Life events research paper
– having a baby

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LIFE EVENTS RESEARCH PAPER – HAVING A BABY

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The birth of a baby for individual women, their families and their communities is implicitly understood as a significant and life-changing event. This paper is part of a larger project looking at major life events of different kinds taking place in rural areas of England, however, here the focus is on needs and needs relating to pregnancy and childbirth. Maternity care policy is set out in documents that describe the provision of flexible, woman focused, individualised care, with services designed to fit the needs of women, babies and their families in the context of a clear maternity pathway.

Providing maternity services in rural areas presents many challenges. The key issues in delivering care to women and families in rural areas are location and accessibility, the range of services provided and staff able to provide the care. Distance from parents’ homes to services may be great, and travel time to the nearest obstetric units may be long. Travel difficulties are exacerbated by poor road quality, transportation services and weather. Poor accessibility impacts most on those with high risk pregnancies, young parents and low income families. Long distances from regional centres and other resources and the unpredictability of what can happen, compounded by the distress experienced in transferring women to larger regional centres to give birth can result in considerable difficulties for families. The characteristics of child-bearing women in rural areas may also be different from their urban counterparts, particularly in relation to socioeconomic disadvantage. All women should receive sensitive, woman-centred, evidence-based midwifery care. Yet maternity care for women in rural settings can be associated with interventions that may be unnecessary and institutionalisation.

Overall women may have limited choice in terms of where they give birth and the extent to which there is provision of the facilities that are recommended. Distance and transfer times, availability of services, and the attitudes of midwives and health professionals to rural maternity care are seen as significant influences on women’s choices and the overall quality of care. The practical difficulties associated with midwifery staffing levels and distance to travel between homes and hospital are also important factors. With regard to continuity, a low population density may mean that, with fewer midwives employed, women and the local community-based staff get to know one another better. Offering high quality antenatal and postnatal family centred support in rural areas is nevertheless a challenge at many levels.

Maternity care providers in rural areas need specific skills and competencies and there is evidence of variation and ambiguity about professional roles and responsibilities. Limited information is available about models of maternity care provision in rural areas and considerable uncertainties remain around the staffing and training required to maintain maternity care team skills and competencies.
1. INTRODUCTION

This report is a review of maternity care, covering policy, national guidelines and standards and research evidence across the care pathway from antenatal through the intrapartum and postnatal periods.

Around 650,000 women give birth in England each year. Pregnancy and childbirth, while “normal” for most women, is a significant major life event, which for most, is a life-changing experience. Maternity services provide care for women and babies with diverse and complex needs. The configuration of services varies across the country and is changing over time. Within that context there is variation in individual women’s experiences according to their needs, as well as in geographical location and the type of provision locally available.

This report describes policy and practice in maternity care, services as they are currently configured, the evidence in terms of guidelines and standards for care as well as the research available on users’ and providers’ perspectives. It addresses issues that may particularly impact on services for pregnant women in rural areas and presents what is known about having a baby in a rural community.

Having a baby and the associated maternity care takes place over a period of approximately a year. Women’s needs and those of their families change over the course of this time period. Thus the policy, guidelines, organisational structures and provision described reflect this.

2. THE CURRENT CONTEXT

2.1 Birth statistics

In 2007, maternity services in England provided care for over 650,000 births reflecting an average 3% rise in the number of births each year since 2002. The regional distribution of births is shown in Figure 1.

Figure 1: Proportion of births in each of the Strategic Health Authorities in England, 2007

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While services cover a generally healthy population of mothers and babies, the past twenty years has seen a steady increase in the “complexity” of care provided. The proportion of women who have their labour induced with the use of drugs more than doubled between 1989 and 2008, and now stands at 20%.\(^2\) Over the same period there has been a similar increase in the proportion of women having an epidural, general or spinal anaesthesia. In 2007-2008 over one third of women had this form of pain relief. The caesarean section rate has also more than doubled since 1989, reaching 24.6% in 2007-8, while the proportion of women having a vaginal birth assisted with ventouse (suction cap) or forceps has remained broadly stable.\(^2\)

Demographic and other factors are changing the landscape of care, including changing patterns of inward migration and movement to urban centres, women delaying pregnancy and childbirth and the use of infertility treatment.\(^1,3\)

### 2.2 The organisation of care

Currently NHS maternity care in England is provided by 148 acute trusts and 4 primary care trusts.\(^4\) Maternity services are provided from the woman’s first contact with a health professional about her pregnancy through the antenatal, intrapartum and postnatal periods. Typically a woman’s first contact with maternity services is with her GP or a midwife, but for women with pre-existing conditions requiring specialist care this may take place pre-conception. The following maternity care pathway shows the interaction between the different elements of the service and indicates the different routes that women might take.

![Maternity care pathway](image)

**Figure 2: Maternity care pathway**\(^5\)
A range of different settings for care is provided and the configuration of care within trusts shows considerable regional variation. Three types of maternity unit have been defined and are shown in Box 1. Women also have the option to plan to have their baby at home.

A total of 180 obstetric units, 26 alongside midwifery units and 56 free-standing midwifery units provide care within the trusts. In 2007 two thirds of trusts, however, only had obstetric units. Across England the majority of births (93% in 2007) take place in obstetric units, with 3% taking place in AMUs, 2% in FMUs and 2% at home. This national pattern conceals regional differences influenced by local availability of services and models of care. The geographical distribution of all maternity units is shown in Figure 3, in which the effects of geography and urbanisation are evident.

**Box 1: Definitions of maternity units in England.** Source: Birthplace Report.

**Obstetric unit (OU):** an NHS clinical location in which care is provided by a team, with obstetricians taking primary professional responsibility for women at high risk of complications during labour and birth. Midwives offer care to all women, whether or not they are considered at high or low risk, and take primary responsibility for women with straightforward pregnancies during labour and birth. Diagnostic and treatment medical services including obstetric, neonatal and anaesthetic care are available on site, 24 hours a day.

