

Towards better births

A review of maternity services in England



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ISBN 978-1-84562-194-0

Concordat gateway number: 134

Cover photographs from www.johnbirdsall.co.uk

The Healthcare Commission

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In England, we assess and report on the performance of healthcare organisations in the NHS and independent sector, to ensure that they are providing a high standard of care. We also encourage them to continually improve their services and the way they work.

In Wales, the Healthcare Commission's role is more limited. It relates mainly to national reviews that include Wales and to our yearly report on the state of healthcare. In this work, we collaborate closely with the Healthcare Inspectorate Wales, which is responsible for the NHS and independent healthcare in Wales.

The Healthcare Commission aims to:

- Safeguard patients and promote continuous improvement in healthcare services for patients, carers and the public.
- Promote the rights of everyone to have access to healthcare services and the opportunity to improve their health.
- Be independent, fair and open in our decision making, and consultative about our processes.

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Summary, key findings and recommendations

This review is the culmination of a programme of work on maternity services carried out by the Healthcare Commission over the last few years. It began with three investigations at individual trusts because of concerns over the safety of care. The best known of these was North West London Hospitals NHS Trust where the investigation was carried out following an abnormal number of maternal deaths. The findings were published in 2005 and identified a number of shortcomings, including inadequate levels of staffing, poor teamworking and poor communication by staff with women.

There were echoes of these shortcomings in the other two investigations, suggesting that there may be a more systemic national problem. The Healthcare Commission has also looked at, or is looking at, maternity services in a number of other trusts as a result of concerns raised with us. We therefore decided to undertake a review of the whole service in England, which started in early 2007.

The review was ground-breaking for the Commission in its scope and method. It focused on the whole of the pathway of maternity care, from the start of the pregnancy through labour and birth to postnatal care. It drew its information from several sources to encompass the different perspectives of those involved in the services, including information from trusts delivering the services and a survey of their staff. Most importantly, however, the review relied heavily on the views of women using the service. These were taken from one of the largest surveys of users of maternity services ever undertaken, which was timed to inform the review.

In many areas of maternity service, standards are not clearly set out. We did not shy away from using established and well respected guidance as a benchmark, or in comparing

The Healthcare Commission and maternity services

1. Commission for Health Improvement publishes investigation into Ashford and St Peter's Hospitals – September 2002.
2. Healthcare Commission publishes investigation into New Cross Hospital in Wolverhampton – June 2004.
3. Commission places Northwick Park Hospital's maternity services under special measures – April 2005.
4. Commission publishes investigation into Northwick Park Hospital – July 2005.
5. Sir Ian Kennedy, Chairman of the Healthcare Commission, publicly expresses serious concerns over the quality and safety of maternity services nationally. Commission commits to a comprehensive and national review of maternity services – July 2005.
6. Commission publishes report on 10 maternal deaths at Northwick Park – August 2006.
7. Commission co-funds national survey of mothers and the report, *Recorded Delivery*, published by the National Perinatal Epidemiology Unit – March 2007.
8. Healthcare Commission publishes largest ever maternity survey, with responses from 26,000 women giving trust by trust information – November 2007.
9. Commission publishes scores for each maternity unit in England – January 2008.
10. Healthcare Commission publishes its report on maternity services – July 2008.

the performance across all trusts so that all significant aspects of the pathway of care could be covered. We also relied heavily on the support of our advisory group, which included clinicians, academics and representatives of national organisations expert in maternity services, as well as staff from individual trusts.

Most women giving birth in early 2007 whom we surveyed had a favourable view of the care that they received. For labour and childbirth, 89% rated their care as “good” or better, falling to 80% for the care they received after birth and at home. These figures, however, conceal significant differences between trusts; in the trust with the least favourable results from the survey only 67% of mothers reported their care during labour and birth as good or better, compared with 96% in the trust with the most favourable results.

More worryingly, while women were generally happy with their care, we found that some had concerns about particular aspects of it and many trusts appear not to have learned from the previous reports of the investigations we carried out. In fact we found significant weaknesses nationally that showed a clear correspondence with those identified in the earlier investigations, showing the importance of learning the lessons of our review.

Our key concerns are that in some trusts:

- Levels of staffing were well below the average, indicating that they may have been inadequate.
- Consultant obstetricians did not spend the time recommended by their professional body on labour wards.
- Doctors and midwives did not attend in-service training courses consistently across trusts.
- There was not adequate continuity of care for women.
- Recommendations were not adequately adhered to for antenatal care, particularly for those women whose pregnancies were likely to be more risky.
- Women experienced poor communication, care and support after their babies were born.

- There were too few beds and bathrooms, particularly in labour wards.
- Inadequate systems for IT and data prevented efficient management of the maternity service, even among some of the larger and well-respected trusts.

The scores given to each trust that summarise its overall performance in maternity services and in the individual elements covered, were published in January 2008, so that the information could be made available to those who use services and individual NHS trusts as soon as possible. The results, based on comparative evaluation, showed that 26% were in the “best performing” category. However, 21% were in the “least well performing” category, indicating a need for improvement. One of our main aims in publishing the results of this review is for the boards of trusts that are below the standards of the best, and commissioners of maternity services, to take action now to ensure that they improve. In January 2008, the Government announced extra funding for maternity, totalling £330 million over the next three years to ensure that mothers get the best possible care and are guaranteed a full range of birthing choices.

In addition, we gave each trust an individual report of its performance, with supporting information and computer software to help them to identify issues from their perspective. All trusts should evaluate their performance against their peer group of trusts, or against established standards where they exist, and identify any issues, paying particular attention to the list of concerns above and the recommendations that follow. They should then work with those who commission services, bodies charged with performance management and local maternity services liaison committees, to produce and implement a plan to address any shortfalls identified.

Trusts that were rated in the least well performing category will have already started this process, as will many other trusts. Staff from the Healthcare Commission visited these trusts as a first priority during the first quarter of 2008 and have been working with them, and the bodies responsible for their performance management, to ensure that they develop action plans setting out how they will improve.

For this report, the Healthcare Commission has built on its previous assessments by carrying out a detailed analysis of the results, drawing conclusions and making recommendations to assist the process of improvement.

To effect these improvements, we recommend that strategic health authorities (SHAs), Monitor, those bodies commissioning maternity services and trusts' boards make maternity services a higher priority and ensure that they are monitoring the standards of maternity care that trusts are providing. In particular:

- Trusts should monitor the pathway of care from first contact with the maternity services to the time of transfer to the health visiting service, and ensure that care complies with guidance for antenatal, intrapartum, mental health and postnatal care from the National Institute for Health and Clinical Excellence (NICE).
- Trusts should ensure that there are sufficient numbers of appropriately qualified staff available to provide a high level of care.
- Trusts and those commissioning services should ensure that there are regular and effective mechanisms for gathering and acting on the views of women using their services, and should ensure that they are represented in the process for planning and monitoring the quality and safety of service provided.

- Trusts should encourage and support all maternity staff in working effectively in multidisciplinary teams with agreed shared objectives.
- Trusts should ensure that all staff are appropriately trained, up-to-date and confident in practising the essential skills needed for a safe and high quality maternity service; where appropriate, this training should be multidisciplinary.
- Trusts must ensure that maternity units are equipped with appropriate IT systems that comply with Connecting for Health, enabling completion of mandated national data sets and the provision of accurate and systematic data on outcomes and management information on which to plan, commission and manage the resources required for maternity care.
- SHAs and Monitor (the performance monitoring bodies) should ensure that trusts and those bodies charged with commissioning services address effectively the requirements of women and their babies who are from higher risk groups during pregnancy and afterwards, identified by the Confidential Enquiry into Maternal and Child Health. This includes ensuring that the process of planning and setting of priorities identifies them and appropriate clinics and visits are provided to support them.

A more detailed checklist for implementing these recommendations is provided at the end of this report.

The main body of this report sets out the detailed findings across each phase of the pathway of care, from pregnancy, through labour and birth, to postnatal care up to the point when a midwife transfers care to the health visiting service. The report also examines the impact of resources

and management on delivery of the service and those who use services. A summary of these findings at each stage is set out below.

Antenatal care

- Many women make a 'booking' for maternity care late, particularly in London.
- Some women receive fewer antenatal appointments than recommended.
- Some women do not receive an early ultrasound scan to establish the expected date of birth.
- Nearly all women receive a fetal anomaly scan.
- Many trusts are not following the latest guidance for screening for Down's syndrome.
- Not all trusts provide antenatal classes to women who want them.
- Many trusts do not have access to a specialist perinatal mental health service.

Good antenatal care provides the foundation for a good pregnancy and birth. There is extensive guidance from NICE, but we found that many trusts were not meeting all the recommendations for initial assessment, antenatal appointments, screening, antenatal classes and provision of services for women with mental health needs.

A key element of good care is the initial assessment of a woman's health and pregnancy that helps her choose the most appropriate antenatal pathway of care. Ideally, women will make a 'booking' appointment by 12 weeks of pregnancy. Virtually all trusts report this as their target date and most women (78%) book within this time. In a quarter of trusts, 26% of women book later, either because of a slow

response from the local service or because the woman contacted the maternity services late. Late initial contact with the service and late booking are more prevalent in London and other large towns and cities and among women from some ethnic minority groups. Thus, particular attention is needed here.

Following assessment, antenatal care should follow accepted guidance, including meeting women's reasonable aspirations. For example, a first-time mother with a straightforward pregnancy of around 38 weeks should expect 10 appointments (NICE's guidance), but 14% of trusts plan fewer appointments than this. Overall, 25% of women reported receiving fewer than the recommended number of appointments. Only a minority (22%) of women were given any choice as to where their antenatal appointments should take place, even though 69% of trusts reported providing some appointments in the new children's centres in line with recent policy.

Routine screening tests should be offered to check the baby's growth and for any anomalies and for any health problems of the baby or mother. The first of these is an ultrasound scan that takes place at 10 to 13 weeks, often referred to as a dating scan. Overall, 92% of women reported that they had received this, although the figure was 86% in some trusts. The second scan offered is between 18 and 20 weeks, mainly to test for fetal anomalies (where the baby is not developing normally) and nearly all women (99%) received this. All women should be offered screening for Down's syndrome, although some mothers may decline this. While all trusts offer screening for Down's syndrome, only 18% offered the most effective tests in accordance with the latest NICE guidance. This is a significant shortcoming, but the guidance had only just become operative. We would expect this percentage to increase rapidly now.

Provision of antenatal classes is part of a high quality service but not all trusts provide them. Overall 60% of women reported attending classes, but this was higher for women in their first pregnancy (84%). Some first-time mothers (28%) reported that there were insufficient numbers of classes in their antenatal course.

Some women need specialist care and women with mental health needs are a good example. While 40% of trusts had access to a specialist perinatal mental health service headed by a specialist psychiatrist and 18% offered access to a community psychiatric nurse-led service, 42% of trusts had no access to a specialist perinatal mental health service. For some trusts, the wait to see a specialist could be as long as a month for a referral, which is unacceptable. Nearly two-thirds of trusts (63%) had midwives trained to support women who misused substances.

Care during labour and birth

- Most, but not all, women are offered a choice of location for the birth, but many did not feel that they were given sufficient information to make a choice.
- Choice is limited by lack of availability of midwife-led units.
- Too few women experience a birth without medical intervention.
- Some women did not get the pain relief they wanted.
- Some women were left alone when it worried them.
- Most women were not cared for by the same midwife throughout their labour.
- Rates of caesarean section are variable across trusts but nearly always higher than the recommended level.

The main issues in this phase of care concern choice and interventions during labour. Choice relates to both the kind of maternity unit where a woman has her baby (midwife-led or obstetric unit) and the character of the professional support that is provided. This is connected with a sense that childbirth has become over-medicalised and that there are too many interventions that may not be necessary. However, it is fully recognised that there are circumstances where intervention is the proper course of action.

The Government has set out 'a national choice guarantee' that by the end of 2009 all women, depending on their circumstances, will be offered a choice of where to have their baby. Overall, 80% of women reported that they had been given this choice at the start of pregnancy and 58% were offered a home birth. However, only half of the women who were offered a choice reported that they had definitely been given enough information to make that choice.

In practice, the choice of types of maternity unit is currently very limited, because our review found that about two-thirds of trusts (65%) had only obstetric units. The remaining trusts had combinations of obstetric and midwife-led units; either alongside the main unit (AMUs), or midwife-led units in separate freestanding premises (FMUs). A few trusts had all three kinds of unit. Two acute trusts had midwife-led units only.

Women with a low risk pregnancy leading to a normal birth (a birth without medical intervention) should usually experience midwife-led care, even in an obstetric unit. The recent consensus statement *Making Normal Birth a Reality* suggests a realistic objective of 60% as the rate of normal births, but the median trust reported only 40% of births as normal and a quarter of trusts reported 32% or less.

The policy of offering choice should continue into labour and one of the most critical aspects is pain relief. The most common method was gas and air (Entonox) used by 80% of women; 32% used the drug pethidine, 30% reported having an epidural (a local anaesthetic causing numbness in the lower part of the body) and 11% used water or a birthing pool. Women having their first baby were more likely to use pethidine or have an epidural than for subsequent births. Overall, two-thirds of women definitely received the pain relief that they wanted, but in a quarter of trusts, as many as 25% of women felt that they did not get sufficient pain relief.

Overall, one in five women reported that they were left alone in labour to the extent that it worried them and this reached 40% in one trust. This was more likely when women felt that they were not treated with respect and dignity, or given the explanations or information that they needed.

Only around 20% of women experienced care from the same midwife throughout labour, with variation across trusts of between 9% and 34%. It should be recognised, however, that in some circumstances, for example in long labours, more than one midwife would be expected.

The most significant medical intervention for women is the surgical procedure – caesarean section. Trusts reported rates of between 12% and 34% with a median of 23%, significantly higher than the World Health Organisation's recommended rate of 15%. Higher rates appear to be associated with older mothers and women from certain ethnic groups, but even when these factors are taken into account, they do not explain the differences between trusts.

Postnatal care

- Postnatal care is least favourably reported on by women.
- Some women would have liked more contact with midwives after going home.
- Rates of breastfeeding need to be increased.

Although important, postnatal care is the phase of maternity care that consistently receives the least favourable ratings by mothers. Women need information and support to enable them to bond with their baby, become skilful in techniques of feeding and grow in confidence as parents.

Postnatal care usually involves a short stay in hospital followed by up to six weeks under the care of a midwife before the woman's care is transferred to the health visiting service. All trusts should provide visits and support postnatally, in accordance with the principles of individualised care.

After going home, all trusts plan at least two home visits by a midwife. There may, however, be a need for more contacts, in the form of home visits by a midwife or maternity support worker, clinics or even by telephone. These contacts allow checks to be made that a mother and baby are well and provide support for parenting such as feeding, crying, care of skin and sleeping. Women reported an average of 4.3 contacts after leaving hospital; a minority (21%) said they would have liked more contact and this reached 51% in one trust. Women's satisfaction with postnatal care rises according to the number of contacts, up to six, but more than six is not associated with greater satisfaction.

Women should be encouraged to breastfeed. There has been a national public service agreement target that the rates for local initiation (where a baby is put to the breast or given some of the mother's breast milk within the first 48 hours) should increase by 2% per year. Nationally, 70% of mothers initiated breastfeeding with trusts reporting rates between 30% and 92%.

Staffing and training

- Variation in levels of staffing indicate that some units may be understaffed.
- Poor attendance at training courses in some trusts.
- Variation in supervision of midwives.
- Insufficient presence of consultants on labour wards.
- Doctors and midwives do not always feel they share the same goals.

Staffing is one of the most contentious issues in providing maternity services because it underpins the quality of the service but at the same time is the most costly component. Inadequate levels of staffing and poor teamworking were found to be significant factors in the report of the investigation we carried out into North West London Hospitals NHS Trust. In this review, we found wide variations in levels of staffing, indicating that some units are understaffed, as well as variations in supervision of midwives indicating the need for this wider study. We also found poor attendance at in-service training courses in some trusts and evidence of cultural separation between doctors and midwives.

Levels of staffing by midwives vary greatly between trusts, even in relation to births.

The median trust employs 31 midwives (whole time equivalent or WTE) per 1,000 births per year, but this ranges from 23 to over 40 midwives. Levels of staffing should be determined locally using an appropriate methodology to take account of complexity of the casemix, skills of the midwives and levels of support available (for example, maternity support workers). Trusts employing numbers of staff that are well below the median should consider whether these levels of staffing are adequate.

All midwives are required to have a supervisor of midwives to provide professional guidance and support and to encourage further development of skills and knowledge. We found the number of midwives per supervisor ranging from 7 to 28, suggesting the need for review in many trusts.

A key measure of doctors' input to maternity services is the time that consultants spend on the labour ward. *Safer Childbirth* recommends that at least one consultant should be present on the labour ward for 40 hours a week (60 hours for large units). Just over two-thirds of trusts meet this standard, but some are well below it at 10 hours per week. Trusts should therefore examine the extent of cover provided by consultants urgently.

In-service training of core skills (for example, resuscitation) is unevenly provided. Some trusts reported that all midwives and doctors have attended courses, but in others it was 40% or less. There is little difference between the levels of attendance of midwives and doctors.

The survey of trusts' maternity staff, which was completed voluntarily by about half of trusts as part of this review, showed that 28% of the doctors and 58% of the midwives responding did not feel that the two groups have shared goals.

Midwives and doctors each see their own professional group as leading in the management of maternity care. When asked to choose from a list of positive adjectives about the work environment, the commonest one was “challenging” and the least common was “democratic”. The negative adjective most frequently chosen was “frustrating”, particularly for midwives, and the least common was “stagnating”.

Facilities

- All obstetric units have access to general emergency facilities, but some trusts do not have access to interventional radiology.
- Some trusts are short of delivery beds.
- Many trusts are short of baths or showers.
- Very few women use a birthing pool.
- Many women reported that toilets and bathrooms were not clean.

Some trusts appear to have too few beds. Many do not have the facilities that might be expected, such as baths and toilets attached to birthing rooms, nor are they made very welcoming. Access to general emergency facilities, for example, adult intensive care, is available to all obstetric units but 26% of trusts do not have access to interventional radiology which is a more specialist area.

Many trusts appear to be short of delivery beds. While the median trust has 3.6 beds per 1,000 births per year, some trusts have as few as two beds per 1,000 births, which means that each

bed is used, on average, by more than one woman in each 24 hour day. Trusts in this position should review their ratio of deliveries to beds. Midwife-led units tend to have more beds relative to the number of births, particularly FMUs.

Many maternity units do not seem to have the level and quality of facilities that women would like in labour, for example only 16% of units have one bath per delivery room and a further 38% of units have one shower per delivery room. Less than half of women (49%) reported that the toilets and bathrooms they used were “very clean”. In terms of “homeliness” and facilities to promote normal births, only 11% of women reported having used a birth pool, with fewer (3%) giving birth in water.

