advice to stay at home, coupled with sending women home in early labour. This approach was introduced for two reasons: the HoM had previously worked within a team midwifery system and was used to dealing with women over the phone, women only going into hospital when their labour was well-established and also because there was a need to use the beds differently:

> *I found it very strange that all these women were being admitted that didn't need to be there, as did some of other staff, and coincidentally we needed to use the beds in a different way.*
>
> (#116)

Another Trust (#149) had introduced an information sheet for women encouraging them to stay at home together with sending women home in early labour and structured telephone advice or telephone triage. The information sheet was developed in-house by the delivery-suite policy team:

> *We were looking at the sort of things we wanted to tell them without putting them off coming in altogether. We don't want them to feel they are a*

> *nuisance to us but obviously if they do come in too early they get interfered with far too much.... We try and send or encourage most women in early labour to go home. We actually say to them, even if, if they are not keen and we are trying to get them to go home for their own benefit, we'll say to them 'go home for 4 hours and then come back and I'll check you over.' So we do send them home and ask them to come back later.*
>
> (#149)

However, there is reluctance on the part of some midwives to encourage women to go home in early labour:

> *If you put it to the women that 'you are in very early labour, you could go another few hours like this, yes you can stop in hospital but you are going to be much better off at home in the comfort of your own home'. And it's the confidence of the midwives, having the confidence to say that to the patient, they get worried that they send them home and they'll come back at 6 cm they will be in trouble, but to me, that's a success ... that's why I'm saying to them to ask them to come back in 4 h, we're trying it step by step.*
>
> (#149)

With sufficient training and support, however, this reluctance or lack of confidence can be overcome:

> *We have had to put in training for the staff. In a sense, it's almost giving them the permission to make that decision. It's gone really well. At first some of the staff were a bit reticent about doing it but now it's become the accepted norm. The labour-ward manager did informal training with staff, encouraged it and acted as a role model and got the other team leaders to act as role models as well to encourage the other staff to do this.... Initially some people found it easier to take the plunge and send people home or encourage them not to come in, but it seems now to be accepted practice.*
>
> (#116)

Documentation for telephone triage or telephone assessment tools is in use in many Trusts; some has been newly devised and some has been adapted from existing paperwork. All has been developed in-house, and a few with some reference to the evidence-base or to the All-Wales Pathway. In some cases guidelines are used in tandem but these are often not specific to early labour.

> *The document is used to help make decisions, there are now more questions that <u>have to</u> be checked off, originally it was just three boxes, but now much more. It was developed in-house.... Guidelines are available for established labour and problems in pregnancy (with some evidence-based components) but none specific to early labour.*
>
> (#83)

None of the HoMs interviewed reported auditing to determine, for example, any reduction in numbers or stage of admission of women to the labour ward but there was a general feeling that the implementation of telephone triage had been positive, with other notable impacts:

> *I think it's part of trying to keep birth normal and we are pushing that, that it's very much a normal event for low-dependency women. But equally a normal event for high-dependency women … we don't treat them as people on the end of a machine. So it fits in with that whole philosophy. Our epidural rate is 14 per cent … but it's partly the culture here, whether people coming in later that's had an impact on it we don't know, we've not studied it.*
>
> (#116)

Numbers assessed in triage or other separate area

Less than a quarter of the respondents knew the approximate percentage of women assessed in a triage or separate assessment/admission area in their unit (see Appendix C). Among the 54 respondents who could provide an answer or an estimate the modal response was in fact zero (n=29). For the 22 giving a non-zero response, the range was very wide (2–100 per cent). Despite the significant amount of change in early labour services, with only few exceptions, there was relatively little data reported on the proportion of women assessed in triage areas.

2.2.7 Additional options for early labour services

In the interviews, some senior midwives reported a range of additional options for providing early labour services including open access to Birth Centres (for women of any obstetric risk status) and access during the day to Maternity Assessment Unit or day units.

In one Trust (#26), a Birth Centre was introduced in 1986 which women in early labour can attend for assessment. The maternity service is developing a team midwifery model with GP practice attachment with the aim of offering more home assessments in early labour. To support the move to team midwifery, the role of the MCA has been developed to provide care for postnatal women in the Birth Centre with midwifery support available on an 'on-call' basis.

Funding and sustainability

One Trust had received PCT funding for a Maternity Assessment Unit as an initiative to tackle the problem of high numbers of category-X women:

> *We received funding by the PCT in 04/05 for a 1.2 whole time equivalent plus one HCA [health care assistant], now it is part of the contract with no additional funding in 05/06.… It has reduced the numbers of category-X women on labour ward during the day.… Those women not covered by group practices (around 65 per cent of the population) routinely phone the delivery suite in early labour. Early labourers are directed to the [Maternity Assessment Unit] when it is open, and a significant proportion go home, it is used as a triage, but it is also used by others not in early labour. We have tried to get midwives to use a template as triage tool on the phone but we are struggling to get midwives to record things not in notes. Also, I am not yet convinced that phone conversations are about*

> *giving care.... The [Maternity Assessment Unit] is popular; we have seen an increase in numbers attending from GP surgeries, not necessarily ones that would have attended before.... I feel this service is sustainable; there are no obvious threats to sustainability.*
>
> (#60)

With their multi-faceted approach, a positive effect was reported on retention and recruitment of staff:

> *Despite it being a very manic labour ward, we can, we are showing staff we are trying to make things better, e.g. [Maternity Assessment Unit]. We offer different ways of working, midwives move around a lot with various things, for example maternity leaves, etc. We have very low recruitment problems, especially given that it's [large city], we have below 5 per cent vacancies.*
>
> (#60)

Another Trust had introduced the change, hoping for funding retrospectively. Funding was, for this Trust, the main threat to sustainability:

> *It has gone very well. There is an assessment area on there and if women in early labour attend the Maternal and Fetal Unit, and are low risk, they come to the Birth Centre.... The Birth Centre has two midwives each shift, including one consultant midwife, and one HCA [health care assistant] and is sited downstairs from delivery suite. It is open 24 h, 7 days a week and only closed as a last option; however, last August it was closed most weekends due to sickness, maternity leave, staff holidays.... The main problem is staffing.... There has been no additional staff for the Birth Centre, we hope that with success stories we may get additional funding from the PCT, which is the main threat to sustainability.... The MSLC [Maternity Services Liaison Committee] have been very supportive too.... I thought there would be more problems than there were, we have a large percentage of junior staff but it has not seemed to cause offence.*
>
> (#1)

Issues for women whose first language is not English

Two HoMs interviewed commented on the challenges of providing early labour support in these situations. An additional service reported by one HoM was the introduction of a 'buddy' scheme to provide support during labour and birth, if possible, together with antenatal and postnatal contact. This scheme had been introduced in an area with high ethnic diversity (#74) for women requiring language support or who were vulnerable in other ways. This had been introduced a few months prior to the interview and further developments include provision of a CD-ROM providing information about labour in a number of languages.

2.3 Recommendations for introducing home- or community-based assessments

The following recommendations were made by HoMs during interviews about implementation of service changes; these are subdivided into the relevant type of service change and include issues of change management as well as specific issues for the service change described.

The main theme of HOMs' recommendations to colleagues related to staffing issues: the importance of appropriate staffing levels in the community, positive attitudes to home assessment and home birth among midwives, considering midwives' job satisfaction and incentives to work in certain ways.

> *Need to ensure there are enough midwives in the community. You need to look at the number in the team, make sure there are enough to provide 24 h cover within a team for intrapartum visits. You also need midwives that are confident and passionate about homebirths, their confidence increases the more they do.*
>
> (#114)

> *You need to get staffing levels so everyone is happy. You need to look at the model of off-duty and on-call, and the incentives they give. The skill-mix is important, you need experienced midwives. With the MCAs you need to tread carefully, making sure the training is at a level they are happy with.*
>
> (#126)

2.3.1 Changes to commissioning

One HoM felt that early labour care may receive attention in future changes to the commissioning of maternity services.

> *There is nothing in contracts at the moment but the PCT are aware that we provide a good service, so it may be a factor in Payment by Results in the future but not at present.*
>
> (#114)

2.3.2 The importance of the model of midwifery care

Heads of Midwifery in most of the units offering home assessments felt that it was only possible to do so in an integrated or other team-midwifery model of care with enough staff, rather than the traditional model. However, this view was not universal. One Head of Midwifery thought it could be possible to offer home assessments in a traditional model of midwifery but there would need to be a change in the philosophy of the midwives:

> *It is a rural population … I think it is possible to provide home assessment to all in a traditional model, but there needs to be a change in the mindset*

> *of the midwives: it is easier in an integrated setting because everyone is doing the same thing.*
>
> (#153)
>
> *It is difficult to offer home assessment to all in a traditional model as there are not enough midwives.*
>
> (#114)
>
> *You can't offer home visits if not in team midwifery, not within a traditional model. Before, if a midwife was on call, if they went out they didn't have to work the following day, we couldn't do that now.*
>
> (#126)

Trust (#1) had piloted the offer of home visits to women in early labour during a 4-month period in four community midwife teams covering a large geographical area. This had been discontinued, however, as there were insufficient funds, not enough midwives and the model of care made it difficult to operate:

> *Many community midwives were positive about this form of care and understood the benefits to women but caseload constraints, patterns of working made this a difficult option to facilitate…. Due to caseload numbers and staffing in the community this form of care was unable to continue at this time.*
>
> (#1)

2.3.3 Recommendations related to the introduction of triage areas

Location

There was general agreement that there should be a dedicated area or space near the labour ward with a separate entrance if possible. Opinion varied over whether it should be adjacent to the delivery suite or not. The main advantage of being adjacent is the proximity in case of clinical problems; however, the main disadvantage is that staff can be moved to the delivery suite when that area is busy and triage subsequently suffers:

> *[In a previous post where triage was attached to the delivery suite] it was very easy when they were busy to close triage. I spent days and nights trying to keep triage open until they finally figured that it wasn't a midwife doing nothing it was a midwife keeping non-labouring activity off the delivery suite. And because here [current post] it's not attached to delivery suite, people don't think of closing it so readily.*
>
> (#28)

Introducing change

In order for the philosophy of a triage area to be accepted and for that philosophy to be operationalised, it was widely agreed that there needed

to be support from all grades of staff in planning and implementation, including senior leadership and management as well as someone 'on the ground floor'. This person should be:

> *…a G grade or band 7 who is prepared to run with it and someone who is credible – good midwifery skills, able to teach and lead a small team.*
>
> (#4)

A key constituency that the planning and implementation group need to influence and involve are the core staff on delivery suite, in particular the:

> *team coordinator on delivery suite, if you can sell it to them, then you've sold it, because if they know it's going to be a positive effect on their delivery of care on delivery suite, they will make it work.*
>
> (#28)
>
> *Bring on board positive labour-ward sisters so they can lead the rest.*
>
> (#118)

Another group of professionals who need to be on board are the medical staff, as they need to be 'compliant with it' (#28).

Operational issues

For the triage area to function smoothly, it was felt that a number of things need to be in place: staffing, documentation, communication, publicity and a telephone. Staffing issues are perhaps individual to each trust but one key feature was:

> *Make sure you have a dedicated person on the shop floor who is going to lead it and isn't sceptical, who really understands it.*
>
> (#4)

Documentation for triage was viewed as important, in particular guidelines that should be written specifically for triage; there should also be a means of recording triage activity.

> *Get paperwork and documentation sorted out. Don't try to do it with existing documentation – it won't work, it's a different area.*
>
> (#28)
>
> *Devise some decent guidelines…. Difficult to find the evidence-base for little things. We have got some guidelines and flow charts.*
>
> (#4)

Respondents reported that it was important to communicate the aims of triage to all staff, to be clear about which women should be seen in the triage area and times when the service is available (#28). However, one note of caution was raised by one respondent who felt that its availability could be over-publicised:

> *Don't overpublicise it, use it to help manage the labour ward, otherwise you get inundated or get confused with the Day Assessment Unit.*
>
> (#4)

One issue identified was that of the provision of 'cross-border' care where a Trust's community midwives provide care for women planning to have their baby in a different Trust. Such women would be referred to their booking unit for early labour advice and assessment since different units are likely to have different policies (#28).

2.3.4 Recommendations related to the introduction of telephone triage

The need to make sure documentation is in place 'to cover yourselves' was highlighted (#83) and making sure that staff who are to carry out the telephone calls are informed, happy and confident was also deemed important.

> *Involve the staff; listen to what their worries are. Explain that the evidence is that this practice is better for women, which is a big lever to make it happen. But you need to listen to the staff and their worries and put things in place to support them to enable it to happen.*
>
> (#116)

There were no reports to suggest that introducing telephone triage had any negative impact on services, or on clinical or organisational issues, staffing, or clinical risk management.

2.3.5 Recommendations relating to additional options for early labour care

These included the need for audit, protocols or guidelines supported by both midwives and obstetricians. The aims and philosophies of the service need to be clear to all staff.

> *You need to audit who is attending, where they are coming from and where their destination is or should be. You need clear protocols, ours were evidence-based and devised jointly between midwives and the lead obstetrician. Be clear that women are to spend less time in there, that the aim is for them to go back home.*
>
> (#60)

2.4 Conclusion and discussion

The questionnaire survey achieved a satisfactory response rate that supports generalisability in interpretation of the findings; additional information was obtained through interviews with a purposive sample of Heads of Midwifery, targeted for interview because of particular models of early labour service provision.

From the questionnaire data, it was clear that, where data were available or an estimate provided, the number of women admitted to labour wards and discharged not in labour (category X) forms a significant workload for maternity care providers. However, the lack of accurate data is a concern when this component of maternity provision has contributed to the need for a significant amount of service modification.

When women phone the maternity unit in early labour (contractions every 5–7 min) there is a variation in the advice given: the two approaches reported most frequently – 'make your way in when ready' and 'phone again later' – may have different implications for staffing of the maternity unit. The majority of early labour care was reported still to take place on labour wards but also includes an increasing range of settings, exceptionally in SureStart facilities and some Birth Centres available for all women to access on a 'drop-in' basis regardless of place where birth is planned. Little midwifery support to NHS walk-in centres was reported. The potential for Children's Centres to be a further venue for early labour services is not yet known and should be monitored. In addition, the impact of changes to the commissioning process must still be assessed.

A large proportion of units did not have guidelines, policies or protocols for early labour care; this is surprising given the contemporary emphasis on the importance of evidence-based care. This issue may, of course, be addressed in the publication in 2007 of the NICE Intra-partum Care guideline. Women receive information about local arrangements for early labour in a range of ways using both face-to-face discussion and written materials, during routine antenatal care and in group sessions, for example antenatal classes and labour-ward tours. The fact that 31 per cent of services have no written information about early labour available to women should be noted by service providers. A minority of units were developing videos and CD-ROMs and providing information on their unit website. The extent to which any of these materials is shared is unknown and it may be that systems that support dissemination, for example, Internet-based discussion boards would be useful.

Forty-three per cent of units reported the introduction of new early labour provision within the last 5 years with further changes planned by over 50 per cent. Changes to early labour services were more likely to have taken place in consultant-led units with midwifery-led areas and in larger size units. Triggers for changes in service provision were most commonly local factors. From interviews with HoMs key drivers to service changes focused on managing labour-ward workloads. Planning future service changes was more likely in NHS consultant units without a midwifery-led care area and again, generally in the larger units. Although a significant number of units had been engaged in making changes to early labour care over the previous 5 years, fewer units reported evaluations of early labour services. All new services were considered to require staff training.

Home visiting and triage required additional staffing but may also release staff to work in other areas; however, the extent to which that occurs may depend on local issues such as facilities and geography.

Home assessment during early labour (currently being investigated in a large randomised controlled trial) is offered to all women in less than 4 per cent of units who responded and offered selectively in a further 44 per cent of units (excluding home birth and DOMINO deliveries). Over two-thirds of units who provide home visits could not state the proportion of women who received them. Discontinuation of home visiting appears linked to staffing difficulties, discontinuation of team midwifery, concerns about midwives' safety and exploring new approaches.

Data related to the proportion of women assessed in a triage area were again not easily accessible to senior staff in the maternity services. Telephone triage, including formalizing and documenting midwives' traditional labour-ward telephone conversations with women, was also reported. Triage services had been discontinued due, it appears, to difficulties in keeping triage areas open when units are busy but also due to difficulties in communicating the philosophy. Telephone approaches to triage also require training, good documentation and guidelines to support staff in this approach. Some Trusts report adopting a combination of approaches to early labour care, particularly where Birth Centres and maternity assessment units are available. The current draft of the revised *Towards Safer Childbirth* (Royal College of Midwives, 2006) suggests that both home assessment and triage services are effective approaches to keeping women off the labour ward. From our research, it is evident that these approaches also bring staffing requirements and changes of philosophy that have to be embraced. In addition, there appears no definitive evidence of clinical benefit from providing triage areas.

The advice offered by HoMs to other HoMs thinking of implementing the same change was specific to the type of change. For triage areas location, documentation, a motivating midwifery leader, and staff understanding and acceptance were key issues; telephone triage was considered easy to implement but required good documentation, staff understanding and confidence in its use; Birth Centres and Maternity Assessment Units work when there is a clear understanding of their aims and philosophy in encouraging women to return home when appropriate; home assessment requires consideration of staffing levels, midwives' job satisfaction, it requires staff with positive attitudes towards home births and women staying at home in early labour. Factors, such as the model of midwifery, were identified that support the provision of home assessment in early labour; the information gained in this component of the research will inform the interpretation of the results of the SDO-funded trial of early labour support and assessment at home.

For women whose first language is not English, increases in the availability of interpreting and advocacy services have been described in the revised draft *Towards Safer Childbirth* (Royal College of Midwives, 2006), for which consultation is currently in progress. The care of this group of women is particularly important in the context of the *Confidential Enquiry into Maternal and Child Health* report (Royal College of Obstetrics and Gynaecologists, 2004) that identified difficulties in communication between women and their health care professionals as contributing to the number of maternal deaths in this group. Further exploration of service provision for non-English speaking women appears warranted.

Section 3 Midwives' and women's experiences of the All-Wales Clinical Pathway for Normal Labour

3.1 Background

3.1.1 The All-Wales Clinical Pathway for Normal Labour (the Pathway)

The website for the Pathway, www.wales.nhs.uk/sites/page.cfm?orgid=327&pid=5786, gives the following definition.

> ***What is the clinical pathway for normal labour?***
>
> A clinical pathway is a template or blueprint for a plan of care. It is a guide to usual treatment patterns, but does not compromise the need for clinical judgement. The clinical pathway for normal labour provides support for midwives who wish to practice evidence-based clinical care of the highest standard with minimal unnecessary intervention. It also provides a framework to maximise the opportunity for women in Wales to experience normal childbirth. It is not intended to prevent clinicians from using their professional judgement in the way that they care for individual patients. The pathway documents expected events in labour with references to the latest evidence available. Midwives are encouraged to use their clinical judgement and to document any variations from the anticipated path. The pathway is designed to be shared with women so that women are both included and informed.

A women's information leaflet, *Your Pathway Through Labour* (see Appendix D), explains the care a women should expect to receive from her midwife once she is in labour. The leaflet is considered to be an integral part of the Pathway (P. Ferguson, personal communication) and is downloadable from the website.

3.1.2 Part 1 of the Pathway

Part 1 of the Pathway covers the so-called latent phase of labour, prior to admission.

The form is headed 'Part One - Telephone Advice' and starts with the statement:

> *This clinical pathway has been developed by clinicians throughout Wales for 100 per cent of women in normal labour. It is a guide and encourages*

> *clinical judgement to be used and documented. The pathway aims to reduce unnecessary intervention in normal labour.*

The first page is taken up with definitions about the grading of recommendations and Levels of Evidence pertaining to the advice contained subsequently. Page 2 then lists the information to be ascertained to check eligibility for the pathway, starting with 'Have you phoned before? If so, a pathway may be in progress'. It ends with the injunction: 'Facilitate as much time as is required for questions or concerns to be raised, please document any relevant information'.

Signs of the latent phase of labour are described and the recommendations and evidence presented regarding staying at home at this time. The midwife documents the advice given, which can be

- advised to attend labour ward or Birth Centre,
- midwife asked to undertake home assessment,
- advised to ring back at a certain time,
- advised to ring back when labour advances.

The form continues:

> *For women who are advised that, at this stage, home is the most appropriate place for them to be, advice relating to maintaining well-being during the latent phase may be considered. Nap and rest if you are feeling tired, although mobilising may encourage the contractions to establish themselves. Take light diet and drink plenty. Warm showers and baths may provide some pain relief; massage or back rubs can be helpful. Paracetamol 1 gm 6 hourly can be taken. TENS machines, if available, should be encouraged. The latent phase is the early part of labour, redefining as 'not in labour', 'slow labour' or 'niggles' is not helpful to women (B), a brief description of the physiology may be of assistance.*

The form has space to record three telephone interactions.

3.2 Aims

The aim of this part of the study was evaluation of Part 1 (the telephone component) of the All-Wales Clinical Pathway for Normal Labour from the perspectives of women and of midwives. Specific objectives were:

1 to determine women's experiences and views of the service,

2 to obtain the views of health professionals and impact on their work,

3 to identify issues of process.

3.3 Methodology

Data were collected from midwives via focus groups (and a small number of questionnaires) and from women through computer-assisted telephone interviews (CATI). Women were to be recruited by their community

midwife at the point of discharge to the health visitor. The original intention had been to sample both midwives and women from every one of the 13 NHS Trusts in Wales, but, as described below, this did not prove possible.

3.3.1 Midwifery research fieldworker

Our team of investigators was based in Yorkshire, and, although it included representation at the strategic level for maternity services in Wales, we felt that the team would also benefit from the additional contribution of a midwife with recent experience and contacts at the service-provider level. We were able to utilise research funding to include a midwifery research fieldworker in the team.

We envisaged that this post would:

- facilitate links with NHS Trusts and research stakeholders in Wales,
- ensure that the research team were correctly interpreting information about the rationale and process of the recently introduced All-Wales Pathway (the Pathway),
- utilise local knowledge of organisations, systems and key postholders,
- facilitate the introduction of the study to midwives and other health care professionals in Wales.

This post would also offer a research-development opportunity for an experienced midwife reflecting the philosophy of the Mother and Infant Research Unit to contribute to building research capacity in midwifery. We were fortunate to be able to appoint from a strong field of experienced, Wales-based midwives. The midwifery research fieldworker was appointed to work one day per week throughout the preparatory and recruitment phases of the study. We felt that it was appropriate to have one senior midwife in this role due to the planned sampling strategy, limited recruitment period in each Trust and the need to liaise at the strategic level with stakeholders in Wales rather than the model used, for example, in the ELSA trial of one local co-ordinator per Trust.

The duties of the post included: supporting introductory work at Trusts; facilitating communications in each site; supporting recruitment of women and assisting with data collection. More specifically, the components of this included:

- assisting with initial contacts and liaising with staff in each of the Trusts in Wales, including visits to each Trust,
- supporting the registration of the study within each Trust's local R&D Department,

- promoting the research within the midwifery and obstetric community in Wales, including presenting the research at meetings with midwives and others,
- acting as a contact point for professionals and participants who became involved in the study,
- receiving and distributing supplies of study information leaflets for women, ensuring that local knowledge is used and harnessed to maximise recruitment within the community,
- supporting communications about the research within the hospital and community midwifery teams,
- liaising regularly with the research team in Leeds (subsequently York) about progress of the fieldwork,
- supporting and monitoring recruitment,
- arranging venues for, and encouraging attendance at, focus groups for midwives,
- contributing to collection of data, including assisting with focus groups for midwives.

3.3.2 Communications with stakeholders

Key stakeholders in the evaluation of the telephone component of the All-Wales Pathway are service users, clinical midwives and their managers. Polly Ferguson, Nursing Officer (Midwifery) at the National Assembly for Wales was one of the project grant-holders. Preliminary work to involve stakeholders included one of the principal investigators (H.S.) attending a meeting of the All-Wales Pathway Steering Group in Cardiff, who welcomed the research. This was followed shortly by attendance at the Royal College of Midwives' national conference, held in Cardiff, with the purpose of networking with midwives based in Wales. This was successful in allowing informal introduction to and discussion of the project by one of the principal investigators (H.S.) with a large number of midwives working in Wales. Fliers were distributed. Contact was also made with the professional forum for Heads of Midwifery in Wales: information was forwarded for inclusion at their quarterly meeting and offers of presentations made; unfortunately their meeting schedule and full meeting agendas prevented a presentation by any members of the project team, although the offer remained open. All Heads of Midwifery in Wales were contacted on an individual basis.

Contact with service users was initially achieved through the NCT, through both their central Headquarters and Cardiff-based contacts achieved at the Royal College of Midwives Conference. The latter resulted in permission to contact women who had received care within the All-Wales Pathway and who agreed to telephone discussions with members of our research team (reported in more detail below). This allowed us to

identify aspects of the telephone component of the All-Wales Pathway that required exploration in the main study.

3.3.3 Ethics and research governance issues

The application was approved by the Leeds West Research Ethics Committee in October 2004. All HoMs had already been approached and submissions were then made to the R&D departments of each of the 13 NHS Trusts in Wales. A large part of the following 6 months was devoted to attempting to obtain the requisite clearances. At the end of that period we still awaited final approval from five R&D departments; contact and permission to work through the community midwives from four Heads of Midwifery; and honorary contracts for H.S. (as principal investigator) from four Trusts, and for the members of the research team from two Trusts.