**Alongside midwifery unit (AMU):** an NHS clinical location offering care to women with straightforward pregnancies during labour and birth in which midwives take primary professional responsibility for care. During labour and birth diagnostic and treatment medical services, including obstetric, neonatal and anaesthetic care are available, should they be needed, in the same building, or in a separate building on the same site. Transfer will normally be by trolley, bed or wheelchair.

**Freestanding midwifery unit (FMU):** an NHS clinical location offering care to women with straightforward pregnancies during labour and birth in which midwives take primary professional responsibility for care. General Practitioners may also be involved in care. During labour and birth diagnostic and treatment medical services including obstetric, neonatal and anaesthetic care, are not immediately available but are located on a separate site should they be needed. Transfer will normally involve car or ambulance.
Figure 3: Map showing location of all maternity units in England. Source: UK 2001 Census Output Area Boundaries. Crown copyright 2003.7
3. MATERNITY CARE POLICY

Maternity care policy is set out in the National Service Framework for Children, Young People and Maternity Services (NSF) and the NSF implementation framework described in Maternity Matters: Choice, Access and Continuity of Care in a Safe Service. The NSF set out a 10-year programme for improvement and established the standard that:

‘Women have easy access to supportive, high quality maternity services, designed around their individual needs and those of their babies.’

The focus is on providing flexible, woman focused, individualised care with services designed to fit the needs of women and babies, including an emphasis on the needs of vulnerable and disadvantaged women, so that women are supported and encouraged to have as normal a pregnancy and birth as possible and that parents are helped to prepare for and adjust to new parenthood.

It is expected that maternity services are commissioned within a context of managed care networks, with a range of routine and specialist services. These should include effective arrangements for managing the prompt transfer and treatment of women and babies experiencing problems or complications that may, for example, require specialist care during labour or postnatally in adult high dependency, intensive care or in a neonatal unit.

In Making it Better for Mother and Baby, Sheila Shribman, National Clinical Director for Children, Young People and Maternity Services, sets out the clinical case for change, emphasising the benefits of maternity service redesign in terms of safer care, improved access and outcomes, providing more choice, promoting normality and local antenatal and postnatal services closer to home, with the possibility of birth in a more home-like environment and at home if women wish. It is proposed that services be redesigned so that women have easy access to and a range of options for care and that reconfiguration provides an opportunity to improve access to the full range of care and specialist services through networks.

Choice is at the centre of government policy commitments for maternity care with four choice guarantees set out in Maternity Matters. While there is an acknowledgement that women’s circumstances may differ, all women should, in principle, expect:

- To be able to choose how to access maternity care and to have a midwife as first point of contact if that is their wish
- To be able to choose the type of antenatal care they wish: midwifery care or that provided by a team of health professionals, including midwives and obstetricians
- To be able to choose where they wish to give birth: supported by a midwife at home, by a midwife in a local midwifery unit or birth centre or supported by a maternity team in a hospital
- To be able to choose how and where to access postnatal care, either at home or in a community setting

The guiding principle that “all women will need a midwife but some need a doctor too” is evident in these choice guarantees. Direct access to a midwife at the start of pregnancy is seen as critical in enabling women to have more time for making informed choices in planning their care and ensuring
they are able to take advantage of the support and tests available. Throughout maternity care midwives are central in giving women individual support, in promoting “normal” birth and in decisions to refer women to more specialist care if necessary.

As Making it Better for Mother and Baby emphasises, what works in one area will not necessarily work in another and proposals for change must be developed in consultation with local people. The way the local NHS trusts choose to organise maternity care depends on many factors including the identified needs of their local community, size and local geography and the investment made in staff skills and training. There is clearly a balance between accessibility and the need for specialist care.

The Royal Colleges and the National Institute for Health and Clinical Excellence (NICE) have also produced clinical and organisational guidance relating to the provision of maternity services in Safer Childbirth: Minimum Standards for the Organisation and Delivery of Care in Labour and the clinical guidelines Antenatal care: Routine Care for the Healthy Pregnant Woman, Intrapartum Care: Care of Healthy Women and their Babies During Childbirth and Routine Postnatal Care of Women and their Babies. While many of the recommendations are clinical in nature, many have organisational and service implications, particularly for services in rural areas. These are discussed in the section that follows.

### 4. STANDARDS AND GUIDELINES FOR CARE

The importance of evidence based standards in healthcare has been recognised in the work of NICE. Many of the standards for maternity care have links with the policies outlined above and those which may have organisational and service implications in relation to having a baby are described in this section. These provide an essential context for understanding the way in which access to high quality care may be influenced by location, the facilities available locally, geographical factors, staffing and staff availability, all of which may affect routine and more specialist care.

#### 4.1 Antenatal care

Based on the NICE guideline for antenatal care, it is expected that all pregnant women should be offered information based on the current available evidence, together with support to enable them to make informed decisions about their care. Every pregnant woman should be:

- Able to have a booking-in appointment, lasting approximately one hour, in which they are fully assessed, by 12 weeks of pregnancy (including assessment of mental health issues and risk factors for some clinical conditions)
- Able, in partnership with her midwife or obstetrician, to draw up an individualised and flexible care plan
- Offered an early ultrasound ‘dating’ scan between 10 and 14 weeks to determine gestational age and to detect multiple pregnancies
- Offered screening for haematological conditions as early as possible in pregnancy (ideally by 10 weeks)
• Offered screening for Down’s Syndrome. The ‘combined test’ should be offered between 11 and 14 weeks. For women who book later in pregnancy the most clinically and cost-effective serum screening test should be offered between 15 and 20 weeks
• Offered ultrasound screening for fetal anomalies, normally between 18 and 21 weeks
• Given information on a wide range of topics on an appropriate time schedule following contact with a health professional in the early weeks of pregnancy to support informed decision-making