Systems for IT and data

Good information is crucial to effective management. A number of trusts lack systems that can provide the necessary information about their maternity service and as a result they could not provide all the data that we requested for our top-level scored assessment. Only 60% of trusts had a system that complied with the requirements of Connecting for Health and 17% reported having no system for maternity care at all. Coverage of antenatal and postnatal care by information systems is particularly weak, only 15% trusts reported having a system that covered both of these phases.

Introduction

In 2007 we reviewed maternity services in all trusts providing intrapartum (during labour and birth) maternity care. Maternity services provide care for a generally healthy population of mothers and babies and account each year for more than 600,000 births in England. However, in recent years the services have become a cause for concern.

At the start of our review, about one in 10 requests to the Healthcare Commission to investigate particular trusts was related to maternity services. Investigations of potentially serious issues affecting maternity care have taken place at three separate trusts and found worrying similarities in the problems identified, suggesting the need for a national review of these services. Poor staffing practices and staff shortages were particularly identified.

The last major independent review of maternity services was carried out in 1995/96 by the Audit Commission¹. This identified key issues and best practice for delivering high quality maternity services. In 2004 the Department of Health published the National Service Framework (NSF) for Children, Young People and Maternity Services² setting out a 10 year programme for improvement. Trusts are tasked with meeting particular requirements of the NSF by 2009³. Three years into the NSF, it seemed sensible to assess what progress had been made.

In addition to the NSF, there is much valuable clinical guidance relating to the provision of maternity services produced by both the royal colleges and the National Institute for Health and Clinical Excellence (NICE) and the review assessed the extent to which this had been implemented.

Since the project started in 2006, there have been numerous other reports on maternity and further guidelines published. The questionnaire went live for trusts to complete in May 2007 and the questions and the subsequent analysis of performance were against the guidelines that were in place at that time. Since then, the following additional guidance has been published:

- *NICE antenatal guidance*, update⁴.
- *Saving Mothers' Lives*, Confidential Enquiry into Maternal and Child Health⁵.
- *Consensus statement on normal birth*⁶.
- *Safer Childbirth*⁷.
- *Maternity Dashboard*⁸.
- *PSA Delivery Agreement 19 on booking within 12 weeks*⁹.
- *PSA Delivery Agreement 12 on breastfeeding*¹⁰.

Where appropriate, reference has been made to these documents, although the data may not always reflect the latest recommendations.

The review covered care from when pregnant women first access the service, to when the care of mothers and babies is transferred from the midwife to the health visiting services.

It included:

- General care provided by trusts to pregnant women: for example, provision of tests and screening, antenatal appointments, antenatal education, birth choice options, care during labour and birth and postnatal care.
- Policies, the organisation of care and outcomes for specific groups of women, in particular: healthy women with a straightforward

pregnancy, services for women with diabetes, services for women experiencing mental health needs, delivery methods and outcomes for births involving twins, breech presentations (where the baby is not in the normal head-first position) and women who have had a previous caesarean section birth.

- Value for money issues such as number and use of staff.

The transfer of babies to neonatal units was included in the review, including details of admission thresholds and transfer distances into neonatal units. However, clinical issues regarding these units were outside the scope of the review.

The review was based on three main sources of data:

- A web-based maternity questionnaire completed at trust level.
- A voluntary web-based survey of maternity staff.
- A trust-level survey of women who had recently given birth (while integral to the review, this has also been the subject of a separate analysis – see appendix C).

There are a few routinely collected national datasets that can also provide useful information on maternity, which were obtained as part of the review. Unless stated otherwise, data reported are for the year 2006/07 and status information was correct as at 10 October 2007.

Altogether, 148 trusts providing obstetric maternity services in England were included in the review, and there were a further four trusts included which provided just midwifery-led services. More than 26,000 women responded

to the women's survey and 4,950 staff in all groups responded to the staff survey. In addition, we organised five engagement events where mothers were recruited from particular groups, including women from ethnic minorities, disabled women and women with learning difficulties. Altogether 42 women attended.

The scored assessment

The review of maternity care, published in January 2008, was a component of our annual health check. Through considering a range of indicators, the assessment gave a view of how well an individual trust was managing and improving its maternity service. Twenty-five indicators, some of which were formed by bringing together several sources of information, were chosen to provide an assessment of trusts' progress in delivering an effective maternity service (see appendix A). The indicators were chosen to test performance in three areas of the service as described by the themes: clinical focus, women centred care and efficiency and capability.

A total of 26% of the organisations scored as "best performing", 32% as "better performing", 22% as "fair performing" and 21% as "least well performing". The particular indicators most strongly associated with organisations' overall assessment were: the proportion of women offered an informed choice for screening, the extent of choice in labour, the quality of support in caring for the baby after transfer from hospital, and cleanliness of delivery and postnatal areas. These indicators provide a user's perspective on all stages of the maternity pathway of care: antenatal care, care during labour, and birth and postnatal care.

Section 1: Women's views of their care

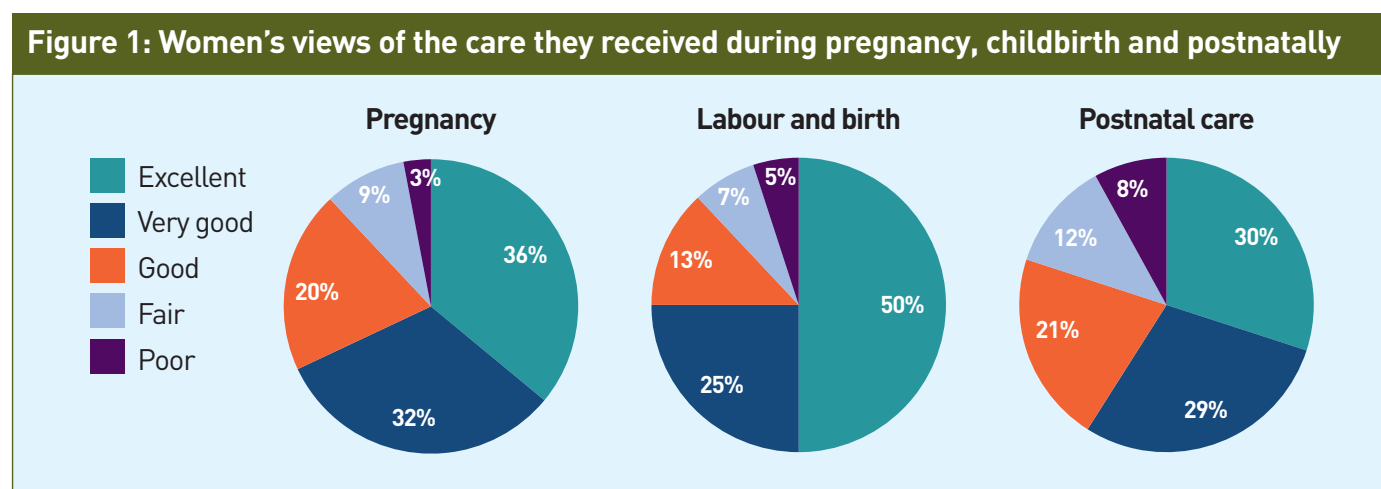
The national service framework (NSF)² emphasises the need for woman-centred, individualised care and recognises that women's reaction to their birth experience can influence their emotional wellbeing, their relationship with their baby and their future parenting.

Women should have a good experience and positive view of the support provided throughout the three stages of maternity care: pregnancy, labour and birth and the postnatal period. Most mothers do describe their maternity care positively, with that received during labour and childbirth getting the highest rating. Postnatal care received more critical responses and one

in five women rated it only "fair" or "poor" (see figure 1).

If we look at the trusts which received the most and least favourable answers from mothers, the variations are considerable (see table 1). Again postnatal care came out as the least favourably rated.

Women reported on particular aspects of the care that they received at each stage of their maternity care (see table 2). The two aspects of care that received the least favourable ratings were about "providing information and explanations" and "involvement in decisions".



Source: Survey of recent mothers, 2007

Table 1: Variations in response from mothers to overall care by trust				
	Care during labour and birth		Care after birth	
	% responding excellent or very good	% responding fair or poor	% responding excellent or very good	% responding fair or poor
Most favoured trust	88%	5%	71%	12%
Least favoured trust	30%	34%	22%	55%

Source: Survey of recent mothers, 2007

Table 2: Women's perceptions of care received at each stage of pregnancy

	% women always spoken to in way they could understand	% women always treated with dignity and respect	% women always treated with kindness and understanding	% women always given information and explanations needed	% women always involved enough in decisions about care
Antenatally	81	81	77	67	67
During labour and birth	82	79	77	72	70
Postnatally	73	66	63	58	

Source: Survey of recent mothers, 2007

On average, women with high satisfaction scores for their care during labour and birth had more indicators of woman-centred care and fewer interventions. High satisfaction was associated with: shorter duration of labour; women receiving the pain relief they wanted; having a straightforward vaginal birth; being cared for by fewer midwives, having met them before; being spoken to in a way they could understand; being treated with kindness; having confidence and trust in the staff; and being given the information and explanations they needed.

Section 2: The maternity pathway of care

Antenatal care

This section covers the pathway of care from first contact with the health service, which may be when a pregnancy is planned, but more commonly when a woman first thinks she might be pregnant. This is followed by antenatal care, care in labour and birth, and finally postnatal care until the woman's care is handed over by her midwife to the health visiting service at around two weeks after the birth.

Preparing for pregnancy

Women with existing medical conditions, such as diabetes or those with mental health needs should be aware of the effect that their condition has on pregnancy, and of the effect that pregnancy has on their condition. An opportunity to discuss the relevance and implication of such conditions on a future pregnancy should be provided by a healthcare professional.

Clinics were in place to provide pre-pregnancy advice in 88% of trusts for women with diabetes, in 77% of trusts for women with HIV, in 42% of trusts for women with existing mental health needs, in 19% of trusts for women with a physical disability, and 18% of trusts offered specific pre-pregnancy counselling for women with learning difficulties. This suggests that the women who could benefit from pre-pregnancy advice but are least likely to do so are those who are unlikely to be in contact with an acute trust, for example those with learning difficulties. There is a need for trusts and those commissioning services to consider how they can offer pre-pregnancy support to these women in an alternative way.

Access and booking

First contact with health services

The first contact with the health services for most pregnant women is a visit to their GP when they are between seven and eight weeks pregnant. Not all women go to their GP first; the survey of recent mothers showed that on average, 19% see a midwife first but this varies markedly between trusts from 1% to almost 50%. The low rates tend to be in London and the higher rates in the midlands and the north of England.

It is the policy of the Department of Health that providers of maternity services should make it easier for women to access midwives for their first contact with the health services³, so trusts should be promoting this. However, trusts report variable implementation of this policy and the commonest contact point is via GP surgeries (54% of trusts). Only 34% of trusts promote the midwife as the first point of contact on their websites and only 15% use local pharmacies for informing women, which might be one of the commonest places visited by pregnant women.

Booking

At first contact, women are referred for, or given an appointment for, initial assessment commonly referred to as the 'booking' appointment. This is normally carried out by a midwife and involves a detailed assessment of the woman's physical and social health, and her clinical history so that the rest of her antenatal care can be planned appropriately and any potential problems identified in good time. It is important that this appointment is made without delay after the first contact, and ideally by 12 weeks. This is partly dependent on women making early contact, so they should be encouraged to do so and treated in a way that they feel makes it a positive experience.

The survey of recent mothers suggests that booking appointments typically take place two weeks after women first made contact with a GP or midwife (or reach eight weeks gestation, whichever came later). However, in 21% of trusts the average time women waited for their booking appointment was three weeks or more. It is recommended that booking should occur within two weeks of contact for women who first make contact after 12 weeks⁵. All trusts except four reported target dates for booking at 12 weeks or less.

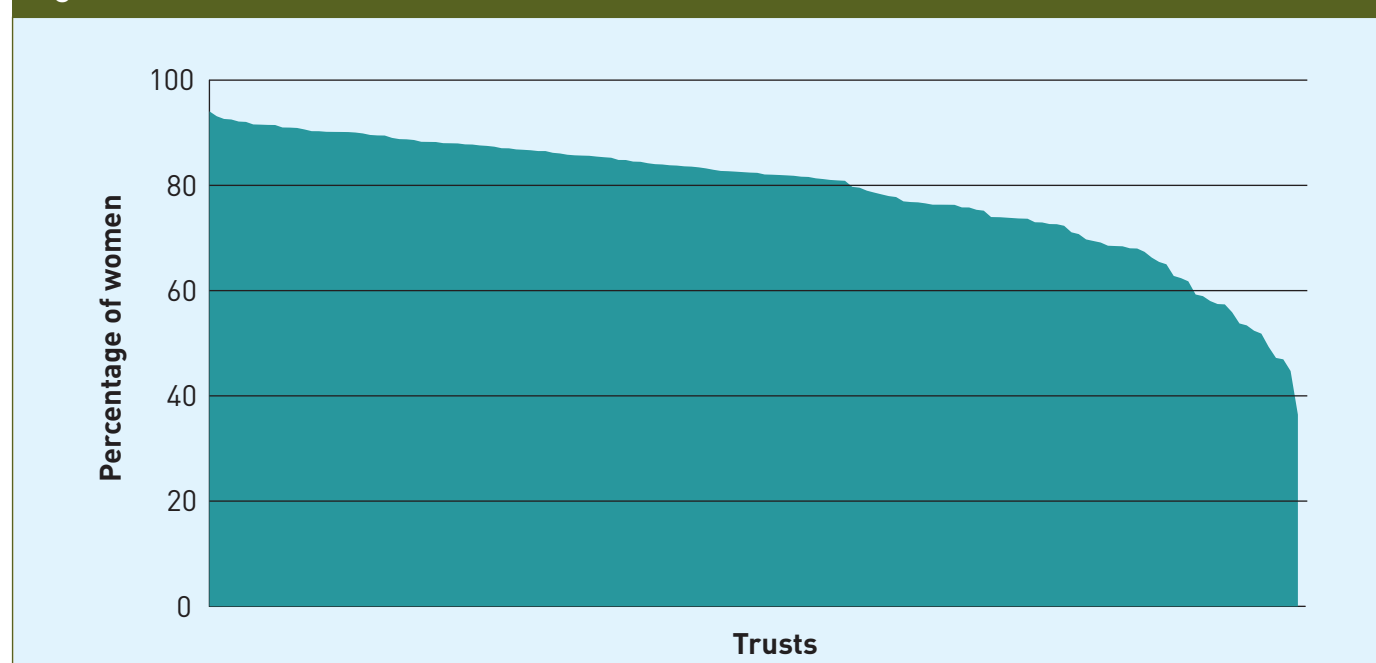
Late booking

Concern that late booking is placing women and babies at risk has led to a new HM Treasury public service agreement indicator that relates to the number of women receiving the full booking assessment by the end of week 12 of their pregnancy⁹. The survey of women who had recently given birth provides an indication of

how actual booking may look against this target (see figure 2). This suggests that many trusts have a long way to go to meet the target. The best trusts achieved over 90% of women booked by the end of week 12, but in a quarter of trusts only 74% or less were booked by this time.

There is some association between women who booked late and their self-reported ethnicity. Whereas 78% of white British women reported that they were booked by 8 weeks and only 5% were booked after 12 weeks, up to 15% of certain ethnic groups were booked later than 12 weeks, particularly women from Black African and Bangladeshi ethnic groups. Bodies that commission maternity services that have diverse communities need particularly to examine why women are presenting late and work closely with the relevant communities to increase contact with a health professional early in pregnancy.

Figure 2: Women booked within 12 weeks



Source: Survey of recent mothers, 2007

Table 3: Proportion of trusts where specific topics are included in trust booking checklist			
Screening for Down's syndrome	100%	Newborn bloodspot test	95%
Screening for rhesus negative	99%	Maternity services guide	95%
Screening for HIV	99%	Full blood count test	94%
Screening for Hepatitis B	99%	Risks and benefits of different birth settings	91%
Ultrasound scans	99%	Maternity rights and benefits	89%
Screening for sickle cell and thalassaemia	99%	Induction of labour	89%
Screening for rubella	99%	Pain management	87%
Screening for syphilis	99%	Caesarean section	85%
Parent education	98%	Mental health	78%
Newborn hearing test	95%		

Source: Maternity service review trust questionnaire, 2007

Content of booking appointments

The booking appointment provides an opportunity for midwives to provide women with important information on a healthy pregnancy, to agree a care plan taking into account any risk factors, to schedule screening tests and for women to ask questions and express concerns. Typically midwives will have a checklist to ensure that the information discussed at booking is comprehensive.

Almost all trusts cover the issues that are important at the start of pregnancy (see table 3). However, a significant number cover issues which may need to be revisited as the pregnancy proceeds, for example, pain management and breastfeeding. Two particular topics that should be included are mental health needs and maternity rights and benefits^{4,11} and trusts that do not currently include them on their checklist (22% and 11% respectively) need to include them.

The Pregnancy Book and further information

Clear, up-to-date information is essential for women and their partners so that they can make informed choices in pregnancy and feel confident about what to expect during labour and birth. It may prepare women for clinical consultations or reinforce information given by health professionals, making antenatal appointments more effective.

Comprehensive and current advice about all aspects of pregnancy and postnatal care is contained in *The Pregnancy Book*, a handbook published by the Department of Health. All pregnant women should be given a copy, particularly first-time mothers. We found that for the median trust, only three-quarters (76%) of women wanting *The Pregnancy Book* reported receiving a copy (this ranged from 44% to 94% across trusts) with some trusts citing inadequate supplies being provided by the commissioning PCTs. Trusts should ensure sufficient copies are available for all pregnant women who want them.

Table 4: Timing of provision of information (written or other media, such as DVD)

	% trusts giving information before booking	% trusts giving information at booking	% trusts giving information after booking
A guide to local maternity services (including options of where to give birth)	25	75	0
Information on the risks and benefits of different birth settings	17	73	10
Maternity rights and benefits	4	84	11
Emotional changes and common mental health needs	10	75	15
Parent education antenatal classes	7	65	28
Induction of labour	1	9	89
Pain management	1	17	82
Caesarean section	1	13	85

Source: Maternity service review trust questionnaire, 2007

Trusts need to supplement *The Pregnancy Book* with additional information to ensure women understand the local service context, for example options for place of birth. Provision of local detailed factsheets prior to an antenatal appointment will give women the opportunity to consider what additional information they need, maximising the benefit of any discussions at antenatal appointments. The majority of trusts are providing information at or after booking (see table 4). To allow women to make informed choices, it may be more appropriate to provide some of this information earlier, perhaps using community pharmacies or GPs, while making clear there will be an opportunity to talk through the information at a later time.