In seeking to follow the Research Governance Framework, we encountered the following issues:

- inconsistency between Trusts in the interpretation of the Research Governance Framework and processes to be followed;
- uncertainty among Trust R&D staff about the interpretation of the framework;
- confusion and a lack of clarity within Trusts in relation to which members of the research team required honorary contracts and conflicting advice from different departments within a Trust;
- wide variations in the process by which honorary contracts are awarded between Trusts in respect of clearance processes; such processes have included:

  a the need for Criminal Review Board checks; this requires submission of documentation, for example passport or driving licence, utility bill and bank details, and the checking process takes approximately 1 month,

  b completion of lengthy occupational-health screening questionnaires dealing with personal health and family history and requests to attend for health screening,

  c checking of professional registration, where appropriate;
- difficulties of communication between Trusts R&D and Human Resources departments and clinical directorates;
- additional notification to general managers, Clinical Governance Leads and Caldicott Guardians, although not stated on Trusts' R&D registration documentation;
- the issuing of contracts that were not specifically developed for researchers and over which further negotiation was required;

- the allocation of supervisory staff from within the Trust when subsequent enquiry has indicated these do not come from an appropriate speciality;
- submission of documentation, previously approved by Multicentre Research Ethics Committee, for R&D approval;
- exploration of issues of sponsorship and liability;
- confusion at Trust level about Multicentre Research Ethics Committee approval and the need for site-specific assessment;
- additional peer review by Trusts' R&D committees.

The workload involved in all of these communications was quite disproportionate, and necessitated an average of 6 h per week each from one of the principal investigators and the project secretary using all possible communication methods including fax, e-mail, telephone and letter. With one possible exception, none of the Trusts apparently had any objection to the research being carried out in their Trust; these delays were entirely bureaucratic. In some Trusts, R&D managers acknowledged that their processes were not facilitative of research and that some anomalies existed in their own systems. By June 2005, we felt that we could not afford to wait any longer for permissions to be granted and made a pragmatic decision to restrict the research to those Trusts in which all permissions had been granted or were imminent. The six participating Trusts were Gwent, North Glamorgan, Cardiff and Vale, Swansea, Ceredigion, and Conwy and Denbighshire. In a seventh Trust (North-East Wales) we obtained permission to approach midwives but not women.

3.3.4 First contact with midwives

One of the fieldworker's first tasks was to clarify how Part 1 of the Pathway worked in different settings. Each main labour ward/Birth Centre in Wales was contacted and asked where telephone calls of women in early labour were directed and who completed the paperwork. This early contact provided an opportunity to inform midwives about the study and to gain a brief insight into the variety of midwifery care models operating in Wales.

While we awaited Trust R&D approvals it was considered important to maintain the momentum of the study. A decision was made to organise meetings with midwives from the Trusts to provide an overview of the study, its aims and objectives. Permission to undertake these initial meetings was obtained from Heads of Midwifery, who forwarded names of the community managers who assisted in setting up the meetings.

Meetings were organised in seven Trusts (Gwent, Cardiff, North Glamorgan, Carmarthen, Swansea, Pontypridd, and Rhondda and Bromorganwg). Each received a presentation about OPAL from the

midwifery research fieldworker and information regarding how the research team would require their help. The midwives were encouraged to ask questions and discussions took place regarding the practicalities of identifying and recruiting eligible women for the study. Leaflets containing study information and team contact details were distributed. The presentations were well received by the midwives who appeared to be interested in the study and its possible findings.

3.3.5 Modifications to the research plan

The original proposal had included the intention of collecting data from obstetricians as well as from midwives. An early meeting with the All-Wales Pathway Steering Group raised objections to this aspect of the research. In particular it became clear that some midwives may not feel comfortable attending focus groups that included obstetricians and that recruitment to the focus groups was likely to be jeopardised by their inclusion. It was in any case argued that the Pathway was a midwifery issue, not an obstetric one. Clearly we needed to deal with this objection pragmatically. It was unlikely that many obstetricians would attend even if invited and it was the experiences and understandings of midwives about which we particularly wanted to learn. Accordingly we agreed that only midwives would be invited to the focus groups, although obstetricians would still have the opportunity to make their views known to us by other means.

The delays described in Sections 3.3.3 and 3.3.4 had two specific implications: a reduction in the numbers of midwives and women who were available for sampling and a reduction in the amount of time still remaining in which to collect and analyse data. Although the SDO had kindly agreed to a no-cost 3-month extension, modifications to the research plan still needed to be made.

3.4 Data collection from midwives

3.4.1 Rationale for focus groups

Focus groups had been chosen as the preferred method of data collection from midwives for a number of reasons. First, they represent a more efficient use of researcher time than individual interviews and are likely to seem less intimidating to the participants. Second, a group gathering allowed us to turn the occasion into a social event, providing a light lunch as a way of saying thank you to participants for their time, and making the atmosphere less formal and more relaxed. In addition, focus groups have the particular advantage that, ideally, they consist of a conversation between the participants, not just a series of questions and answers between the researcher and individual participants. This allows for

exploration of areas of consensus or disagreement. Finally, this was a topic where we, the outsiders, were trying to gain understanding of something that was a part of everyday life for the participants. A number of our questions – for example, why things are done in a particular way – would be issues that they would take for granted and not actually articulate unless asked. By asking such questions we were able to create a situation in which underlying beliefs and assumption were aired and similarities and differences identified (Barbour and Kitzinger, 1999). The focus-group schedule is given as Appendix E.

3.4.2 Alternative data collection from midwives

It was always evident that only a small proportion of midwives in Wales would be able to attend a focus group. We therefore also devised a brief questionnaire to allow any staff who were unable to attend the groups to express their views. The questionnaire was printed as part of a Newsletter (see Appendix F), which was distributed to all maternity units in participating Trusts in August 2005 and invited responses from obstetricians as well as midwives. There were 'personalised' newsletters for North and South Wales, and readers were also told how to access an electronic version of the questionnaire, if preferred. Six questionnaires were returned in total; information obtained is included in the report of the focus-group findings.

3.4.3 Focus-group arrangements

The plan had been to hold four focus groups for midwives in geographically spread locations to which all local labour-suite care providers would be invited. Following problems with obtaining necessary permissions, only two were held: in Caerphilly in the south in August 2005 and in Rhyl in the north in September 2005. Both were held, following negotiation, on Trust premises that were familiar and easily accessible to local midwives, and both were held at lunchtime; this approach was supported as the preferable option by Trusts. Midwives from the seven Trusts participating in this part of the study were invited to attend one of the two focus groups via an invitation sent to midwifery managers. Potential participants were told that lunch would be provided and that all those attending would have their name entered for a prize draw for a £25 gift voucher.

3.5 Midwives: findings

Findings are presented in the form of a narrative account that discusses the themes and is supported by quotations to illustrate the midwives' perceptions of Part 1 of the Pathway. The letters and numbers in brackets at the end of the quotes relate to the participant identification code.

3.5.1 Documentation

One of the first themes to emerge from both the focus-group and questionnaire data concerned the documentation used to record the telephone advice given. This arose initially in response to the opening invitation.

> *Tell me about the telephone component of the Pathway. How is it different from what you were doing before or what other units do? Is it a strict algorithm or is there room for professional judgement?*

It was clear that some respondents interpreted 'Part 1 of the Pathway' simply in terms of a change of documentation from that used previously, rather than as any change in underlying philosophy. Prior to the implementation of the Pathway, there had apparently been no standard way of recording the telephone advice given to women in early labour; this varied between individual midwives and maternity units. Some of the units would record the woman's particulars either with or without details of advice given in a 'telephone message' book; other units used 'slips of paper' (*sic*) to document the telephone call.

There was a general consensus that Part 1 of the Pathway has provided a formalised approach by standardising the documentation in an easy format to record advice given by midwives to low-risk women in early labour. This standardisation has provided midwives with a clear structure for giving advice but nevertheless was viewed more as a guide or a prompt that complemented clinical judgement rather than a set of rules to be strictly adhered to.

It would appear, however, that during the initial stages of implementation there was resistance by some midwives to the change in documentation.

> *We had slips of paper that were used but when the Pathway came in we had Part 1 on the side, but we got rid of the other slips of paper because we found that some people were favouring the 'old' paperwork.*
>
> (N1)

The training received had varied; some midwives said that they were given clear information on how to complete the documentation, others relied on colleagues to help them. However, the straightforward format of the documentation means that it is easily taught to student midwives and new staff who have not previously worked in Wales and training was not felt to be a major issue.

These perceived advantages of the documentation had apparently led to widespread adoption. In one unit, Part 1 documentation was used for all women who telephoned the labour ward for advice regardless of whether they were eligible for the Pathway or in early labour.

This utilisation may have arisen as a way of ensuring that midwives became familiar with completing Part 1 of the Pathway. However, because

the documentation is structured specifically for low-risk women seeking advice in early labour, applying the framework to women outside these criteria could be seen as inappropriate and results in duplication of paperwork as further documentation in a different format is required.

The situations in which the documentation was likely *not* to be used for low-risk women seeking advice in early labour were in the community, and we will return to these issues below. Community midwives said they were more likely to record advice in their diaries or the antenatal hand-held record if they spoke to the women face to face, because they did not necessarily carry copies of the documentation and in any case would probably not be able to get it to the hospital to be of use to the next person who the woman spoke to. There was ambiguity about whether it should be used for home births.

> *Well I don't tend to use it when I'm doing a home birth, I don't tend to need to use it for ringing, and I'm not having to write lots of bits of paper out.*
>
> (N6)

In terms of the layout of the document some expressed concern over its length and felt it could be condensed into fewer pages. Several queried the need to have the evidence summary on the front sheet as they admitted to not reading it. They suggested a separate booklet containing that information for midwives similar to the *Midwives Rules and Standards* (Nursing and Midwifery Council, 2004).

3.5.2 Recording Part 1 information

There were a number of points regarding how Part 1 information was recorded. The first concerned who recorded the information. In some maternity units the telephone will be answered by a ward clerk during office hours and it is they who commence the documentation before calling a midwife to advise the woman.

> *They take the information, they ask some of the questions then they come to us. Sometimes the ward clerks say our reply but other times if we feel that we need to actually speak to them on the phone. It depends what the call is.*
>
> (N1)

Additionally, in some instances a MCA may answer the telephone although it would appear that they call for a midwife and do not commence any of the documentation.

While not always possible due to shift changes or other clinical commitments, midwives will try to offer continuity of contact:

> *Sometimes I'll say do you want to ring me back in an hour, if I am not sure what is going on, then I will give them my name then. If you can see on the*

> *Pathway they have phoned in on this shift and the person they spoke with is still there then we would try and get them.*
>
> (N4)

There are also occasions when a student midwife would take the telephone call. There was a general agreement that Part 1 of the Pathway was a useful teaching aid; the student works under the supervision of her mentor, all documentation is countersigned, they learn to listen to women and give appropriate advice about early labour.

In the community some Trusts have midwives who work in caseload-holding teams. Midwives who practice in this setting are always the first point of contact for women on their caseload who are in labour and therefore complete the Part 1 documentation. In contrast, as we have seen, many community midwives who work within more traditional or integrated models will have early labour calls directed through a main labour suite/Birth Centre and will not necessarily carry copies of the documentation. Others may give early labour telephone advice to women if contacted during 'on-call' hours, therefore completing Part 1 documentation.

Having a range of systems in place has led to diversity and sometimes uncertainty for the community midwives regarding whether they should complete Part 1 documentation:

> *I actually had a call from one of my own patients this morning who actually said she was having niggles after I gave her a sweep yesterday. I really wondered whether I should fill in a Part 1 for that, but I haven't and I suppose I should really.*
>
> (S2)

Some midwives fill in the documentation retrospectively because they do not keep copies of Part 1 and so do not have immediate access to the documentation or if advising a home-birth mother in very early labour. These midwives felt they were now familiar with the Pathway and were experienced enough to know which questions to ask. However, for some there is a logistical issue of getting the paperwork from the midwife to the woman's labour notes.

> *And in my area I serve a 50-mile radius so she might ring me 50 miles from where I currently actually am. I'm not going to travel 50 miles to fill in a form.*
>
> (S3)

These issues could mean that if the woman made a later telephone call to the birth unit/labour ward that another Part 1 would be initiated. This raised concerns about duplication of paperwork and wasting paper; however, there were also comments that even in hospital some women would end up with more than one set of Part 1 documentation.

3.5.3 The telephone assessment

The midwives discussed how they conducted the telephone assessment. Some felt that the questions on the form were no different to those many midwives asked before implementation of the Pathway. However, it was felt that it has assisted all midwives to ask the right questions to assess the progress of early labour and to give appropriate advice rather than asking all women who may (or may not) be in labour to attend labour suite.

Although the Pathway provides guidance on questions to ask they are not read out as a set list, midwives are incorporating them into the telephone conversation so there is natural flow of dialogue. This suggests the midwives are adopting an individual approach rather than using the Pathway as an algorithm.

The duration of the telephone call can be dependent on how far the woman's labour is established. However, according to the midwives the overall time spent talking to women in early labour does not appear to have altered significantly.

> *But we've* always *spent a lot of time speaking to women in early labour on the phone and we [just] never documented it.*
>
> (S6)

The midwives discussed how the telephone assessment encouraged conversation with women and the importance of using listening skills. They also discussed how the art of recognising and interpreting what can be quite subtle cues from the content of the conversation, the tone of voice or woman's breathing develop with experience:

> *…having conversations with women is just the best way of learning midwifery and it's great that it's brought back the conversation rather than just 'come in' and put the phone down.*
>
> (S7)

One other area discussed was the importance of speaking to the woman herself rather than having a conversation via her partner or other family member. The midwives also spoke of occasions when there would be little time for the telephone assessment as some calls were made to say they were 'coming in' or made *en route* by the partner.

However, even in such circumstances the midwives said that they endeavour to engage in conversation with the woman or partner to undertake an assessment and obtain a minimum amount of information. If appropriate, they may arrange for a midwife to go the woman rather than she give birth on her way to the maternity unit.

The midwives were encouraged to debate actual or potential risk-management issues they may have encountered in relation to the

telephone assessment and advice. It was considered that having telephone advice documented might be assisting the risk-management process as it provides evidence of the discussion between the woman and the midwife, especially if problems occurred later in labour.

> *I think it might be preventing problems because I think in the past there have been occasions where a woman has rung up and been give advice, and there's been a problem that has arisen later and there's nothing documented so there's nothing to prove what the midwife said.*
>
> (S7)

Furthermore, the midwives felt that the documentation provided evidence in the event of a complaint regarding advice given.

> *We've had a number of complaints in the past and it has provided good evidence of when there has been disagreement with what has actually been said over the phone.*
>
> (N1)

However, in relation to specific incidents such as a possible increase in the number of babies born at home without the attendance of a midwife (BBA, born before arrival), the midwives did not believe encouraging women to stay at home in early labour had any effect.

The midwives were asked whether a limit would be put on the number of phone calls a woman could make before being asked to attend a labour ward/birth unit. This question was included as we had heard that one Trust had adopted a policy that women are asked to come in after the second call. Several midwives thought there may be a ceiling of three or four calls, which may have arisen because the document only provides space for recording three telephone calls. Overall there was a consensus that no official ceiling should exist regarding the number of times a woman could telephone for advice, as a policy to assess women after three calls would compromise clinical judgment. However, some midwives suggested that if a woman telephoned for advice repeatedly they might advise her to attend the unit because it sounded as if she wanted reassurance, although the overall clinical assessment would influence the decision.

3.5.4 Supporting practice and empowering midwives

There was a clear perception among the midwives that the Pathway supported their clinical practice and was an empowering tool. One of the explanations given was that the best-practice guidance offered within the Pathway framework was evidence-based.

> *It has got some of the evidence down there, in that it does guide you. It gives you what the best practice is in terms of the current evidence and that if they are in labour that it's better for them to stay at home, and it gives you grades of evidence for that.*

(S3)

It was also viewed as a support to midwifery practice that could be used flexibly to inform clinical decisions. For example, some midwives said that they would often ask women additional questions to those listed on the documentation if necessary.

The midwives believed that documenting the telephone advice had improved communication. This had two elements: first in terms of the consistency of advice the midwife and their colleagues would offer women who telephone on more than one occasion and second it was thought to enhance communication between shifts where there may be long periods between telephone advice.

And particularly, say, if people phone in quite frequently with every sort of contraction, you've got the continuity of advice there.

(N3)

Communication is better between the shift change as well. Because someone can look at what was said on the previous shift and what has changed, that's been useful.

(N2)

In addition to improving communication, there was also the assertion that using the Pathway had increased the midwives' professional autonomy. They were able to offer evidence-based advice that aimed to promote labour as a normal physiological event rather than one that has to be managed medically.

Whether it's just been to enhance people's recognition of the normal and just to get people thinking and talking about normal birth, that to me is one of the issues, and it's increased midwives' confidence.

(S11)

Moreover, not only was there a belief that professional autonomy had improved, but also that Part 1 of the Pathway has helped midwives develop a more positive language that emphasises the normality and benefits for women to be at home in early labour. Midwives' confidence in facilitating and promoting normal birth had therefore increased, and so they are happier to advise women to stay at home rather than suggesting that they attend labour ward.

It's definitely a confidence issue, you've got to learn to use your ears as well, you know *by the tone of a woman's voice and what they're saying to you, and you know if they can talk to you happily for 10 minutes on the phone you can guarantee that they are probably not in active labour, but if they can't, then.... And it's building up that confidence, whereas before it just like was a case of 'oh yes, well, please make your way in'.*

(S2)

It was also suggested that using Part 1 of the Pathway helped some midwives to reflect on their practice.

> *And also I mean it's a part of how I reflect on my own practice you know, if I've spoken to a woman and given her particular advice about something specific, then you want to find out the outcome, to know whether, you know, were you correct in what you were thinking, was the advice you gave appropriate – it's a part of the learning yourself isn't it, as well, I mean I find it really helpful as a learning experience to find out what's happened afterwards.*
>
> (S7)

Inclusive of building midwives' confidence and supporting their role was the perception that the Pathway had enabled them to engage in reasoned debate with their obstetric colleagues. It was felt that the evidence-based guidance added weight to their arguments when discussing their rationale of care for women with uncomplicated labours.

> *I think the Pathway in itself has had far more wide-reaching effects than we probably realise, just in the debate it's caused.*
>
> (S7)
>
> *It's definitely generated huge debate with our obstetric colleagues and that has to be a positive.*
>
> (S11)

3.5.5 Impact on workload

The midwives discussed how encouraging women to stay at home in early labour had impacted on their overall workload. There was a perception that undertaking telephone assessments for women in early labour had resulted in a reduction of category-X women – those who are not in established labour – on the labour ward.

> *Women are not coming in as early and you don't get many women coming in, in that latent phase, and they are more likely to be in active labour when they do come in.*
>
> (S7)

This appeared to have created an additional benefit of freeing up midwifery time because seeing those who attend Birth Centres/labour ward in the early phase takes more time than reassuring and advising women on the telephone.

> *I mean your phone call [has] got to be 10 minutes, whereas if you bring them in, by the time we've examined them and put them on the CTG then that's an hour at least.*
>
> (S9)
>
> *Where I think they are is also the element of that we are spending in some circumstances longer on the telephone with a Part 1 than we used to.....*

> *You know, we used to just say come in and then deal with all those when they were there, but it is quicker and easier to do it on the phone, so I think it is freeing up a bit of time.*
>
> (S7)

This would suggest that the midwives could allocate priority and direct resources to women in established labour. However, it was evident that midwives still assess some women whose labours are not established but who want the reassurance of a face-to-face assessment. In some Trusts they are directed to a triage area away from the main labour ward.

> *But some of them just like to come in for reassurance I think, and that's no problem, they can just come into triage and go back home.*
>
> (N4)

Alternatively, community midwives who hold caseloads or book DOMINO births offer a home assessment and/or provide additional support for women who are experiencing a difficult latent labour phase.

> *Yes, we do see people who don't know what to do. They phone for advice and we say 'if you want we'll come and see what's going on', and they want to stay at home a bit longer.*
>
> (N6)

Moreover, the midwives agreed that, although they inform women of the benefits of being in their own environment, they would not discourage anyone from attending their unit if they so wished.

An additional impact of Part 1 of the Pathway suggested in both the focus groups and questionnaire responses is that it has a value in workload planning for labour suites or Birth Centres. This was considered beneficial by some midwives as they felt that completed Part 1 forms provide a record of the number of women who are at home in early labour pending admission.

3.5.6 Perceived benefits for women

One of the perceived benefits for women was that the Pathway was helping to educate them that birth is a normal process. The educational role of the midwife would appear to start with the community midwife who is responsible for the distribution and explanation of the labour pathway leaflet to low-risk women in pregnancy. The use of the leaflet is considered to assist women's understanding of the normality of the birth experience, which is then reinforced by other midwives. This was seen as a positive step that had wider implications for educating the public as well as staff who worked within a model that treated birth as a medical event.

> *For me, my understanding of the Pathway being introduced was really to look at the situation we were having with increasing rates of intervention … and to impact on that positively and normalise that whole birth*

experience, and to normalise it within society as well as what was actually happening in the labour wards, so for me it's like multi-pronged.

(S7)

The midwives suggested that the emphasis on being at home in early labour is also beneficial to women as it reduces their likelihood of unnecessary intervention in labour which could influence their birth experience.

That is the big aim of the Pathway, to reduce that unnecessary intervention.

(S9)

Moreover, the development of midwife-led care options for women had reduced the number of women receiving conflicting advice from doctors because midwives have adopted a consistent approach that emphasises the normality of birth for low-risk women.

And I think with more midwife-led care, because they are seeing that midwife all the way through and they don't see any doctors, that they take it from the midwife, they think it's perfectly normal.

(N7)

There was also an opinion that midwives' consistency in their emphasis on the normality of labour has had the effect of increasing women's confidence to stay at home.

…if a woman phones up and speaks to a midwife you are actually giving her the confidence to stay at home and know what she is experiencing is normal … if she's got someone at the end of the telephone she can speak to she's not left on her own, she can cope with the early stages without coming to hospital really.

(S2)

The midwives were also of the view that women would consider the telephone conversation in a positive light, because it should not appear that the midwife is following a care pathway but that she is making an informed assessment guided by information that the woman provides.

Some respondents saw the Pathway as empowering women because midwives are offering them informed choices by discussing plans of care for early labour, while the decision on whether to stay at home remains with the woman, thus giving her the control. One community midwife said that she told women antenatally:

…but if you feel, even if it's 2 minutes after you come off the phone that the contractions are stronger and you want to go in, then go in, they won't mind. Or even if they say don't come in, and you want to go in, again I'd say go in. So, if you tell them that beforehand I don't think they feel they have got to take exactly what is said.

(N2)

It could, of course, be argued that what these midwives are describing is giving women permission to take an alternative course of action to that advised by the Pathway, rather than an inherent feature of the Pathway itself.

Finally, the midwives explained how the telephone assessment could improve the potential for building a rapport with women. This could occur when a woman has telephoned on more than one occasion and spoken to the same midwife, or if the woman is admitted following telephone advice.

> *I've often looked after women that I've had a telephone conversation with, so you know when you meet her you say 'oh yeah, I spoke to you' and you know there's rapport there immediately because you've already had a good conversation.*
>
> (S7)

The midwives also felt that there may be an additional benefit of increased rapport between women and midwives because more women are being admitted in established labour, therefore there is more likelihood of continuity of carer for the birth.

3.5.7 Possible disadvantages

There was a general feeling that Part 1 of the Pathway is a positive intervention for women and midwives. However, there were some concerns highlighted in the questionnaire responses. These included a concern that the Pathway is rigidly applied by some midwives who are over-reliant on the format and are not exercising their clinical judgement. This would appear to contradict the dominant view in the focus groups that the Pathway is a flexible framework that is used to *complement* clinical judgement. Furthermore, a concern was voiced that some women may not give an accurate picture of their labour if only asked the list of questions set out in Part 1 documentation. There is undoubtedly variation between midwives in this regard and these concerns may reflect some midwives' lack of confidence or knowledge. This could suggest an opportunity for professional development.

There was also a concern that some women may feel the telephone call to be an impersonal question and answer session and would prefer face-to-face contact with a midwife. Certainly, the inability to build a rapport could pose a problem and may depend upon the individual personalities of the woman and midwife. However, this was not an issue raised by the focus-group midwives who asserted the positive aspects of conducting telephone assessments.

One possible disadvantage raised both in questionnaire responses and by focus-group participants was that some women might feel 'put off' and

prefer to come to the hospital/Birth Centre for an early labour assessment:

> *I still do feel like some of ours feel like they are being put off.*
>
> (N1)

This is clearly a slightly sensitive area. Many focus-group participants emphasised that they were happy for women to come in if they needed reassurance, even though there was also recognition that it was better for women to stay at home. However, they rejected the facilitator's query that this might be counter to the Pathway philosophy of discouraging women from coming into hospital too early.

> *I wouldn't say it's to discourage them, rather to let them know it's OK to be at home, also that they are welcome to come in if they are concerned.*
>
> (N4)

3.6 Midwives: discussion

Only two instead of the four originally planned focus groups were convened; thus fewer midwives contributed views than had been hoped and only from a limited number of Trusts in Wales. Two of the Trusts participating in the study were not represented in the focus groups and no questionnaires were returned from those units. One limitation of the findings of the focus groups is that some midwifery experiences of Part 1 of the Pathway may, therefore, not have been captured. It is also possible that midwives who attended the focus group were more positive about the Pathway; thus some element of selection bias may have occurred.

One strength of using focus groups is that it facilitates discussion among participants, rather than obtaining their views in isolation in individual interviews. It allows exploration of topics to determine whether views are widely held and to check consensus. It appears that participants felt happy to talk freely and without the guardedness that can sometimes manifest in discussions of mixed staff groups.