In relation to the organisation of antenatal care:
• Midwife-led models of care should be offered for women with an uncomplicated pregnancy
• Antenatal care should be provided by a small group of carers with whom the woman feels comfortable. There should be continuity of care throughout the antenatal period. It should be readily and easily accessible to all women and should be sensitive to the needs of individual women and the local community
• A system of clear referral paths should be established so that pregnant women who require additional care are managed and treated by the appropriate specialist teams when problems are identified
• A schedule of antenatal appointments should be determined by the function of the appointments. For a woman who has not previously given birth, with an uncomplicated pregnancy, a schedule of 10 appointments should be adequate. For a woman who has previously given birth, with an uncomplicated pregnancy, a schedule of 7 appointments should be adequate

4.2 Care during labour and birth

According to the NICE guideline on the care of healthy women and babies during labour and birth all women should be treated with respect and should be in control of and involved in what is happening to them. Specifically:

• Women should be offered the choice of planning birth at home, in a midwife-led unit or in an obstetric unit and should be informed that giving birth is generally very safe for both the woman and her baby and also of the possible practical difficulties associated with unexpected problems and the need for transfer between units and between home and hospital care
• A woman in established labour should receive supportive one-to-one care
• A woman in established labour should not be left on her own except for short periods or at the woman’s request
• With normal labour clinical intervention should not be offered or advised where this is progressing normally and the woman and baby are well
• The opportunity to labour in water is recommended for pain relief
• Before choosing epidural analgesia, women should be informed about the risks and benefits, and the implications for their labour, which may include transfer to another type of unit for care
• When delay in the established first stage of labour is confirmed in women who have not previously given birth, advice should be sought from an obstetrician and the use of oxytocin should be considered.
• Instrumental birth is an operative procedure that should be undertaken with tested effective anaesthesia
Relevant clinical governance issues described in the intra-partum guideline for all settings include: 12

- Maintaining equivalent competency and experience by rotating staff between obstetric and midwife-led units
- Clear referral pathways should be in place to enable midwives to inform or seek advice from a supervisor of midwives when caring for a woman who may have risk factors but does not wish to labour in an obstetric unit
- If an obstetric opinion is sought by either the midwife or the woman on the appropriate place of birth, this should be obtained from a consultant obstetrician
- Monthly figures of numbers of women booked for, being admitted to, being transferred from and giving birth in each place of birth should be audited. This should include maternal and neonatal outcomes
- The clinical governance group should be responsible for detailed root-cause analysis of any serious maternal or neonatal adverse outcomes

Clinical governance guidance for intra-partum care in settings other than an obstetric unit includes: 12

- Clear pathways and guidelines on the indications for, and the process of transfer to, an obstetric unit should be established. There should be no barriers to rapid transfer in an emergency
- Clear pathways and guidelines should also be developed for the continued care of women once they have transferred; these pathways should include arrangements for times when the nearest obstetric or neonatal unit is closed to admissions
- If the emergency is such that transfer is not possible, open access must be given on-site for any appropriate staff to deal with whatever emergency has arisen
- There should be continuous audit of the appropriateness of, the reason for and speed of transfer; audit also needs to consider circumstances in which transfer was indicated but did not occur and audit should include time taken to see an obstetrician or neonatologist and the time from admission to birth.

4.3 Postnatal care

The NICE guideline on routine postnatal care of women and their babies identifies the essential core care that every woman and her baby should receive in the first 6–8 weeks after birth. 13 Advice is also given on additional care which may be needed and indicates the degree of urgency needed in dealing with problems that may occur. Key points and priorities in the guideline are as follows:

- A documented, individualised postnatal care plan should be developed with the woman as soon as possible after birth, if not before, to be reviewed at each postnatal contact
- At the first postnatal contact, women should be advised of the signs and symptoms of potentially life-threatening conditions and to contact their healthcare professional immediately or call for emergency help if any signs and symptoms occur
- Hospitals providing postnatal care should ensure round the clock rooming in, privacy, adequate rest and ready access to food and drink
- How long a woman stays in hospital after birth should be negotiated, considering the health and well-being of the woman and her baby and the level of support available following discharge

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• All healthcare providers should have local protocols about communication and the transfer of care between clinical sectors and healthcare professionals and these should be audited
• A full examination of the newborn should be carried out within 72 hours of birth, results documented in the postnatal care plan and personal child health record and shared with the parents
• A newborn blood spot test should be offered when the baby is 5–8 days old
• All healthcare providers should ensure an externally evaluated breastfeeding programme is implemented; have a written breastfeeding policy that is communicated and implemented and ensure breastfeeding support is available in all care locations
• At each postnatal contact, women should be asked about their physical and emotional well-being, offered information and advice in relation to infant feeding and the care and health of their baby

There is no specific schedule of visits or contacts for postnatal care. The number of postnatal home visits and other contacts will depend on duration of hospital stay, the checks required and the needs of individual women and babies. Continuity of care across the different phases of care is aimed at, though it is affected by practical considerations and the models of care in operation.

5. ISSUES ARISING FROM THE ORGANISATION OF CARE

All the guideline elements listed have implications for the organisation of maternity care overall and in rural areas: access to members of the maternity team providing care; the time and contacts required with health professionals; the type of health professional required and their experience; and the availability of specific services (e.g. as ultrasonography or day assessment in the antenatal period and drop-in centres or breast-feeding telephone support telephone in the postnatal period). The extent to which they are funded, staffed and in place varies and affect provision overall and future plans, as well as the experience of individual women and their families.