Access for all groups

We met with parents from different ethnic backgrounds and with disabled parents to discuss their experience of maternity services. Some reported that they received written information in their preferred languages but all were offered access to interpreter services when required.

They emphasised the importance of personal discussion about their care, rather than simply being given leaflets. For some, especially women who had recently come to live in England, this may have been due to literacy requirements, or a lack of awareness of the different arrangements for maternity care in England compared with the normal arrangements in their country of origin.

Meeting the information requirements of disabled parents appeared to be a greater challenge for trusts. For example, concern was raised about the accessibility of information for parents with learning difficulties and from the discussions, it was clear that poor communication with these parents had affected their ability to cope with labour and birth and caring for their new babies.

Much of the information provided to women is in a written format and women with visual impairments or learning difficulties may find this information inaccessible. Fifty-six per cent of trusts said they had information available that is tailored for visually impaired women and 58% for those with learning difficulties.

Choice of location for antenatal check-ups

As part of the choice commitment, it is important that women can choose where they receive their antenatal care. However, only 22% of women, on average, reported that they were given a choice about where antenatal check-ups would take place, though this ranged from 9% to 50% across trusts. As a follow-up to the Sure Start programme, there is now a national initiative to introduce more children's centres that include antenatal clinics. Sixty-nine per cent of trusts reported these were already in place.

Trusts are extending the locations where antenatal care is provided, with more than a third of trusts (39%) increasing the number of locations in the last three years and very few (4%) reporting a decrease. This trend is set to continue, with most trusts (61%) planning to increase locations in the next three years.

Provision of appointments outside routine working hours can help women, particularly those who work some distance from home, to access antenatal care. Just 30% of trusts reported having antenatal clinics that offered appointments outside 9am to 5pm on weekdays.

Location affects the accessibility of antenatal care but for physically disabled women accessibility may also be about facilities. A lack of height-adjustable couches was a problem associated with antenatal checks identified by some disabled women, though 83% of trusts reported having these at some clinics. Some women may benefit from having home visits antenatally; 51% of trusts offer a home visit to all women while 42% will provide this on request. For the remaining trusts, 90% would provide home visits for disabled women, 70% for teenagers and 70% for women with mental health needs.

Antenatal appointments

Almost all women (99%) see a midwife for some or all of their antenatal checks and 60% see a hospital doctor one or more times. The National Institute for Health and Clinical Excellence (NICE) has identified an appropriate schedule of appointments for a woman with a healthy pregnancy⁴, with more for first-time mothers than those who have already had a baby. The schedule of appointments proposed by NICE is 10 for a first-time mother who gives birth at term, but not all trusts seem to be observing this; 21 trusts (14%) have advised that they plan fewer appointments for these women.

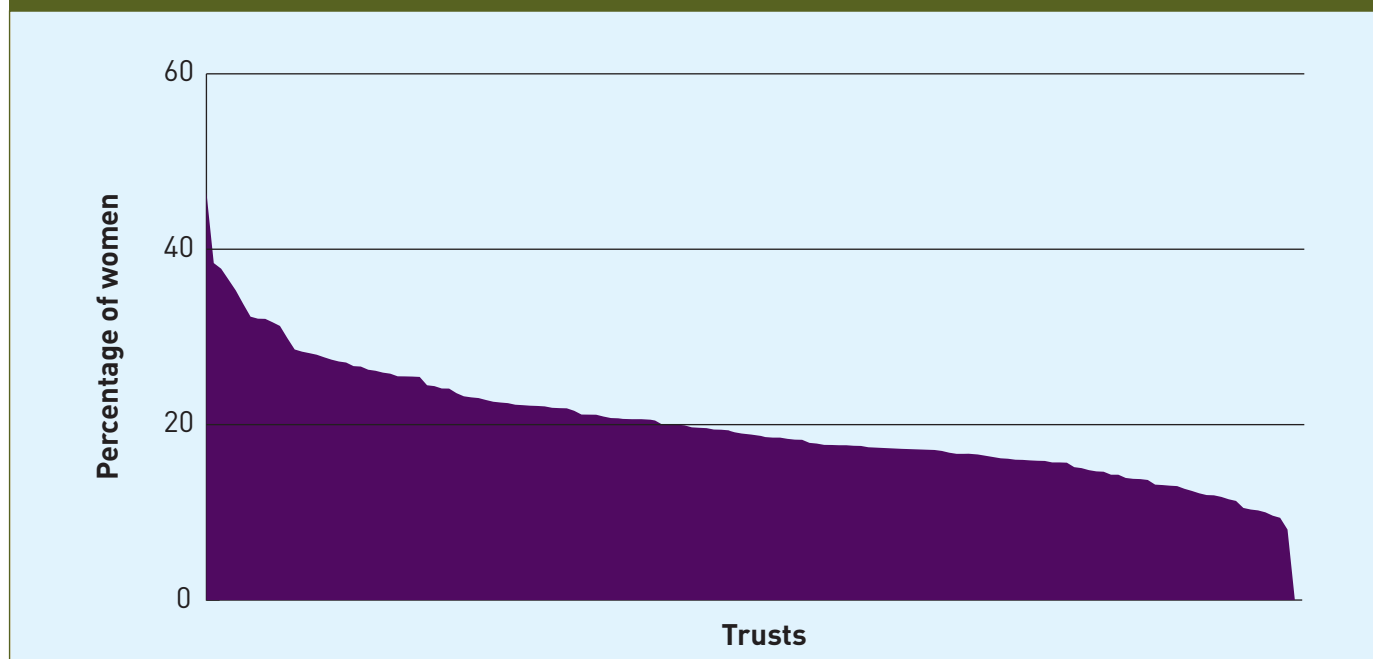
For mothers who have already had a baby, the NICE schedule suggests seven appointments, and eight trusts (5.4%) have advised that they plan fewer appointments. The results from the women's survey also indicate that up to 44% of women are not receiving the recommended number of antenatal appointments, but this is the case even in the better performing trusts (see figure 3)*.

Duration of antenatal appointments

At our engagement events for this review a number of women expressed concern that there was not enough time to talk through their concerns and choices at antenatal appointments. Very few of the women we met had birth plans, and not all women seemed aware of different options for birth location or about birthing aids that may have helped them manage pain. Clearly it would be easier to discuss these issues if antenatal appointments allowed sufficient time.

* For women who make contact prior to 16 weeks (the timing of the first antenatal appointment after a booking appointment) and deliver beyond 36 weeks gestation, taking into account whether it is the first baby or not.

Figure 3: Women receiving fewer antenatal checks than number recommended by NICE



Source: Survey of recent mothers, 2007

Most trusts (86%) allow at least an hour for the booking appointment, but 11 trusts (14%) reported only allowing 30 minutes. The time available for the subsequent routine antenatal appointments is much less, typically only 15 minutes but in some trusts (11%), only 10 minutes are allowed.

Continuity of care

In general, women would prefer to see the same midwife or doctor for their antenatal visits, but the extent to which this occurs is highly variable. The proportion of women reporting that they mostly saw the same midwife for antenatal check-ups was 58% overall and ranged from 15% to 85% across trusts. Women reported less continuity from medical staff, with 39% of women overall reporting they mostly saw the same doctor,

ranging in trusts from 15% to 70% of women.

This was supported by the results of the survey of maternity staff. In about half of the trusts, the balance of staff agreed with the statement “continuity of care (antenatal and postnatal) is not provided for most women”. Linked with this, is whether women are given a telephone number to contact a midwife. In half of the trusts, the proportion of women who were given a number was 93% or more, but in 20 trusts it was less than 80%.

The survey of maternity staff went on to ask for the level of agreement with the statement that “individualised care is provided for women receiving our service”. The level of critical responses indicates considerable scope for improvement, 20% disagreed and 60% agreed but only to “some extent”.

Caseload midwifery

Caseload midwifery and team midwifery staffing models have been introduced in some trusts with the aim of improving continuity of care. With true caseload midwifery, women are allocated to a single midwife who will look after a woman through her pregnancy, care for her during labour and birth and during the postnatal period until her care is transferred to a health visitor.

This model of care can work very well, but can also be difficult to manage and ensure that midwives have an acceptable work-life balance. This way of working may also require more midwives for a given number of births. A third of trusts reported that some caseload midwifery occurred, with a fifth (21%) of trusts stating that this involved at least half of their midwives.

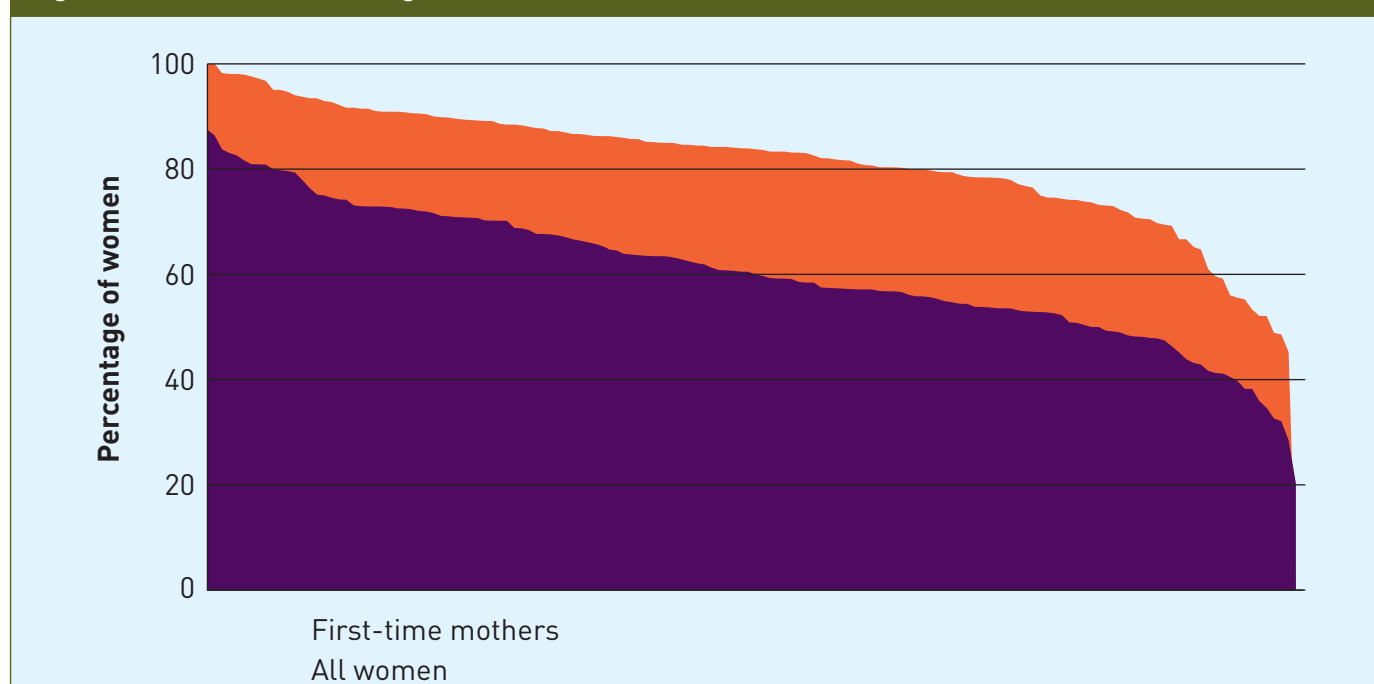
Team midwifery is another model that allows a group of midwives to care for a group of women.

Each woman has a named midwife, but she will also be introduced to other members of the team who may on occasions provide the care. However, if the team is large, women are unlikely to experience continuity of care. Half of trusts (51%) reported having some team midwifery. Some trusts operated both caseload and team midwifery care models.

Antenatal classes

Provision of antenatal classes is identified as part of a high quality service^{2,3} but many trusts are not addressing this issue fully. In the survey of recent mothers, 60% of women were offered classes, 3% reported that the classes were all booked and 37% reported not being offered any at all. The proportion of women who wished to attend antenatal classes and were able to do so varied quite markedly (see figure 4).

Figure 4: Women attending NHS antenatal classes who wanted to



Source: Survey of recent mothers, 2007

For the median trust this was 60% of all women and 84% for first-time mothers. Of those women who did attend classes, 15% reported that they were not at a convenient time of day, and a few found that they were not conveniently located (6%) and their partner or someone of their choice was not allowed to attend (5%).

Larger proportions of women, particularly first-time mothers, reported that there was an insufficient number of classes in the antenatal course (28%) and that they did not cover the topics the women wanted (20%). This last point is particularly important as antenatal classes represent a window of opportunity during which women can become better informed about the later stage of pregnancy, labour and birth and early infant care.

When asked directly, 86% of trusts advised that they offered all first-time mothers an opportunity to attend antenatal courses, while somewhat fewer trusts (71%) offered all women who had previously given birth a place on a course.

Working women and their partners may have difficulty attending courses unless they are provided outside normal working hours. For those that did offer classes, almost all of them (95%) offered at least some outside the normal working day. Clearly, many trusts need to improve the availability of classes and to review the extent to which they are addressing women's requirements.

Women with particular requirements can benefit from having more tailored antenatal education. Specifically tailored antenatal education was available in 98% of trusts for teenage mothers (under 18), in 64% of trusts for mothers with learning difficulties, and in 62% of trusts for disabled mothers. This reinforces the need

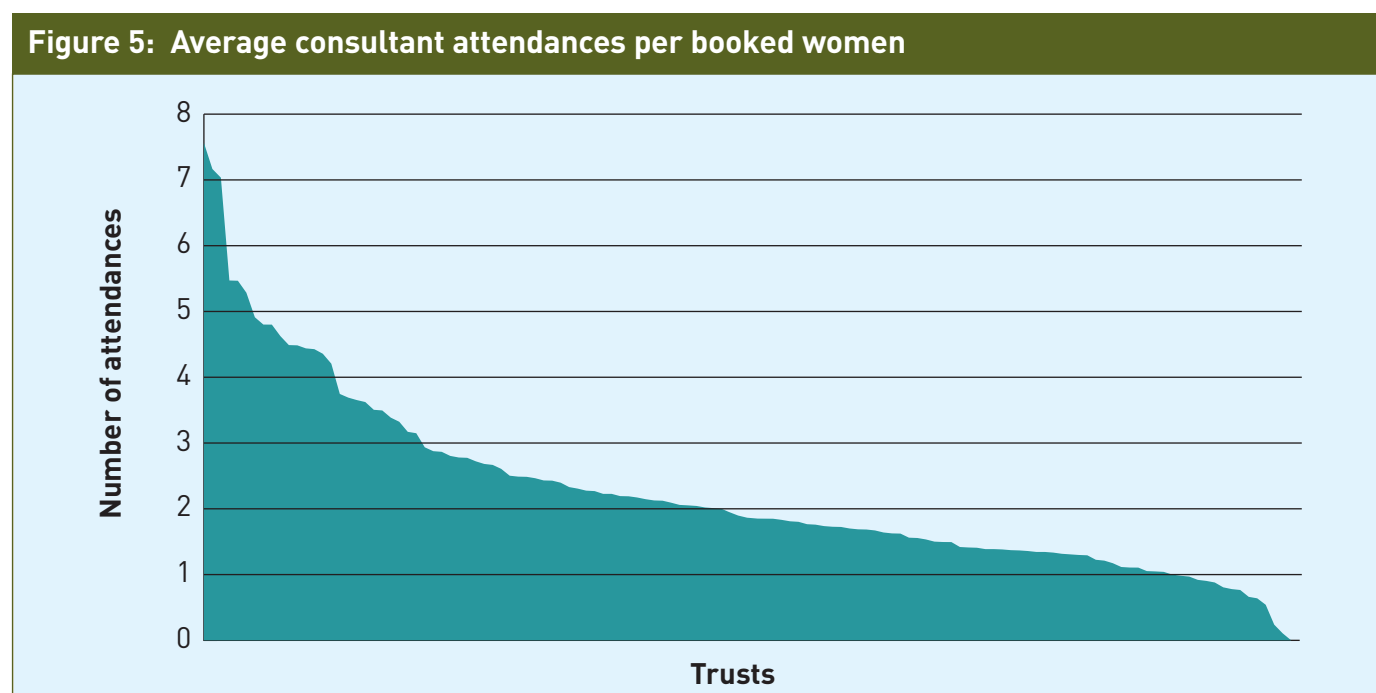
to improve services for those with particular requirements in a number of trusts, but this can pose problems because of the small numbers of women involved.

Care for women with high risk pregnancies

All pregnant women need a midwife, but some need a doctor too³. This may be because they have been identified as high risk, or because a specific problem has arisen during their pregnancy that needs a medical opinion. From the survey of recent mothers it is evident that approximately two-thirds of women (60%) will see an obstetrician at least once during their pregnancy.

When the average numbers of attendances per woman are considered across trusts, there is a very wide variation – from more than six per woman to less than one (see figure 5). Some of this may be explained by differences in case mix but there is still concern that some trusts are relying excessively on doctors while other trusts are not making sufficient use of them. Trusts that lie near the extremes may need to reconsider their criteria for referrals to consultants.

NICE guidance may recommend the number of antenatal appointments needed for a low risk pregnancy, but is very clear that each woman must be individually assessed and if necessary, additional appointments made to meet particular requirements. Trusts appear to be applying this advice, at least in some cases, where the survey of recent mothers showed that up to 7% of mothers reported having 20 or more appointments (over twice that recommended for a healthy first-time pregnancy).



Source: Maternity service review trust questionnaire, 2007

Specialist services

For certain high risk conditions such as epilepsy, input from specialty doctors, such as physicians, can improve the care for women, so many trusts provide joint clinics with obstetricians, together with doctors from the appropriate specialty, often backed up by a specialist midwife (see table 5).

For other conditions with a more social

dimension, such as domestic abuse, the lead is often provided by midwives although, in some cases, with a specialist midwife (see table 6).

Antenatal admissions

Women who develop problems during pregnancy may need to be admitted to hospital for monitoring or treatment. The survey of recent mothers indicated that one in five women had one or more overnight stays in hospital. Information

Table 5: Joint clinics for higher risk pregnancies		
Pregnancies in which there are concerns about:	% trusts with joint clinics	% trusts with specialist midwife
HIV or Hepatitis B	53	50
Asthma	31	7
Diabetes	99	64
Haematological disorder	53	22
Epilepsy	50	8
Cardiac disease	53	11

Source: Maternity service review trust questionnaire, 2007

Table 6: Role of midwives in higher risk pregnancies

Pregnancies in which there are concerns about:	% trusts where midwives lead	% trusts with specialist midwife
Domestic abuse	76	41
Learning difficulty	51	9
Teenagers	48	71
Physical disability	27	5
Women over 40	23	2
Previous big baby	13	3
Obesity	14	5
Previous small baby	11	4
Previous caesarean	9	13

Source: Maternity service review trust questionnaire, 2007

from trusts showed that the average number of admissions per woman was almost exactly one. This suggests that although only a minority of women have an antenatal admission, those that do tend to be admitted several times.