Several issues related to midwives' experiences of using Part 1 of the Pathway emerged during the focus groups. Midwives appreciate the Pathway as it supports midwifery practice; in particular, conversations with labouring women. Telephone assessment for labouring women was seen to encourage dialogue between women and midwives, which was described as 'bringing back the conversation in midwifery'. This enhanced communication was also seen as an opportunity to build rapport.

Part 1 was perceived as offering a good teaching aid and documentation of telephone conversations with women could also protect in cases of subsequent complaint. Part I documentation appears not to be utilised in some community settings, due to some continuing uncertainties over when it should be used and also the practical difficulties for community-

based midwives of uniting Part 1 documentation with the main clinical record. These practical difficulties could mean that women may not be benefiting from the improved communication between care providers that is a key aim of the Pathway. This issue is not reflected in hospital settings where positive impacts on communication between women and care-givers were perceived. Moreover, the midwives believed Part 1 acted as a supportive framework to their clinical practice and had been instrumental in changing midwives' philosophy. The midwives also perceived that there had been an overall reduction in unnecessary intervention for women as they are less likely to attend Birth Centres or labour wards until their labours are established. While generally acceptable to midwives, some feel that the documentation could be shorter and it is interesting to note that the evidence summaries included in Part 1 do not appear to be utilised by some midwives. Midwives appear to have a range of views about whether using Part 1 of the Pathway documentation offers a full assessment of the woman's situation or whether additional information is required. The difficulties that midwives face in trying to encourage women to remain at home while also not wishing to be seen to deny access are clearly evident. This might mean that more work is required in providing women with information during pregnancy about the rationale for delaying admission until labour is established and in fulfilling what midwives described as the education function of the Pathway. It was also apparent that one Trust has adopted the use of Part 1 documentation to capture all telephone data on the labour ward, irrespective of women's risk status and whether they are in labour.

3.7 Data collection from women

3.7.1 Method of data collection

The chosen method of data collection was via CATI. Telephone interviews rather than questionnaires were chosen for the following reasons.

- We were interested in exploring women's experiences and in understanding the ways in which the process worked, or failed to work for them. This is more easily achieved in a spoken dialogue than with predetermined questions and responses.
- A brief telephone interview, particularly at a time nominated by the interviewee, is less onerous for the respondent than completing a questionnaire.
- If a woman wishes to take part but does not speak English it is easier to find someone who can speak to her in her own language than to produce printed questionnaires in all possible languages.
- Women who cannot read can be included.

- The sample should, ideally, be representative. Telephone interviews yield higher response rates than self-completion questionnaires (Crow *et al.*, 2002) and are thus more likely to be representative.

Although telephone interviews run the risk of excluding women without telephones, the availability of relatively cheap and easy access to pay-as-you-go mobile phones has considerably reduced the number of women to whom this would apply. Telephone interviews had been used previously by members of our research team in studies involving new mothers (Ewing and Green, 2000) and in other studies of maternity-service provision (Statham *et al.*, 2001). Face-to-face interviews with women were never a realistic option given the project resources and the fact that most of the research team were not based in Wales. However, our previous use of telephone interviews with new mothers (Ewing and Green, 2000) had suggested that telephone interviews were actually preferred by mothers as being less intrusive, and thus more relaxed, and easier to rearrange if necessary.

In addition to these advantages of telephone interviewing, the use of a computer-assisted proforma has two major advantages: first, the computer is able to route the interviewer to the next appropriate question depending on the answers given. For example, if a woman made only one phone call, she will not be taken to questions about a subsequent call. Second, data are entered directly onto the computer so there is no need for separate data entry. A possible disadvantage, however, is that a woman may wish to say something that is of interest but which the proforma does not have space for. To allow for this possibility and as a back up, all interviews were also tape-recorded. The intention was not to transcribe all the tapes in their entirety, but rather that the researcher could note the sections of particular interest to be transcribed. This keeps the workload manageable and allows us to:

- cover topics not fully covered by the CATI,
- allow verbatim quotation where this was desirable,
- check information entered into the CATI in situations where there appeared to be conflicting information,
- be a back-up in case of computer failure.

3.7.2 Analysis of women's data

The intention was to provide descriptive quantitative information illustrated with direct quotations. Depending on the sample size achieved, cross-tabulations and χ^2 analyses would be carried out. In practice (see below) the small sample size meant that only the most basic quantitative analyses were possible and generally these required grouping categories of responses together to avoid small cell sizes. Conversely, having less data to analyse allowed us to give much more attention to individual

women's experiences and we were able to go back to the tape recordings to explore emerging themes in the data in a way that would not have been possible with a larger sample.

3.7.3 Development of the CATI

The CATI software was developed using Microsoft Access 2000. The aim was that the design should guide the interviewer through the interview to ensure that all relevant questions were asked and recorded.

3.7.4 Early pilot work: mapping the key issues

Themes for investigation were developed by the research team, and formatted into interview questions. We were keen to ensure at an early stage that no areas of importance to women were omitted, so within the first 3 months of the start of the project we piloted our themes and questions with a group of postnatal women who had been to NCT antenatal classes and were attending a postnatal reunion class. The women were approached by the NCT leader during the reunion class, the aims of the study and the pilot explained, and permission sought for us to contact them by telephone. Those women agreeing to participate released their details to us via the NCT leader. The basic eligibility criteria were that women were primiparous; that they had not been booked for a planned caesarean section or induction; they were well and their baby was living with them and that a phone call had been made to the hospital in early labour. Seven women were interviewed and their responses noted on paper (rather than on computer).

We were aware of the possibility of some women reporting problems during the telephone interviews that would indicate a need for support, for example postnatal depression or breastfeeding problems. In order to address this, the interviewers had available a list of suggested contacts that could be drawn on for women who may need help that the interviewers were not in a position to offer.

This list was kept for the final interviews, and contained the following:

- postnatal depression: discuss this with their health visitor or GP;
- breastfeeding: the NCT Breastfeeding Helpline can be accessed 8 am–10 pm every day on 0870 444 8708;
- bottle feeding: discuss with health visitor;
- own or baby's health: discuss with GP or health visitor;
- complaint about the maternity care they received: contact the Head of Midwifery in the Trust where they had their baby.

This pre-pilot stage was very helpful in raising a number of issues that needed to be resolved for the main interviews. The issues and their resolution are listed below.

Methodological issues

- In some cases, the phone call to the hospital had been made by a partner rather than the woman herself. This raised a dilemma about how we dealt with third-party information. It was decided that where the partner made the call this should be noted but that our principal interest was in the woman's experiences.
- A number of interviews were carried out with a baby crying in background, which was clearly not ideal for anyone involved. This raised issues about the time of day when interviews should be carried out and also whether there was a need for a minimum set of questions or more open questions that would allow key issues to emerge if it was desirable to shorten the interview.
- Moving back and forward between pages for different phone calls when asking questions was a challenge for the interviewers, which underlined the desirability of a CATI which would enable this facility.
- How best to order the questions if more than one phone call was made.
- Screening questions were devised as a check that women did meet the eligibility criteria. These questions were to be asked prior to setting a time and date for the telephone interview. In addition, brief reminder information about the study and a preamble were devised, which would be given at the start of the CATI, which included a reminder of the interview being recorded and mention of simultaneous entry on to the computer during the conversation.

Interview content: general

- We needed to be realistic about the level of detail that women could be expected to recall up to 4 months after the event, for example about the specific questions they had been asked and the advice that they had been given.
- It was apparent that we needed to get an overview of labour to contextualise the phone calls and timings even though we did not require details of labour once the woman was in hospital. It was agreed that this question would be asked first.
- Women were more inclined to want to talk about what had happened to them after they reached hospital than about the phone calls. However, information about the calls did seem to be available with detailed questioning.
- It was apparent that awareness of the existence of the Pathway varied and it was agreed that the interview would look for evidence

about this, including whether women made reference to the Pathway leaflet and its contents. The terminology of the leaflet, for example regarding signs of early labour, would exist as a drop-down list for the interviewer on the computer but would not be used as a prompt in questioning.

- Other questions which we agreed to include as a result of the pre-pilot interviews were: demographics such as age and educational attainment only; had the woman attended antenatal classes?; was there a home visit from a community midwife?

Interview content: information about phone calls

- Were details to be collected on every phone call made? If not, which were critical? After consultation with the Midwifery Officer (Welsh Assembly Government), it was decided to collect basic information about all phone calls that were made but to ask detailed questions only about the first and last calls.
- Time of day of the phone call(s) should be noted.
- It was apparent that women had phoned the hospital for a variety of reasons (e.g. to check bed availability; to notify onset of labour; uncertainty about whether or not they were in labour; needing advice; asking to come into hospital), and their expectations of the call would vary accordingly.
- The pre-pilot interviews confirmed that we would want to detail the specific advice given and to distinguish 'advice' from 'assessment'.

The list of questions to be asked was further developed and reworded as a result of the pre-pilot interviews.

In parallel with the development of the list of interview questions, an database in Microsoft Access was developed with the assistance of IT staff.

Key features of this were:

- drop-down menus for questions,
- capacity to add free text to certain questions,
- routing questions (if x then go to y; if not go to z),
- ability to repeat whole sections of questions (for different phone calls),
- switch easily, using mouse and visually, between sections/windows of interview schedule,
- data to be exportable to analysis program, e.g. SPSS.

A final check was completed by the software at completion of the interview. The software incorporated drop-down options, rather than free text, to aid data integrity and quantification.

3.7.5 Piloting the interview process

Prior to commencing the main study there was a need to pilot the telephone interview questions and all post-recruitment procedures. The midwifery research fieldworker obtained permission to attend an NHS postnatal reunion group meeting and discuss the study with the women present. There were 10 women in total who attended the group; four did not meet the criteria for eligibility and the remaining six gave consent to participate in pilot interviews. Their written consent and details were forwarded to the research team.

The project secretary made the initial telephone contact, asking the screening questions and then setting an agreed time and date for interview, followed by a letter sent to the woman to confirm details. One woman was found not to be eligible at this stage.

Since the researchers carrying out the interviews worked in part from home, it was possible to offer a larger range of interview times (9 am–9 pm) than would ordinarily have been the case. This was a particular advantage in this study as it enabled women to arrange a time when their partner would be at home and able to take over care of their baby where necessary. In practice, the majority of interviews (in the pilot and main data-collection phase) were carried out after 6 pm; this had an unanticipated advantage of reducing the costs of telephone calls. Paper versions of the CATI questions were used initially and then computer-assisted interviews in the later cases.

Issues that arose from the main pilot phase included the following.

- There were issues around wording and drop-down menu options.
- The need to add to the preamble information about the anticipated time the interview would take. The initial information had said 20 min but many were taking longer than this. We also added additional information about confidentiality, and the project's credentials.
- The questions from the ELSA study were moved to the end as they were found to trigger details that were going to be asked about in other specific questions.
- Further probes were needed in the overview to get the sequence of events, keys stages and how many times the woman went into hospital.
- In some cases the last call consisted only of the partner phoning to say 'we're on our way in'. It was agreed that in these circumstances it would be more informative to collect detailed data on the penultimate call but that the content of the last call would still be noted.
- The interviewers were not always able to type answers to open-ended questions fast enough to keep up with the conversation. It was

agreed that the CATI would be used mainly for choosing items from the drop-down menus and for noting the number on the tape-counter to go back and transcribe any details/specific quotes after the interview was over.

Following this pilot, it was agreed that a final pilot stage would be useful to test the changes to the schedule and gain practice in the computer element of the CATI. Four women were recruited by their NCT leader at a postnatal reunion class with the same eligibility criteria as before. The CATI schedule is given in Appendix G.

3.7.6 Target sample

The target sample were women in Wales who had recently given birth to their first baby and who had phoned the maternity unit at least once when they thought that labour was starting. Women having subsequent babies generally spend less time in early labour and they have a better idea of the indications that they are or are not in labour. The issues are therefore different for them. Because the ELSA trial was concerned only with first-time mothers, it was appropriate to limit the OPAL sample in the same way. We wanted to recruit women soon after they had given birth, so that they would remember their early labour experiences, but to give them time to recover from the birth and acclimatise to their new role. Between 6 and 10 weeks after the birth was felt to meet this criterion. This strategy for the provision of information to women and recruitment by the women's own community midwife was chosen for a number of reasons: our positive experiences of community midwifery support for recruitment in the ELSA trial, the opportunity for information to be offered by someone known to the woman and thus avoiding potential 'cold calling' associated with sampling from, for example, birth registrations, and increased probability of avoiding distress if serious untoward events have occurred.

The plan was that each of the 13 NHS Trusts in Wales would be asked to recruit to the study all women at the point of discharge to the health visitor for just one specified week (this was intended to minimise demands on midwives). This would provide a sample of between 35 and 65 women per Trust, depending on the number of births per annum. The weeks allocated to each Trust would be staggered over a 6-month period to ensure a steady rate of recruitment, and thus a manageable workload for the researchers, and to allow all women to be interviewed within 6–10 weeks of the birth. The Trusts were to be sampled in the order in which they had introduced the Normal Labour Pathway to ensure that the Pathway methods were established by the time of data collection. Target women were those being discharged from the care of the community midwives during the study week.

3.7.7 Planned sample size

The method described above should have produced a sub-population of approximately 600 women; that is, 4 per cent of the women in Wales who give birth within a 6-month period and who are identified within a structured sampling frame. It was estimated that approximately 50 per cent of these would have been eligible for the Normal Labour Pathway (approximately 300); these were the women who were to be the focus of our data collection. We recognised that not all would agree to take part, but we anticipated that the response rate would be high since the burden of participation would not be great and many women welcome the chance to talk about their labour experiences. We thus expected between 200–250 interviews with women who were eligible for the Pathway. The option of asking Trusts to recruit for 2 weeks instead of one, should it become apparent that target numbers were not being met, was included in the original proposal.

This is a large sample size for qualitative analysis, but, unlike many qualitative studies, we wanted the sample to be large enough to be representative. Much of the information required was to be entered directly on to the computer by the interviewer at the time of the interview, and these data would be suitable for basic quantitative analysis. However, when it became apparent that only six Trusts would be recruiting women and that we were running short of time, we revisited our assumptions and, in discussion with SDO, decided that a sample of 100 interviews would still meet our needs if we did not attempt analysis at the level of individual Trusts. This would require each participating Trust to recruit for a 2-week period: the Recruitment Fortnight.

A separate issue was that local information had suggested that more women may fall outside the Pathway than we had previously been advised. This underlined the need for a fortnight of recruitment rather than 1 week. In order to be sure that the projected numbers for recruitment were realistic, arrangements were made for a single community midwifery team to record their total number of discharges and the number of women who commenced Part 1 of the Pathway over a 4-week period. These were recorded on a proforma and collected by the midwifery research fieldworker.

3.7.8 Recruitment in practice

As planned, women were recruited by their community midwife at the point of discharge to the health visitor during a specified 2-week period, the Recruitment Fortnight. Recruitment took place in only six NHS Trusts: Gwent, North Glamorgan, Cardiff and Vale, Swansea, Ceredigion, and Conwy and Denbighshire. The timing of the Recruitment Fortnight was negotiated individually with each Trust as soon as R&D clearance was

obtained. All Trusts had been operating the Pathway for over a year by this point. Some Recruitment Fortnights ran concurrently. The main recruitment phase ran from the end of May until the end of August 2005.

3.7.9 Informing women about the research

Protocol 1 Women whose expected date of delivery was such that they may be discharged from midwifery care during the Recruitment Fortnight were given written information about the research (Appendix H) along with the information that, we understood, they received routinely about the Pathway, at approximately 36 weeks. This information was to be distributed during a 4-week period, 2–6 weeks prior to the Recruitment Fortnight, to allow for variations in gestation. Women were encouraged to contact the research team in York for any further information or to speak with the Wales-based midwifery research fieldworker. Flow chart 1 identifies the key steps in recruitment, and the timescale associated with each step in relation to the Recruitment Fortnight.

Protocol 2 The delays in obtaining R&D approval resulted in the need to recruit during a much shorter period than the 6 months that had been planned. Furthermore, the original protocol described above required a substantial 'lead time' before recruitment because women were being approached while still pregnant. A protocol amendment was submitted to Multicentre Research Ethics Committee, and approved, in which study information was distributed postnatally rather than antenatally, in the week prior to being discharged to the health visitor. Flow chart 2 outlines the revised format. Information about the study was distributed by community midwives in the week prior to the Recruitment Fortnight and during the first week of the Recruitment Fortnight, which gave women approximately 1 week to consider participation. The information sheets were to be given to all primiparous women who the midwife anticipated discharging to the health visitor during the Recruitment Fortnight. This meant that during the first week of the fortnight there was an overlap of information-giving and recruitment; the recruitment was of women who had received the information in the week prior to the Recruitment Fortnight and the information sheet was distributed to women who were expected to be discharged during the second week of the Recruitment Fortnight.

This procedure was modified slightly in two Trusts that were operating selective visiting in the postnatal period. Here midwives requested a 2-week information distribution period prior to Recruitment Fortnight to ensure that eligible women were not missed due to the length of time between visits. During the main data-collection phase, one Trust followed Protocol 1 (Flow chart 1) and five Trusts followed the amended format (Flow chart 2).

Recruitment flow chart 1

Recruitment Fortnight (Recruitment Fortnight)=2 weeks during which primiparous women will be recruited and 'consented' by community midwives.

Recruitment Fortnight minus 7 weeks Contact with community midwifery staff to flag up Information Sheet distribution period (to begin in following week for 4 weeks) and send bulk copies of information sheet.

Recruitment Fortnight minus 6–2 weeks For next 4 weeks, women attending antenatal appointments for their 36-week check-up will be handed information sheet at same time they are given information about the Pathway from the midwife.

Recruitment Fortnight minus 1 week Contact with community midwives teams to flag up Recruitment Fortnight and explain what we need them to do and collect. Leave bulk copies of the proformas (with attached consent form).

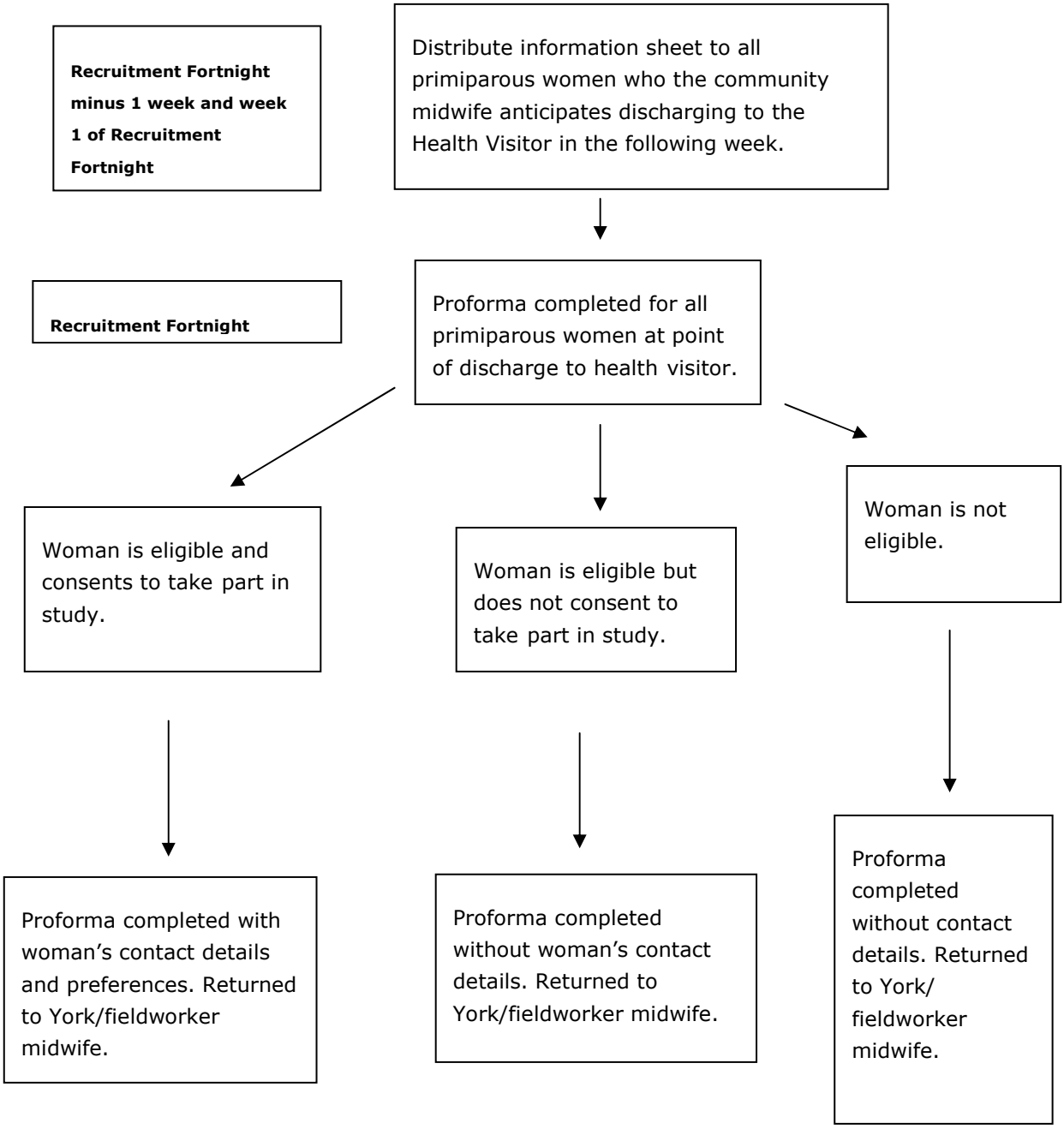
Recruitment Fortnight Women are recruited by community midwives. Proforma completed for each primiparous woman being discharged that week into the care of health visitor (usually 10–28 days after birth). Woman consents to take part and release details to research team in York.

Recruitment Fortnight plus 1–2 weeks Woman contacted by research team to book a date/time for phone interview. Woman encouraged to contact York in meantime if any questions or changes to arrangements or to withdraw.

Recruitment Fortnight plus 4–8 weeks One week prior to arranged phone interview, a letter is sent to remind woman of date/time and key areas we are interested in covering in phone interview. Option for woman to change arranged time/date or to withdraw.

Recruitment Fortnight plus 5–9 weeks Phone interviews take place.

Recruitment flow chart 2



3.7.10 Recruitment of women at discharge

Following the birth and at the point of discharge to the health visitor, the community midwife reminded women about the research (offering another information sheet if necessary). The midwife was asked to complete a short proforma (Appendix I) for *every* primiparous woman indicating her eligibility for the Pathway (and reason for ineligibility if appropriate) and then document whether or not she consented to participate; women agreeing to participation signed a consent form.

For women who were eligible for the Pathway, and who consented to participate in the study, the midwife obtained basic details to be forwarded to the research team which included: the woman's name; contact telephone number; preferred time of day for a telephone call; whether she was willing to be interviewed in English and, if not, her preferred language; and any special circumstances that the research team should be aware of, such as admission of the mother or her baby to intensive care facilities around the time of birth. Contingency plans were made for interviews to be carried out in Welsh if requested.

The names of women who did not consent to the research or who were ineligible were not to be entered onto the *proforma.* However, since we needed to monitor the number of women who fell into these categories, midwives were asked to complete a proforma for every primiparous woman discharged during the Recruitment Fortnight. The proformas and completed consent forms were returned to the central community midwifery office for Gwent following protocol 1. Other Trusts were provided with freepost envelopes to return completed documentation directly to the research team in York, at the end of the recruitment fortnight. We were advised that help with translation of the information sheet was available from the resources of the Welsh Assembly Government.

3.7.11 Preparing community midwives for Recruitment Fortnight

In advance of the recruitment period for each Trust, meetings were arranged with community midwives, sometimes with considerable difficulty due to their already full meeting agendas. Assistance was sought from the community midwifery managers to determine suitable dates and venues. Liaison took place through telephone calls and e-mails. The meetings took place in order of obtaining Trust approval, and the Recruitment Fortnight dates negotiated.

Each group of midwives was given a short PowerPoint presentation that included an overview of the study, their role in assisting the team with recruitment and their individual time frame for distributing information

and dates for Recruitment Fortnight. Following the presentation information packs containing consent forms, proformas, a flow chart plus women's and midwives' information sheets and stamped, addressed envelopes for return to either the community office or research base were distributed to the midwives and the recruitment process was explained in detail. This further explanation gave an opportunity for clarification and allowed for further discussion around the recruiting process. The midwives attending the meeting tended to be the lead midwife for each of the community teams, who were then responsible for cascading information about OPAL to their colleagues.

The first Trust (Gwent) to participate in the study followed the original protocol that gave an information-distribution period of 6 weeks before their Recruitment Fortnight. Due to the length of this lead-in period there was an opportunity to meet with at least 50 per cent of the total community midwives. This was achieved through holding three meetings at different venues and capitalised on fitting in with pre-arranged meetings; this was only possible because this was the midwifery research fieldworker's own Trust. Subsequent Trusts followed the amended protocol that shortened the process of information distribution and recruitment to 3-4 weeks in total and gave less opportunity to meet individual community midwives.

3.7.12 Maintaining contact during Recruitment Fortnight

The ability to maintain direct contact with the midwives during the recruitment process varied according to the proximity of the Trust to the midwifery research fieldworker's own workplace. North Glamorgan, Conwy, Ceredigion and Swansea Trusts received one visit prior to their recruitment period. Telephone and e-mail contact was maintained with the managers to provide support and to chase up any possible outstanding consent forms at the end of Recruitment Fortnight. Gwent and Cardiff and Vale Trust received site visits at the end of the first week of Recruitment Fortnight in addition to telephone contact. Site visits appeared to be valued by the midwives as they were able to clarify the eligibility of women who they thought may consent to the study and ask questions about OPAL. However, only three midwives made direct telephone contact despite being given the midwifery research fieldworker's and the team's e-mail and telephone numbers plus a direct pager number carried by one of the co-principal investigators identified as a midwife during the re-run of the Recruitment Fortnight.