Staffing is the main cost in healthcare and maternity care is no different in this respect. The changing age structure of the nursing and midwifery professions, together with changing patterns of demand appear to be contributing to staffing shortages which many maternity services report.\(^4\) The median trust vacancy rate for midwifery in 2007 was 3.7%, though this was much higher in some areas. Turnover is also an issue, with an overall rate of 6.4%. Maternity support workers have been introduced in almost all trusts and are used in a variety of ways in all phases of care to support midwives who are responsible for their supervision.\(^4\)

The current shortage of middle grade medical staff working in maternity care, both in obstetrics and paediatrics, is largely related to the implementation of the European Working Time Directive which has resulted in reduced hours and changing rotas and work patterns. This has affected maternity services and the functioning of different types of facilities. Many trusts are planning to open more AMUs, or have already done so, attempting to address a number of issues including staffing, giving women options for care and supporting birth with minimal intervention.\(^4\) However, these units are necessarily in the same locations as obstetric units.

The continuing development of perinatal or maternity networks and integration with neonatal networks is also part of the reconfiguration process in maternity services.
5.1 Transfers between settings

Planned birth at home with a midwife and birth in alongside and freestanding midwifery units, is an option for women with straightforward pregnancies. Inevitably, for some, complications arise during labour, which can mean transfer to a hospital obstetric unit. Where the planned birth is ‘out of hospital’, that is at home or in a freestanding midwifery unit, this is likely to involve transfer by ambulance. A structured review of studies from around the world from 1982 to 2004 showed that the proportion of women transferred from freestanding midwifery units during labour varied from 12% to 22%, but there is little reliable evidence on transfer rates in England.6

In England transfer from most FMUs involves a journey of up to 25 miles, with a median distance of 17 miles; from a very small number of more rural FMUs the distance is longer. The distribution of transfer distances is shown in Figure 4 below.

Figure 4: Distribution of transfer distances from freestanding midwifery units (FMUs) in England. Source: Healthcare Commission. Maternity Services Review, 2007.

Transfer times have the potential to influence outcomes for women and their babies and, while distance travelled may be a contributory factor, these are likely to vary according to time of day and traffic conditions. Ongoing research as part of the Birthplace in England Research Programme will provide more reliable estimates of the proportion of women who are transferred, actual transfer times and the extent to which length of transfer impacts on outcomes.

Safer Childbirth: Minimum Standards for the Organisation and Delivery of Care in Labour recommends that, “There should be written multidisciplinary evidence-based clinical guidelines, which are accessible and reviewed every 3 years at each birth setting... [and that these] should include... management of transfer of mother and/or baby to obstetric unit.” (p.14).10 In 2007 all NHS trusts reported to the Healthcare Commission’s Maternity Services Review that they had guidelines in place that covered transfer during labour, but recent research has indicated that these guidelines are not always of good quality.14 Early findings from this and ongoing research indicate that the management of transfer during
labour varies\(^6\) and acute and ambulance trusts have different policies on aspects of care that may affect women’s experience and outcomes.

5.2 Access to specialist care

Facilities for emergencies should be easily accessed. The Healthcare Commission maternity review collected evidence on specialist services that may be required by women in the perinatal period.\(^6\) Almost all obstetric units (95%) had an adult intensive care unit (ITU) on site, and all had one in the same trust. Virtually all obstetric units (96%) had a blood transfusion service on site, and for those that did not, 13 miles was the longest reported distance to such a centre. The RCOG guidelines for care provide more detail about what is required for women needing specialist clinical care associated with or following labour and birth.\(^{12}\)

The Department of Health review of neonatal services in 2003\(^{15}\), the National Audit Office report Caring for Vulnerable Babies: The re-organisation of neonatal services in England\(^{16}\) and the Neonatal Taskforce work have all addressed the complex issues associated with providing and organizing neonatal care in England, particularly those associated with capacity, staffing and transport. For babies needing additional care, all obstetric units have a local neonatal facility on site, but only half have a level 3 neonatal unit providing the full range of intensive care for babies at all gestations. So for very sick babies transfer may be necessary. Alongside midwifery units, by definition, have access to a nearby neonatal unit, however, babies born in freestanding midwifery units requiring neonatal care will have to be moved. Transfers between neonatal units may also be necessary because units are at capacity and are closed to further admissions.\(^4\) Each trust in England is a member of one of the 23 neonatal networks designed to facilitate such transfers and very few babies (less than 1%) are transferred outside their own network. Three quarters of trusts reported being in a network with its own transport service, others shared transport, but a small proportion indicated that they did not have a transport service.

It is important in planning, commissioning and providing services, to appreciate where the pressure points are, in order that women and their families have the best and most appropriate care. This may be provided locally, but not necessarily, particularly where specialist services are required for a mother, a baby or both mother and baby. The local maternity service network, working with acute and primary care trusts and Strategic Health Authorities, is at present responsible for the overall organisation of services.

6. THE CARE RECEIVED

The Healthcare Commission review of maternity care in 2007 Towards Better Births and the national survey Recorded Delivery provide evidence of the extent to which guidelines are followed and a baseline from which progress to targets can be measured, as well as basic data to help plan services.\(^4\)\(^{17}\)

Selected results are shown in Table 1 below.\(^4\)\(^{17}\)
Antenatal care

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwife as first contact</td>
<td>19%</td>
</tr>
<tr>
<td>Offered choice of birth at home at the start of pregnancy</td>
<td>57%</td>
</tr>
<tr>
<td>Booking before 12 weeks</td>
<td>86%</td>
</tr>
<tr>
<td>Choice about location for antenatal care</td>
<td>22%</td>
</tr>
<tr>
<td>Mostly saw same midwife antenally</td>
<td>58%</td>
</tr>
<tr>
<td>Had overnight stay/s in hospital during the pregnancy</td>
<td>21%</td>
</tr>
<tr>
<td>Wished to and were able to attend AN classes</td>
<td>60%</td>
</tr>
<tr>
<td>Had a dating scan</td>
<td>92%</td>
</tr>
<tr>
<td>Had an anomaly scan</td>
<td>99%</td>
</tr>
</tbody>
</table>