Diabetes

Diabetes is a particularly common condition in pregnancy and substantially increases the risks for women and their babies¹², so it is important that trusts make special arrangements to care for these women. Almost all trusts provide joint clinics (see table 5) and two-thirds have a specialist midwife. Women with diabetes also require more frequent monitoring and so most trusts provide more antenatal appointments than normal. The median is a schedule of 16 appointments but varies markedly from nine appointments (no more than normal) to 40.

It seems that most diabetic women are receiving specialist care, and the variation in the number of appointments may indicate that trusts are providing individualised care as recommended, or that there is variation in the interpretation of the guidance.

Therefore, although most trusts provide considerable specialist services for conditions that increase risk during pregnancy, this is not the case everywhere. Doctors and midwives in the maternity staff survey are critical of the provision of specialist services, with 63% and 64% respectively reporting that such services were not always available.

Mental health needs

Proper identification of mental health needs associated with pregnancy and childbirth is increasingly being recognised as important. Although some conditions, for example postnatal depression, can normally be treated with support from mainstream services, other serious conditions require specialist services, often urgently. The consequences of not providing appropriate care can be severe, including in the most extreme cases maternal suicide. It is therefore important that potential issues are identified as early as possible, and the appropriate services made available if needed.

Recording of mental health needs by maternity staff in trusts is inconsistent and so it is difficult to gauge how common problems of this kind are. For the 40 trusts able to provide data, the median trust reported that 8% of women were identified at booking as having a personal or family history of mental illness (this proportion ranged from around 2% to over 30% across trusts). For the 29 trusts that provided data on referrals to mental health teams following booking, the median trust referred 1.6% of women to a mental health team (ranging from 0% to 7% of trusts).

Coverage of mental health at booking appointment

NICE issued guidance in 2007 in relation to women's mental health during pregnancy, labour and birth and in the period following birth¹¹, including the questions to be asked at booking. All trusts reported that they covered mental health at the booking appointment and over half (55%) reported that they explored current mental health using the specific questions* identified by NICE, and also asked about women's and their family's previous mental health. This leaves 45% of trusts with a less complete schedule of questions indicating that trusts need to apply greater consistency in this area.

Joint clinics with specialist midwives

Mental health needs can also be cared for by providing joint clinics with mental health professionals and specialist midwives. More than half of trusts (56%) reported running joint antenatal clinics with health professionals specialising in substance misuse, and

approximately a third of trusts had joint clinics with mental health teams for previous puerperal (or postnatal) psychosis and psychiatric disorders. Nearly two-thirds of trusts (63%) had specialist midwives in post for supporting women who misuse substances, but fewer had specialist midwives for women with previous puerperal psychosis (19%) or to support women with a psychiatric disorder (21%).

Access to specialist mental health services

When severe issues arise, trusts should have fast referral pathways to access support from appropriate specialists. The review found that 40% could access a specialist perinatal psychiatrist and 18% had access to a community psychiatric nurse-led service, but this left 42% of trusts that had no access to a specialist perinatal mental health service.

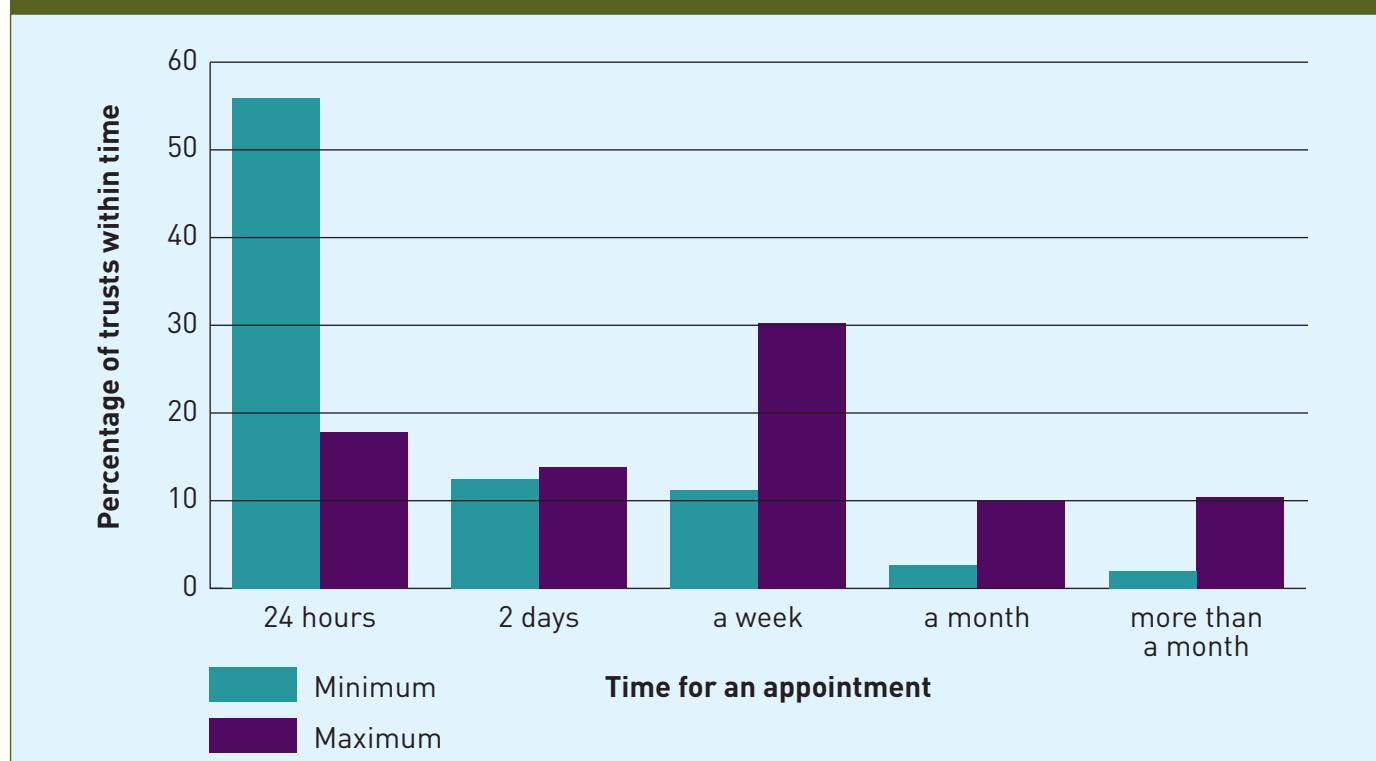
Given that midwives provide most antenatal and postnatal care, referral will be more rapid if they are able to refer women directly to mental health specialists. This was by no means universal with 70% of trusts reporting that this was possible. Trusts were asked to describe the maximum and minimum waiting times for a new urgent referral for a specialist mental health appointment. In most cases the minimum waiting time for a referral was no more than two days and the maximum waits were usually no longer than a week (see figure 6). In a substantial minority of trusts, however, the maximum wait (and in a very few cases the minimum wait) could be a month or more, which is unacceptable.

Mother and baby units for mental health needs

A few women will need inpatient specialist mental health care. Mental health trusts that have psychiatric mother and baby units can provide care while allowing the mother to continue to spend time with her baby,

* The NICE questions are: "During the past month, have you often been bothered by feeling down, depressed or hopeless?" and "During the past month have you often been bothered by having little interest or pleasure in doing things?"

Figure 6: Timing of urgent appointments for perinatal mental health service following referral



Source: Maternity service review trust questionnaire, 2007

which can aid recovery. Ideally this unit should be close enough so that the woman can receive support from family and friends. Ninety-five per cent of trusts reported having some access to a mother and baby unit and 80% said that this unit is in their strategic health authority.

Responses from staff working in maternity

Staff working in maternity have considerable reservations about the specialist services provided for women with mental health needs. The survey asked staff if they were adequately trained to identify the occurrence of mental illness (59% of staff responded positively), the type of mental health illness (only 18% of staff responded positively) and the severity of the illness (12% of staff responded positively).

The survey went on to ask if staff agreed with the statement about their maternity service “there is support for women with mental health needs (antenatal and postnatal)”. Less than a quarter of staff (24%) agreed and a further proportion (43%) only agreed to some extent, with little difference according to staff group or the type of unit in which staff worked.

Bearing in mind its seriousness and its prevalence, it is clear that mental health needs are inadequately provided for in many trusts. Trusts and PCTs need to review their provision, considering all aspects from booking, specialty training, streamlining referral pathways and access to specialist services.

Tests and screening

An integral part of antenatal care is using ultrasound scanning to monitor the baby's health and progress together with blood tests, which are principally used to monitor the health of the mother. Down's syndrome screening can involve both ultrasound scanning and blood tests and is discussed separately.

Ultrasound scans

NICE recommends⁴ that all women should have at least two ultrasound scans during pregnancy. The first of these takes place early in pregnancy, and is often referred to as the dating scan. We surveyed mothers to see if they had been given a 'dating scan' between eight and 14 weeks of pregnancy. For the median trust, 92% of women had this scan, but for a quarter of trusts the reported percentage was 86% or less.

Possible reasons for women not reporting having this scan are: late booking rendering the scan inappropriate; trusts providing the scan outside the recommended target number of weeks gestation; trusts not yet complying with the NICE recommendation and not offering the dating scan to all women; women not wanting to have the scan even though it was offered; and women not being adequately informed to realise that they had received a dating scan. Whichever of these issues apply, trusts should be working to address them.

The second scan should be offered at 18 to 20 weeks and is also used to check that the baby is developing as expected, and in particular to check for any fetal anomalies. The take-up rate for this scan is higher than for the dating scan, for the median trust 99% of women reported receiving this scan (the proportion ranged from 88% to 100% across all but one trust).

NICE guidance recommends that 11 attributes are checked as part of this scan, of which two are optional; 62% of trusts reported their scans included all these attributes. But of the optional standards, cardiac outflow tracts are only covered by 75% of trusts and face and lips covered by 91% of trusts. Checking the renal pelvis anterior-posterior measurement, one of the non-optional attributes, is only covered by 85% of trusts.

Down's syndrome screening and tests

A variety of screening tests are available that can involve a combination of ultrasound and blood tests which allow trusts to provide prospective parents with information about the chances of their unborn baby (fetus) having Down's syndrome. Those found to have a high risk result can decide whether to continue to have a definitive diagnostic test.

NICE guidance⁴ makes clear that from April 2007 trusts should be providing a test which has a detection rate of 75% or above and a false positive rate of less than 3%. It advises that the four tests meeting these criteria are the combined test, the quadruple test, the integrated test and the integrated serum test, provided they are carried out before 14 weeks. After 14 weeks only the quadruple and serum integrated tests are effective. However, most trusts are offering just the triple test, which met NICE guidance prior to April 2007 but not after that date.

The combined, integrated and serum integrated tests have the best performance, but these are only offered by 18% of trusts. Given that two of the four recommended tests require access to ultrasound, it is of note that only 38% of trusts' preferred screening method involves ultrasound, which may be linked to ultrasound capacity.

Both chorionic villus sampling (CVS) and amniocentesis tests are available after a high risk screening result to determine whether or not the fetus has Down's syndrome. However, such tests are invasive and have a risk of miscarriage of approximately 1%⁴. Trusts reported an average of 5% of abnormal pregnancies identified through these tests.

Other blood tests

Written information on four common blood screening tests for maternal conditions, hepatitis B, HIV, syphilis and rubella, were provided by 87% of trusts. Virtually all women are offered these tests irrespective of trust and in most the take-up rates are high. The least often taken up is HIV where a quarter of trusts have take-up rates of 90% or less. Some of these trusts with low take-up rates are in London, where the the likelihood of babies being infected with HIV is higher than average.

Informing women

It is important that the potential benefits and risks of screening and scans are clearly explained to women and that they should feel that they have a choice, particularly for Down's syndrome testing, where women may wish to decline. On average 92% of women felt that these tests had been properly explained to them.

A similar percentage (91%) of women felt that they had a choice of whether to have a Down's syndrome test, but only 71% and 74% respectively felt they had a choice of the dating and fetal anomaly scans. Trusts should examine their performance in this respect and if necessary, improve their communication to women before tests are carried out.

For choices to be realistic, women need to be informed a little while before the tests would take place, if chosen. Most trusts give information on antenatal tests and screening at or before booking, but there were a few trusts that only gave this information at the time of the procedure, particularly for ultrasound scans.

Screening coordinator

The National Screening Committee advises that trusts employ a maternity test and screening coordinator to act as an expert advisor and monitor performance and take-up rates. Sixty-one per cent of trusts have coordinators who look after both antenatal and neonatal screening, 30% only have a coordinator for antenatal screening and 9% reported they had no coordinator in post. In 54% of trusts, the coordinator role has sufficient protected hours to be a full-time role. At the other extreme, in three trusts it was reported that the coordinator had no protected time at all.

The data from trusts on tests and screening used in this review has been of variable quality, which may reflect poor monitoring of antenatal screening. For example only 69% of trusts could provide data on the number of women who had a dating scan and 73% of trusts provided data on women having a fetal anomaly scan. Trusts need to improve their monitoring of screening and testing activity.

Communicating results of screening and tests

Learning the results of tests can be very distressing, so sharing these results with women and their partners should be done sensitively. Seventy-one per cent of trusts advised that results could be shared face-to-face, over the phone or in a letter, giving prospective parents a choice. However, 4% of trusts did not offer face-to-face feedback, while 1% offered none of these options, suggesting that feedback may not be routinely provided.

The majority of trusts reported that screening results could be discussed in a room privately, however, 15% reported feedback might be given in just a curtained environment. Ideally, all results should be communicated in the privacy of a closed environment.

Seventy-one per cent of trusts reported that for the majority of tests they had supporting written information for women who have had a positive or high risk result, though 5% of trusts reported having no additional written information to share. From our survey we know that staff are generally confident in feeding back screening results with only 3% of staff in the median trust reporting they are not confident in their understanding of information about screening and tests, although they still try to support parents.

Care during labour and birth

Different settings for giving birth

Care during labour and birth can be provided in four different settings:

- Obstetric units caring for births at all risk levels where obstetricians work together with midwives.
- Alongside midwifery units (AMUs), usually adjacent to or integrated with the obstetric unit.
- Free standing midwifery units (FMUs), in a separate building remote from the obstetric unit.
- Home.

In the last three settings, care is normally provided exclusively by midwives who care for low risk births.

The vast majority of births take place in obstetric units (93%). Of the remainder, 3% take place in AMUs, 2% in FMUs and 2% at home.

Of the 150 English trusts taking part in this review, two-thirds had no AMU or FMU, so all births took place in an obstetric unit or at home. The remaining third had various arrangements of midwifery-led units, including two acute trusts that had no obstetric unit, so they provided midwifery-led care in their maternity units instead (see table 7). Unit level data was provided for 181 obstetric units, 57 FMUs and 25 AMUs. The information captures nearly all units, but there were eight trusts that could provide only very minimal activity data for an AMU or FMU but were not able to give full unit profiles.

Table 7: Delivery unit types

Trust configuration	Number of trusts
One obstetric unit only	82
More than one obstetric unit	15
Obstetric unit and AMU	21
Obstetric unit and FMU	25
Obstetric unit, AMU and FMU	5
Trust midwifery units	2
Total	150

Source: Maternity service review trust questionnaire, 2007

That such a large proportion of trusts had no midwifery-led units is likely to impact on the choices that women can make about place of birth and the possibility of midwife-led care. However, within obstetric units, midwives are nevertheless responsible for providing most of the care for women.

Locations for birth

Choice in location of birth

Despite the relatively small proportions of births that take place outside obstetric units, most women reported being given a choice at the start of pregnancy about where to have their baby – the median trust reported 80%. This was slightly higher in trusts with some form of midwife-led unit. On average, 57% of women were offered a home birth, but this varied between 22% and 93% across trusts (some women would not have been offered a home birth because it would have been medically inappropriate).

Only just over half (51%) of the women who were given a choice about where to have their baby reported that they had definitely been given sufficient information by midwives or doctors to help them decide. Between 3% and 36% of women said that they would have liked more information, which suggests that some women are being faced with choices they do not feel informed enough to make.

At our engagement events, women said that where they had been given a choice of birth location, it had mainly been influenced by previous experience, feedback from friends, transport access and their view on cleanliness of the maternity units.

Although women can make a choice, they may find, when the time comes to give birth, that their chosen option is not possible as the unit is closed to new admissions. Forty per cent of obstetric units reported that they had closed at some time during the year, with the maximum being 12 days. A third of FMUs had been closed during the year as had 36% of AMUs, with some units reporting being closed to admissions for more than 55 days.

Births in midwifery units

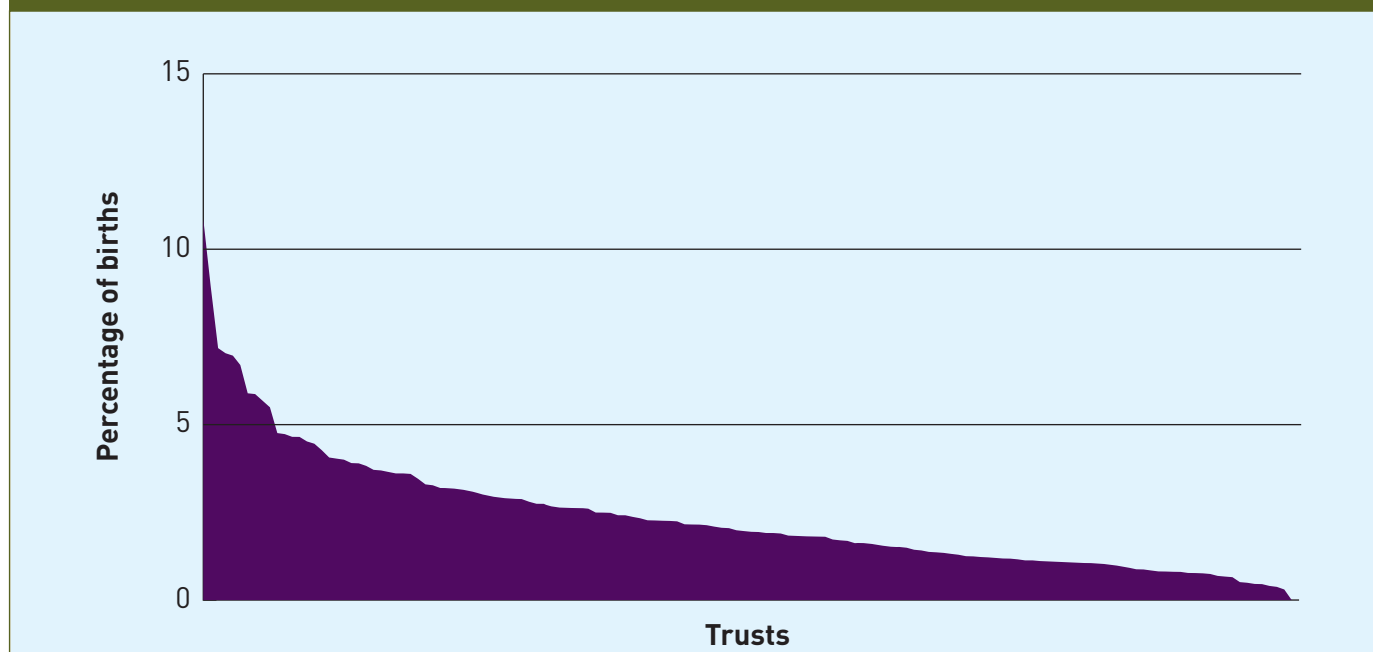
The proportion of women who gave birth in midwifery units (5% nationally) depends on the extent and nature of midwifery provision in a trust. This ranged from none in over half the trusts to a maximum of 36% in a trust which had several FMUs and an AMU.