3.7.13 Arranging interviews

Some delays occurred in completed documentation being received at the study base. On receipt of the consent forms and proformas, the research

team checked details and calculated in which weeks it would be appropriate to interview the women, given they were to be interviewed between 6 and 10 weeks postnatally. The initial phone call to set up the interview was made by the project secretary or a Research Officer. Screening questions were asked to confirm eligibility. Ineligible women were thanked for their willingness to participate and no interview was arranged. For all other women, an agreed time and date was set, and this was confirmed in writing.

In a small number of cases it proved difficult to contact the woman on the phone, and after several attempts had been made, a letter was sent to check if the woman was still willing to participate and asking her, if applicable, to confirm her contact details so we could make telephone contact. A freepost envelope was included to ensure no costs were incurred by the woman. If this letter was not returned, no further contact was attempted.

The researcher conducting the interview phoned at the arranged time. In some cases there was no answer, and after trying for up to 15 min after the arranged time, the interview was abandoned on that date. A follow-up call was made to try and arrange an alternative date and in all but one case this was achieved. Where this was not possible, a letter similar to the one above was sent thanking the woman for agreeing to participate and checking whether she no longer wished to take part.

3.7.14 Recruitment response

In view of the considerable efforts invested in the recruitment process, the response was disappointing. Only 53 forms were returned: of these 16 were not eligible and 14 did not consent, withdrew or could not be contacted. Thus only 23 interviews could be carried out. As far as we were able to determine, women who were asked were mostly willing to take part but only a minority of community midwives seem to have attempted to recruit women. This was despite a system of reminders and, for the last two centres, an 'on-call' system for enquiries. The extent to which midwives recruited did not appear to relate to the amount of input from the midwifery research fieldworker. Two Trusts had visits during the Recruitment Fortnight, but one of these had one of the lowest numbers of returned proformas and consent forms whereas Conwy and Denbighshire Trust, who were most geographically distant and who were only visited prior to their Recruitment Fortnight, had the highest number of consent forms per caseload number.

The poor response was discussed with midwifery managers who expressed willingness to run a second phase of recruitment. SDO kindly agreed to a further no-cost extension until 31 March 2006 to allow this to take place and it was agreed that we would repeat the recruitment strategy that we had used before, this time with a higher profile and more

support to the community midwives. We felt that the most effective strategy was to limit this second recruitment phase to the three largest Trusts (Gwent, Cardiff and Vale and Conwy and Denbighshire) where we would be likely to get the highest numbers of recruits. We expected to at least double the total number of interviews in this way. We considered a change of recruitment strategy, but this would have required a new round of negotiation with Multicentre Research Ethics Committee and R&D departments which would have been time consuming.

3.7.15 Alternative strategies considered

A number of other strategies were also considered for accessing women's views and experiences. These included face-to-face recruitment by the midwifery research fieldworker of women being discharged from the postnatal ward; this was rejected as it could not be accommodated alongside the midwifery research fieldworker's duties in her substantive post; it would have required submission and approval of a protocol amendment and also precluded the continued support to other Trusts. We were particularly attracted to the idea of focus-group discussions with women. These had not been part of the original plan but we felt that they might add another, richer, dimension which would augment the interview data. These, ideally, would be carried out with pre-existing groups of women such as a postnatal reunion of an antenatal class or groups of new mothers in SureStart areas. The difficulty was that accessing women via NHS routes would again necessitate a further round of negotiation with Multicentre Research Ethics Committee and Trusts' R&D departments, which would have introduced substantial delays. We explored a number of avenues for accessing women via non-NHS routes but, unfortunately, time pressures were such that these plans had to be abandoned as impossible within the time frame.

3.7.16 Phase 2 recruitment procedures

The community managers were re-contacted to arrange suitable dates to meet with the community midwives. The Recruitment Fortnight dates, all in November/December 2005, were agreed between the team and the Trusts. All Trusts followed the second recruitment protocol. Due to time constraints and the timing of their meetings dates, Conwy midwives did not receive a presentation but we were assured that they were happy to proceed without this. Following a detailed telephone conversation between the co-principal investigator and acting manager that clarified expectations and processes, the manager was sent recruitment packs with covering letters to distribute to the midwives. Contact was maintained via e-mail and telephone during their period of recruitment.

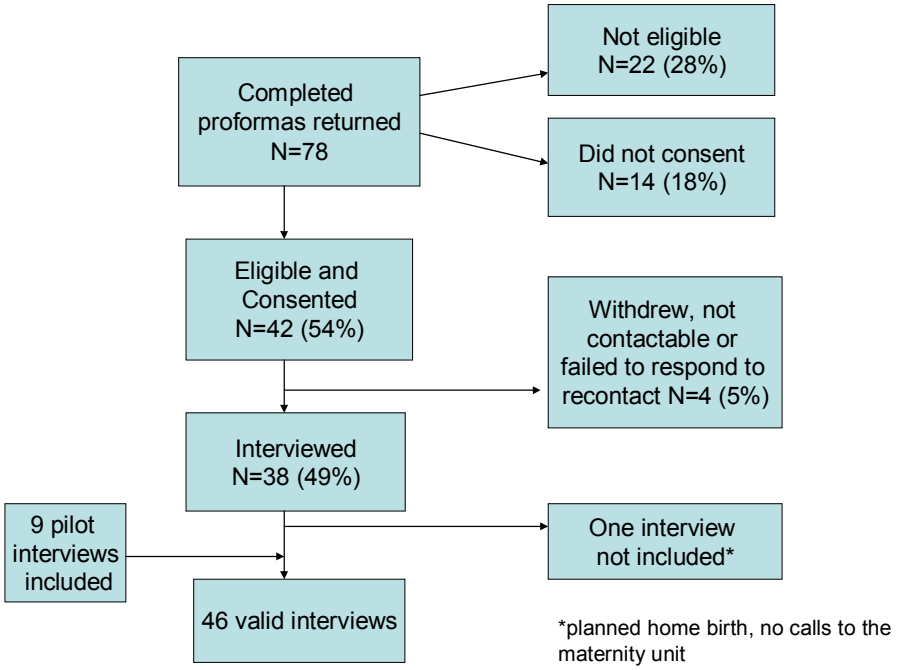
The midwifery research fieldworker made presentations to both Gwent and Cardiff midwives to remind them of the aims of the study, the

recruiting process and provide an update on progress made. Recruitment packs were distributed to the team leaders present. Because both Trusts in the south ran their recruiting periods during the same weeks some of the midwife packs were sent directly to named individuals with a covering letter.

An addition to the midwives' packs was a sheet of 14 stickers with the recruiting dates printed on them. The aim of the stickers was for midwives to place a sticker on each page of their work diary (where all midwifery work and postnatal visits are recorded) to remind them to inform women of OPAL and to try to recruit them to the research. As with Conwy Trust contact was maintained via e-mail and telephone with the managers, who were asked to remind midwives of the importance of recruiting women and returning completed documentation.

3.7.17 Final recruitment figures

Figure 3.1 Recruitment response (phases 1 and 2 combined)



Regrettably, the response from the second recruitment phase was no better than the first. Twenty-five forms were returned: of these six were not eligible and five did not consent, withdrew or could not be contacted, resulting in a further 14 interviews carried out. The final total figures are shown in Figure 3.1. We were also able to include data from nine women who had been interviewed as part of the pilot, yielding a final total of 47 interviews. However, one of these was with a woman having a planned home birth who made no calls to the maternity unit, only one brief call to

notify her community midwife of labour onset. Since most questions did not apply to her, this interview has not been included, although we understand that the care of women giving birth at home is included in the Pathway.

3.7.18 Sample characteristics

Just over half the sample had an expected journey time of 15 min or less. However, six women (13 per cent) had a journey time of 30 min or more, reflecting the rurality of many areas of Wales. The sample is somewhat older, and probably better educated, than first-time mothers in Wales as a whole, as shown in Appendix J. This will, to some extent, be because young and less-educated women are less likely to agree to participate in research. It may also reflect selection bias at recruitment by community midwives.

Just over half (*n*=24) of the births were spontaneous; instrumental deliveries accounted for just under one-third (*n*=14) and six women had a caesarean section. Table 3.1 shows the comparable figures for the whole of Wales for 2003/2004. However, it is difficult to say to what extent our sample is representative, since women were all low-risk primiparas. The low number of caesarean sections, however, probably does reflect a sampling bias.

Table 3.1 Mode of birth

	Frequency	Percentage	National percentage 2003/2004*
Spontaneous	24	52.2%	67.1%
Caesarian section	6	13.0%	23.8%
Instrumental	14	30.4%	8.8%
Missing	2	4.3%	
Total	46	100.0%	

**Taken from Health Statistics Wales (2006), www.wales.nhs.uk/page.cfm?pid=739.*

3.8 Women: findings

We will first present descriptive quantitative information on women's experience of Part 1 of the Pathway. Following that we will focus on women's satisfaction and its determinants, first based on statistical analyses and then drawing on women's qualitative descriptions. This is followed by a further focus on antenatal preparations and expectations which emerged as an important issue.

Our focus is on the sequence of communications that women had with the maternity unit from their first phone call through to going to hospital for the last time. As we shall see, the range of experiences was substantial. To demonstrate this and as an aid to identifying the pattern of events for individual women we have illustrated the trajectories of all 46 women in the flow charts given as Figures 3.2–3.6. Because women's later communications with the maternity unit all built on the first contact and the advice given, we have grouped women according to the response that they received to their first call: first the 21 women who were asked to phone back (Figure 3.2) and then those who were asked to come in (*n*=18; Figure 3.3). The two additional flow charts show the alternative paths followed by the seven women who did not fit either of these two main groupings. It may be helpful to refer to these flow charts in later sections when individual women's experiences are discussed in more detail. Accordingly each woman's code number (e.g. Z201) occurs at the end of her branch on the diagram so that her route can be followed. Each letter U–Z represents a different NHS Trust. A letter P as a prefix indicates that the woman was interviewed as a pilot.

3.8.1 Descriptive information of women's experience of Part 1 of the Pathway

Process issues

Only one woman said that she had encountered problems getting through on the telephone to the delivery suite. Over a third (*n*=18) said that they received the impression that the unit was busy when they telephoned but very few women (*n*=4) experienced interruptions to their phone calls. Over two-thirds (*n*=32) said that they were not aware of being taken through a preset list of questions on the phone and the vast majority (*n*=40) felt they were able to raise all the issues they wanted to during the calls. All phone calls were conducted in English, which was the language of choice for most women, but two would have preferred Welsh. Most women were quite happy about the conversations being on the phone rather than face to face, but five women said that they were not comfortable with it, saying that it was not as personal; they felt awkward or were just unhappy about it.

Being treated as an individual and treated with respect

Women were asked if they felt that they were treated as an individual and also whether they were treated with respect. Over three-quarters (*n*=36) said they felt as if they were treated as an individual on the phone by all staff, although six women felt treated as an individual by only a few staff or not by any. Similar figures were reported for feeling treated with respect: three-quarters (*n*=36) felt that they were treated with respect by all staff; five by only a few staff or not at all (see Appendix J). For

subsequent analysis a new combined variable was created: women who felt treated as an individual and with respect by all staff (*n*=34) and those who did not (*n*=9; responses were missing for three women).

Prior awareness of the Pathway

Table 3.2 demonstrates that a little over two-thirds of the women (*n*=32) said they were aware of the Pathway. Seventeen women had discussed it with their midwife while discussing their birth plan. Twenty-seven women said that they had attended antenatal classes and 11 said that the Pathway had been discussed there. Women were not asked directly whether they had received a copy of the Pathway leaflet, but, when the qualitative analysis suggested that this might be an important variable, we went back to each of the interviews and extracted this information. Twenty-six women were evidently familiar with the leaflet; the remaining 20 were not, or made no reference to it. These relatively low numbers suggest that there may be scope for improving women's awareness of the Pathway, and its rationale and purpose.

Table 3.2 Awareness and discussion of the Pathway

	Yes	No	Not sure/missing/not applicable	Total
Aware of Pathway	32 (69.6%)	13 (28.3%)	1 (2.2%)	46
Discussed Pathway in birth plan*	17 (37.0%)	18 (39.1%)	11 (23.9%)	46
Attended antenatal classes	27 (58.7%)	18 (39.1%)	1 (2.2%)	46
Discussed Pathway at antenatal class	11 (23.9%)	8 (17.4%)	27 (58.7%)	46
Had a leaflet*	26 (56.5%)	–	20 (43.5%)	46

**We had not asked women directly whether they had had a Pathway leaflet (see above).*

Women's awareness of where and when to call

The vast majority of women (*n*=44) knew where to phone: the central labour and delivery suite. Nearly a quarter (*n*=12) did not know, or were unsure, of *when* it was appropriate to telephone. The Pathway leaflet (see Appendix D) does not tell women this explicitly. The statement 'you are advised to contact a midwife at this stage' appears in the column headed 'Active Labour – 1st Stage'. It is implicit that the events in the column headed 'Very early labour' have already occurred. These include 'Contractions feel uncomfortable but are not yet regular' 'You may pass a "show"; the plug of mucus is released from your cervix. It can be

streaked with blood. Your waters may break.' Since these signs are only 'maybes', the only definitive sign that the Pathway leaflet offers is that in 'Active Labour' 'Contractions are coming regularly about every 5 minutes (or more frequently) and lasting 20–60 seconds'. When women were asked what signs they were looking out for (Appendix J), it is therefore not surprising that 'contractions' was the most frequently mentioned sign (*n*=26; 56.5 per cent); indeed, it is perhaps surprising that more women did not give this response.

The frequency of contractions that women were looking out for and the frequency that actually prompted them to phone may have been different from the guidance in the leaflet. Of the 26 respondents saying they were looking out for contractions, half mentioned that the contractions should be 5 min apart or less, as indicated on the Pathway leaflet; two identified 10 min as the interval; seven respondents did not mention any specific interval between contractions, just that they were definitely occurring or were painful, regular or stronger.

Making telephone contact in early labour

The 46 respondents made a total of 104 calls, as shown in Table 3.3. Two calls was the modal response (*n*=19); just over one-third of the sample made more than two calls (*n*=16). Two women made five calls. Just over half of the women (*n*=24) made no contact with other sources of advice in early labour, whereas 16 made contact with their mother or other female relative. Over three-quarters (*n*=36) had their partner present when they made the first phone call, but eight were alone. Just over half the first calls (*n*=27) were made during the day, between 6 am and 6 pm. The time interval between the first and last call was 12 h or less for 82.6 per cent of the sample (*n*=38; including the 11 women who only made one call). For two women, the calls were spread over a period of 2 weeks (see Appendix J, Tables J7–J10).

Table 3.3 How many times did you phone the hospital?

How many times	Frequency	Valid percentage	Cumulative percentage
1	11	23.9	23.9
2	19	41.3	65.2
3	11	23.9	89.1
4	3	6.5	95.7
5	2	4.3	100.0
Total	46	100.0	

What prompted the phone calls

Rupture of membranes was the most common event that prompted women to make the first call (Table 3.4), cited by just over one-third of

women, with contractions and pain being next most common, although contractions may not have been 5 min apart when they phoned. Pain prompted most of the last calls (16 out of 35 with a second call), with contractions being the next most common reason (Table 3.4).

Table 3.4 What prompted you to phone (first call and last call)?

	First call		Last call	
	n	**%**	***n***	**%**
Waters broken	16	34.8	2	4.3
Contractions	10	21.7	10	21.7
Pain	9	19.6	16	34.8
Bleeding	5	10.9	–	–
Concern for baby's health	–	–	1	2.2
Prearranged time to call back	n/a	–	3	6.5
No second call	n/a	–	11	23.9
Other	6	13.0	3	6.5
Total	46	100.0	46	100.0

Details of the first and last phone calls

Table 3.5 shows that the majority of first phone calls (*n*=25) were of less than 5 min duration. This is in contrast to the impression that emerged from the focus groups with midwives and we will return to this point below. Of the 23 cases where times were given for last calls, half (*n*=11) were less than 5 min.

Table 3.5 Duration of first and last phone calls

Call length	First call		Last call	
	n	**%**	***n***	**%**
<5 mins	25	54.3	11	47.8
5–10 min	20	43.5	12	52.2
10+ min	1	2.2	–	–
Total	46	100.0	23	100.0

*Few respondents (*n=*6) knew the midwife that they spoke to on the phone.*

The questions asked most commonly by the midwife related to frequency of contractions and details about the type of vaginal loss (Appendix J). Only 28 women (60.8 per cent) said that they were asked how they were feeling.

Advice to attend or to stay at home

First phone call

At the first phone call, just over one-quarter of the sample (*n*=12) were asked to attend the unit immediately and another five to 'make their way in when ready'. The most common advice was to remain at home and to phone again later (*n*=21). Details are shown in Appendix J.

The likelihood of being asked to come in was related to whether or not the woman's waters had broken. Twelve of the 17 women who were asked to attend had ruptured membranes (eight asked to attend at once; four 'when ready') in contrast to only five of the 21 who were advised to stay at home. Women advised to stay at home were given varied instructions about *when* to phone back, as Table 3.6 shows, but the most frequent was 'when labour advances'.

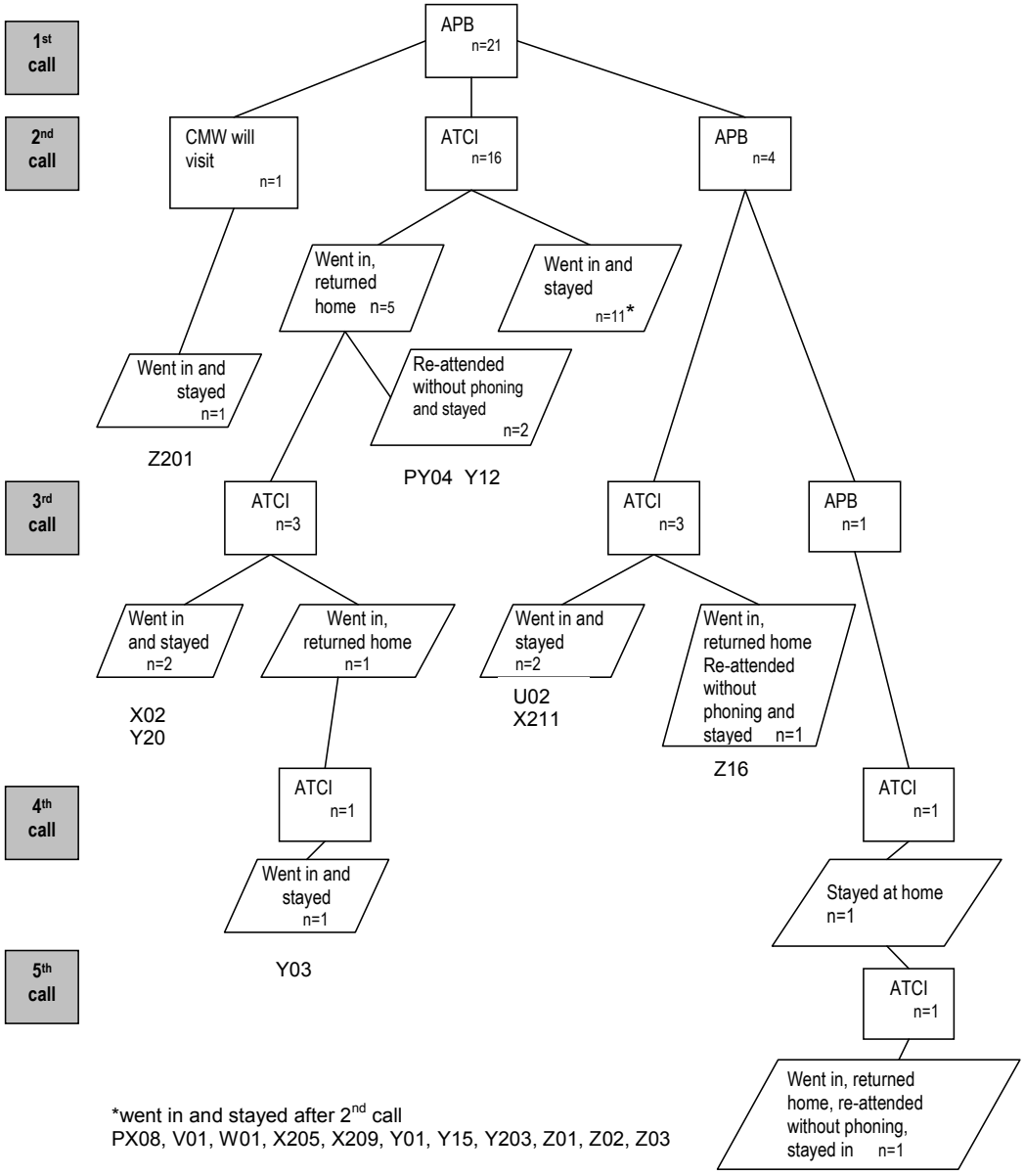
The advice and instructions given on the first call were as expected in the majority of cases (*n*=27). However, just over one-third of respondents (*n*=16) said that it was not what they expected or that they were unsure about what they had expected to be told.

Table 3.6 What were you told on the first phone call?

	Frequency	Percentage
Asked to phone back		
Ring back when labour advances	14	30.4%
Ring back at a certain time	4	8.7%
Ring back if concerned	2	4.3%
Ring back to update hospital on progress	1	2.2%
Asked to come in		
Attend unit	12	26.1%
Make way in when ready	5	10.9%
Come in if you like	1	2.2%
Alternative routes		
Call back/asked to come in 24 h	3	6.5%
Contacted own midwife	2	4.3%
Had planned contact with community midwife/hospital just before labour onset – asked to phone back	2	4.3%
Total	46	100.0%

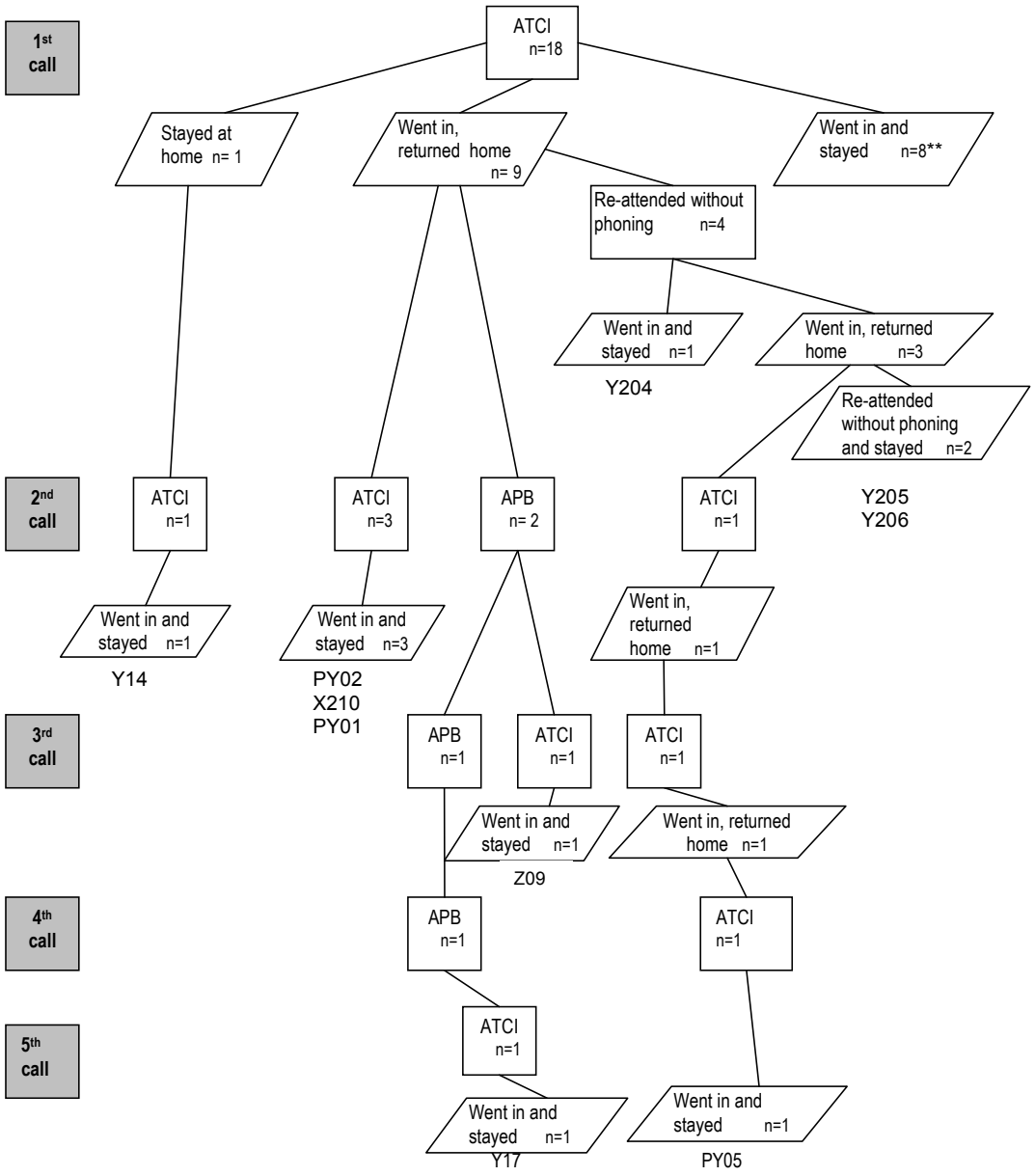
Sub-headings refer to flow chart routes (Figures 3.2–3.5).