Care during labour and birth

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women giving birth in:</td>
<td></td>
</tr>
<tr>
<td>obstetric units</td>
<td>93%</td>
</tr>
<tr>
<td>alongside midwifery units</td>
<td>3%</td>
</tr>
<tr>
<td>freestanding midwifery units</td>
<td>2%</td>
</tr>
<tr>
<td>at home</td>
<td>2%</td>
</tr>
<tr>
<td>Women delivered by midwife</td>
<td>62%</td>
</tr>
<tr>
<td>Had met midwife before</td>
<td>21%</td>
</tr>
<tr>
<td>Women having non-instrumental vaginal birth</td>
<td>48%</td>
</tr>
<tr>
<td>Women having epidural anaesthesia or similar</td>
<td>30%</td>
</tr>
<tr>
<td>Women having caesarean birth</td>
<td>24%</td>
</tr>
<tr>
<td>Babies admitted to a neonatal unit</td>
<td>11%</td>
</tr>
<tr>
<td>Women staying:</td>
<td></td>
</tr>
<tr>
<td>6 hours or less after the birth,</td>
<td>6%</td>
</tr>
<tr>
<td>less than 24 hours</td>
<td>25%</td>
</tr>
<tr>
<td>Midwives seen postnatally and all met before</td>
<td>26%</td>
</tr>
<tr>
<td>Women having 5 postnatal contacts</td>
<td>50%</td>
</tr>
<tr>
<td>Last PN contact: at more than two weeks</td>
<td>30%</td>
</tr>
</tbody>
</table>

Postnatal care

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babies admitted to a neonatal unit</td>
<td>11%</td>
</tr>
<tr>
<td>Women staying:</td>
<td></td>
</tr>
<tr>
<td>6 hours or less after the birth,</td>
<td>6%</td>
</tr>
<tr>
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<td>Last PN contact: at more than two weeks</td>
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</tr>
</tbody>
</table>

Table 1: Care received by women during pregnancy, childbirth and in the postnatal period

7. MATERNITY CARE IN RURAL AREAS: PUBLISHED EVIDENCE

In order to identify evidence of issues in relation to maternity care in rural areas, a literature review was conducted. The search strategy used medical subject headings to compile a list of search terms which included: health services (organisation and administration); obstetrics; maternity; pregnancy; rural health; rural health services; midwifery; obstetrical nursing; maternal-child nursing.18 Computerized searches were conducted using these headings (and combinations thereof) in June 2009 in the following electronic databases: PubMed; Psychlit; EMBASE; CINHAL; The Cochrane Central Register of Controlled Trials (CENTRAL); Web of Science; OVID. The inclusion criteria were: all studies, published from January 1999 to June 2009, participants: parents receiving maternity care and health care providers. All titles and abstracts were retrieved (n=165) and 24 duplicates removed, the remaining 141 citations were downloaded into Endnote. All abstracts were reviewed for inclusion suitability, and 100 articles not relating directly to the inclusion criteria were excluded (11 letters or comments, 2 historical reviews, 87 studies from developing countries). Full text versions of the remaining 41 papers were obtained and
reviewed. Where possible, research in England is referenced. However, examples from elsewhere in the
UK and other developed countries are used where these are particularly apposite and where there is an
absence of appropriate studies.

7.1 Antenatal, intrapartum, postnatal and neonatal care

There is a body of research which indicates that the profile of mothers living in rural and remote areas
may differ from that of mothers in urban areas. For example, as previously described, an initial step in
receiving effective maternity care is engagement with antenatal services. However, some studies have
suggested that women from rural communities may be more likely to have delayed entry into antenatal
care than those from urban areas.19 Studies of intrapartum care provide a less clear picture for mothers
in rural areas. A large New South Wales study found that, compared with urban women, rural women
had lower rates of obstetric interventions both before birth (induction of labour, planned caesarean
sections and epidurals) and at the time of birth (caesarean sections after labour, instrumental delivery
and episiotomy).20 This difference was greater for rural women giving birth in their local area, although
partly explained by higher rates of epidural anaesthesia in urban areas. In contrast, a more recent
Canadian study compared intervention rates and outcomes between women who live adjacent to
maternity service with specialist services and women who have to travel for this care.21 Rural parturient
women who had to travel had an increased rate of induction of labour (1.3 times more) compared with
women who lived within the hospital area.

As previously described policy reviews and these studies would suggest, a key issue for rural maternity
services is delivery by caesarean section.10 15 A Canadian study compared maternal and perinatal
outcomes of two rural remote hospitals one of which had caesarean section capability.22 The findings
suggested that having a local caesarean section capability was associated with a greater proportion of
local deliveries and a lower rate of preterm deliveries.

An English study compared the distances travelled for inpatient treatment between electoral wards
prior to the introduction of extended patient choice.23 Using Hospital Episode Statistics, the distance
from a patient’s residence to the hospital was calculated for each admission. Unsurprisingly, rural
mothers travelled on average 12 km further for maternity care than those in urban areas. Distance to
the nearest large centre, while important, is not the only relevant factor for pregnant women, as
indicated in a qualitative study of the experiences of rural women accessing maternity care in two
Canadian provinces.24 Availability of services, having economic and informational resources to access
the services offered, and the appropriateness of those services in terms of continuity of care,
confidentiality, quality of care, and cultural fit were all highlighted in relation to health care access in
rural communities.