Criteria for eligibility

Obstetric units provide care for women with both straightforward and more complex pregnancies, as well as for those mothers and babies who are very sick. On the other hand, midwifery units specialise in low risk births and must be selective to minimise the risk that a mother will need interventions requiring a transfer to an obstetric unit. A transfer from an FMU will probably involve a journey by car or ambulance, whereas a transfer from an AMU will normally just involve being moved on a bed from one room to another or possibly between buildings on a hospital site.

The criteria for acceptance by an FMU tend to be more restrictive than those for an AMU, but only to a limited extent. The factors that almost always exclude women from either type of unit are multiple pregnancy, gestation below 37 weeks, breech presentation or planning to have an epidural. Other factors can influence the decision but are not definitive in their own right. These can include body mass index, grand multiparity (six or more previous babies) and age.

Figure 7: Home births



Source: Maternity service review trust questionnaire, 2007

Home birth

The choice of home birth should be offered to all women³. Overall 58% of women reported being offered birth at home, with little difference between first-time mothers and those who had previously given birth. However, for the median trust only 2% of births are actually home births (see figure 7). The highest figure reported was 11% and one trust reported none. Typically 82% of home births involve mothers who have previously given birth.

The level of home births tends to be higher in those trusts that offer more home births, which is to be expected, but the take-up rate is never very high. For example, in the trust with the highest proportion of home births (11%), 84% of women said that they had been offered a home birth.

Discussion of home birth as a birth choice at our engagement events led to a mixed reaction and suggested that ethnicity may be an influence. Some women reported feeling pressure to consider home births and women who lived with an extended family described home birth as unattractive. Concerns were expressed as to the safety of giving birth where there would not be immediate access to medical staff and facilities.

In contrast, a home birth seemed desirable for some women because it might address some of the poor care they had received in a hospital environment, including being left alone in labour. And some women see it as attractive in its own right, as they have their own things around them, do not need to travel in labour and have more control, including the freedom to move around freely.

Normal births

The majority of births take place in obstetric units where doctors and midwives work as a team and the full range of interventions can take place if needed, including induction, use of forceps, ventouse (a suction cap attached to the baby's head) to assist labour, or caesarean section. However, many of the women who give birth in obstetric units plan and experience a 'normal birth'* , which does not require care from a doctor. Women may choose this setting either because they are reassured that the interventions are available should they require them or because it is the unit nearest to their home and there was little or no other choice.

All births are expected to be normal in midwifery-led units but only a small minority of births takes place in these settings. The Consensus Statement recommends that normal births should increase to 60% of all births by 2010. However, there is some way to go as the median trust reported only 48% of births as normal and a quarter reported less than 32%. It is generally agreed that the management of healthy women with a straightforward pregnancy and no history of obstetric or medical complications should be led by midwives and facilitated through a working culture that facilitates normal birth. Advice and support from doctors is only sought if a medical opinion is needed or if labour or postnatal period care needs become more complex.

* In this review a 'normal birth' was defined as a spontaneous vaginal delivery without the aid of an epidural, spinal or general anaesthesia, forceps or ventouse. The *Consensus Statement*⁶ published after the data for this review was collected additionally excludes episiotomy from the definition of normal births, which is now embodied in the Information Centre definition.

Pain relief and quality of care in labour

As noted in section 1, the overall perception of the quality of care in labour and birth is generally favourable. However there are some aspects of care that are particularly important to women whether the birth is normal or otherwise.

Assessment in the early stages of labour

There can be some uncertainty at the start of labour about how it is progressing and about when a woman should be admitted to a delivery unit. Having a number of options for early labour assessment can allow women to be admitted at the most appropriate time and may reduce unnecessary pressure on delivery units. Just over half of units stated that a home visit to assess women was an option and almost all units (98%) would 'triage'* over the phone.

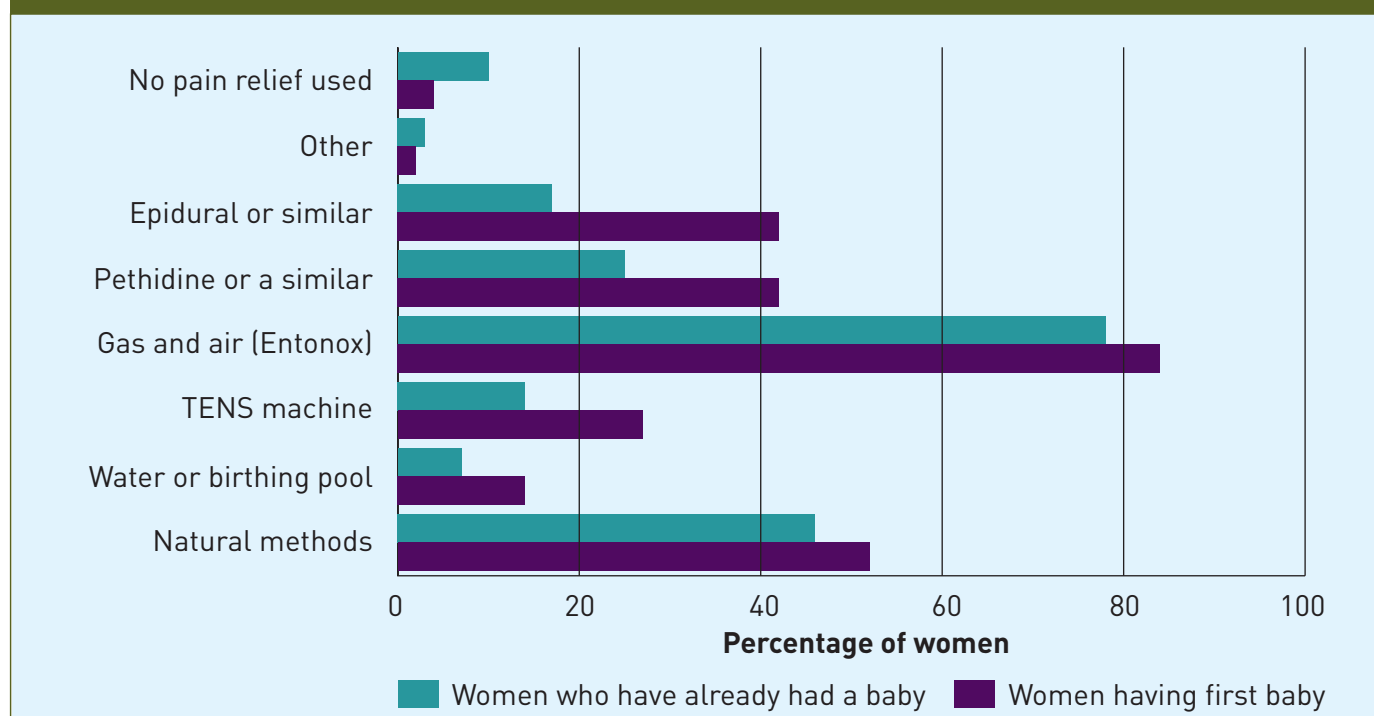
Methods of pain relief

Women use a mixture of methods for pain relief as shown by the survey of recent mothers (see figure 8). At some time in labour, nearly half of the women surveyed used natural methods of pain relief, such as breathing or massage, 11% used water or a pool and 21% employed a TENS machine (which transmits small electrical pulses to the woman's back).

Most commonly, women used gas and air (Entonox) with a mask (82%), a third (32%) had a pethidine or a similar opiate injection and 30% had an epidural, spinal or other regional anaesthesia to provide pain relief. A small proportion (6.5%) reported not using any pain relief at all and this is significantly higher for women who have already had a baby (9.7% compared with 3.5%).

* An assessment to determine whether or not the woman had reached the stage where she was ready to be admitted.

Figure 8: Women's use of pain relief



Source: Survey of recent mothers, 2007

Note: individual mothers could report more than one method.

Women reported the extent to which they received the pain relief they wanted during labour and birth. Overall nearly two-thirds definitely received the pain relief they wanted (64%) and a further 28% felt they had the pain relief they wanted “to some extent”. But in a quarter of trusts as many as 25% of women did not feel they got the pain relief they needed.

Most obstetric units offer, or can make available, the full range of pain relief options. For midwifery units the range is different, with more emphasis on low-tech or non-invasive approaches, such as massage and movement, water and Entonox. There is very limited use of opiates, though most (80%) can offer them, and very few AMUs (8%), and no FMUs, offer epidurals.

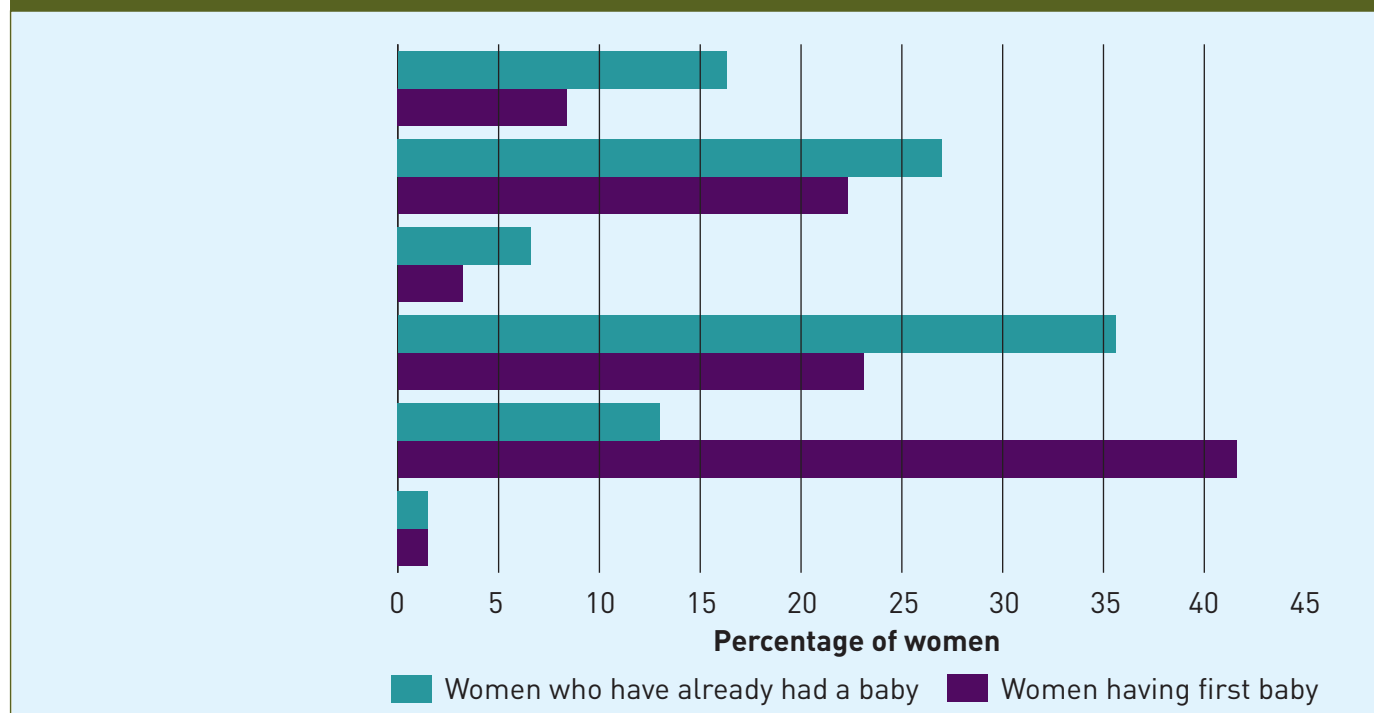
For home births, all trusts provide Entonox but for other options, such as opiate injections,

over half of trusts expect the women to provide these themselves, which would mean obtaining a prescription from their GP.

Availability of epidurals

Ideally epidurals should be available 24 hours a day in every obstetric unit. Almost all obstetric units (94%) report offering a 24-hour epidural service during weekdays and weekends. Although 24-hour epidural services are generally in place in obstetric units, women may still wait for epidural pain relief, for example due to unavailability of clinical staff. Two-thirds of obstetric units indicated that there is rarely a problem providing epidurals (less than once a month), but at the other extreme a small proportion (7%) reported that this is a more common problem and can happen at least once a week.

Figure 9: Women's position for birth



Source: Survey of recent mothers, 2007

Epidurals can be provided in different dosages: a low dose can be used to manage pain but will leave women with greater mobility, which can help with the birthing process. Low dose epidurals do, however, contain opiate drugs, which cross the placenta and may make the baby sleepy, making it more difficult to establish breastfeeding. Nearly three-quarters of obstetric units (73%) offer both high and low dose epidurals.

Use of water in labour

Evidence shows that water relieves pain without evidence of harm to the baby and also reduces the number of women having an epidural.¹³ However, current provision of pools varies across the different types of unit and appears to be under-used. Almost all trusts (95%) report being able to provide access to a birthing pool, with the median trust having 0.4 pools per

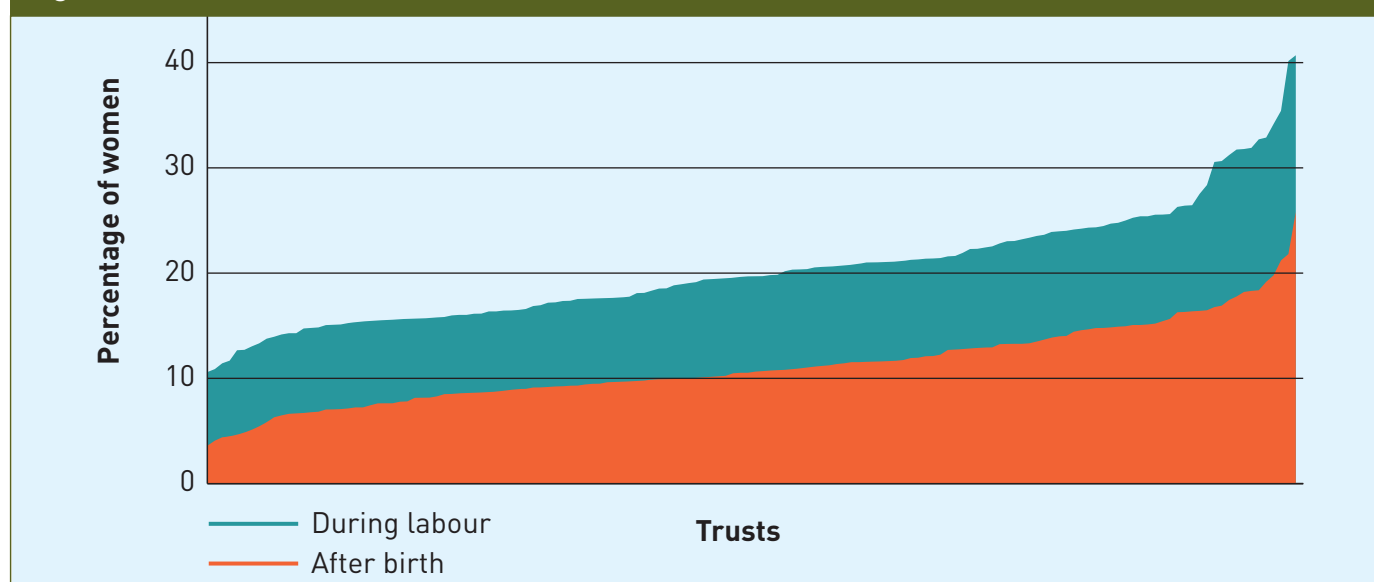
1,000 births per year (that is, one pool for every seven women giving birth per day). The average number of women using birthing pools was just seven a month for the median trust, which seems a low usage rate for the investment made.

Typically 50% of women using a pool will actually give birth there, the remainder will use the pool just for pain relief, getting out of the pool before giving birth. Midwives need to be trained to support women labouring and giving birth in pools, but only 25 midwives per pool in the median trust had received the right training.

Position and mobility during labour

Staying mobile can help the labour progress so it is important that wherever possible women have the opportunity to move around in labour. Overall 74% of women felt able to move around

Figure 10: Women left alone and worried



Source: Survey of recent mothers, 2007

at least some of the time, but this varied between 57% and 86% across trusts. Most women reported giving birth on a bed (91%) and over half were in the position described as 'lying' (56%), though this was more common for women having their first baby (see figure 9).

Women who are left alone

Overall, one in five women (20%) reported that at some time they, with or without their partner, were left alone when it worried them during labour and 11% of women reported the same thing shortly after the birth. In the least favoured trust, up to 40% of women were left alone and worried and even in the best trust it happened to 11% of women (see figure 10). This indicator is associated across trusts with other quality of care indicators reported by women, namely: being treated with kindness and understanding (see figure 11); being talked to in a way they could understand; being treated with respect and dignity; being given information and explanations; and being involved in decisions

about care. This suggests that improving these indicators of care and communication could reduce anxiety, but should not be seen as a substitute for one-to-one care when needed.

Continuity of care

The majority of women did not experience care from the same midwife during their labour and birth. Those cared for by the same midwife during their labour varied between 9% to 34% in trusts (median 20%) and the proportion of women who already knew one or more of the staff caring for them in labour ranged from 10% to 43% across trusts (median 21%). Trusts need to consider ways in which greater continuity can be provided while taking into account the practical difficulties involved in long or complex labours.

Handling bereavement

Although trusts should be doing everything possible to ensure good outcomes, neonatal deaths and stillbirths can occur and it is important that these are handled appropriately.

Figure 11: Women's experience during labour in trusts



Source: Survey of recent mothers, 2007

All trusts have protocols in place that cover a maternal or neonatal death; these include informing the GP, and nearly every trust has written information that they can share with parents.