Figure 3.2 Individual women's sequence of events: women asked to phone back at first call (*n*=21)



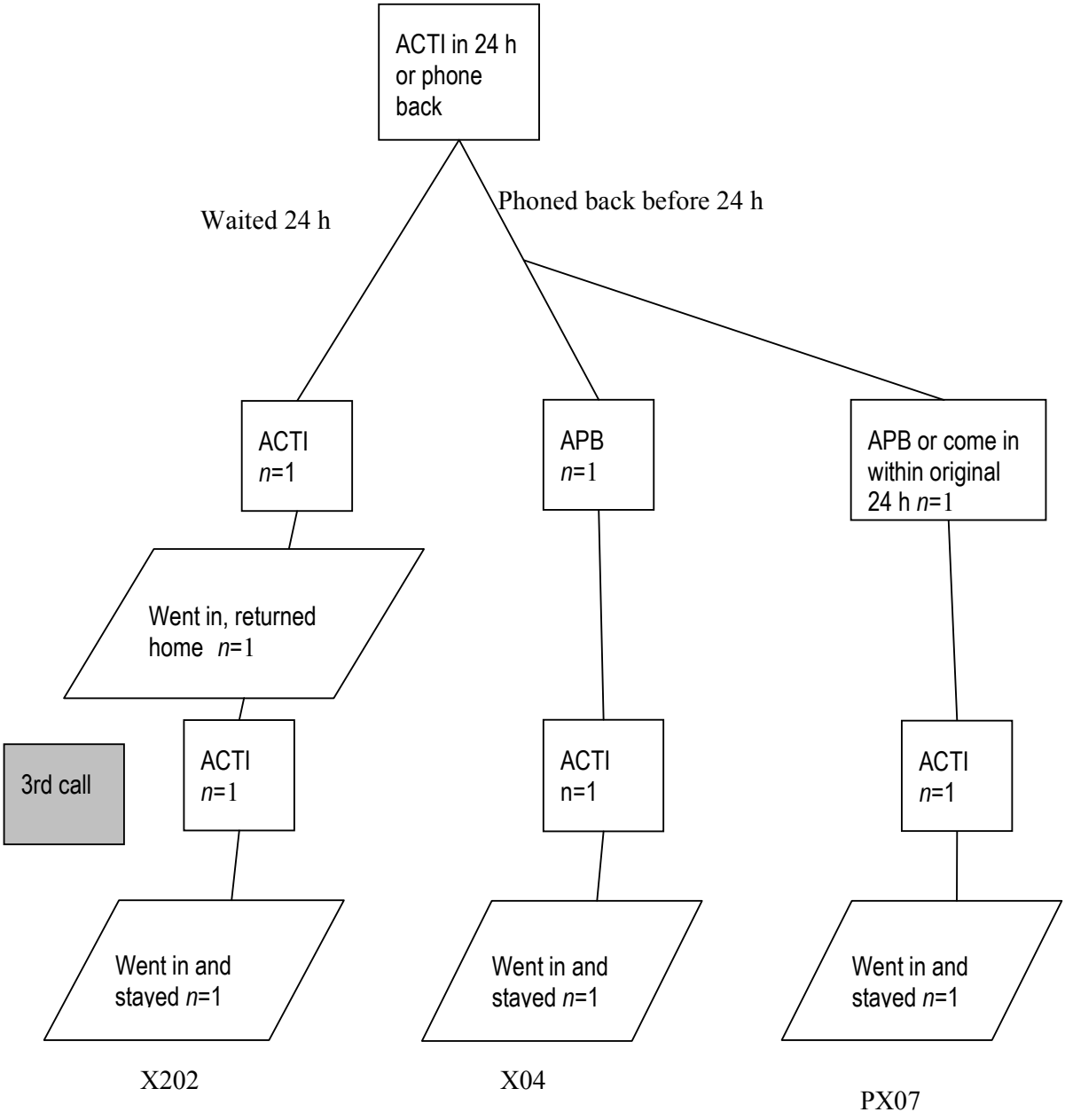
Key	
▭	Advice given on phone call
▱	What happened
APB	Asked to phone back
ATCI	Asked to come in
CMW	Community midwife
codes (e.g. PX08)	Participant ID

Figure 3.3 Individual women's sequence of events: women asked to come in on first call (*n*=18)



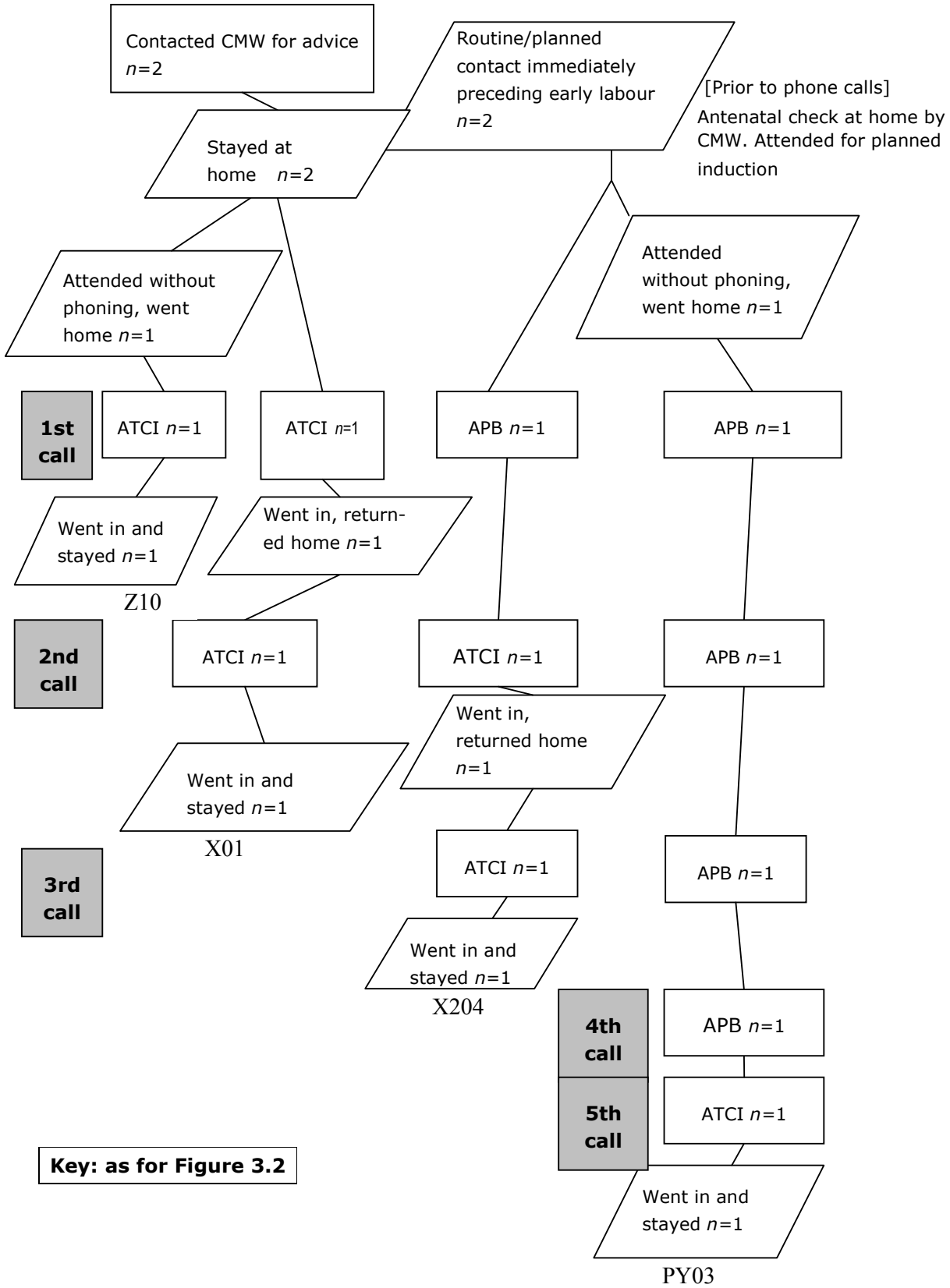
Key: as for Figure 3.2

Figure 3.4 Individual women's sequence of events: exceptional scenarios (1) (*n*=3)



Key: as for Figure 3.2

Figure 3.5 Individual women's sequence of events: exceptional scenarios (2) (*n*=4)



3.8.2 Advice while staying at home

Advice for women staying at home at the first call was, most commonly, to have a warm bath (*n*=19) and take paracetamol (*n*=17); Table 3.7 also demonstrates that six respondents said they had not received any or couldn't remember what the advice was.

Table 3.7 What advice were you given on phone (first call)?

	Frequency	Percentage
Warm bath	19	41.3%
Paracetamol	17	37.0%
Keep active	8	17.4%
TENS machine	5	10.9%
Rest	5	10.9%
Diet/food/drink	5	10.9%
Breathing/relaxation/postural change	4	8.7%
Keep calm/take it easy	2	4.3%
Other		
Regarding coming in	2	4.3%
Regarding phoning back	2	4.3%
Contact own midwife	1	2.2%
Drink cold water to stimulate fetal movement	1	2.2%
Keep eye on show	1	2.2%

This was an open-ended question. Answers are given in order of frequency. The total is >100 per cent because women gave multiple responses.

Most women said that the advice was as expected but some had no expectations

> *I was not sure what to expect as I'd not done before. I didn't know about paracetamol.*
>
> (Z01)

and others felt that their need for support was not met:

> *I think I was expecting more, I was expecting how to be advised to look after myself. My Mum said to have a warm bath. I wasn't given any advice about how to control the pain. I came off the phone and was like 'oh, that's all it was'. I had no advice on what to do.*
>
> (Z03)

The rationale for the advice was not always understood.

> *I was asked to come in in 24 hours – it wasn't explained why in 24 hours.*
>
> (PX07)

Feelings about staying at home after phoning

Thirty-four women were not asked to come in straight away on their first call and they were asked whether they had felt confident to stay at home. Most (*n*=30/34) said that they did. They were then asked an open-ended follow-up question, 'What do you think made you feel that way?' In most cases (*n*=18) women associated this with 'feeling OK in myself'. Reasons cited by the four women who did *not* feel confident to be at home were: distance from hospital; being alone; not knowing what was happening; and feeling unprepared as the antenatal classes had been cancelled.

The majority (*n*=28) of the 34 women staying at home after their first call felt they had been given enough advice from the midwife on the phone to stay at home. Of the four women who did not feel they had had enough advice to stay at home, one commented on the brevity of the call as the reason why she did not feel she had enough advice on the phone; the remaining three expressed an unmet need for knowledge and information:

> *I wouldn't have known what to do if anything had happened. You hear about some babies being born very quick, but I wouldn't have known what to do.*
>
> (Y12)

Of the 10 women who were not asked to come in to the unit straight away on their last call, all were confident to stay at home: five felt confident because of themselves and how they were feeling; two because of their partner; one because of their mother and two because of the midwife on the phone:

> *She was quite thorough, told me loads of things to be aware of, I felt quite safe coming off the phone to her.*
>
> (X04)

In most cases (*n*=27) partners felt the same way about the woman staying at home.

Feeling encouraged to be at home in early labour

All women were asked if, overall, they had felt that they were being encouraged to stay at home as long as possible, and, if so, how they felt about this. Most (*n*=32) said that they did feel encouraged to stay at home, and comments suggested that they were generally happy about this because it fitted with what they wanted or expected.

> *OK. Spoke to my friend and she had said she wanted to stay at home as long as possible. That reassured me that it was OK to do that.*
>
> (PX07)
>
> *Fine, I'd wanted to be at home as long as possible all along, but I did not want a home birth.*
>
> (X204)

Some also made a point of saying that they felt that they could have gone into the unit if they had wanted to.

> *That was fine – I was given the choice all along but encouraged to stay at home.*
>
> (PY01)

However the comments of 10 of these 32 women suggested that they were unhappy about it overall and we will look at these in detail in a later section.

Of the 12 women saying they did not feel they were being encouraged to stay at home for as long as possible, four said it was because they had been given a choice or been advised to stay at home until a certain point when they would be coming in. Two said they were happy about not being encouraged, one made no comment and only one expressed unhappiness about not being encouraged to stay at home, saying she wanted to stay at home longer. Four respondents said they felt neither encouraged nor discouraged, all were happy about this and said it was because they had been made to feel welcome to attend if they wanted to and felt that they had been given the choice.

Once the woman attended hospital

Nearly half (22) of the respondents had the experience of attending the hospital in early labour and then being sent home again. As the flow charts (Figures 3.2–3.5) show, some women had this experience on multiple occasions. Half of these women (11/22) understood it was appropriate to be sent home and four were happy to go home. However, five women were disappointed to be sent home and a further two were angry. These reactions will be discussed in more detail below when we consider the factors associated with satisfaction.

Nine women stayed in hospital with labour not progressing. Two women understood it was appropriate and one felt happy to be kept in, however the rest felt a range of emotions - anger, unease, disappointment, and frustration.

Overall, just under three–quarters of women (*n*=33) felt they went into hospital at the right time – when they went and stayed in until the baby was born – the remainder (13) of women felt they went to hospital either too late or too early.

3.8.3 Satisfaction: statistical analyses

At the end of the interview women were asked 'Overall, on a scale of 0–5, with 0 being very dissatisfied and 5 being very satisfied, how satisfied were you with the telephone conversation[s] that you had?'

There were generally high levels of satisfaction, with over two-thirds giving satisfaction scores of four or five. However, 28 per cent (*n*=13) reported being less satisfied, scoring their experience as three or less

(shown in Table 3.8). In the remainder of this section we will explore the variables associated with women's levels of satisfaction.

Table 3.8 Overall satisfaction scores

Overall satisfaction score	Frequency	Percentage
1	1	2.2
2	3	6.5
3	9	19.6
4	17	37.0
5	16	34.8
Total	46	100.0

5=Very satisfied.

We will consider women in three groups:

- completely satisfied (score of 5; *n*=16),
- not completely satisfied (score 4; *n*=17),
- dissatisfied (score of 3 or less; *n*=13).

Women's satisfaction grouping was significantly related to age: women in the upper half of the age range (>30) were more likely to be satisfied (χ^2=13.87, 2 df, *P*=0.001; see Appendix J, Table J12) than younger women. There was a tendency for women educated to degree level to be more likely to be completely satisfied but this did not reach statistical significance (χ^2=3.95, 2 df, *P*=0.14, see Appendix J, Table J12). The explanation for the association between age and satisfaction may be to do with greater confidence and being articulate (in which case we might have expected a stronger relationship with education) or, we conjectured, it may be to do with how women of different ages are treated (see qualitative data).

There was no relationship between satisfaction and subsequent mode of birth, which offers reassurance that women's judgements of their early labour experiences were not being coloured by later events. The numbers of women from individual Trusts were too small for statistical analysis of this variable, although there was a suggestion that one unit had a disproportionate number of more-satisfied respondents and another a disproportionate number of less-satisfied women. The latter were mainly recruited in the pilot phase. It is possible that the slightly different recruitment method for pilots may have made it more likely that dissatisfied women would respond, but this can only be conjecture.

Not feeling treated as an individual and with respect (χ^2=11.79, 2 df, *P*=0.003) was the variable most strongly related to satisfaction. No woman who said that she was 'not always treated as an individual and with respect' was completely satisfied, and two-thirds of these women fell into the least-satisfied group (Table 3.9). There was a suggestion

in the data that younger women were less likely to feel treated as an individual and with respect.

Table 3.9 Satisfaction and being treated as an individual and with respect

	Completely satisfied	Not completely satisfied	Dissatisfied	Total
Not treated as an individual and with respect by all	0 (0.0%)	3 (33.3%)	6 (66.7%)	9 (100.0%)
Treated as an individual and with respect by all	16 (47.1%)	13 (38.2%)	5 (14.7%)	34 (100.0%)
Total	16 (37.2%)	16 (37.2%)	11 (25.6%)	43 (100.0%)

Satisfaction was related to the length of calls. Women who had no calls that lasted more than 5 min were much more likely to be dissatisfied (χ^2=8.11, 2 df, *P*=0.02), as Table 3.10 shows.

Table 3.10 Satisfaction and length of calls

Any calls >5 min?	Completely satisfied	Not completely satisfied	Dissatisfied	Total
No	4 (23.5%)	4 (23.5%)	9 (52.9%)	17 100.0%)
Yes	12 (41.4%)	13 (44.8%)	4 (13.8%)	29 (100.0%)
Total	16 (34.8%)	17 (37.0%)	13 (28.3%)	46 (100.0%)

Women who perceived that the unit was busy when they phoned appeared more likely to be dissatisfied, but this did not quite reach statistical significance (χ^2=5.02, 2 df, *P*=0.08).

Table 3.11 Satisfaction and number of phone calls

Number of calls	Completely satisfied	Not completely satisfied	Dissatisfied	Total
1	4	5	2	11
2	7	8	4	19
3	5	2	4	11
4	0	2	1	3
5	0	0	2	2
Total	16	17	13	46

Although cell sizes are too small for statistical analysis, Table 3.11 suggests that women making more than three calls were least likely to be completely satisfied. The same tendency is apparent if we consider

the mean number of calls made by women in each of the three satisfaction groups (Table 3.12).

Table 3.12 Satisfaction and mean number of phone calls

Satisfaction level…	Completely satisfied	Not completely satisfied	Dissatisfied
Mean number of calls	2.06	2.19	2.77

Women who felt that they were being taken through a set list of questions were no more likely to be dissatisfied.

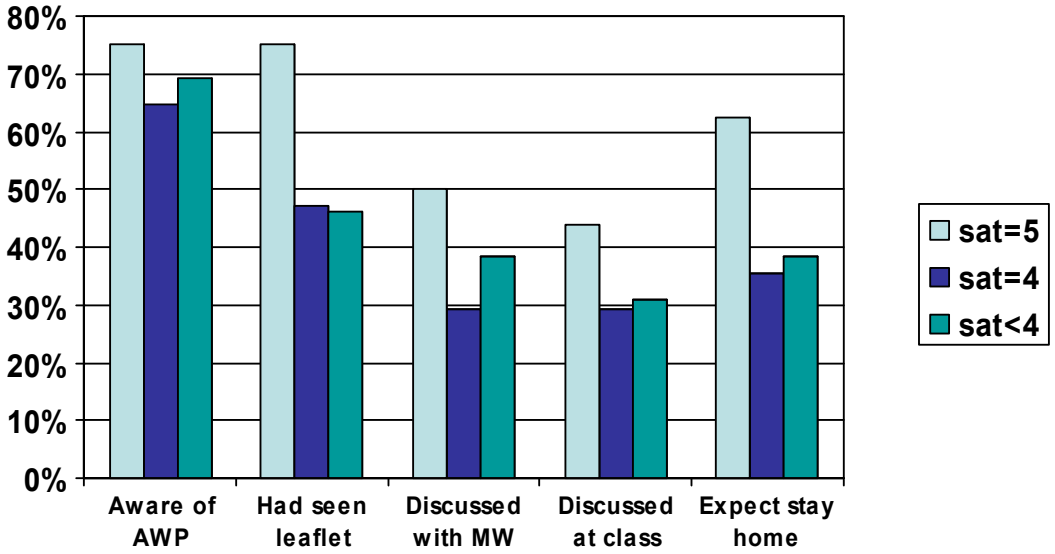
Being sent home again after going to hospital was significantly related to dissatisfaction (χ^2=6.83, 2 df, *P*=0.03; see Appendix J, Table J13).

Women who were aware of the Pathway were no more satisfied than those who were not (Table 3.13). However, other more specific aspects of antenatal awareness and preparation did appear to relate to satisfaction as shown in Table 3.13 and Figure 3.6. There is a notable difference between the completely satisfied group and the rest regarding the leaflet and discussion of the Pathway and an antenatal expectation to stay at home in early labour. Note that there is little difference between the groups who were 'less than completely satisfied' and 'dissatisfied'. This might indicate that antenatal preparation is a prerequisite for complete satisfaction, but is not in itself sufficient. We will return to the important topic of preparation in a subsequent section.

Table 3.13 Preparation for the Pathway and satisfaction levels

	Completely satisfied	Not completely satisfied	Dissatisfied	All women
Aware of pathway	12	11	9	32/46
Had a leaflet	12	8	6	26/46
Discussed pathway with midwife	8	5	5	18/46
Discussed pathway at antenatal class	6	4	4	14/46
Not discussed at class	6	1	4	11/46
Did not attend antenatal class	4	10	5	19/46
Antenatal expectation to stay home in early labour	10	6	5	21/46
Total	16	17	13	46

Figure 3.6 Antenatal preparation within groups with different levels of satisfaction



AWP, All-Wales Pathway; MW, midwife; sat, satisfaction score.

The antenatal expectation to stay at home in early labour had come from the community midwife in most cases, but others had received the same message from antenatal classes, from 'a lot of people', and from 'friends'.

3.8.4 Satisfaction: women's descriptions of their experiences

In this section we will look in more detail at the experiences of women who fell into the three satisfaction groups in order to understand more about what makes for a satisfactory or unsatisfactory experience. It was evident during the interviews that the 21 women who had (or may have had) rupture of membranes prior to phoning the maternity unit were generally asked to come in on their first call. Many returned home after assessment and may or may not have made further telephone calls. This means that they followed a somewhat different pattern from women with intact membranes. We will therefore focus our discussion initially on women with intact membranes and then go on to discuss the similarities and differences for those with (possible) ruptured membranes. The distribution of satisfaction scores across these two groups was almost identical.

The trajectories of individual women can be traced on the flow diagrams presented in Figures 3.2–3.5, and Table 3.14 lists the code numbers of all the women, with their satisfaction score, membrane status and the number of the flow chart on which they can be located.

Table 3.14 Details of individual women's satisfaction scores, membrane status and the flow-chart number on which she appears

Patient ID	Satisfaction score	Membranes ruptured at first call	Flow chart figure number
P06	5	No	3.3
PU09	5	Yes	3.3
PX07	4	Yes	3.4
PX08	5	Yes	3.2
PY01	5	Yes	3.3
PY02	3	Yes	3.3
PY03	3	No	3.5
PY04	3	No	3.2
PY05	1	Yes	3.3
U02	5	No	3.2
V01	4	No	3.2
W01	4	No	3.2
X01	2	Yes	3.5
X02	5	Yes	3.2
X03	4	Yes	3.3
X04	5	Yes	3.4
X201	4	No	3.2
X202	4	Yes	3.4
X204	5	No	3.5
X205	4	Yes	3.2
X209	5	No	3.2
X210	5	No	3.3
X211	3	No	3.2
Y01	4	No	3.2
Y03	4	Yes	3.2
Y12	3	No	3.2
Y14	4	No	3.3
Y15	5	No	3.2
Y17	3	Yes	3.3
Y18	3	No	3.3
Y19	4	Yes	3.3
Y20	4	No	3.2
Y201	4	No	3.3
Y203	4	No	3.2

Patient ID	Satisfaction score	Membranes ruptured at first call	Flow chart figure number
Y204	4	Yes	3.3
Y205	5	Yes	3.3
Y206	3	Yes	3.3
Z01	2	No	3.2
Z02	5	No	3.2
Z03	4	No	3.2
Z04	4	Yes	3.3
Z09	5	Yes	3.3
Z10	3	No	3.5
Z16	2	No	3.2
Z201	5	Yes	3.2
Z202	5	No	3.3

We will first present the experiences of women who were completely satisfied (score of 5), then the experiences of women who were not completely satisfied (score of 4) and finally the experiences of women who were dissatisfied (score of 3 or less).

Women who were completely satisfied

Women with intact membranes (*n*=8)

In response to their first call, this group of women were typically asked to phone back when labour advanced if their membranes were intact, usually defined clearly; for example, 'when contractions are five minutes apart and lasting for one minute', or at a set time, 'in two hours', or 'when you can't cope with the pain'. Women welcomed such exact instructions:

> *I was given clear instructions, not 'well it might be better', which was what I needed.... I waited till the contractions were doing what the midwife said then phoned, they said come in.... I took the advice they gave and waited for it to happen...I knew it would be OK to go in.*
>
> (Z02)

> *They said I could stay at home but advised me that I was going to have to come in within a couple of hours – they'd be expecting me.*
>
> (U02)

This also demonstrates the trend in these calls of an implication that the woman would be expected to come in soon, once she had reached the criteria for phoning back, or she could make her way in when ready or had the choice to come in but opted to stay at home a bit longer.

There were no comments indicating that the woman felt unwelcome, that she was not asked to come in when she wanted to go in or that

she felt that she was being put off going into hospital. Furthermore, in this group of women there were no comments indicating a negative experience on the phone.

There were a number of positive comments offered, demonstrating the women's appreciation of the midwife's reassurance, confidence, information, friendliness and encouragement:

> *Very calm and helpful and friendly - wasn't made to feel 'oh, it's another one'.*
>
> (Z02)

> *She put my mind at rest, said it was all normal.... Said I was welcome to come in.*
>
> (Y15)

> *I was particularly impressed, I was struck when I had the contraction on the phone, you're on the phone and you feel the need to almost talk but the midwife was very much saying 'Look, you don't need to talk, I won't put the phone down, just get through it and then start talking again' and she was talking to me, I thought she was really good.*
>
> (X209)

Two of the eight women with intact membranes were sent home but were both aware of this possibility before going in for a check. Although one woman asked to come back in (rather than being invited to) on her subsequent phone call, she had been given an indication that she would be expected back soon:

> *The midwife at the hospital said I'd probably be back before midnight.*
>
> (X204)

Women with ruptured membranes (*n*=8)

Of the satisfied women with ruptured membranes, five were asked to come in on their first call. The time at which they should attend was not given as immediate or soon: in 3 h; within 24 h if nothing happened; make your way in when ready. Two were asked to phone back when labour advanced, and both were subsequently asked to come in on their second call. One contacted her community midwife, who went to visit after a second call. There were three examples of women choosing to stay at home longer after being invited to attend.