Some studies have examined changes in the characteristics and outcomes of urban and rural women.
Using a large midwifery dataset in New South Wales, associations between place of residence
(urban/rural) and maternal factors and pregnancy outcomes were examined, including changes over
time.20 25 Over a ten-year period, rural mothers were increasingly likely to be teenagers, multiparous,
without a married or partner, public patients and smokers. Although births in rural areas declined,
particularly among women aged 20-34 years, infants born to mothers in rural communities were at
increased odds of stillbirth and being in poorer condition at birth. As this study suggests, the problems
associated with delivery in rural and remote areas are compounded for premature or sick infants. In particular, access to skilled personnel, transport issues and prevention of complications such as hypothermia are possible hazardous sequelae of rural deliveries.  

7.2 Service organisation

Despite the differences in both the geography and organisation of care in other countries, there are some common features relating to rurality that may impact maternity care in England. Further, innovations in maternity care organisation may be transferable to the English context. Against the backdrop of needs of the rural parturient woman, the efficacy of smaller community-based maternity care for low-risk deliveries has been documented. Several publications have reported the utility of midwifery-led maternity units in rural communities in Australia, Canada and Norway, with delivery outcomes and transfer rates that compare favourably with other similar urban units. As indicated in section 5.1, ongoing research on maternity services aims to provide comparable data for England.

Some studies have explored the relationship between organisational change, such as centralisation of services and closure of small maternity hospitals. One Finnish study looked at the incidence and perinatal outcomes of non-planned out-of-hospital births in relation to the changes in the hospital network. A temporal relationship was found between closing of small hospitals and an increase in non-planned out-of hospital birth rates. With centralisation of services, the incidence of such births rose and the parity adjusted risk of an out-of-hospital birth was higher for residents of rural areas. Additionally, the birthweight adjusted risk for a perinatal death was higher in these births than in hospital births.

In recognising the needs of less populated areas, several studies have pointed to innovative service schemes for rural maternity populations. One example is a study of the efficacy of an antenatal record card on the continuity of maternity care in rural New South Wales. While health professionals were supportive, rural mothers were less positive and felt it had little impact. A more successful initiative is that of telemedicine. One study concluded that, with limited access to tertiary centre experts for those living in rural and remote areas, and the need for prompt identification of congenital fetal abnormalities in preventing perinatal morbidity and mortality, videoconferencing technology and the development of a tertiary level tele-ultrasound service is effective.

7.3 Women’s perspectives

Relatively little research has been carried out on women’s perceptions of rural maternity care. Two UK-based studies have looked at consultant-led versus midwife-led maternity care in rural areas. One, based in a small town in rural England explored the impact of changes from a consultant-led to midwife-led service. It found that the women using midwife-led care were satisfied with the care they received, particularly in relation to continuity of care. Further, women giving birth at the midwife-led unit and at home required less pain relief and were more likely to have an intact perineum than a similar group of women giving birth in hospital. Transfer for complications during the birthing process caused anxiety and stress for women and their partners. The authors concluded that, although the establishment of a midwife-managed unit provided increased choice for a minority of women, the removal of the consultant unit disadvantaged the majority of pregnant women, and the majority expressed a preference for the consultant-led maternity hospital to be re-established.
These themes were also evident in a Scottish study of women's preferences for intrapartum care. Most rural women preferred delivery in a maternity unit to home birth and consultant-led care to midwife-managed care. Women preferring consultant led care associated it with covering every eventuality and increased safety. Although women preferred shorter travel times, trade-offs indicated a willingness to travel for approximately two hours to get one's preferred choice. Subgroup analysis showed that women's preferences were related to their experience, risk status, geographic location, and perception of care and family circumstances.

These findings echo previous studies of the influences on rural women’s choice of childbirth provider location. In one small Australian study, all participants stated that safety concerns about themselves and, more importantly, their baby, influenced their choice. The women also reported a range of secondary reasons influencing their choice of childbirth location including the availability of family support, familiarity with the doctor and maternity service, and financial considerations. All participants agreed that delivering in town was logistically much easier, however some chose to deliver away. Different women were influenced by a different set of factors; however, safety (actual and perceived) appeared to be the overriding concern.

Similarly, three Canadian studies looked at rural women's experiences of obstetric care in rural and remote small urban communities. In one, the perspectives of expectant mothers highlighted the need for integrated models of maternity care. For the majority, local care, based on fully informed choice was vital to their maternity experience. Another study described the unmet needs and associated anxieties of women from rural communities. These related to safety and security, community and belonging and self-esteem. For many women, community was critical to meeting their psychosocial needs, and women who had access to local maternity care said that being able to give birth in their own community or in a community nearby was essential. In a second publication from the same study, the authors further explored factors which influenced mothers’ obstetric experience, including geographic realities, local health service resources, the influence of parity and the financial implications of leaving the community to give birth. They found that, when these realities were incongruent with the mothers’ needs, they developed strategies of resistance to mitigate the dissonance. Strategies included trying to time the birth at the referral hospital by undergoing an elective induction, seasonal timing of pregnancy to minimize the risk of winter travel, showing up at the local hospital in an advanced stage of labour to avoid transfer to a referral centre, or, in a few instances, having an unassisted homebirth.

7.4 Midwifery and obstetric practice

In England and elsewhere in communities without immediate local access to specialist services, practitioners must be prepared to respond to obstetric emergencies and arrange urgent transfer if indicated. In most cases reasonably safe care can be provided, but the possibility of an unexpected emergency that threatens the fetus or mother always exists.