Training of staff in handling bereavement appears less strong, particularly among medical staff (see table 8). There are a number of support groups that trusts could put women and their partners in contact with if this is their wish. Ninety-nine per cent of trusts reported having information from the Stillbirth and Neonatal Death Society, 97% from the Miscarriage Association and 65% from the Child Bereavement Trust.

Table 8: Handling bereavement

	% units
Maternal death protocol	100
Neonatal death protocol	100
Protocols in place to inform GP of bereavement	100
Written information on miscarriage	99
Written information on neonatal loss	98
Written information on stillbirth	98
Partner stay in the room overnight	94
Protocols to cancel Bounty pack	93
Private room for bereaved parents	89
Midwives trained in bereavement	77
Doctors trained in bereavement	40

Source: Maternity service review trust questionnaire, 2007

Clinical care and interventions

Despite the desire for a normal birth, some women experience complications in labour that lead to some form of intervention.

Induction

Not all women start labour spontaneously at or before term. The number of stillbirths and neonatal deaths begins to increase once birth is delayed beyond 41 weeks and so ways of getting labour started need to be considered. One method that might avoid induction is the vaginal examination and membrane sweep. This is offered by all trusts, mostly at 41 weeks but a quarter of trusts offer it earlier.

Three-quarters of women reported that their labour started naturally but for the remaining quarter, three methods of induction were used: vaginal gel or pessary, amniotomy (a deliberate surgical rupturing of the membranes), or a drug being delivered by intravenous infusion. The first of these was used for 69% of those women whose labour did not start naturally. Trusts' policies vary somewhat over the timing of inductions: in three-quarters of trusts the policy is to initiate labour at 10 to 12 days after term (40 weeks), but for 6% of trusts the policy is to do it earlier at seven to eight days, and a fifth of trusts leave it until 13 or 14 days.

It is important that all women understand the benefits and risks of induction and feel that they can make an informed decision. Overall 57% of women reported they had a choice about whether their labour would be induced, ranging from 29% to 84% across trusts.

Assisted vaginal birth

Most vaginal births are completed naturally but a small proportion (15%) are assisted by either ventouse (a suction cap attached to the baby's head) or forceps. Typically, 62% of assisted births are performed using ventouse, but its use varies among trusts and for some it is 35% or less. Obstetricians are responsible for decisions about assistance of this kind so, since some situations can only be assisted by the use of forceps, it is important that they remain skilled in both methods.

Women should have either an epidural or local anaesthetic prior to an assisted birth. Typically 56% of women with assisted vaginal births have an epidural, often because this has already been set up for pain relief during labour. For women who have been induced, an assisted vaginal birth is somewhat more likely (19% compared with 14%).

Caesarean birth

The most significant form of intervention for a birth with complications is a caesarean section. In 1995 the rate was just 17% but this has been rising. The survey of mothers indicated a current rate of 24%, ranging from 14% to 39% for individual trusts. Data from trusts is similar, with the median trust reporting a rate of 23%, but ranging between 12% to 34%.

This increase may be associated with reduced infant and maternal deaths but caesarean sections can also have short and longer-term adverse consequences for the mother, which is why it is important that trusts balance the risks with the benefits¹⁴.

Two of the major socio-demographic influences on caesarean rates identified in the National Sentinel Caesarean Section Audit¹⁵ were the

mothers' age and ethnicity. This is supported by data from trusts that indicates that the caesarean rate for women over 35 for the median trust is 33% compared with only 22% for women under 35 years.

Emergency caesareans

The figures above relate to both elective and emergency caesarean sections. If a woman can be identified in advance as needing a caesarean section, this can be planned and she will have an 'elective' caesarean section. However, this is not always possible and for many women the decision is made after labour has started, which results in an 'emergency' caesarean section. Sixty per cent of caesarean sections are emergencies in the median trust, but this varies across trusts from 74% to less than 40%.

Consultant obstetricians should be informed prior to an emergency caesarean and the maternity staff survey shows this varies across trusts with 54% to 100% of staff reporting that this usually or always occurs.

Carrying out caesareans with an epidural (spinal anaesthesia) can reduce the risks associated with general anaesthetic for the mother and can also allow her to see her baby almost immediately after the birth. For all caesareans the median trust reported that 9.6% were carried out using a general anaesthetic, but this was only 3% for elective caesareans.

In situations where there is concern for the life of the mother or the baby, trusts are expected to commence a caesarean within 30 minutes of the decision. Thirty per cent of trusts that provided data on this point reported that all caesareans in this situation commence within 30 minutes but half reported that they did not meet this standard.

Vaginal birth after caesarean

Many women who have already had a caesarean section do not necessarily need to have another one for their next baby. The Royal College of Obstetricians and Gynaecologists (RCOG)¹⁶ suggests that around three-quarters of women should be able to benefit from vaginal birth after caesarean (VBAC), but clinicians will need to balance the risk of a re-occurring delivery problem or uterine rupture against the adverse consequences of a caesarean section. Not all trusts keep figures on this, but in this review 75% of trusts were able to provide data. This showed wide variation; while on average 32% of women had a vaginal birth following a previous caesarean, rates ranged from less than 10% to over 60%.

There did not seem to be much enthusiasm from staff to increase the rate of VBAC. Overall only 10% of medical staff and 12% of midwives participating in the staff survey considered VBAC could be offered to more women.

Breech babies and external cephalic version

A small proportion (3.5%) of babies present in the breech position at term. However, if the breech is identified at 36 weeks or later, carrying out a procedure termed 'external cephalic version' (ECV), may correct the breech position of the baby, making a straightforward head-first birth likely. Most, but not all, obstetricians recommend a caesarean section for persistent breech babies and most of these babies (88% in the median trust) are delivered in this way.

Trusts vary widely in the extent to which they offer ECV to women, from all women to practically none. Not all women accept the offer, but where it is attempted, success rates also vary from 76% to just 7% with a median of 40%.

Guidelines from the Royal College of Obstetricians and Gynaecologists¹⁷ indicates that take-up rates could be in the order of 75%, suggesting that more women could benefit from this procedure.

Staff, again, did not show a great deal of enthusiasm in the staff survey for increasing the ECV rate although it was slightly higher than for VBAC; 19% of midwives and 16% of medical staff thought ECV could be offered to more women.

Cardiotocograph (CTG) monitoring

Continuous CTG monitoring, sometimes referred to as continuous fetal monitoring, is indicated for a number of situations where there is concern over the continuing health of the unborn baby (fetus), for example during labour following induction. However, women's movement in labour may be restricted when they are monitored using a CTG and there is concern that use of continuous CTG is associated with higher levels of intervention, in particular, caesarean sections¹⁴. Despite these reservations, it is clearly very widely used; 45% of recent mothers reported that they had experienced continuous monitoring, which may explain why so many women felt that they were not free to move around during labour.

Some staff are clearly concerned as to whether continuous CTG monitoring is appropriate. For midwives 41% considered that continuous CTG use was too high, which was more than medical staff, where the percentage was 27%. These figures vary greatly across trusts; any trust where the staff survey shows strong concern, or where their use is significantly above average, should review their policies and protocols for CTG monitoring.

Partograms

Partograms are charts used for documenting progress during labour and birth. Maintenance of a partogram for an individual woman during labour, with a clear understanding of action points, can lead to more consistent and decisive intervention. If partograms are not completed with clear action lines there may be scope for trusts to improve consistency in labour management, which could improve outcomes.

Responses from maternity staff on the adequacy of partograms varies greatly. The proportion reporting regular completion with clear lines for action marked on the charts ranges from 8% to 100% across trusts (median 50%) and is 54% for medical staff and 33% for midwives. The reasons for not making a wholly positive response were mostly that partograms were completed but without clear action lines (38% of medical staff and 50% of midwives) or, worse, that they were not regularly completed (17% of midwives and 8% of medical staff).

Staff working only in obstetric units were more likely to report partogram completion with clear action lines than staff working at least some of their time in midwifery units (40% compared 35%).

Outcomes

Maternal morbidity

Three indicators of maternal morbidity were identified as potential markers relating to the risk of maternal mortality, or mothers dying before or after birth, namely: excessive bleeding after birth (postpartum haemorrhage or pph), convulsions (eclampsia) and transfer of the mother to an adult intensive care unit (ICU). Of these, the one with the highest incidence reported was pph, followed by transfer to ICU and finally eclampsia. All the figures showed great variation across trusts, which may be as much due to difficulties in collecting and estimating the figures as to actual underlying differences.

A fourth indicator, a tear to the perineum, was also reported because it is very common but unlike the others, it is not a marker of maternal mortality risk.

Trusts should follow the advice in the *Maternity Dashboard*⁸ for collecting and monitoring these indicators.

Postpartum haemorrhage

Two levels of pph were reported on; a 'significant' blood loss of 1,000ml or more and a 'major' loss of 2,500 ml or more. Significant haemorrhages are quite common with the median trust reporting an incidence of 27 per 1,000 births, ranging from 0.4 per 1,000 to more than 100 per 1,000. The incidence of major haemorrhages is less than a tenth of this, with a median of 1.9 per 1,000 births ranging from 0.1 per 1,000 to 8 per 1,000. There should be appropriate policies and procedures and inclusion of haemorrhage management in 'skills and drills' training.

Eclampsia and admission to ICU

The incidence of eclampsia is a suitable clinical indicator because in many cases properly managed antenatal care should allow signs of pre-eclampsia, such as high blood pressure, to be identified and appropriate measures taken before eclampsia occurs. The median trust occurrence rate is 0.4 women per 1,000 births, but this varies even more than the other indicators with rates rising to more than 20 per 1,000.

The median trust reported a rate of one woman per 1,000 births for admissions to an intensive care unit for respiratory support or following a major organ failure.

Perineal trauma

Perineal trauma associated with labour and birth is not uncommon. The median trust reported a rate of 2% for the serious 3rd and 4th degree tears (those that affect the back passage). This was below the rate reported by women in their survey responses at 8.2%. The reasons for this are not fully understood; they may be due to women's inaccurate perception or to inaccuracies of recording by maternity units. Trusts should have clear guidelines covering the classification, repair and documentation of perineal tears.

Episiotomy, or a cut to the perineum, may be used to advance the birth of babies if certain problems arise. Overall, a quarter of women (24%) who had a vaginal birth reported having an episiotomy, but this varied across trusts from 11% to 44%. The rate for first-time mothers was significantly higher at 38% than the rate for women who had previously given birth, at only 11%.

Suturing, or stitching, after perineal tears and episiotomy should be carried out without unnecessary delay, but some time should be allowed for mothers and their babies and partners to be together after the birth. In the median trust 89% of women were sutured within an hour of birth, though the proportion ranged from 70% to 98%.

Outcomes for babies (Neonatal morbidity)

Four neonatal morbidity indicators, for babies born with impaired health, that trusts could collect data for were identified. These indicators can be improved by policy, practice and training for monitoring and intervening in labour and caring for newborn babies. These are:

- The Apgar score at 5 minutes after birth; this is a score between 0 and 10 of the baby's physical condition, based on the activity and muscle tone, pulse, grimace response, appearance and respiration.
- The need for newborn intubation, to help breathing.
- Meconium aspiration before, during, or after labour and birth, when a newborn inhales (or aspirates) a mixture of meconium and amniotic fluid.
- The occurrence of the condition neonatal encephalopathy.

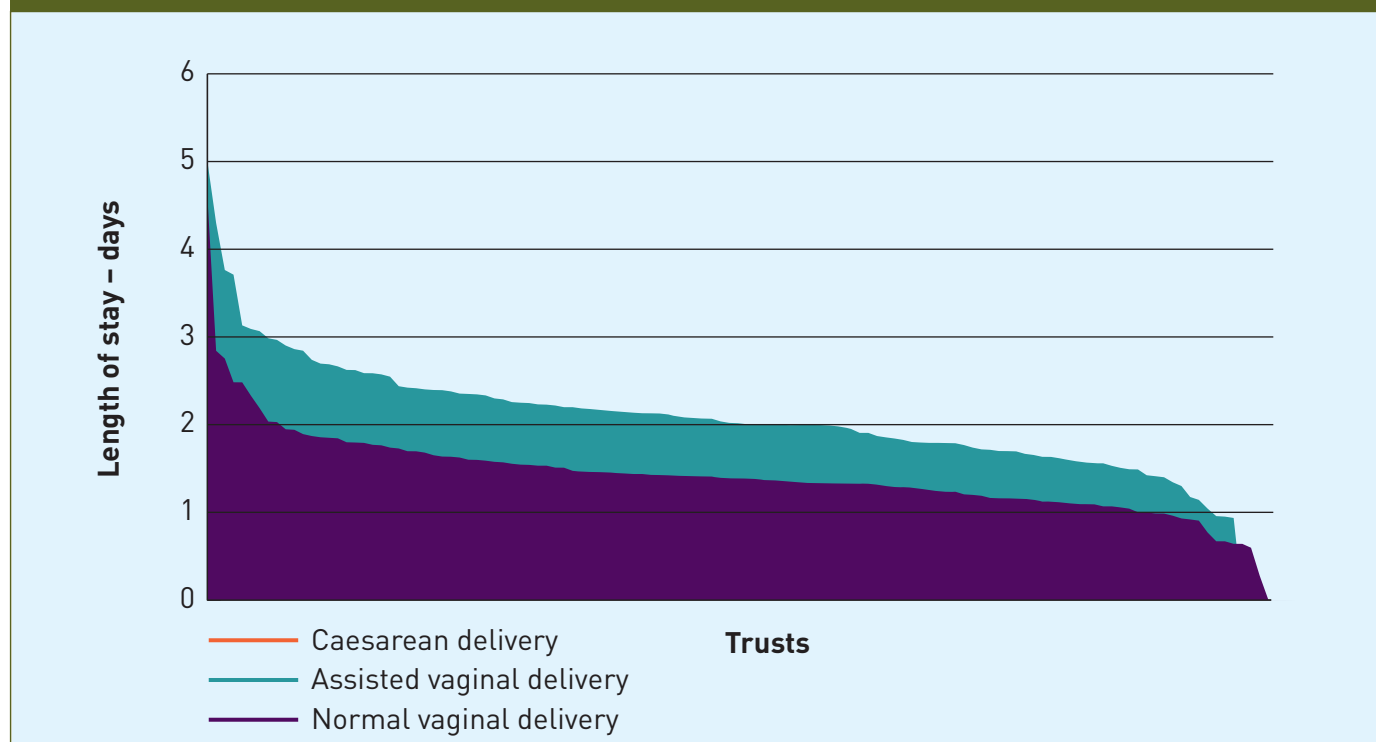
All of these indicators were poorly reported by trusts; typically only half could, provide any figures and for those that could, the variation was often so great as to render the figures of little value. Trusts should follow the advice in the *Maternity Dashboard*⁸ for collecting and monitoring these indicators.

Postnatal care

After the birth, most mothers and their babies will usually spend a short time in hospital, from one to four days, and then go home. Care must continue at home and traditionally this has been delivered by a community midwife who visited the mother at home, and then handed over responsibility to the health visiting service on the 11th day. The pattern is now more flexible, with the number of contacts and the length of time varying by trust and with individual circumstances. The contacts are by midwives or maternity support workers and are at home or in a children's centre or a drop-in clinic.

A minority of mothers will not experience this pattern, because either the mother, or more likely the baby, will not be well and will need to be kept in hospital. If the baby has serious problems it will be transferred to a neonatal unit that may be in the same hospital or may require a transfer to a more specialist unit. The length of stay is usually just a few days but in some cases, typically with premature babies, may be weeks or months. After mothers and babies have gone home, a very small minority develop problems and then need re-admission to hospital.

Figure 12: Length of stay by delivery type



Source: Maternity service review trust questionnaire, 2007

Hospital postnatal care

Length of stay and effects of intervention

Length of stay varies according to the type of birth. The median length of stay reported by trusts for a normal vaginal birth was 1.4 days, slightly more for a first-time mother at 1.7 days, and slightly less, 1.2 days, for a mother who had had a previous baby. For an assisted vaginal birth average length of stay rises to two days and for a caesarean birth to 3.4 days. However, variation between trusts was very wide, with the shortest length of stay for caesarean sections being shorter than the longest length of stay for normal births (see figure 12).

However, some women stay for much less than the average. Data from the women's survey shows that a quarter of all the women surveyed stayed for less than 24 hours and a few women only stayed in hospital for six hours or less after the birth (6%). Almost all of these had previously given birth.

Women's reaction to length of stay

Mixed feedback was received from women themselves about their length of postnatal stay. The postnatal care that women receive should be responsive to individual circumstances.¹⁸ Women should leave hospital when they feel they have had sufficient opportunity to recover and they feel confident in taking care of their baby.

For the median trust, 73% of women were satisfied with their length of stay in hospital, but this leaves 27% of women who were not. Following a normal birth 12% of women felt their stay was too short but 15% of women felt their stay was too long. For women who had a caesarean section the balance shifts slightly; 15% of women felt their stay was too short and only 11% felt it was too long.

At our engagement events there was a sense

within a number of the groups that women felt pressured to leave hospital too soon after having their baby. Women who had a caesarean reported that they were expected to get up and start looking after all their baby's needs before they felt ready to do so and experienced some discomfort as a result. Two such women reported going home quite quickly and having to be re-admitted following complications. Lack of staff time and support for women on postnatal wards was a common message.

Food

Women who have given birth are usually healthy with good appetites and need sufficient food for nourishing both themselves and their baby, especially if breastfeeding. Most women reported getting enough food, 77% for the median trust, but in some trusts up to 42% did not. All trusts where women reported not getting enough food need to review their provision.

Disabled mothers in hospital

At engagement events disabled women described particular problems they had experienced in caring for themselves and their new baby in an unfamiliar environment. For example, one visually impaired woman expressed her frustration at not being able to identify her milk in the fridge or to locate her bed on the ward. Disabled mothers may need a personal assistant to help them with their requirements and most, though not all, delivery units (87%) were reported as having facilities for an assistant to stay 24 hours.

The disabled parents' network identified the difficulties of caring for babies in fixed height cots. Providing flexible height cots can make it easier for disabled women and those women with back pain following birth, to care for their babies but just 22% of delivery units advised that they had these cots.

Postnatal care following transfer from hospital

Contacts with midwife after going home

Trusts advised that their planned contacts after transfer from hospital (through home visits, clinic appointments or telephone) ranged from two to 10 or more, with typically five contacts planned. A variety of contact locations can make the service more accessible, but variable use is being made of children's centres or drop-in clinics. Sixty five per cent of trusts offer access to drop-in clinics, the most common location is in a community clinic (58%) with others in children's centres (47%), and hospitals (25%).