As with the women with intact membranes, there were no comments suggesting a negative experience on the phone and no evidence indicating that the woman felt unwelcome; was not asked to come in when she wanted to go in; or was put off going into hospital. One respondent volunteered:

> *I didn't feel I was being forced to [stay at home] I felt the ball was in my court, I didn't feel 'you're not allowed in yet, you're not ready', they were so lovely... 'cos I was so relaxed they took it from me what I wanted to do.*
>
> (X04)

In two cases (X02, X04), the woman had been telephoned by midwives at the hospital to see how things were progressing at home. Again, there were a number of positive comments from the majority (*n*=6) of respondents referring to the midwife's reassurance, confidence-giving and encouragement, welcoming, information, being given a choice and feeling confident in the midwife's ability:

> *Given choice all along but encouraged to be at home…gave me confidence.*
>
> (PY01)

> *Felt I was in good hands…treated as an individual…your wishes were taken into consideration…calls were really reassuring.*
>
> (Z201)

Five of the eight women with ruptured membranes were sent home after attending the hospital, some were given the choice to go or had arrangements made for when they would return. One (PX08) was disappointed to go home, she was aware of a policy that women are invited to attend on their second call and expressed some element of regret at having phoned too soon. However, she had been given reassurance that it was OK to phone once she had gone home.

Women who were not completely satisfied

Women with intact membranes (*n*=9)

Seven of the nine women with intact membranes were asked to phone back once labour advanced, the criteria being: contractions 5 min apart and lasting 1 min; pains worse or not being able to cope with the pain; or at a set time. One woman was given a choice about whether to come in or not, another was asked to come in but she stayed at home to have a bath before going in.

There were two examples of women being told that they were welcome to come in but opting to stay at home.

> *I felt confident that they were saying you can come in when you want to. They didn't stop me coming in, I had the option.*
>
> (V01)

Three of the nine respondents indicated that at some point they themselves asked to come in, rather than being invited. One of these indicated being made to feel less welcome:

> *…they said if you've got to come in, come in.*
>
> (Y01)

Six respondents had some negative comments about the advice they were given during the phone calls. In two cases (W01, Y203) this was because they were told that the unit was full. One woman felt she was having to repeat information on different calls; and also wanted to be induced on her due date but wasn't (X201). Z03 had also wanted calls

to be in Welsh. The other three all felt that they had failed to obtain helpful advice:

> *…think I was expecting more, was expecting how to be advised to look after myself.... I wasn't given any advice about how to control the pain. I came off the phone and was like 'oh, that's all it was'. No advice on what to do.*
>
> (Z03)

One woman, who had previously opted to stay at home longer, wanted to stay in hospital after attending but was told she would have to have pain relief in order to stay. This created a dilemma for the woman as she had wanted to avoid taking drugs where possible.

> *After I was examined I was only 1 cm dilated and the midwife said I would have to go home or have – the only way to stay in hospital would have been to have some drugs. I was against having any but didn't want to go home. It was a half-hour journey on country lanes with contractions every 3 min. I was offered pethidine and after much deliberating I decided I would do that as I didn't really want to go home.*
>
> (Y14)

Women with ruptured membranes (*n*=8)

Five of the eight women in this group were asked to come in on their first call: now; in 2 h; within 24 h if nothing happened. Three were asked to phone back when labour advanced, and all were subsequently asked to come in on their second call. There were two examples of women choosing to stay at home longer after being invited to attend.

One respondent commented on the advice to phone back in 24 h as 'weird advice', which suggests the rationale for being encouraged to stay at home for this period had not been fully explained during the phone call. She acknowledged that her mother had encouraged her to go in sooner as she had had quick labours and warned her to be watchful. This possibility had, apparently, also not been addressed during the phone call as the woman was anxious about the midwives:

> *…they never seemed to think it could happen sooner.... I was assured it wouldn't happen until next day. It would have been reassuring to hear that I may need to go in earlier.*
>
> (PX07)

One respondent expressed relief at being asked to come in on the first call and then being allowed to stay in:

> *I know they say stay at home, but to be honest with you I think I was probably one of those people that would have benefited from going in because I'm not very good in those [scary] situations anyway and I have quite a low pain threshold, so I probably would have headed in anyway. Extremely glad they told me to come in.... I think I would have been really upset if they had said go home.*
>
> (Y19)

Negative comments about the phone calls were made by two respondents: PX07 – quoted above – and Y204, who was asked to come in but didn't expect this or want to go in. Furthermore, she was angry and annoyed at then being sent home.

Three out of eight women in this group went home after going in to hospital. One had an arrangement to phone back at a certain time to check if there was space for her to be admitted for induction of labour. She went home but felt 'a bit gutted that they were not going to just get on with the induction' (X202). When she phoned as planned she went in and stayed in. Another woman (Y204) went home with a planned return for an induction but was angry and annoyed at having to go home, as described above. The third woman went home twice, the second time after being told 'women are not usually kept in until 4 cm dilated, and no pain relief is offered until 4 cm'. She was given a choice whether or not to go home and went with a planned time to return. Regarding going home, she admitted to feeling:

> *…disappointed and a bit scared, in pain, told it would get worse – the midwife was a bit 'off'.*
>
> (Y03)

She also commented that she felt treated with respect by 'most' rather than all staff.

Women who were dissatisfied

Women with intact membranes (n=8)

Five of the eight women in this group had been advised to phone back when labour progressed but a number had unresolved anxieties after this first call. One woman was having pains 2 weeks prior to her due date:

> *I think I expected them to ask me to go in, but they didn't. [Q: how did you feel about that?] Erm, I think I was a bit scared 'cos it was my first baby as well, I didn't know what to expect.… I would have preferred to go to hospital though. My partner felt the same. They said if I felt any worse I could go in.*
>
> (Y12)

A second woman phoned when she was 3 days past her due date:

> *Short call – not enough time, I didn't feel I could say 'I want to listen to the heartbeat' , they were not very supportive – when I called the first time I just wanted reassurance – partner was anxious. He had had a panic attack. Contractions were getting quicker than 15 minutes, then 10 minutes, then stopping, then 3 minutes. I felt upset after the first call – scared and hormones, but after half-an-hour I felt better.… It would have been reassuring to be able to hear the heartbeat. I was concerned about losing the baby - convinced that the baby had died, especially when it was not moving, it's good being able to listen to the heartbeat.*
>
> (PY04)

Two others were given criteria for when to phone back that they found imprecise. One was told:

> *…if you feel you can hang on a bit longer and see how you go and update us.*
>
> (Z16)

This less-than specific criterion was, not surprisingly, confusing:

> *But then it was 'well how long do you hang on a bit longer for?' That's what confused me, and I was in a bit of pain and I didn't think to say 'well how long is a bit longer'. But she just said 'see how long you can hang on for'. And I thought 'well what if I get to 1 minute apart and I'm stuck with a 5 minute journey?' and, I don't know…. It [phoning back] wasn't so much at an agreed time; it was sort of to say how I was getting on. So I was thinking 'well what do I do, do I phone back in an hour? Do I phone back when I get to so far apart?'…It would probably have been better for one of the women [midwives] to say 'well if they are coming every 5 minutes now wait until they are coming every 3 minutes, or wait till you get to 2 minutes, it's not going to happen straight away', but it was nothing, it was just 'phone back if they get closer', that was it.*
>
> (Z16)

In both these cases the advice led on to a less-than satisfactory series of events: the first woman (Z01) phoned back and admitted to having 'lied about contractions, said they were stronger' in order to be eligible to attend; respondent Z16 complied with instructions and phoned back:

> *I phoned to say they were wearing off so you probably won't expect me up. When I said 'my name is [name] I'm phoning just to let you know that my contractions are wearing off and they are 8 minutes apart'. 'And what are you phoning for?' was the reply and I just sort of said 'Oh, well I was told to give you an update', they said 'that's fine, OK' and that was it. It was that short and sweet and I was left dumbfounded really.*
>
> (Z16)

The impact of this left the woman feeling very 'angry' and unsure about phoning again because of how she imagined the staff reacting:

> *…when I made the third one [call] I thought, all I could think of was them thinking 'Oh god, it's this girl on the phone again'.*
>
> (Z16)

In view of our earlier observations on the relationship between age and satisfaction, it is interesting that this dissatisfied woman, aged 26, imagines that the staff saw her as a 'girl'.

Although we asked an overall level of satisfaction with the phone calls, some respondents, including this one, distinguished their satisfaction with different calls:

> *I'd probably say 2, but that's with the first and last not being as bad as the second. [Q: So if you were to rate each call?] Number one I'd probably give a 3, number 2 a 0, and number 3 a 2 or 3.*
>
> (Z16)

Two of the eight dissatisfied women offered positive comments about the phone calls, while seven made at least one negative comment (some three or more). These related to unmet needs: for information or advice; for support; for having fears or anxieties allayed; and to unmet expectations. The issues were generally the same as have already been described. Y12 had expected to be asked to come in, she was scared and not happy being encouraged to stay at home, feeling she could only go in 'if I felt worse'. Y18 felt that she was given no advice from the maternity unit, only from her sister-in-law. PY03 was 'shocked' to be told that she was not in labour when contractions were 5 min apart and confused about when it would be OK to go in. She felt that midwives were generally not supportive on the phone and specifically mentioned that they did not offer any advice on eating until she asked. When subsequently asked what she wished she had been told on the phone, she replied:

> *What they class as being in labour – but not when actually in labour – better to be told in antenatal class.*
>
> (PY03)

This draws attention to the importance of antenatal preparation and a match between expectations and experiences.

PY04 complained at the briefness of the call and said that she was 'made to feel as if I'd woken them up'. She felt upset and scared after the first call; felt that the advice she was given was not helpful; she was not given the name of the midwife on the phone and on the last occasion of phoning found the line engaged for 30 min.

The last woman in this group (X211) had only one negative comment about the phone calls; that she was 'not made to feel welcome'. That this was her *only* negative comment highlights the impact of this dimension. She was explicit that this was what reduced her satisfaction score to 3:

> *She was saying...we don't want to keep you unnecessarily and we don't want you to be frustrated...that made me think that 'I'd better stay at home because they may not be very patient with me,' that was my kind of impression. So I thought I'd just carry on by myself because I was feeling alright and I was able to manage things and I didn't feel that there was anything wrong I just thought I'd keep on going, and that's what I did basically.... I didn't feel that welcome anyway; it felt like they wanted me to be really ready to give birth when I got there.*
>
> (X211)

She went on to say:

> *If I had felt more welcome, if they had said 'oh yes come in, even if it takes another 12 hours, you'll be alright here' that would have been very different, I would have been happy to go in then, it would have been great to have had the support of another woman there, for example, in an ideal world I would have loved that, but you know I just know things aren't like that normally.*
>
> (X211)

Her experience was worsened after she eventually went to hospital when she was left alone, unexamined, in a meeting room for 40 min. She was then found to be 8.5 cm dilated.

Two women in this group reported that they asked to come in, rather than being asked by midwife to come in. There was no evidence of feeling welcome to attend; in one instance it was as if to pacify:

> *They said to come up then if I was so worried and upset, they didn't say to me 'we want you to come up' it was just – 'if it's concerning you then come up'. …it was 'if I wanted to come up, to reassure me'… she just said 'well if you are that teary then come up to be monitored but there's nothing to worry about'.*
>
> (Z16)

This respondent also described several aspects of the phone calls that were negative. In particular was the unmet expectation of being asked to attend once contractions were 5 min apart:

> *It wasn't a very nice call really, because, when you are told by your [community] midwife as well, 'when you get to 5 minutes give them a call and they'll probably tell you to come up', I was told to hang on and see how long I could go. And I thought 'yes, OK, I'm only 5 minutes down the road but I'm a first-time mum and I didn't have a clue what to expect. So I wasn't too impressed. A bit worried to say the least. I had all my bags packed and I thought 'is this it now?'…when I got to 5 minutes apart I was expecting to go in, so to be told to wait a bit longer, to hang fire, a bit daunting really.*
>
> (Z16)

She went on to say:

> *It's everywhere though, all the books you read, the magazines, everything, all the information I was given about going to hospital and what to expect, it's all about this 'when you get to 5 minutes apart', and I just think 'either don't print that or the hospital takes note of it'.*
>
> (Z16)

This woman also made reference to the fact that the particular call she was concerned about was very short in length, which was also apparent in other less satisfied respondents 'It was about 2 minutes if that'. The significance of shorter calls on satisfaction has already been demonstrated. Shorter calls would seem to indicate less time available for the more supportive aspects of the call, for example picking up on anxieties and need for reassurance, which in a number of less satisfied respondents was apparent:

> *…'cos you read so much, with my contractions wearing off, I panicked that not that there was something wrong but I thought, 'well I'm going the opposite way now' again worrying that the baby was in distress. I would have rather have been reassured.… I mean even if she had said 'well it's normal for them to branch [meaning to get less] off, get further apart, or it's just practice ones or if you find they are coming regular again give us a ring back' but that wasn't even said.*
>
> (Z16)

Indeed, if anxieties remain unaddressed after the call then they can feed into greater upset, fears, anxiety and misconceptions:

> *My stomach had gone quite hard, again, I panicked 'was the baby getting in distress? Was that why my contractions were getting further apart?' I then panicked because I couldn't feel her moving, but that could have been me just feeling so tense because of what was going on. I got quite upset on the phone.... Upset to say the least, because you think: your baby. OK, they would have said if contractions going the wrong way and baby could be in distress, they probably would have said, but it's still in your mind. So I'd come off the phone upset and phoned my Mum. To which she said 'well, you phone back and say that you are not happy with the way she was with you'. And I said to her 'I'll hang fire for a bit' but when I started not being able to feel the baby moving as much, that's when the third phone call came.*
>
> (Z16)

This case also demonstrates the likelihood of the woman feeling the need to phone the hospital more if fears remain unaddressed. This is consistent with the impression given by the quantitative data.

Whether or not the women's fears were allayed is not only about absence of any attempts to reassure but also, when attempted, the manner in which this is made as illustrated previously.

> *…first-time mum you expect a bit of support really on the phone which I don't feel I had really.*
>
> (Z16)

A further concern expressed by this respondent and a minority of others was about the nature of having the conversation on the phone rather than face to face, leading to less confidence with the advice being given or assessment being made:

> *I mean, even if I had gone up there and they'd have said 'well nothing is sort of happening so go back home and see how you get on'. At least then I'd have seen someone face to face, they'd had a prod round and what not, but they didn't know what situation I was in over the phone, so that's what worried me a bit. …A bit worrying really, 'cos you try and express how much pain you are in and they obviously they can't see you and I know everybody is different so, you can't really judge one woman on what your previous woman was like, with her contractions, erm, so a bit disappointed really that I couldn't go in to speak to someone or even to have someone come round to reassure me.*
>
> (Z16)

Two respondents indicated dissatisfaction with not being told the name of the midwife they were speaking to on the phone.

The majority (six out of eight) of women in this group were sent home, one more than once. One chose to go home; two were to return when labour progressed (unspecified time) and one the next morning; one was to return for induction of labour (already booked) and the fifth went home with the expectation that she would be back soon. PY03 was sent home more than once: she had attended without phoning first; having been booked for an induction she went in as

planned. Her contractions were 5 min apart when she first attended and she described her 'shock' at being told she was not in labour and should go home, to return when contractions were stronger.

Her second visit was also without the preamble of a phone call, and being sent home was not what she wanted: 'I didn't want to get in the car again'. She first phoned the hospital an hour after returning home a second time, but was left confused:

> *They said I could go in to be examined but suggested the best place for me was at home. I was confused, I had no way of knowing how far dilated I was until I was examined, but I didn't want to go in for an exam and be sent home again…they said I needed to be at least 5 cm dilated to be kept in. I was afraid to go in again – I didn't want to be sent home again. It was more sort of 'pull yourself together', it didn't feel great. I didn't feel confident to be at home – I didn't feel in danger, but anxious as I didn't know how to find out if dilation had progressed.*
>
> *(PY03)*

This demonstrates that giving women a goal (5 cm dilatation) which they cannot know they have reached is unhelpful.

She made four further phone calls to the unit before going in for the last time. She offered additional comments about the phone calls in early labour which underlined how she felt that they had failed to support her at home, leading to dissatisfaction:

> *Questions on the phone should be longer, talk through things more. I felt like it was just an exchange of information, efficient but not necessarily comforting or considered. It could have been more supportive.*
>
> *(PY03)*

Z16 went home after attending, was told to come back the next morning, and admitted to feeling 'alright' about being sent home. She considered the reassuring nature of the midwife, together with the reassurance of being on the monitor had made the difference:

> *After being on the monitor it reassured me and the girl was lovely, and she just explained that your contractions can wear off, didn't actually say why, I still don't know to this day why, but yes, if I was able to get home and I felt comfortable then it was probably the best place. … Wasn't too bad after I had spoken to someone, I'll hold my hand up, being reassured had made it a bit better.*
>
> *(Z16)*

Z16 would appear to be an example of someone who needed the reassurance of monitoring and face-to-face contact.

Women with ruptured membranes (*n*=5)

Three of the five women in this group were asked to come in straight away. There was evidence of this advice being a shock; unexpected and unwanted:

> *I was quite shocked at the brevity of the call, because the community midwife was of the opinion you shouldn't go down until the last minute*

> *so I was quite shocked when they said come straight down…a bit shocked and panicked having to come in straight away.*
>
> (Y206)

> *Worst call was the first – asking me to go in to check my waters were really broken – they didn't believe me, I was indignant. A bit panicked too…not too happy about it, I knew my waters had gone – it was as if they didn't believe me. I didn't see the point of going in, I knew I'd be sent home after.*
>
> (Y17)

Another woman in this group (X01) had a series of unsatisfactory experiences which started prior to going into labour including lack of antenatal classes, being unsure where to phone and advice about her clinical condition that she was not happy with. She was surprised by the response to her first call:

> *I expected them to say come in. My sister-in-law said that they used to say if your pad is wet to come in but they didn't say to come in.*
>
> (X01)

This call prior to attendance was also unsatisfactory in the way in which questions were asked and the experience of not feeling treated as an individual:

> *They said how often are the contractions? How intense are they? But I had nothing to compare it to. They were asking me questions which I didn't have anything to compare it to.... No, they didn't treat me as an individual, did they, because they said just a general, because they said 'can you still talk?' and things like that, it was just a general outline.... I just wanted them to say like 'come on in then' and not asking you millions of questions when you're in pain.*
>
> (X01)

Her husband then made a phone call to the hospital prior to attending which did not go well:

> *…phoned up and they weren't that good. They said 'you can't be in that much pain 'cause you're able to talk'. And my husband got quite angry with that and said 'what do they want you to do, to be dying?'*
>
> (X01)

Women reported that 'the midwife was treating me as if I didn't know what I was on about' (PY05). 'They do kind of make you feel a bit silly phoning' (Y17) and an unmet desire to be told 'that I was not being daft' (PY02). There was also evidence of lack of explanation.

> *I don't think a lot was explained…they didn't tell me why they wanted me to go down, but it was really busy.... I was not told of the possibility of being sent home, I thought that as my waters had broken I'd be kept in…*
>
> (Y206)

As was the case for dissatisfied women with intact membranes, women were more likely to say that they had not felt welcomed to come in.

> *[Satisfaction score?] Probably about 2 really because they didn't encourage me to – probably because they were so busy – they didn't encourage me to go in at all, and if anything they were trying to put me off which they were, more than likely, because they were so busy.*
>
> (X01)

This woman was another of the minority who expressed doubts about the assessments being on the phone rather than being examined.

All five women in this group were sent home: two more than once. PY02 felt:

> *Disappointed and angry. I felt dismissed – I was 3 cm dilated, waters had broken in the day, I thought I may need to be induced, but then when we got there, I was sent home.*
>
> (PY02)

There was no evidence of an arranged time for women to return, and in three of the five cases respondents indicated a feeling of being unwelcome to come back in: having to ask to go in or just going in without phoning. For PY05, there was no evidence of not being welcome to attend; the problem was rather not being able to stay. After the first attendance she was advised to go home and take her temperature, and if it rose or contractions got to every 3 min then she should go straight back in, otherwise to come in at 3 pm for another check. These instructions do not appear to have been relayed to other staff:

> *I went in at 3 pm; my contractions were 5–8 mins. Midwife [second one] was very dismissive and seemed baffled why I was in, I was told to go home.... I was surprised that they were surprised I went in after being told to go in.*
>
> (PY05)

She was sent home four times in total, leading to dissatisfaction and distress:

> *OK about the first two times I had to go home but very unhappy at being sent home at 11.30 pm – it was snowy and icy – that was unacceptable and wrong. I feel I should have been kept in at 8.30 pm. If I had been able to stay in at 11.30 pm and not sent home, baby wouldn't have been in distress.... It was the repeated sending home that I was not happy about.... No benefit to be sent back and forth.*
>
> (PY05)

The way that the remaining woman in this group felt treated when she went in and was then sent home had a negative impact on her willingness to return. Indeed, her experience meant she wanted to delay returning so there would be different staff on duty:

> *...and then they sent me home in the night as well, I was in the bath every half hour in the house and I was having contractions continually, and I didn't want to go back because of the way they were, they thought I was wasting their time.... Well I was just waiting as long as I could, until the morning staff so that the night staff would be off shift, basically.*

(X01)

She did not feel it was right to be sent home for a number of reasons:

> *But when they put me on the monitor, my contractions weren't that strong, but because I didn't know how to breathe through them I was hyperventilating, and the baby's heart rate went up to 200, so they shouldn't have sent me home really.... I would have preferred to have stayed in, it was horrible travelling.... Well I was frightened because everything I'd read said you should stay in once your waters have broken because of infection, but they sent me home...it wasn't a problem going in, it was going home again that was the problem. Because I didn't mind, once you're in hospital you feel safe don't you? I was disappointed and angry...because they send you home and they don't know how quickly you'll progress at home and they know you are in labour, I mean I could have been nearly having my baby.*

(X01)

This woman perceived that the unit was busy and that this had influenced her being sent home.

3.8.5 Satisfaction summary

In summary, satisfaction was associated with:

- clear instructions about when to phone back, or return to the unit,
- choices about coming in/staying home or staying in/going home,
- not being made to feel unwelcome,
- receiving assurance, information, friendliness and encouragement,
- advice given in a confident manner.

Factors contributing to dissatisfaction were:

- instructions which were less clear,
- not obviously being made to feel welcome to come in or being invited to come in when the woman wanted to,
- being sent home when the woman did not want to go home,
- unmet expectations, particularly about timing of going to hospital,
- fear and anxieties that were not resolved by the phone calls,
- an absence of support and reassurance,
- shorter calls,
- more calls,
- midwives not understanding why a woman had phoned/attended (according to instructions from another colleague); that is, a lack of continuity of care.

An additional source of dissatisfaction for women with ruptured membranes was being told to come in immediately on the first call, leading to shock and panic. Apart from this, the factors contributing to satisfaction or dissatisfaction for women with and without ruptured membranes were very similar.

3.8.6 Antenatal preparation and expectations

Analysis of interviews in terms of satisfaction made it clear that women's expectations of early labour care were important and that these were likely to relate to the antenatal preparation that they received. Accordingly, we returned to the data to focus on these aspects.

Pre-labour expectations of when to go to hospital

It is interesting to note that, in answer to this question, many women answered in terms of their expectations of when it was appropriate to *phone* the hospital. This was more noticeable in the women who were less satisfied. Clearly this also relates to the expectation of staying at home in early labour, which, as we have seen, was related to satisfaction.

A small number of women had clear expectations and this had generally come from multiple sources:

> *When I was not coping with pain, the piece of paper said contractions were 4–5 mins apart, 60–90 seconds long, also [Q: Where did you get that information?] from the Internet, magazines and the community midwife.*
>
> (X204)

> *I had been given an indication from the antenatal classes that they would assess the signs of labour and know when to tell me to come in based on what I had told them and what advice they gave me, it would dictate when it was appropriate for me to go into the hospital. And perhaps that I may have to go home again.... [Q: Was there discussion of when to phone?] At antenatal classes and my community midwife but in more detail at the antenatal classes – they explained what would happen where you would have to go and so on.*
>
> (X205)

The influence of such classes was missed by one respondent (PX07), for whom the classes had been cancelled, and she was unsure of when it was appropriate to phone the hospital. Another woman who had not been to antenatal classes had discussed some aspects of what to expect with the community midwife, but was not apparently aware of the whole picture:

> *I was told that it was OK to phone at any time. Yes – if losing blood or waters broken. Nothing was mentioned about contractions.*
>
> (Y204)

One of the notable sources of dissatisfaction was a mismatch between expectations and events. Four of the dissatisfied women said that they expected to be going into hospital by the time their contractions were 5 min apart. Although that expectation was, as we have seen, common in other groups, within this group there was a suggestion that women had found this misleading.

> *I was a bit surprised that she encouraged me to stay [at home] because I thought that when the contractions were 5 mins apart I would be encouraged to go in. I thought it would be time to go in. I was trying to be brave, not too scared, I knew what I had to do, be positive.*
>
> (Y14)

Conversely one woman was asked to come in when this was what she neither wanted nor expected.