The literature indicates that there is an emerging understanding of the experience of care providers offering maternity care in rural environments. In conjunction with rural care delivery processes, research has also identified variations in the maternity care workforce, particularly in relation to education and professional development. Several countries have put in place initiatives to try to address these issues.
In Canada these have included the development of supports to assist rural midwifery practices, and efforts to increase cultural competence within the midwifery profession. 40

A literature review of evidence-based midwifery practice in Australia revealed little published evidence regarding the implementation of evidence-based midwifery practice in rural settings.41 42 In discussing the challenge of formulating evidence-based rural workforce policy, Wilkinson argues that ‘serious consideration must be given to the need for, and needs of nurses [and midwives], pharmacists and allied health workers in the country’ 43 and Parsons and colleagues recommend that the implementation of evidence-based practice must be ‘context-sensitive... [and] context-specific to have any chance of making lasting and worthwhile changes to practice’.42

Two Canadian studies examined the experience of rural maternity care providers. In one, participants identified elements of personal risk they perceived were assumed by offering intra-partum care in communities without local access to specialist back up, and the potential effects of these risks to themselves and their communities.44 In a similar paper, care providers identified significant stressors related to the provision of maternity care services, including the development and maintenance of competency in the context of decreasing birth volume, the safety of local maternity care and the desire to balance women's needs with the realities of rural practice.42 The authors concluded that maternity care providers in small rural communities are experiencing stress due in part to the absence of evidence-based policy and planning for rural maternity care services.

Another study described maternity care from the nursing staff perspective in rural communities and geographically isolated small towns in Canada.45 Using detailed accounts, the work of nurses who provide maternity care was characterized as broad in scope, requiring complex knowledge and skills, with a significant professional responsibilities in an environment with limited resources. Rural nursing was also grounded in nurses knowing their community. An adequate number of skilled nurses was consistently identified by all participants as essential for the safe provision of maternity care. Since opportunities to learn the skills needed to provide maternity care were difficult to obtain in small rural settings, nurses also identified affordable and accessible continuing professional education as the most important strategy.

In all geographical contexts Continuing Professional Development (CPD) provides an important counter to workforce pressures affecting rural midwives. One publication reviewed the literature on skills, competencies and continuing professional development necessary for sustainable rural maternity care. The authors found little published literature on professional education, competencies, training or continuous professional development in maternity care in rural settings.46 Another study explored rural midwives' experiences and perceptions of CPD within the context of rural practice.47 Key issues for midwives were difficulties associated with role diversity, the need for acquiring key skills before engaging in CPD, and the importance of a culture supportive of ongoing learning.

In the light of a review of Scottish maternity services, a series of publications looked the delivery of care, staff perceptions and inter-professional working in maternity care in rural areas.46 45-51 One explored midwives’ and general practitioners’ perceptions about their professional roles in remote and rural general practice, noting a number of areas of dissonance between the groups.40 Another publication highlighted the perceived 'distance' between senior managers imposing change and the wider
community of staff; perceptions of community vulnerability; and tensions arising from working in small teams and living in small communities.49

Investigation of staff views about their roles, skills and training to deliver high quality, local intrapartum services in rural and remote settings against national recommendations further explored these issues.46,48 Prominent among them, medical specialisation, workforce, competency, and throughput were associated with concerns about the sustainability and safety of services, particularly for rural maternity care teams and for medical cover in small district general hospitals with large rural catchments. Risk assessment and transfer-related decision-making were seen as central issues for effective rural practice. Staff self-reported that competence and confidence varied according to procedure. The views of Scottish midwives in rural and urban settings on their competence and confidence in providing an effective and safe care for low-risk women were compared. 51 Although the proportion of midwives who reported that they were competent was broadly similar in the two groups, there were some significant differences: midwives in the rural group were more likely to report competence for breech delivery, while urban midwives reported competence in skills such as intravenous fluid replacement and initial and discharge examination of the newborn. Both groups reported facing barriers to continuing professional development. Lack of time was a greater barrier for urban midwives, whereas distance to training was greater for rural midwives. Lack of motivation or interest was significantly higher in urban units.

In conjunction with research identifying regional variations in the maternity care workforce, several publications from the USA have pointed to the need for specific maternity care training in residency and labour and delivery services in rural areas.52,53 A survey of the diagnosis and management of mild hypertension in pregnancy in rural general practices in Scotland would endorse this approach. It was found that, compared with guideline recommendations, most GPs (80%) and midwives (63%) over-diagnosed hypertension.54 Intended management was therefore most often referral or admission to a specialist hospital. There was an association between distance of practice from specialist maternity hospital and professionals’ reports of intended referral or admission. Explanatory factors included a poor knowledge base, cautious risk assessment, and perceived inflexibility of guidelines for rural and remote situations. These results suggest that women in rural settings may experience more antenatal referrals and admissions, with a subsequent increase in inappropriate referrals and increased personal and societal costs. Against this backdrop, several educational and support models, including the use of telecommunication and video conferencing, have been successfully implemented in increasing skills and knowledge of rural midwifery and obstetric practice.48 55-57

8. MATERNITY CARE IN RURAL AREAS: KEY ISSUES

8.1 Key issues

A number of issues reflect the challenges of providing services to women in rural areas. These include location and accessibility, choice of place of birth, continuity of care and access to antenatal and postnatal care and breastfeeding support.
8.2 Location and access

Women in rural areas can have difficulties with access to services because of the low density of population, and the way in which care services are configured. This may affect the distances families and health care professionals have to travel. These problems may be compounded by infrequent, poorly scheduled, unpredictable and costly public transportation services. Physical geography and bad weather conditions, together with poor roads may make access to maternity services and postnatal support more problematic. Travel difficulties are likely to be exacerbated for vulnerable or disadvantaged groups including young parents, families on low income, those with a baby born preterm and women who had high risk pregnancies. In this context there is concern about reconfiguration of maternity services, with moves towards services being increasingly centralised, focusing on towns and cities and therefore less accessible for those in rural areas.