In 45% of trusts midwives make all postnatal visits, whereas in the others they are made by

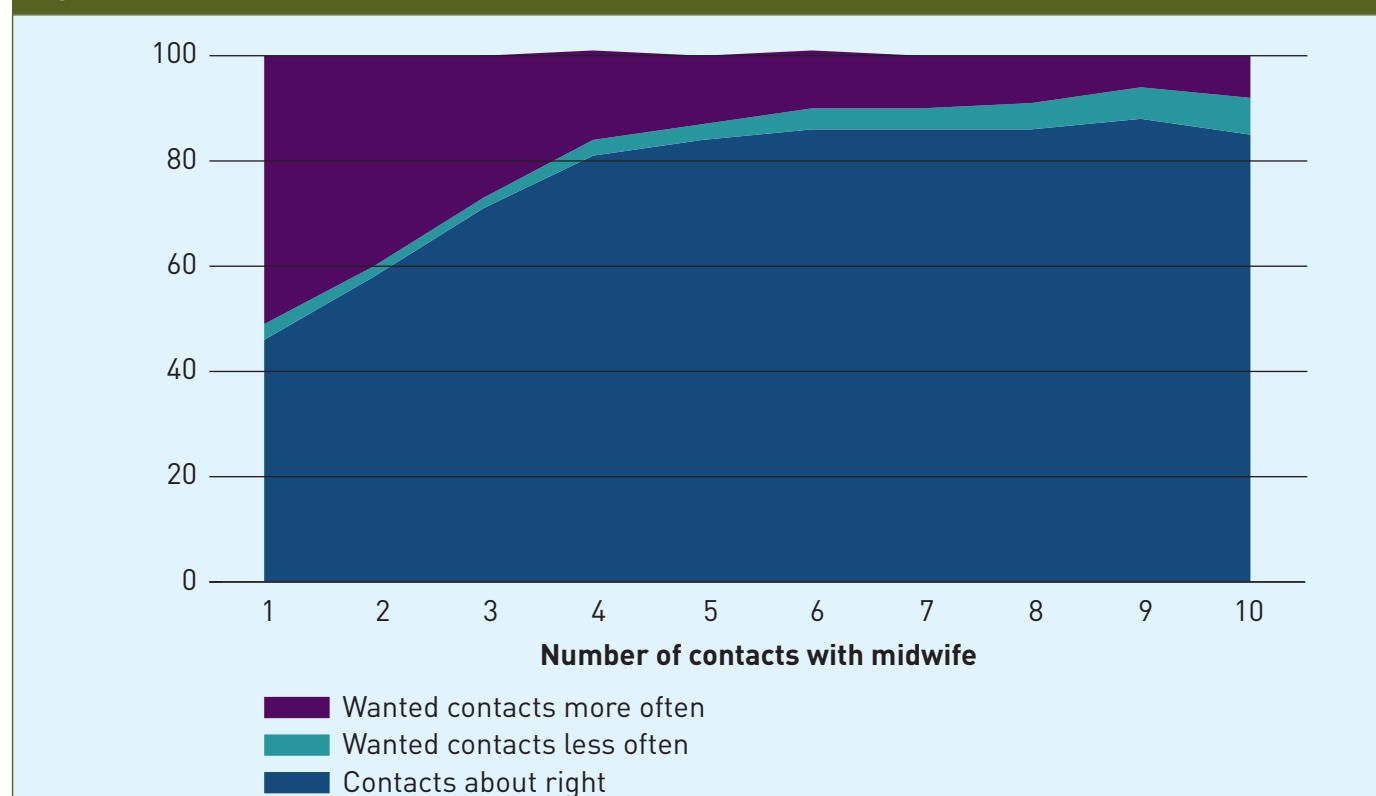
a mixture of midwives and maternity support workers. All trusts plan at least two visits by midwives. Women report an average of 4.3 contacts; similar but slightly fewer than the average planned by trusts.

Satisfaction compared with number of contacts

A substantial minority of women felt they would have liked more contacts with a midwife after going home. This averaged 21% of mothers across trusts, but ranged from as low as 4% up to 51%.

Comparing the actual number of contacts with midwives after going home against women's satisfaction gives an understanding of their need for postnatal care (see figure 13). Satisfaction rises with up to six contacts, but after that reaches a plateau. There is little

Figure 13: Postnatal number of contacts with midwife versus satisfaction



Source: Survey of recent mothers, 2007

difference between first-time mothers and those who have already had a baby.

When surveyed, some midwifery staff (41%) agreed that not enough time was spent with women during the first few days at home, and a further 32% agreed to some extent. Clearly, for some women, trusts are not making sufficient postnatal contacts, and they need to review their postnatal planning.

The national service framework (NSF) states that midwifery-led services should provide for the mother and baby for at least a month after birth or transfer from midwifery care². But in practice the average age of the baby at last contact with the midwife ranges across trusts from 10 days to 42 days (occasionally more) and is typically 14 days. Satisfaction increases up to about 10 days after transfer, after which it levels off.

Quality of support

The first few weeks of caring for a new baby can be a worrying time. Good support can be essential to help parents care for and develop confidence in caring for their new baby. Responses to the survey of recent mothers show where postnatal care most and least meets women’s needs. The largest unmet need seems to be related to infant crying, followed by skincare, whereas sleeping, feeding and general infant health and progress are better supported (see table 9).

Women who receive more midwife contacts rate more highly the help and advice they were given on all the aspects of infant care about which the survey asked: infant crying, sleeping, feeding, skin care and general health and progress.

Teenage mothers and mothers with learning difficulties

These mothers, particularly those without support from extended families or partners, may need additional support in the weeks after the birth and specialist midwife roles can be developed to support these mothers. Trusts advised that their planned contacts after transfer with teenage mothers ranged from three to 13 or more, with typically six contacts planned. Mothers with learning difficulties were visited between three and 12 times or more, again, with typically six contacts planned; more in both cases than normal.

Transfer of care to health visitor

Ninety-four per cent of trusts have a policy or agreed process for transferring care from midwife to health visitor and 58% of trusts have reviewed this process within the last year. Almost all trusts have processes that cover the baby’s health including nutritional status (97%), the mother’s physical and mental health (96%) and risk factors in the family’s social environment (94%).

Table 9: Help and advice received within six weeks of the baby’s birth (% women requiring help who responded that they definitely got this help)

	Crying	Sleeping	Feeding	Skin care	Health and progress
First baby	34%	55%	58%	42%	57%
Subsequent baby	37%	57%	54%	45%	59%

Source: Survey of recent mothers, 2007

Health checks and re-admission

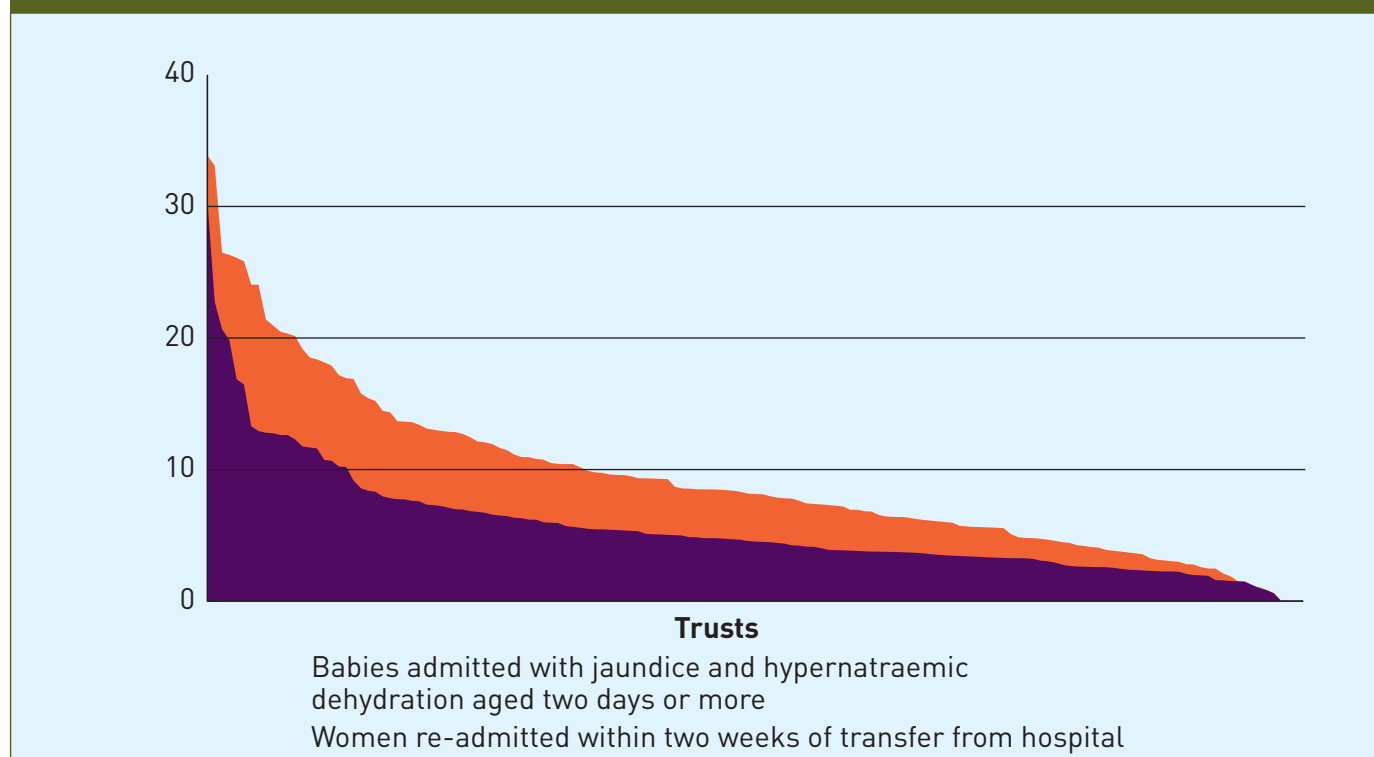
Baby check (72 hour check or statutory examination of the newborn)

A complete examination of the baby should take place within 72 hours of birth and recent mothers reported near universal coverage. In most cases it is carried out before leaving hospital. It can also be done after leaving hospital, provided midwives are trained to do it. If only paediatricians can carry it out, it can cause unnecessary delays to transfer, but this applies in only 4% of trusts.

Women's postnatal check

Women's physical and emotional health should be assessed prior to transfer from hospital and again at six to eight weeks after birth.¹⁸ The proportion of women who reported receiving a postnatal check-up of their own health and wellbeing at six weeks ranges from 71% to 97% with half the trusts having a rate of 89% or less. It is a concern that 11% of women may not be receiving postnatal checks so trusts, working with health visitors and local GPs, need to have effective processes in place to help ensure this check-up occurs. This is a time when new mothers can raise any issues or concerns that may be worrying them and it is also a time when postnatal depression is most likely to occur.

Figure 14: Re-admissions to hospital of mother and baby



Source: Hospital Episode Statistics, March to September, 2006

Re-admission after going home

If the baby or mother becomes sick after going home, they may need re-admission to hospital. High levels of re-admissions of either mother or babies can suggest problems with either the timing or quality of health assessments before the initial transfer or with the postnatal care once the mother is at home. Dehydration and jaundice are two common causes of re-admission of babies and are often linked to problems with feeding. Half of trusts had an admission rate of eight per 1,000 babies or greater for these conditions two or more days after birth.

Emergency re-admissions of mothers can have a number of causes. Half of trusts had a re-admission rate within two weeks of birth for mothers of 4.5 per 1,000 births or greater (see figure 14).

Feeding

The national service framework² states that there is clear evidence that breastfeeding has positive health benefits for mother and baby, both in the short and long term, and it is important for addressing national targets on infant mortality and health inequalities. NICE guidance¹⁸ states that breastfeeding support should be made available regardless of the location of care.

Rates of breastfeeding

Breastfeeding has been the subject of a public service agreement target¹⁰, which states that local rates should increase by 2% each year. This has now been revised to focus on rates at six to eight weeks but the standards have not yet been set. Trusts reported an average of 70% of mothers 'initiating breastfeeding' but this varied over a wide range between 92% and 30%.

Mothers were asked if they had ever put their baby to the breast (even if it was only once) and they reported somewhat higher rates than those reported directly by trusts, averaging 82% and varying between 97% and 42%. Despite the overall differences, there is general agreement, trust by trust, between the two sets of figures. Mothers were also asked if they had continued breastfeeding in the first few days. Almost all who had started continued with at least partial breastfeeding, median 77%, but the proportion continuing with exclusive breastfeeding dropped considerably to 55%.

White British mothers are the ethnic group that is least likely to initiate breastfeeding (median 77%). African and Asian groups are much more likely to initiate breastfeeding, median 90% or more, but the proportion continuing with exclusive breastfeeding after a few days is similar.

External groups and accreditation

There are a number of external groups such as the National Childbirth Trust or La Leche, that can provide help to women with breastfeeding. Almost all trusts (97%) reported they had literature available from breastfeeding support groups. Sixty-seven per cent of trusts reported that women had access to external breastfeeding support and 76% of trusts reported having a breastfeeding advisor on the trust staff.

The World Health Organisation and UNICEF Baby Friendly Initiative was designed to encourage implementation of the 'Ten Steps to Successful Breastfeeding'. The programme supports healthcare facilities that are seeking to implement best practice and has an assessment and accreditation process for which trusts are charged. Only 11% of units had full accreditation. These units did not show significantly higher breastfeeding rates than other units, but this may conceal improvement over past performance.

Baby Friendly encourages all staff to be trained to give consistent support and advice on breastfeeding and to ensure there are appropriate facilities in place. All but a few trusts (96%) reported that they had an agreed policy on infant feeding which all staff are encouraged to follow. Sixty-six per cent of trusts reported having a private breastfeeding area but there is no significant association between this and breastfeeding rates.

Around half of trusts (52%) reported having both doctors and midwives trained to support infant feeding and a further 46% had just midwives trained to do so. In many trusts maternity support workers were trained to provide this kind of support.

Advice and support for breastfeeding

Women should be aware of the benefits of breastfeeding and be supported in feeding their baby whatever their choice of feeding method. All women should have their midwife discuss methods of infant feeding antenatally⁴, and while this happened for 80% of women, in over half of trusts (range 50% to 95%), there is still a marked shortfall in this respect.

Women reported on the consistency of advice that they had received, and the practical help and active support and encouragement for feeding their baby, either breast or bottle. Around 40% of women responded that these were "always" good and a further 40% said that they were "generally" good. Mothers who breastfed exclusively for the first few days were more likely to say they were given consistent advice, practical help, and that they received active support and encouragement.

Early skin-to-skin contact between mother and baby can help with breastfeeding. This is not always possible for women who have a caesarean but should be possible for other women. From staff reporting how often this has occurred at the last 10 births they have attended, it is clear there is scope for more women and babies to have this experience. While three-quarters of midwives had facilitated this kind of contact with most of their recent births, only a third did so consistently.

Supporting women in breastfeeding is an important part of postnatal care and at our engagement events for this review, women generally reported good support for breastfeeding. However, some women with learning difficulties reported that they tried breastfeeding but the baby did not take to it straight away so had bottle fed, suggesting that not enough individualised care was provided to these mothers.

The maternity staff survey asked if staff agreed with the statement “sufficient postnatal help is provided to help women with infant feeding”, to which they could respond “agree”, “agree to some extent” or “disagree”. The responses indicated agreement from only 16% of midwives, suggesting that many maternity staff feel more support could be given.

Table 10: Provision of neonatal care while baby is on postnatal ward	
	Care that can be provided on postnatal wards (% units)
Intravenous antibiotics	39
Other intravenous medicines	19
Phototherapy	77
Tube feeding	44

Source: Maternity service review trust questionnaire, 2007

Neonatal care

Supporting mothers

For a minority of babies, many of them premature, some additional care will be needed that requires the transfer to a neonatal unit. There is a degree of specialism required in the provision of neonatal care both to ensure appropriate skill levels available and to be cost effective, so this may or may not be available in the same unit as the baby was delivered.

Typically 10% of mothers responding to the survey of recent mothers reported that their baby was cared for in a neonatal unit. Almost all trusts (93%) reported that they could provide parents with literature from BLISS, the premature baby charity.

Care provided on postnatal ward

Provision of some neonatal care on a postnatal ward can help keep mothers and babies together. For the four care types considered in this review (see table 10), phototherapy (where a baby is placed under ultraviolet light to prevent or treat jaundice) was the aspect of care most likely to be provided on a postnatal ward.

In some cases care can be provided by a baby ‘visiting’ a neonatal unit without a transfer; for example, in three-quarters of trusts, intravenous antibiotics can be provided in this way. There appears to be scope for more units to consider developing provision of some neonatal care on a postnatal ward.

Section 3: Resources and management

Configuration of maternity units

The way maternity care is designed and organised is a critical factor in the way women experience maternity services and the outcomes for them and their babies.

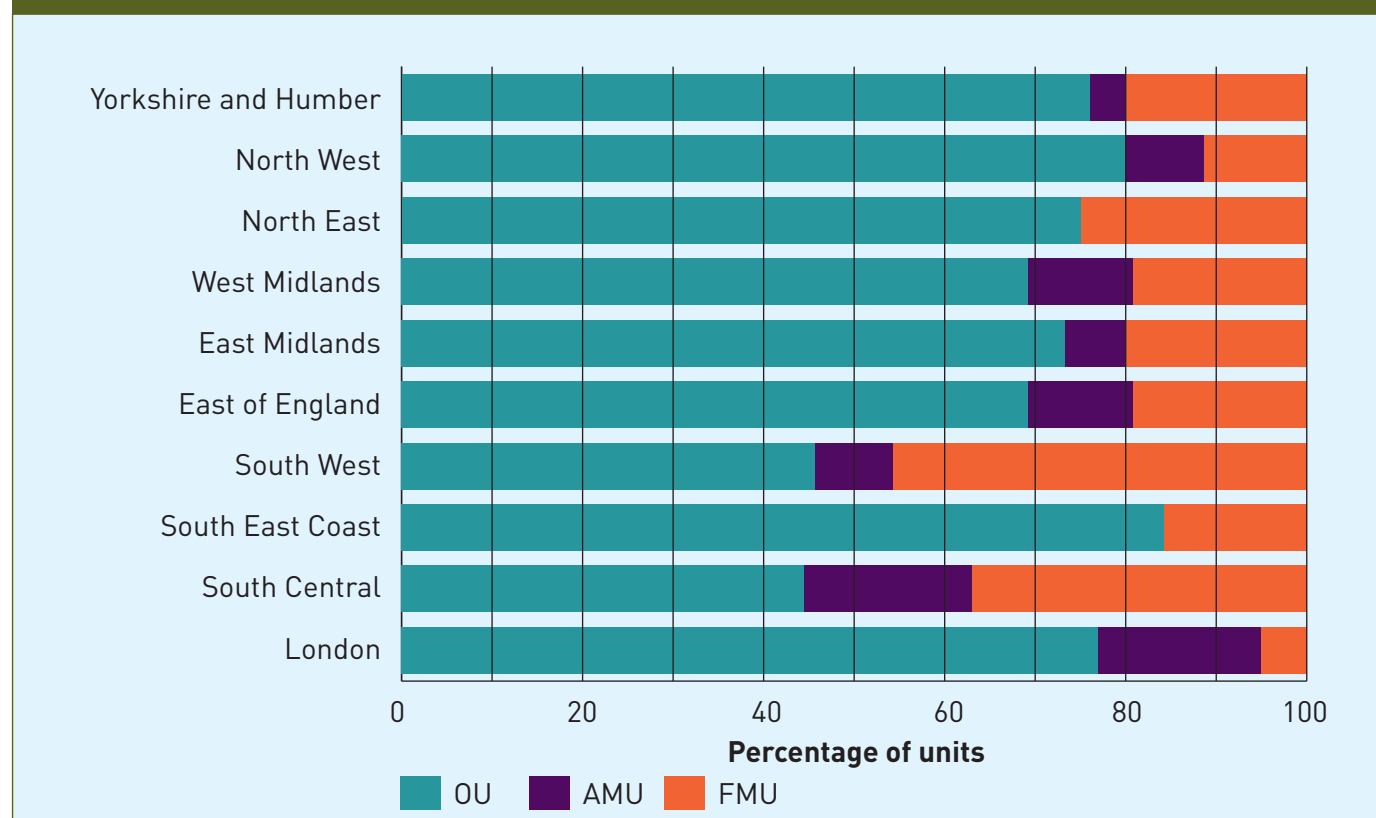
Availability of midwifery units

The types of unit used for maternity care within trusts varies, but there is fairly limited choice, with care mainly based in obstetric units (OU) (see table 7). The extent to which midwifery units, both alongside (AMU) and freestanding (FMU), are a feature of maternity provision, varies across strategic health authority regions (see figure 15).