> *I was not too happy about it, I knew my waters had gone – it was as if they didn't believe me. I didn't see the point of going in, I knew I'd be sent home after. The midwife didn't warn me that they would do a sweep.*
>
> (Y17)

One woman highlighted the fact that this expectation is generated not only by discussions with midwives but in written material too (including the Pathway leaflet):

> *Wish I had been told to wait until every 3 mins – I expected that when they were 5 mins I would be asked to attend – all the books, leaflets say to call at 5 mins. It needs to be clearer that it's not necessarily the case that you go in at 5 mins apart.*
>
> (Z16)

Overall the aspects of antenatal preparation which appeared to relate to satisfaction were:

- receipt of the Pathway leaflet and discussion with the community midwife;
- specific antenatal encouragement to stay at home as long as possible in early labour (either by community midwife, antenatal classes or friends/relations) – almost two–thirds (10/16, 63 per cent) of completely satisfied women had been encouraged in this way;
- clearer expectations of when they might be admitted to hospital.

Conversely, women who were less than completely satisfied or dissatisfied:

- were less likely to have received the Pathway leaflet or discussed the Pathway;
- showed less evidence of specific antenatal encouragement to stay at home for as long as possible in early labour (just over one-third – 6/17 and 5/13 – in less-satisfied groups);
- had less obvious expectations of when they would be likely to attend hospital;
- were more likely to comment on lack of antenatal preparation.

The role of the community midwife in preparing women was clearly evident and very much valued where it occurred. Their influence on expectations and knowledge about when it was appropriate to phone and attend hospital was very strong, and notably absent in cases

where women felt they had no community support, particularly when antenatal classes were not available. The importance of classes was also evident in preparing women for what to expect, and in some cases the classes appeared more influential than the individual discussions with community midwives. It is noteworthy that so few women reported discussing the Pathway and the leaflet in antenatal classes.

The Pathway leaflet

The Pathway Leaflet is an important component of the Pathway, but only 26/46 women had apparently received it. Many of those who had were positive about it, saying that it gave them some element of control by providing them with:

- appropriate terminology,
- a likely plan of events,
- a guide to when it was appropriate to contact the hospital.

As we have already seen, women with the maximum satisfaction score were more likely to have had a copy of the Pathway leaflet than others. Comments on the leaflet were offered by 5/16 of these women, 3/17 of those who were not completely satisfied and 3/13 who were dissatisfied. The satisfied women were positive:

> *I kept on reading it in labour to work out where I was – to be honest my husband was reading it more than me. I thought it was very very useful.*
>
> (Z02)
>
> *It helps – it puts you more in control, I knew what to look for, I had information. I was informed every step of the way – what to expect. Good to have it in one leaflet.*
>
> (PY01)

Women who were not completely satisfied or dissatisfied were more likely to find some shortcoming:

> *I had the leaflet but I was not really sure when to phone – I was unprepared as there were no classes – they'd been cancelled. I didn't really understand the leaflet much, I just glanced at it – I was going to discuss it. It gave me information about the different stages, reassured me a bit.*
>
> (PX07)
>
> *I got given that sheet.... Maybe it's because of my profession [teacher] I like to have things to read. If it was a normal delivery it would have been great, because that [sheet] is what we kept consulting before we made the decision to go down and things.*
>
> (Y206)

'If it was a normal delivery' is a telling phrase in that the 'abnormality' in Y206's case was being asked to attend the unit to check (as she saw it) that her membranes really had ruptured. This was clearly an event that she saw as being treated as a divergence from the

Pathway, even though membranes rupturing is part of normal labour. The leaflet is perhaps less clear than it might be about what women with ruptured membranes in early labour can expect.

Y17 also highlighted another possible omission:

> *The Pathway leaflet didn't say that you could be in a lot of pain and still not be in established labour.*
>
> (Y17)

Overall, few women in any of the satisfaction groups mentioned any discussion of the Pathway. There was a tendency to equate 'the Pathway' with 'the leaflet':

> *The community midwife brought it [leaflet] here when we went though the birth plan.... My community midwife was very good, she said for me to take paracetamol in the house, try breathing and taking my mind off it. She said try and leave it as late as possible to go down [to the hospital]...because the community midwife was of the opinion you shouldn't go down until the last minute.*
>
> (Y206)

This last comment suggests that Y206 was interpreting this advice as one midwife's personal preference rather than a matter of evidence-based policy.

Overall, women's accounts of their experiences suggest there were some elements missing from the leaflet that could have prepared women better and possibly reduced uncertainty and dissatisfaction, specifically:

- when you will be likely to be asked to attend the hospital;
- contractions being 5 min apart do not necessarily mean that you will be asked to attend;
- if membranes rupture spontaneously you will be asked to attend either immediately or within 24 h if contractions do not start, due to risk of infection;
- in your best interests, you will be encouraged to stay at home for as long as possible in order to reduce the likelihood of unnecessary intervention;
- support to remain at home will be available on the phone from the hospital and clear instructions about when to phone again will be given;
- you may be encouraged to go home again after attending if labour is not established but with clear instructions about when to return;
- clearer information about likely levels of discomfort and pain during latent or early labour.

The leaflet itself could be more specific about encouraging women to stay at home as long as possible: currently this is not included. Indeed, the philosophy behind the Pathway, of promoting normality of labour, is not apparent on the leaflet. If the practical manifestation of

the philosophy of supporting normality throughout labour is to stay at home longer in order to reduce unnecessary intervention, and it is in the woman's best interests to do so, then this should be made more specific in the literature and in discussions with women. In this way, women will be made aware of the likelihood of being encouraged to remain at home as long as possible, together with the rationale for this. This may affect women's experiences of labour and influence women's attitudes regarding staying at home for as long as possible.

3.9 Women: discussion

3.9.1 Methodological issues

The number of interviews conducted was fewer than originally planned and we were particularly conscious of the need to avoid over-interpretation of data from a sample of this size. We therefore confined presentation of quantitative data to reports of frequencies in the main and tests of significance where cell sizes warranted this. The qualitative analysis of women's experiences has, we feel, provided important information on women's experiences of the Pathway, in line with the research objectives. We must also acknowledge the potential for selection bias as it may be that women who agreed to participate in the interviews were those who were particularly dissatisfied with their experiences. However, in terms of the qualitative analysis this should not be seen as problematic. Indeed, given the tendency for women to express satisfaction with their maternity care (van Teijlingen *et al*., 2003), it is advantageous to have had sufficient examples of dissatisfaction to be able to extract with confidence some common themes. The strength of the qualitative data is to identify the features of satisfactory and unsatisfactory experiences, not to infer prevalence.

3.9.2 The Pathway

One of the characteristics evident in those who were most satisfied was having been made to feel welcome to attend hospital. At first glance this would appear counter to the main philosophy behind the All-Wales Pathway which, in promoting the normality of labour, is encouraging women to stay at home in early labour to reduce unnecessary interventions. However, as the data demonstrated, being 'allowed' to come in was not necessarily immediately followed by a woman's attendance: in some cases it was the safety net they needed to have the confidence to remain at home a little longer. A further feature in those with greatest satisfaction was the perception of choice, so that they did not feel that they were being denied something. In many such circumstances, the advice of the professional was still valued and was influential in the woman's decision.

Being first-time mothers with no prior experience of labour, many of the women were anxious. One of the key elements of their anxiety was the uncertainty of when they would be 'allowed in'. The Pathway's philosophy of encouraging and supporting women to remain at home in early labour can, if not explained clearly, potentially exacerbate this anxiety. Where uncertainty is perpetuated, for example through vague instructions about when to phone back or a lack of indication of when they will be likely to attend, anxiety is further worsened and satisfaction with the phone call diminished. For a minority, having the conversations on the phone makes this situation worse and it can lead to feelings of uncertainty over the decisions and assessments being made, which in turn feeds the anxiety. Where it is clear to the woman why she is being encouraged to remain at home, and an indication given as to when she will be asked to come in, there is greater satisfaction, and the parallel situation is true for women who are sent home after attending hospital. The role of antenatal information so that women know what to expect, and why, should not be underestimated.

Where dissatisfaction occurred in either the first or second phone call, there was a negative impact on subsequent calls and attitudes towards going into hospital. Each individual call needs to be managed well if the rest of the Pathway of care is not to be jeopardised.

3.9.3 Professional and telephone skills of the midwife

The most statistically significant finding was that women who do not feel treated with respect and as an individual were dissatisfied. This is in keeping with a growing body of research literature which highlights this fundamental of communication in a wide range of settings. It may well be that making a woman feel that she is being respected and treated as an individual is more difficult to achieve on the telephone where there are fewer non-verbal ways of showing this. However, the perception of being taken through a pre-set list of questions was *not* related to satisfaction, so this clearly does not preclude a midwife from treating a woman as an individual and with respect. Women who were more satisfied were more likely to mention that the midwife was friendly and gave instructions in a confident manner. There was dissatisfaction when the midwife was less friendly, and especially if she:

- made the woman feel silly,
- made the woman feel that she was not believed,
- left the woman confused about her meaning.

In a minority of cases it was clear that the midwife responding to a telephone enquiry was not aware of the instructions the woman had been previously given by a colleague. This usually resulted in the woman feeling embarrassed and dissatisfied, as well as eroding confidence in the midwife.

Another key feature of the less satisfactory phone conversations was the absence of reassurance by the midwife; conversely where reassurance was given, it was associated with higher satisfaction. Coupled with this was the importance of support and encouragement over the phone. Where there was evidence of unmet need for reassurance and support, there were higher rates of dissatisfaction and residual anxiety after the call. Left unchecked, these residual anxieties can lead to misconceptions, lack of confidence in the assessment being made and the advice being given, and additional need for more calls.

The length of phone calls appeared to be important: where women reported no calls lasting 5 min or more, there was reduced satisfaction. We must, of course, be cautious about this finding because it is based entirely on women's retrospective assessment of the length of each call. However, it does seem plausible that shorter calls are less likely to have had time spent on reassurance and support. Time and skills need to be employed to pick up on, and address, unmet needs for reassurance, support and information.

Section 4 NHS Direct

4.1 Views of Heads of Midwifery in England

As described in Section 2.1.4, the initial component of the survey of HoMs in England included a cover sheet that allowed the research team to identify all of the units within each HoM's jurisdiction and, in the case of delegation of completion of the main survey tool, to obtain his/her direct response on two key issues: views related to NHS Direct involvement in early labour services and interest in use of the Pathway. The reason for seeking a response directly from the most senior midwife in each Trust was that it was considered that if these areas had been explored, it would be likely to receive the attention of the HoM as strategic midwifery lead who usually combines a managerial role with the statutory function of supervision of midwifery.

The first question asked HoMs whether they had considered introducing the telephone component of the Pathway; responses are shown in Table 4.1.

Table 4.1 Consideration of the introduction of the telephone component of the Pathway

	Frequency	Percentage
Yes	33	25.2%
No	39	29.8%
Not sure	55	42.0%
Missing	4	3.1%
Total	131	100.0%

The majority of HoMs were unsure (42 per cent); a quarter indicated that it had been considered and 29.8 per cent that it had not.

The HoMs were asked whether there was any potential role for NHS Direct in early labour services; whether there had been any exploration of the use of NHS Direct for early labour services in their local area; whether any pilot work had been carried out or was planned and whether they had been involved in exploring the use of NHS Direct in early labour. Questions with possible response options are included below; boxes were incorporated to allow respondents to provide further information on this issue; the format of the cover sheet can be seen in Appendix B.

Responses to questions related to NHS Direct are as shown in Tables 4.2–4.4.

Table 4.2 Do you feel that there is any potential role for NHS Direct in early labour services?

	Frequency	Percentage
Yes	13	9.9%
No	87	66.4%
Not sure	29	22.1%
Missing	2	1.5%
Total	131	100.0%

Table 4.3 Has there been any exploration of the use of NHS Direct in early labour in your area?

		Frequency	Percentage
Valid	Yes	4	3.1%
	No	121	92.4%
	Not sure	4	3.1%
	Missing	2	1.5%
Total		131	100.0%

Of the four HoMs who reported exploration of NHS Direct in their area, one was aware of pilot work (#10) and one had been involved in local exploration of NHS Direct (#116). Two respondents were aware of pilot work (#54, #162) and one HoM reported exploration of NHS Direct in her previous post in a different Trust (#153).

Table 4.4 Concerns about use of NHS Direct for early labour services

	Frequency
Who is giving advice? Professional midwifery issues	67
Negative impact on communications	28
No knowledge of individual Trust policies	24
Appropriateness of approach Is an algorithm enough? Difficulty in making an assessment by phone Concerns related to IT	18
Litigation; vicarious liability; complaint; accountability*	9
What else can NHS Direct provide beyond our existing services?	9
Concerns about women at high obstetric or social risk	6
Poor experience of NHS Direct/lack of knowledge of NHS Direct's guidelines	5
No problems/possible role for NHS Direct – as long as NHS Direct work within guidelines and algorithms are agreed	4
Whether all language needs can be met	3
Contradicts NSF and encouragement to move to caseload holding	2
Cannot comment: inadequate information/evidence	1
NHS Direct – not the answer; sort out the local service	1

**Identified as concerns by HoMs due to potential shared responsibilities between NHS Direct and the maternity services.*

Heads of Midwifery were asked to identify any particular concerns about the use of NHS Direct for early labour services. A thematic content analysis demonstrated a range of concerns amongst HoMs. These are included in Table 4.4 and many HoMs provided more than one response. Only four HoMs had no concerns or felt that there could be a role for NHS Direct in early labour care. The most frequently stated concern related to who would be providing such advice and a feeling that the midwife was the most appropriate professional to do this. Negative impacts on communication with women and the lack of continuity were identified, together with a negative impact on communications with labour wards and the importance of clinical areas knowing who could be expected to attend the labour ward. A need for advice to be tailored to the individual policies of each Trust was stipulated. Doubts were expressed about the appropriateness of an algorithm-based approach to providing advice that appeared reliant on IT, together with concerns about responsibility where problems occurred, for example, litigation or complaint. A range of other concerns was reported less frequently.

4.1.1 Interview data

Telephone interviews were conducted with three Heads of Midwifery who had been involved in exploration or discussion of the use of NHS Direct for early labour services. These HoMs worked in different areas of England; one in the north east, one Midlands, one London; two had jurisdiction over large maternity services (4500 and 6700 births per annum) and the other a smaller-sized unit (1250 births per annum).

A range of issues had triggered exploration of the use of NHS Direct:

> *…sort of reviewing all of their processes, thinking could it apply to midwifery? Because as a unit we do get well over 10,000 women a year coming through our triage area, so it's a huge issue for us to look at 'how could we manage telephone advice better?'*
>
> (#10)

Following exploration of NHS Direct, this unit had moved towards a telephone triage approach to women's enquiries as it was considered important that advice about early labour should be provided by midwives and a view that a less structured approach than that used by NHS Direct was preferable:

> *…as a midwife you ask those questions and if you're going to follow a set algorithm, there are some times you'd want to deviate from that, as a midwife, depending on the answer you've got. It isn't always that you could follow one arrow or another, depending on what the woman told you. I mean, as we know, sometimes women don't give yes/no answers to things so you can move on to the next box, so to speak. I mean maybe this is just being very, very cautious but the midwives felt that it's better to have a freer conversation I suppose.*
>
> (#10)

Although HoMs expressed concerns about the perceived rigidity of the NHS Direct approach, several acknowledged that they were, in fact, exploring the use of *structured* tools for telephone assessment and one commented on the apparent internal inconsistency in this.

A further HoM had been involved in a sector-wide discussion about implementing an NHS Direct-type approach across the hospitals in that group; this exploration had been led by consultant midwives but had not been pursued further due to anticipated NHS re-organisation at the Strategic Health Authority level and other competing priorities for service development.

A further significant service consideration for this area had been the multicultural population where 120 languages are currently spoken. There was a concern that the advice provided might not be culturally appropriate for the local population:

> *…it's quite general the advice given and it's not specific to the needs of women in X [area] and so we've got cultural mix and the issues that we have here – we've got more understanding of that. And all we would like to pull together is, in X [area] and to be able to deliver that to these women, given that we've got better understanding of what their needs are, as opposed to, a sort of national…*

(#74)

Providing early labour services for women who do not speak English was identified as a challenge in more than one unit.

It certainly is a challenge for us, because sometimes the women arrive and they might have called an ambulance, and how do they get home if you don't need to keep them, and you start on the spiral really where they don't need to be here but they're in the system type of thing. And the other type of thing is that we're desperate for early labour facilities.

(#10)

This HoM also saw the telephone contact as fulfilling a risk-assessment purpose and was doubtful that could be delivered by NHS Direct.

So, it was trying to risk assess them at the same time, knowing that we had, maybe not medical concerns, but there were a lot of social concerns with women in our area.

(#74)

One HoM reported that she had explored joint funding with neighbouring Trusts of a midwifery post based in NHS Direct but other Trusts had not wished to support that:

We had to have a local model that sort of reflected the way NHS Direct worked, but we needed to fix all the cost and the logistics of it, but what followed really had to be maternity based, as opposed to the general one that NHS Direct took on.

NHS direct do not always give the right advice – our idea was to second a member of staff to be employed at NHS Direct.

(#116)

4.2 Views of midwives in Wales

The concerns expressed by Heads of Midwifery in England were, perhaps unsurprisingly, echoed by midwifery participants in focus groups conducted in Wales related to the Pathway.

The overwhelming response from midwives regarding NHS Direct providing early labour advice was one of rejection. The focus groups identified several areas of concern; first there was the issue of the professional status of the person advising women, whether they had an active midwifery registration and whether and how they would receive supervision of midwifery if based in NHS Direct. There was also an opinion that if women telephoned NHS Direct for advice in labour it would erode the midwife's role in being the first point of contact for women.

We've worked hard for the midwives to be the first point of contact, we've worked very hard to have a named midwife for our women, then to give the first phone call to NHS Direct is a big backwards step.

(S1)

In addition there was a concern about the quality and appropriateness of advice given to women who were known to have contacted NHS Direct.

> *Women do ring NHS direct, surprisingly, and they are not advised correctly. We have had problems because they haven't known, because they have phoned them [NHS Direct] first and had incorrect advice.*
>
> *(N9)*

The midwives also expressed concern regarding how advice given by NHS Direct would be passed on to the relevant area within the local maternity services with the implication that care could become fragmented resulting in a lack of consistency and continuity, all of which would appear to be in opposition to the aims of effective service provision. This concern appears valid in the light of the difficulties reported by community midwives in Wales related to ensuring that Part 1 documentation was accessible for hospital staff within the time frame of a woman's labour.

4.3 Discussion with staff of NHS Direct

A meeting of members of the research team with senior staff of NHS Direct was convened to identify current processes and response to enquiries related to labour. It was confirmed that no algorithms specific to normal labour were currently in use or under development; women contacting the NHS Direct telephone service for advice related to labour would always be directed to contact their maternity service provider. It was confirmed that the number of midwives employed by the service was not sufficient to ensure that a midwife was on duty at all times in the call centres. Algorithm development was reported to require at least 6 months, following which piloting and tests for clinical integrity would be required. No plans existed, at that stage, to extend the service to include the provision of advice to labouring women, although interest was expressed in the findings of this research.

4.4 Conclusion

In conclusion, the concerns reported by midwives encompassed the importance of early labour advice being provided by midwives, risk management, doubts about whether a telephone conversation would allow a comprehensive assessment and the importance of meeting the needs of women in their local community. There appeared to be no view that NHS Direct had any potential utility in England in the provision of early labour services and there was little interest in further exploration of its use.

4.5 Incorporation of structured telephone assessment for the SDO-funded Early Labour Support and Assessment (ELSA) trial

Delays in the timetable described in Section 1.4, together with the 6 months required to develop and pilot algorithms or other structured telephone tools, meant that the timetables of the two studies were no longer running in parallel, as had been anticipated previously. Multicentre Research Ethics Committee and research governance approval had already been obtained and permission for a further protocol amendment would be required to support any changes to care for women in either arm of the trial. The time required to develop and test a tool for structured telephone assessment would not fit into the timescale of the trial, the preparatory work and recruitment of which had already commenced.

Discussions with Heads of Midwifery in centres supporting the ELSA trial had also revealed additional concerns about trying to incorporate structured telephone assessment into the trial for women allocated to the intervention group who laboured at night. These concerns included the time for training in use of the new tool, potential for confusion among midwives and women and difficulty in trying to maintain a distinction between standard care for the unit and a different approach to advice for the intervention group at night, thus contributing an additional variable in the analysis.

Section 5 Discussion and conclusion

5.1 Discussion

5.1.1 Methods

The approach to identifying the sampling frame of English maternity units by using the Local Supervising Authority Midwifery Officer's list appeared to work well in the context of continuing Trust re-configurations. One potential demerit of using this approach was that some non-NHS and island maternity facilities were identified, as they also fall within the jurisdiction of statutory supervision of midwifery but they did not meet our criteria for inclusion. The use of further sources and unit websites allowed us to confirm inclusion or exclusion of units and senior midwives also indicated if they felt that they did not meet our criteria.

We were using the approach of a cover sheet – to be completed by the Head of Midwifery and confirming the identity of units in her jurisdiction – followed by a questionnaire per clinical site (hospital or Birth Centre), for the first time. This allowed us to verify information about the number and identity of maternity units by Trust and also to obtain the HoM's own view on issues of strategic importance. Further, it appears that offering the option of delegating completion of the questionnaire to a midwifery colleague was also acceptable to Heads of Service and reduced demands on their time, as we are aware that HoMs are frequently asked to participate in surveys. The use of telephone interviews for Heads of Midwifery also seemed an acceptable approach for all parties; the interview was easily rearranged if the HoM had been called away at the scheduled time. We feel that this allowed a more relaxed approach than trying to complete face-to-face interviews when there are pressing demands on HoMs that can arise at short notice.

Similarly, the two–stage approach of questionnaire and interview was appropriate to map the overall service provision but also to identify and subsequently obtain further detailed information about innovative services. Despite pilot testing of both data-collection tools (the cover sheet and questionnaire) we encountered problems caused by the range of terminology used for particular service settings. For example, small units where women give birth may be called community units, Birth Centres and midwifery (-led) units and although we tried to achieve clarity and avoid offence, there was always a concern that some units may have felt that wording of some questions did not relate to their circumstances. Although we were aware of this issue, a satisfactory response rate was achieved across a range of sizes and types of unit.

Although completion of core data items describing early labour service provision was again satisfactory, it became apparent that questions requesting statistics related to a unit were not always provided. The reasons for this appeared to include the fact that some Trusts had recently undergone reconfiguration, and thus any data available did not reflect the current new service provision or population. In addition, some Trusts appeared to have data at the Trust rather than unit level and for some data items it appeared that HoMs did not have access to that statistical information; for example, the proportion of women admitted and discharged home not in labour. Whereas the poor quality of maternity data has been recognised for some time, it is surprising that data are not available using IT and maternity database systems; inputting information into these systems appears to cause a significant burden to staff in maternity units. We are aware of a small number of further changes to maternity services that have occurred since the data-collection period.

There were few opportunities for the core team to make meaningful links with maternity service professionals in Wales. None of the core research team had existing professional linkages in that area. While efforts had been made to network with midwives in Wales at the start of the research, significant time subsequently elapsed before preparatory work started in the centres due to delays in governance processes. There was also a considerable geographical distance between the core research team in York and the Trusts in Wales, and, for that reason, despite the efforts of the midwifery research fieldworker, it was difficult to engender support for the research. In addition, the model of support to the centres in this research was different from that of the ELSA trial where a sustained period of recruitment led to the need for an appointment of a Local Midwifery Co-ordinator for 1 day per week in each of the six participating Trusts throughout the recruitment period.

We were disappointed in the numbers of women recruited in Wales. In working to meet the requirements of research governance, we encountered a significant number of delays that impacted negatively on the planned investigation. While we are aware that these processes have subsequently been reviewed, the impact on this research was significant and contributed to the small sample size. Although alternative approaches to recruitment in Wales were explored, they were not feasible and would have required development and submission of protocol amendments.

The slow rate of recruitment was also rather surprising when compared with the steady rate of recruitment to the ELSA trial by community midwives in Yorkshire. The reasons for this were possibly multifactoral. We had originally designed the sampling frame to allow us to include women from all parts of Wales and to both minimise and equalise the burden for community midwives throughout Wales, but this was, perhaps, counter-productive. It may be that, although the sampling strategy was methodologically robust, requesting only

2 weeks of recruitment conveys a message that the endeavour is too transitory to be important, compared to a sustained period of recruitment. It also offers little opportunity for midwives to become acquainted with the system for identification and recruitment of potential participants.

An alternative sampling frame, perhaps including fewer Trusts with a longer period of recruitment, could have allowed consolidation of resources, better use of the midwifery research fieldworker's time and more intensive communication with Trust staff. This approach may still mean that the impact of local applications of a policy may remain undetected. Alternatively, sampling via other systems such as birth registration would allow the inclusion of women throughout Wales but this approach would not ensure that the clinical characteristics required in the sample could be met.

Two of the South Wales Trusts were also accessed in another study of the Pathway. This may have led to research fatigue by some midwives, or possibly a misunderstanding that these were the same study. Furthermore, the majority of recruitment took place during the summer months and peak holiday period. This may have impacted on the midwives' ability to recruit as, during peak holiday periods, they are required to take on the work of colleagues who are on leave. In addition to this one of the Trusts underwent a re-organisation of their maternity services, which had an enormous impact on their community midwives and led to a period of unsettledness. There were also a number of areas with high levels of staff absence through illness. All of the above factors plus an inability to provide a sustained physical presence in Trusts may have contributed to the overall low response rate. It may be possible that a designated midwife in each Trust with responsibility to act as a local liaison would have achieved a greater sense of ownership.