8.3 Choice and safety

Choice of place of birth can be affected by an individual woman’s risk status, the information and support provided and the geographical location in which she lives. There are many ways in which rurality may impact on choice:

- Midwife-led birth centres, alongside in a hospital or freestanding in the community, are not available in many areas, and practically there is often access to only one hospital, which may affect non-pharmacological options for pain management during labour.
- Location and distance to the nearest maternity unit or community-based birth centre, coupled with travel requirements and ambulance service response times, may limit women’s choices in relation to place of birth.
- Women may be less likely to book a home birth when there are concerns about proximity and transfer times to the nearest hospital and the difficulty midwives have in covering large geographical areas.
- Appropriate clinical ‘drills and skills’ training for staff in rural areas is crucial in development of out-of-hospital options for intrapartum care.

The example of the Powys maternity service in mid Wales which covers a large rural area, yet has a high number of home births is of interest here. The birth centres are used by midwives as and when needed, so they can be operated more cost effectively and women have access to a freestanding birth centre where there is a plumbed-in birth pool. Home birth is relatively common. In Powys in 2008, 23.5% of women gave birth at home or in a birth centre (home births, n=112 (8.6%); birth centre births, n=194 (12.1%); total caseload, 1300). The service comprises eight teams of expertly skilled midwives who provide antenatal and postnatal care to all women and women with low-risk pregnancies have a choice of birth at home, in a freestanding birth centre or in a district general hospital.

8.4 Continuity of care

Continuity of care refers to staff working in integrated teams with a consistent approach to care, information-giving, choices and support. As women and their families get to know the same health professionals, it enables them to build up mutual understanding, feel valued and more confident that their views, concerns and preferences are understood and respected.

As suggested in the literature review, one consequence of fewer midwives covering a larger geographical area in rural communities is that there may be higher levels of continuity of care. Thus
women may be more likely to be attended by the same midwife during the antenatal, birth and postnatal periods. However, care from a small number of health professionals may mean less choice and women may be subject to the prevailing views and attitudes of a small number of individuals. Further, there may be less flexibility and few specialist midwives.

8.5 Antenatal and postnatal care and breastfeeding support
In rural areas, the time and distance involved in travel may make the situation of pregnant women and new mothers more difficult than for those living in less rural locations. Isolation is a significant issue in the transition to parenthood, accessing support during and after pregnancy and maintaining and improving maternal wellbeing. In some areas, a lack of facilities and community based networks to support new and young parents have an impact on those without immediate access to extended family support, teenage mothers, women with complex medical, social or psychological needs, and women requiring breastfeeding support. Minority groups with particular needs, such as young parents, may be more vulnerable.

Easy access to “routine” antenatal care, postnatal care and breastfeeding support may be more difficult in rural areas, when only a small number of mainly hospital-based services cover large areas. Peer support systems may also have difficulties as a consequence of the distances involved. Taking babies to hospital for postnatal checks rather than having a home visit may be difficult for many mothers, particularly those recovering from surgery, with health problems or no personal transport.

The key challenge of providing perinatal support services in rural areas arises from having a widely distributed and relatively low population, the particular location and configuration of services and the financial viability of the service provided. However, Powys, which offers maternity services specifically designed for women living in rural areas of Wales, has a shared philosophy whereby midwives work closely with health visitors to ensure continuity of care and offer 24 hour breastfeeding support with on-call midwives resulting in higher than average breastfeeding rates. The value of community based advice and support in pregnancy and during the postnatal period, especially in assisting with infant care and feeding, should not be under-estimated.

8.6 Meeting the challenges
There are significant service challenges in providing high quality maternity care to women living in rural areas. These include: supporting choice and flexibility; addressing individual clinical and psycho-social needs; workforce structure, skills and resources; travel and distance; caring for vulnerable groups of women; caring for high risk women; the way in which services are currently configured.

A range of initiatives are in place or in development that aim to support providers in meeting the policy objectives and standards for maternity care. These include children’s centres, maternity services specifically designed for rural communities and other service innovations that encompass multi-agency working. Consumer and user group perspectives are essential elements in informing the planning and development of new services. National and local surveys and well as Maternity Services Liaison Committee input are valuable ways of ensuring that the voices of all women, including those living in rural areas, are heard. As suggested in the literature review, midwives caring for women in isolated
settings need to be skilled but also confident in their clinical skills. Enhanced support and communication skills are particularly important for midwives caring for women in rural communities.

8.7 In conclusion

The policies in relation to maternity care are clear, with a focus on flexible, individualised care. Markers for high quality include achieving the evidence-based clinical standards that have been endorsed by professional bodies and supported by user groups. They also include information giving and support, a range of options at appropriate points along the care pathway and continuity where possible.

Meeting the needs of a local rural population is a challenge in the context of healthy women with healthy pregnancies and babies and more so with women and babies who need more specialised care for shorter or longer durations. Maternity care pathways in the context of rurality may be more complex as a function of geographical distance, the type of provision locally available, response times and proximity to other levels of care. Evidence of the extent to which rural community needs have so far been identified and awareness of these in relation to maternity care is limited. Further research is required to further explore the safety, skill mix, appropriateness, access and acceptability of maternity care in rural communities in England.

Resource and workforce issues are significant elements in the debate about commissioning and the provision of healthcare in rural areas. Consultation with user and provider groups is critical to the further evolution of care, and the development of innovative practice aimed at overcoming the challenges described.

Policy documents, guidelines and evidence on maternity care suggest that maternity services need to be available and accessible to all rural women, supplemented by prompt access to interventions known to reduce low birthweight and perinatal death. The challenges for service providers are to provide comprehensive midwifery and obstetric services by skilled and competent practitioners, within acceptable travel time, while responding to the heterogeneity of women's preferences. Collaborative and innovative models of care may have potential to create the sustainability and collegiality required to achieve these goals.
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