Although midwives are ideally placed to know the circumstances of an individual woman's experience and the clinical course of events during labour and birth, their involvement in research is also difficult because of the preparation time required. Meeting agendas, mandatory in-service training and other routine events often lack capacity to incorporate a further (research) component that is of lower priority than the midwife's other activities. Based on these experiences, recruitment via community midwives during their provision of routine postnatal care appears unsatisfactory and it may be too difficult for midwives to incorporate into their current workload. Recruitment by community midwives has the potential for selection bias and to increase the proportion of women who decline participation. We would not advocate use of this method of recruitment in future research unless increased local ownership could be fostered.

Members of our research team had used telephone interviews with new mothers previously and found this approach to be highly acceptable (Ewing and Green, 2000). This was also found to be the

case in this research. In any project involving new mothers, it is important to allow for the unpredictability of life with a newborn baby and sleep deprivation is not uncommon: interview arrangements therefore need to be flexible. The configuration of our research team included two researchers who themselves worked in part from home; we were therefore able to offer most of the day (9.00 am–9.00 pm), including evenings, as a potential time for the interview to be conducted. This appeared to suit families as, during the evening, it was more likely that there would be another adult at home to take care of the baby during the interview, if required. Telephone interviewing is also useful as it avoids the potential intrusion of a visitor in the woman's home and any perceived need for preparation.

The CATI facilitated routing of questions and reduced the amount of typing required compared to traditional full transcription. Piloting of the system was essential to ensure a smooth flow through the interview. In our pilot work, we identified that the researcher needed to understand the overall sequence of events in the labour, in order that subsequent enquiry could focus on the telephone component, as this was not the element that the woman would automatically focus on. It was essential to have available a paper version of the CATI questions in case of computer failure during the interview. The main benefit of CATI was that data collection and input happened largely simultaneously. Tape-recording the interview ensured that any information that could not be typed in at the time could be entered later. When conducting a large number of interviews this is of huge benefit; however, the lower-than-anticipated response rate meant that this particular benefit was not as widely apparent. One slight disadvantage is the delay that data entry can cause to the course of the questioning. When listening to the tapes after the interview, the sounds of keystrokes and pauses while typing occurred were noticeable. Mouse clicks are a further potential distraction as the interviewer proceeded through screens. Participants, however, seemed generally untroubled by these issues and the pausing sometimes meant that other information or details occurred to them and which might otherwise have been missed could be captured and there was also an opportunity to verify what had been said.

In planning focus groups, we wanted to learn midwives' perceptions of the telephone component of the Pathway from their discussions together. Whereas all Trusts were not represented at the focus groups, discussions flowed freely among both the community and hospital-based midwives. We were aware of the difficulties of releasing staff from their clinical duties to attend meetings or training and wanted any midwives or obstetricians to be able to offer their own perspectives on the telephone component of the Pathway. We circulated newsletters on labour suites and other maternity areas with a short questionnaire on the reverse that could be completed and posted back to the research team. We also offered the opportunity for online completion, but received few questionnaire responses. We feel

that this indicates that midwives and obstetricians did not feel particularly strongly, either positively or negatively, about the telephone component of the pathway, although it may be that they have stronger views on its subsequent components.

It was interesting that the offer to use electronic methods to provide information met with little response. This experience was mirrored in the survey of HoMs in England where offers to provide data-collection tools electronically were rarely taken up.

5.1.2 NHS Direct

The majority of midwives, both managerial and clinical, felt that NHS Direct did not have a role in the provision of early labour services. The most commonly cited reasons for this included professional concerns about the importance of advice related to early labour being provided by practising midwives. Additional concerns included a view that the use of NHS Direct would have a detrimental effect on communications with women and with the labour wards and that NHS Direct would not be familiar with the policies of each Trust.

It appears unlikely that NHS Direct would be able to ensure midwifery availability in all of its call centres throughout the 24-h period and, when the pool of midwives in England is not increasing rapidly, such appointments would inevitably reduce the numbers of midwives available for hospital and community services.

Concerns were also expressed, albeit less frequently, about whether a telephone assessment governed by an algorithm, perceived as an inflexible tool, was the most appropriate method for giving advice related to early labour. This strength of feeling was, to an extent, surprising when, in the questionnaire responses and interviews, it became apparent that several units were developing *structured* telephone tools.

One issue appears to be that of knowing the local population, its needs and geography and of providing advice fitting with local Trust policies. This issue was also reflected by one of the senior midwives interviewed; the sense of 'our' population being different to those of other areas and therefore, in her view, rendering use of the Pathway inappropriate in one English setting.

Midwives in Wales acknowledged the need to develop skills of telephone assessment when the Pathway was introduced. One difference between the Pathway and NHS Direct includes the access to an existing midwifery knowledge base that can be adapted for telephone application. There are also differences between the two approaches; NHS Direct appears to focus on assessment and the Pathway includes the additional component of providing evidence-based advice.

Earlier research evaluating NHS Direct reported an over-cautious approach in the advice given by nurses (Munro *et al.*, 1998). Although

those researchers considered this a desirable trait, it suggests that, if NHS Direct were to be used for early labour advice, this might result in a duplication of resource use with women being asked to contact the unit where they are booked, in addition to contacting NHS Direct. The effect of this on women's overall experience of labour and potential for conflicting advice, previously a criticism of the maternity services (Audit Commission 1997), would require exploration, if telephone advice via NHS Direct became a part of service provision.

Concerns about potential negative impacts of NHS Direct on continuity within primary care were voiced by Florin and Rosen (1999). Concerns about disruption to communication were reported by HoMs in England and midwives participating in focus groups in Wales. Similarly, the difficulties of completing Part 1 documentation for community midwives in Wales and in making that available in a timely manner to hospital-based care providers could occur if NHS Direct was utilised for early labour services. In the context of HoMs' concerns about potential litigation and responsibility in the case of complaint, efficient IT-based mechanisms would be required to ensure communication about labouring women with provider units.

There will also be, as identified in interviews with women in Wales, some who will prefer and only be reassured by face-to-face advice and assessment.

5.1.3 England

The responses to the questionnaire indicated that considerable energies have been expended in making changes to early labour services in England over the past 5 years. Some units that have already made changes are planning further ones. The drivers to change appear to have been local factors; that is, an increase in bookings, response to staff shortages and clinical risk management. In addition, several senior midwives interviewed identified the impact on their workload of women attending their labour ward who are not in labour.

Changes to services to date have occurred more frequently in consultant units with midwifery-led care areas. It is also apparent that changes were more likely in the larger maternity units and it is these larger units, together with consultant units without midwifery-led care areas, that reported planning (further) changes to their services. This may be for a variety of reasons. Changes may have been stimulated by the introduction of midwifery-led care; it may be that larger units have more difficulty in dealing with large numbers of non-labouring attenders or that smaller services have been developed with a focus on early labour care or in premises that support its provision. No units identified either rurality or serving a particular urban area as a trigger for service change.

The fact that units that had already changed their early labour services were planning further changes suggests that the anticipated

benefits of previous changes had not been realised. It was also apparent, albeit in the context of the small amount of data for some innovations, that service changes brought implications in terms of requiring more staff and more training. As staff shortages were among the local factors that triggered service changes, then careful consideration must be given to the adoption of any new approaches.

This research was conducted at a time when changes to the commissioning process were anticipated; a minority of questionnaire respondents and interviewees mentioned this. In the interviews we heard examples of maternity service providers starting to work with Primary Care Trusts to address issues such as reducing unnecessary admissions; this included the allocation of funding subsequently used to develop a triage area and also of exploration of community-based locations for early labour assessment. It was clear that HoMs expected some impacts on service-level agreements from practice-based commissioning (Department of Health, 2004b); further research will be required to determine these.

It was interesting to note that despite the amount of effort expended in service change, HoMs reported relatively little evaluation of early labour services, even in those units where change had been effected. It may be that in some units the changes had been implemented relatively recently and it was considered that evaluation was not yet appropriate or that resources to support evaluation, either financial or skills-related, were not easily accessible. Consultant units reported evaluation of services more frequently; this reflects the findings of a study reporting governance procedures in different types of maternity unit (Smith and Smith, 2006). The majority of units, but not all, reported the availability of guidelines related to early labour care; increases in this can be expected following publication of the NICE Intra-partum Care guideline in 2007. Some units had changed their services to incorporate recommendations from the NICE guideline related to women with pre-labour rupture of membranes (Royal College of Obstetricians and Gynaecologists, 2001a), including women going home following initial assessment.

The ELSA trial is being conducted to evaluate the impact of offering support and assessment at home to nulliparous women in early labour. Although a small amount of primary research has previously investigated the impact of this intervention, there is no high-quality evidence derived from contemporary UK settings. It is interesting to note, therefore, the extent to which this largely unevaluated intervention is available in current UK maternity care, albeit selectively in the majority of cases. One of the aims of this present study was to inform the interpretation of the findings of the ELSA trial. If early labour support and assessment at home is found to be a clinically effective and cost-effective intervention, useful information has been gained about the circumstances that support the continued provision of a home-visiting service. This includes information related to the

model of midwifery care and the importance of adequate staffing levels for community midwifery.

Among those units that currently provide home visiting in early labour, a wish to delay admission to a hospital or Birth Centre during labour is not the only outcome for such a service. Offering a woman the option to delay the decision on place of birth until labour was a consequence reported by one respondent whose unit's home birth rate of 11 per cent was considerably higher than the national average of 2 per cent (NHS Maternity Statistics, England, 2004–2005; The Information Centre, 2006). This was ascribed to a midwifery workforce that appeared particularly supportive of home birth and may not occur in other areas or workgroups. If this interesting outcome were to occur in other areas, it is likely to require increases in community midwifery staffing levels.

The involvement of MCAs in supporting women in early labour was reported by one of the HoMs interviewed and is also included in the report of new roles for maternity support workers (NHS Employers, 2005). Such approaches reflect current considerations of skill mix in NHS maternity services. It may be that individuals other than midwives can provide the supportive companionship that women need as labour becomes established. Such approaches should, however, be subjected to careful evaluation.

There appear to be an ever-increasing number of locations where early labour services are provided. These appear as Day Assessment Units, Maternity Assessment Units and triage areas. It is interesting to note how the terminology used in North American settings has been translated into the English context. While the limited descriptions of triage areas suggest that women find them highly acceptable at the anecdotal level, there is no evidence that they improve health outcomes; neither is there evidence to refute the possibility of harm and there has been no rigorous evaluation of their impact on the psycho-social outcomes of labour. Similarly, studies of the cost-effectiveness of such facilities were not identified in the literature. The terminology has been adopted perhaps because new terminology suggests innovation, but it may be that there is little difference between Day Assessment Units, Maternity Assessment Units and triage areas. Instead, all of these provide a service for women with problems of pregnancy or where a woman requires reassurance. It is unclear whether there is a distinct difference between these services at a practical or philosophical level, although there may be variation between units in admission criteria. One Head of Midwifery commented on the potential for confusion between the triage and Day Assessment Units in her area.

Triage systems were developed to determine the order of treatment for battlefield casualties with the aim of returning the maximum number to front-line combat. The term appears to have subsequently been adopted for workload management in North American emergency

rooms and triage systems used to prioritise workload according to severity of presentation, generally reflective of a high–risk approach to maternity care. Its translation from general emergency settings to all non-routine obstetric care raises questions about its appropriateness for early labour care in UK settings. Although the institution of these areas was seen, in some units but not universally, to address workload-management issues, difficulties were reported, for example, in issues of privacy that are key to a woman's experience of labour.

Previous approaches to the assessment of early labour included admission rooms, either single or multi-bedded, to which women would be admitted while their partner or birth companion was banished to a waiting room. A midwife would take a history of the labour, assess maternal and fetal well-being, often including electronic fetal monitoring, and confirm labour onset. This process may or may not have involved consultation with a junior obstetrician. Such admission areas fell into disuse for various reasons; a lack of privacy for women who were in considerable discomfort and wanted to be mobile and to assume positions of comfort in early labour; an acknowledgement that women needed the support of a companion at that time and a wish to avoid transfer between rooms for those women for whom labour was confirmed. There is a danger that the introduction of new assessment areas, however labelled, may to some extent be re-introducing an outdated concept.

Further, if triage areas are working to prioritise admissions according to clinical urgency, it is possible that women who are in early labour may be restricted in movement and have their assessment delayed while women with complications of pregnancy receive urgent attention. It may also be difficult for midwives to provide the early labour support, for example, discussion of coping strategies in multi-bedded areas. If women are assessed in triage areas and found not to be in early labour, discharge from that area will still mean that repeated hospital attendance is required. Thus, while technically removed from the labour suite's category-X admissions, such women may still be incurring personal costs for themselves and their family and costs to the NHS from repeated journeys and admissions.

It is often the case that assessment procedures may be applied in a universal way in any assessment area; this may include the use of electronic fetal monitoring. This practice is not supported for routine use on admission to labour wards for low-risk women in labour (Royal College of Obstetricians and Gynaecologists, 2001b) thus there is a risk that care, for some women, may return to a more routine technological approach, counter to the emphasis on low-risk care in the NSF (Department of Health, 2005).

One potential demerit of any new assessment area is that it requires staffing. It is apparent from the data collected that there have been both successes and failures in triage units, as reported by senior midwives. Difficulties with staffing were among the problems

encountered and these appear difficult to resolve in a climate of financial pressures.

The extent to which triage areas can be considered synonymous with early labour care, based on the tenets of the NSF, of supporting normality in childbearing, individualised care and equality of access is, therefore, unclear. It therefore appears urgent that further research explores, in detail, the care provided in triage and similar areas and their appropriateness as a venue for early labour assessment.

The provision of drop-in services at Birth Centres, regardless of place of booking offers a further, non-technological, location for early labour assessment and advice. Again, there is little known about women's experiences of early labour services in these settings when subsequent intra-partum care may be provided at a different site; however, this does appear to fulfil the NSF's requirements for ease of access and support for normality.

One issue that figured in the description of the population served but not as a trigger for change to early labour services was that of language. Despite the fact that 57 units reported serving populations that included over 5 per cent women from minority ethnic communities and asylum seekers, only one innovative service was identified in an interview with a Head of Midwifery. This involved a befriending or so-called buddy scheme. It appears likely that, as described by that HoM, without access to someone who speaks the same language, women who do not converse in English may, themselves, be unable to obtain early labour advice by telephone and thus either labour unsupported at home or present at a maternity unit when clinically inappropriate. The use of services such as language link and, with the one exception described above, the involvement of link workers, translators or other professional language services, were not reported. This should not be interpreted as a lack of utilisation of such services; it may be that in some maternity services their use is embedded as an intrinsic part of maternity service provision. For services where this not the case, however, it may be helpful if good practice and innovative approaches could be reported in the professional literature and via electronic bulletin boards to achieve the equity in access to services for all women required by the NSF.

Some of the systems described by respondents as telephone triage do not appear to share the theoretical underpinning of North American triage systems. They appear to provide a more structured approach for midwives' telephone conversations with women and to offer a form of documentation that protects and is, therefore, welcomed by midwives at a time of concerns about rising litigation (Webb, 2004).

In England, the greatest changes to early labour services have taken place in consultant-led units and generally larger units. In addition, local issues and a wish to provide a locally appropriate service figure in senior midwives' aspirations for the care provided to their population. Any new developments in early labour care should meet

the requirements of the maternity module of the NSF and provide care that supports normality in childbearing and that can be accessed equally by all maternity service users. It appears likely, therefore, that in considering optimal approaches to early labour provision, there will not be a single solution in terms of approach but it may be that agreed principles should be developed to underpin service delivery, however local care is configured.

5.1.4 Wales

Women had several positive perceptions of the Pathway; these included its helpfulness in orientating themselves and their family to the terminology and possible sequence of events in labour and they particularly appreciated discussion of the information leaflet with the midwife during their pregnancy. The importance of antenatal preparation in relation to the pathway is clear, whether it is individual discussion between the woman and her community midwife or at antenatal classes. Similarly women need prior information of labour-related events that are treated as a variation from the Pathway, for example, pre-labour spontaneous rupture of membranes at term (which occurs in 6–19 per cent of pregnancies), in order that these do not come as a shock and cause distress for the woman.

At the point of contact with labour suite, women had also consulted other sources for advice and reported differences between when they were invited to attend labour ward and what the information leaflet had led them to expect. This mismatch may occur because it may be that Pathway information is based on traditional views of signs of labour, whereas it has been demonstrated by Gross and colleagues (2003) that women experience labour onset in ways that do not always reflect conventional professional teaching. Burvill (2002) commented on the extent to which labour is a continuum and that the stages of labour as experienced are not so clearly demarcated as traditional obstetric and midwifery teaching suggests. The process of labour varies between individuals (reflected in the various patterns of contact with services on the trajectories Figures 3.2–3.6, Section 3). It is therefore impossible to reflect every potential combination of labour events in an information leaflet. It may be, however, that the leaflet could be reviewed to avoid the disappointment caused when women are not invited to attend the unit at the point at which they expect that to occur. It is interesting to note that, for half of the respondents, the Pathway did not prevent women being admitted and being sent home without delivering their baby. This issue, in the context of an initiative whose aim is to support women remaining at home, warrants further investigation as some women experienced admission and discharge (undelivered) more than once and others remained in hospital but not in established labour.

It would appear difficult to fully realise the purpose of an integrated care pathway for improving communications until both midwives and women are conversant with the Pathway's aims. It may be that the

importance of the telephone component of the Pathway could be overlooked, as it comprises a telephone conversation, thus the gateway to the labour ward remains as it was previously. There is, however, the intention that there should be a clear difference between the telephone conversations that midwives had with women prior to institution of the pathway, that often resulted in a request to attend the labour ward, and the current structured assessment and provision of evidence-based advice. Midwives expressed an awareness of tensions between supporting women to remain at home, while also making sure that women feel welcome to attend the maternity unit when they feel they need to. This again relates to the issues of women being given realistic information about the Pathway and its philosophy that being at home in early labour is considered to be in the best interests of those women at low obstetric risk.

There appears to be a mismatch between midwives' and women's perceptions of the duration of telephone calls. This may be due to the relatively new status of the pathway when memories of the previous shorter telephone response, generally inviting attendance, are still in the professional consciousness. An alternative explanation of the different perceptions of the duration of telephone conversations might relate to the fact that a midwife may be called away from providing care to a woman in established labour to respond to a telephone call. It may be that concerns about leaving a labouring woman unsupported might influence perceptions of call duration. Future training could address this issue and improve women's experiences of the telephone call, in particular the amount of empathy and reassurance provided by the midwife. Clearly, if the first telephone conversation does not go well from the woman's perspective, subsequent interactions may not be successful.

Similarly, for women to benefit from the integrated care pathway approach, midwives need to be able to access the advice given by their colleagues on previous shifts or in other locations; thus, each episode of early labour advice and assessment requires documentation. This is also optimal for the midwife managing a labour ward or Birth Centre who can consult documentation and know how many women may be expected to attend within the next few hours, assisting in the management of that clinical area.

Previous work has highlighted the importance to women's experiences of labour of being in control, involved in decision-making and of being treated as an individual and with respect (Green and Baston, 2003). The data collected in this research reflect this as women with higher satisfaction scores reported feeling that they were able to make choices and that they were being treated as an individual and with respect. Conversely, lower satisfaction scores were associated with a perception of being treated with a lack of respect or not as an individual. Smith (2001) has demonstrated positive support from professionals as a factor when evaluating women's satisfaction with different models of intra-partum care.

It is interesting to note the welcome that midwives have given to telephone approaches to early labour care; midwives participating in focus-group discussions felt that the telephone component of the Pathway was supportive of midwives' decision-making and useful in the teaching of midwifery students. This was echoed by a senior midwife in England who felt that the introduction of a structured assessment tool supported midwives' decision-making. Documentation associated with this type of service change was seen as supporting the midwife's position, in case of subsequent clinical problem or complaint. Further work investigating midwives' decision-making related to confirmation of labour onset is currently being explored in a randomised controlled trial (Cheyne *et al.*, 2006).

This present study has, we feel, generated a rich source of data related to the experiences of midwives and women related to the telephone component of the All-Wales Pathway for Normal Labour. We have identified three current additional studies in progress in Wales that will add to this. Data related to women's early labour experiences of the Pathway will provide a useful comparison to data related to standard care and home visiting generated in the ELSA trial.

There is, however, a significant evidence gap in what is known about the Pathway in terms of clinical outcomes for women and their babies. We understand that data related to process (entry of women on to the Pathway and proportion remaining on the Pathway throughout labour) have been collated at Trust level; information on whether there are health gains for women and babies is lacking. Although the opportunity for evaluation through introduction in a randomised controlled trial no longer exists in Wales, we would recommend that any further implementation outside of Wales should take place within a robust evaluation framework. It would, however, still be possible to evaluate outcomes in Wales using research designs with historical controls and we would strongly recommend further research to address this issue.

5.2 Over-arching themes

The increasing array of options for early labour care is shown by the range identified and the fact that, in some units, several approaches to providing services are used concurrently. The main, although not exclusive, driver to change relates to management of workload on labour wards but normalising early labour; reducing interventions and improving staffing ratios for women in established labour were also identified.

Although several service innovations have aimed to reduce the number of women admitted to a labour ward and subsequently discharged home, there appears to be little evidence to demonstrate whether this has occurred. It appears that much of the innovation in services lacks a robust evidence base. Service changes are not introduced within a framework of rigorous evaluation; the availability

of statistical information that allows monitoring of the impact of change appears poor or inaccessible to senior staff in the maternity services and for several service changes evidence of impact on clinical outcomes is lacking.

For women's experiences, the provision of written information about early labour appears important but such information is not always available and, if it is available, is not always discussed prior to labour onset. With the exception of this current research, the impacts on women's psychosocial experience of different approaches to early labour care are generally unknown.

For several of the service changes identified in this research, provision impacts on staffing and training needs and service providers require guidelines for practice. Midwives' concerns about the availability of documentation to protect their position in case of complaint remain; clear and accessible documentation to record advice are all required and several of the service changes identified have addressed this (triage, telephone triage and the Pathway).

Questions remain about the extent to which a telephone conversation can provide a complete assessment of a woman's status at labour onset; further exploration of this issue would be useful. Rigid frameworks for telephone contacts were generally considered inappropriate.

5.3 Conclusion

The NHS has instituted a range of approaches to early labour services over the past 5 years in England and Wales without either evaluation or ongoing audit. There is little evidence of the clinical effectiveness or cost-effectiveness of any of these interventions. This research has identified the range of early labour services in England, explored particularly innovative services and gathered information that will inform the interpretation of the results of the SDO-funded randomised controlled trial, ELSA. Information gained about the telephone component of the All-Wales Pathway for Normal Labour is now available to inform both its future development and the preparation of midwives for its use in practice. There appears little scope for exploring the use of NHS Direct for early labour care. It is hoped that the implementation of *Best Research for Best Health* (Department of Health, 2006) and research passports will address the research governance issues encountered in this research.

Recommendations for practice, policy and further research are listed below.

5.4 Recommendations

5.4.1 Recommendations for practice

1 Changes to early labour services should be introduced within robust systems of evaluation that address issues of clinical outcome, impacts on women's experiences and labour-ward workloads.

2 Good practices in change management should be adopted that foster staff involvement and time for discussion of new approaches.

3 The provision of early labour care for women who may not be able to communicate in English requires particular consideration.

4 Any changes to early labour services in England should reflect the philosophy of the maternity module of the NSF (Department of Health, 2005).

5 Statistical information should be of a quality to support evaluation and monitoring.

6 Clinical guidelines for evidence-based care in early labour are required.

7 Workload-management systems should be utilised to determine impact of service changes.

8 The provision and content of written information about early labour should be reviewed. Women should receive information about the Pathway and have the opportunity to discuss it with a midwife during pregnancy so that they also understand the underlying philosophy.

9 The use of discussion boards or other electronically based systems to facilitate the dissemination among providers of service developments, experiences and evaluations related to early labour care should be explored.

10 Further information about the philosophy of the Pathway should be included in midwives' training sessions.

11 The Pathway information leaflet should be reviewed to incorporate information about events that will be treated as variations from normality.

12 Documentation should be completed for each episode of telephone assessment; this documentation should be available for subsequent care providers.

13 Women should be given clear messages according to local policy; for example, that they are welcome to attend a labour ward for assessment at any time but they may be advised to go home again to await established labour and why that may be advised.

14 Women should receive clear instructions about when they should return to hospital if sent home.

15 Women should feel welcome to re-contact the labour ward without feeling embarrassed.

16 Midwives need to consider spending more time on telephone conversations with women in early labour to ensure that needs for reassurance and information are met.

17 Midwives' training needs in conducting telephone assessments should be reviewed and training made available, where required.

5.4.2 Recommendations for policy

1 The telephone service provided by NHS Direct should not be extended to include assessment of women in early labour.

2 The potential for Children's Centres to be a further venue for early labour services is not yet known and should be monitored.

3 The impacts on early labour services of changes to the commissioning process should be assessed.

5.4.3 Recommendations for future research

1 The service provision and experiences of early labour for women who are unable to communicate in English should be explored further.

2 Clinical outcomes for women experiencing care under the Pathway should be evaluated.

3 Women's experiences of early labour should be explored throughout the range of settings where care is provided; for example, triage areas, Maternity and Day Assessment Units, and Birth Centres.

4 The clinical effectiveness and cost-effectiveness of triage units should be evaluated.

5 The impact of changes to the research governance framework included in *Best Research for Best Health* (Department of Health, 2006) should be closely monitored.

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Addendum

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Addendum:

This report was amended on 13th February 2012 to update the correct copyright statement and/or correct the publication date. The content of the report has not been changed.