Opening and closing units

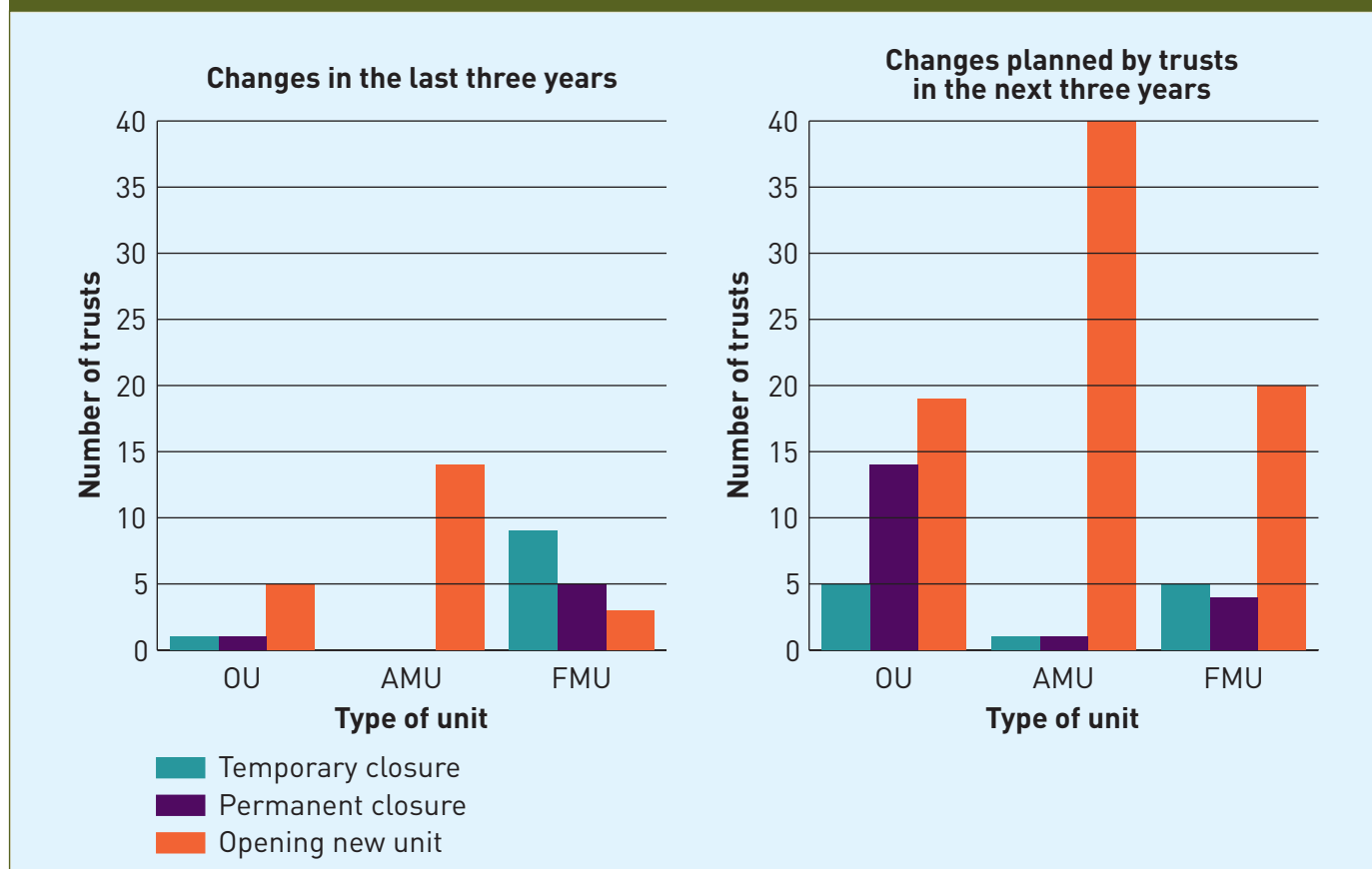
In recent years changes have taken place in the types of unit used for maternity care and trusts are planning more developments (see figure 16) for the previous and next three years. Nearly one in 10 trusts has opened an AMU in the last three years, and more AMUs are planned. Though some FMUs have closed on a temporary or permanent basis, some new FMUs are planned too. Overall, numbers of delivery units reported by trusts have increased (9% of trusts reported an increase in the last three years), while 17% plan an increase in the next three years (see figure 16).

Figure 15: Current provision of maternity care by type of units and strategic health authority (SHA)



Source: Maternity service review trust questionnaire, 2007

Figure 16: Recent and planned changes in maternity care



Source: Maternity service review trust questionnaire, 2007

A small proportion of trusts (4%) reported mergers of maternity units during the last three years and more trusts (14%) plan mergers of these during the next three years. A small number of units were reported as having changed status in the last three years and some (10%) plan such changes during the next three years, usually involving an OU becoming a midwifery-led unit.

These changes may affect women's options for care and access to more specialist services. Other changes in maternity care organisation and neonatal care have begun to take place, particularly those associated with the centralisation of specialist neonatal services. In a small number of trusts, neonatal units have merged in the last three years (3%), more trusts are planning mergers (15%) and some (9%) plan unit closures in the next three years.

Staffing and mix of skills in maternity care

Staffing and mix of skills in maternity care have been a continuing concern for the professional organisations whose members provide maternity care.⁷ The Royal College of Midwives in particular, and other bodies such as the National Childbirth Trust, have expressed concern with levels of staffing by midwives and the impact of a rising birth rate on the provision of maternity services.

There are two main staff groups providing maternity care: midwifery staff and doctors. Midwifery staff are mainly midwives, but also some maternity support workers. The main medical specialty is obstetrics, but input is needed at certain times from anaesthetists and paediatricians.

Staffing numbers clearly vary by size of unit, but even when standardised against the number of births in a trust or unit, the variation is still a cause for concern in all staff groups.

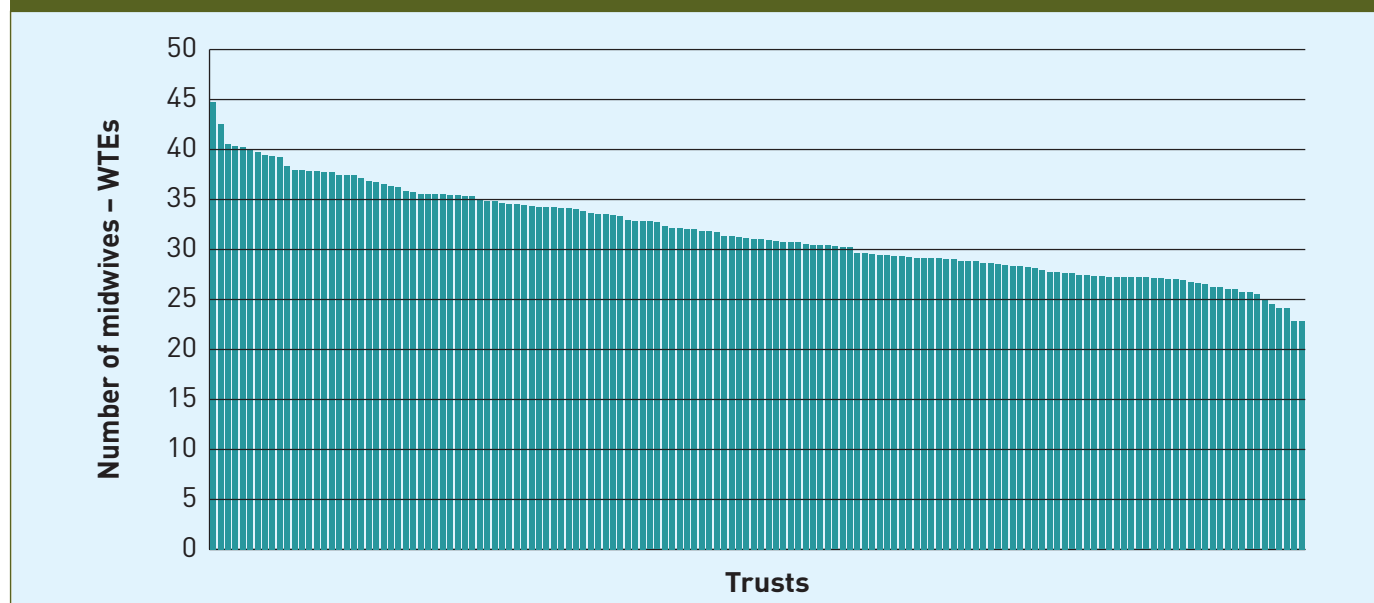
Midwives

Levels of staffing

A medium sized trust will employ more than 100 midwives. They are responsible for all aspects of care that do not require medical input, from antenatal, through labour and birth to postnatal care and hand over to the health visitor.

There are three broad categories of care provided by midwives, each accounting for about a third of the workforce. These are community midwives who provide antenatal and postnatal care – usually outside the hospital; hospital midwives who provide care on antenatal and postnatal wards; and midwives who provide care during labour and birth. However in many trusts these distinctions are blurred. For example midwives on the wards are frequently rotated with midwives working in the labour rooms according to demand, and some community midwives come into hospital to carry out births themselves.

Figure 17: Midwives (whole time equivalents – WTEs) per 1,000 births per annum by trust



Source: Maternity service review trust questionnaire, 2007

There may be a tendency for trusts that are short of midwives overall, to economise on community midwives to preserve the number of hospital midwives.

Overall, the ratio of midwives to births varies very significantly from more than 40 midwives per 1,000 births in the most generously staffed trusts to fewer than 25 in the most tightly staffed, with a median of 31 (see figure 17). Clearly there is a need for all those trusts below the median to examine the midwife staffing levels urgently, and to increase them if necessary.

Birthrate Plus

The numbers quoted so far are simple numbers of midwives per 1,000 births and take no account of the proportion of mothers needing extra care. Maternity units that care for a higher proportion of high risk pregnancies will probably need more staff. A method for calculating the numbers of midwives needed is provided by Birthrate Plus¹⁹, which is described in more detail in appendix B.

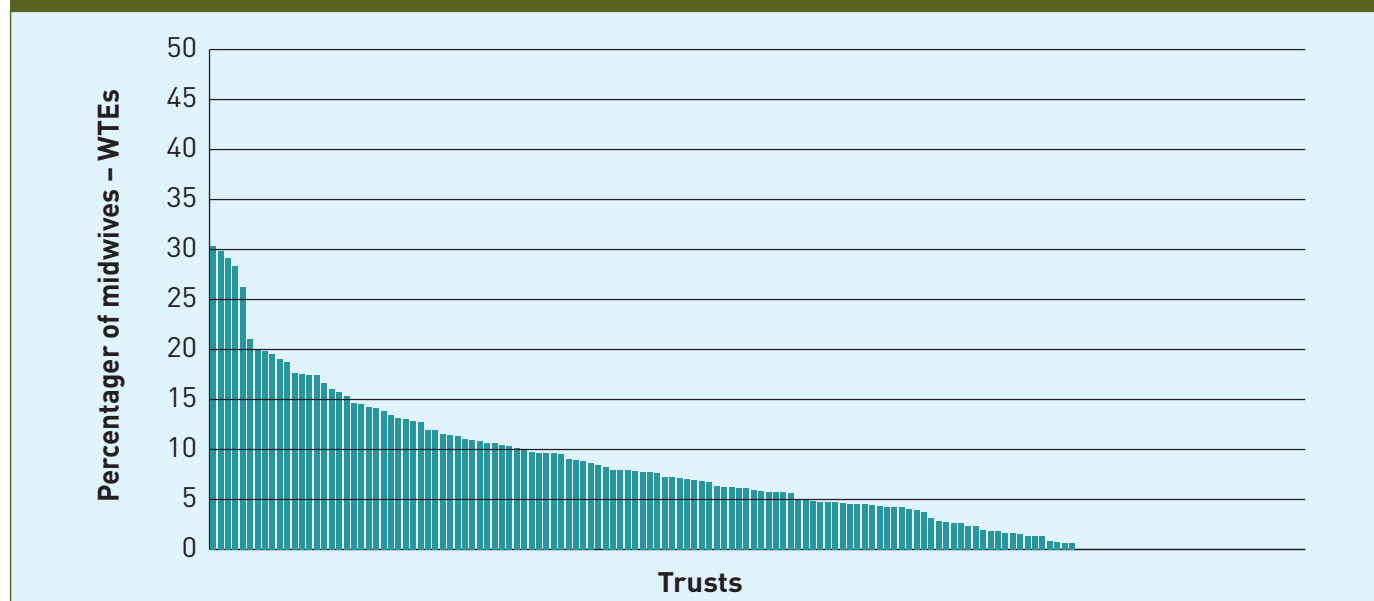
A number of units have applied this to their staffing needs and nearly always the numbers calculated are greater than their actual numbers. The units that show the greatest shortfalls tend to be those where the simple ratio of midwives per 1,000 births per year is also well below average.

Range of grades for midwives

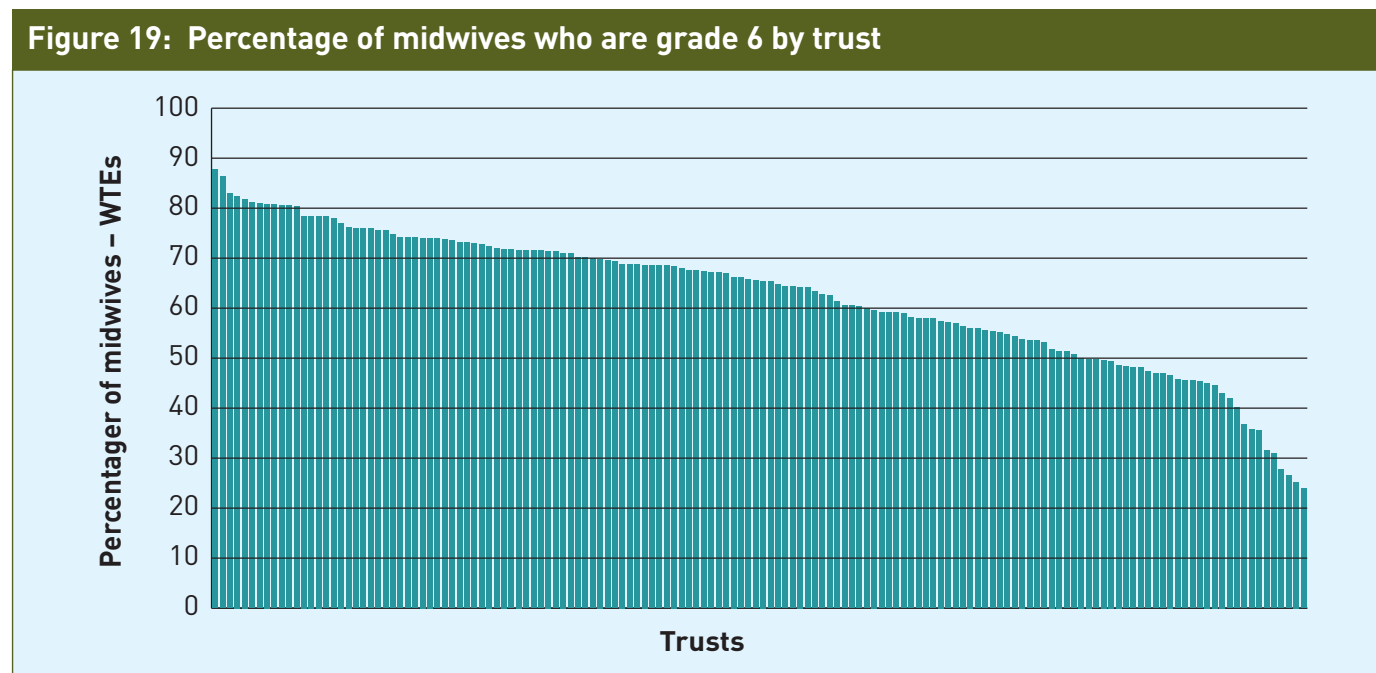
Midwives are employed on a range of grades; from band 5 for newly qualified midwives to band 9 which is only used, and then only rarely, for heads of midwifery or consultant midwives. The grade mix between trusts varies widely, indicating that they have significantly different levels of skills and experience and employment costs.

Newly qualified midwives on band 5 should progress relatively quickly to band 6 and therefore the median proportion of 6% is reasonable. But at one extreme they form 30% of the midwifery workforce, and at the other extreme, 31 trusts report no band 5 midwives at all (see figure 18).

Figure 18: Percentage of midwives who are grade 5 by trust



Source: Maternity service review trust questionnaire, 2007



Source: Maternity service review trust questionnaire, 2007

The most numerous group is band 6 with a median percentage of 65%, ranging from 88% down to only 24% (see figure 19). Band 7 which is for senior and experienced midwives, probably in a management role, has a median of 26%, but ranging even more widely from 72% to 5%. There is no tendency for teaching or specialist trusts to employ more higher-band midwives.

The head of midwifery is most usually band 8c (46%) or band 8b (36%). Just a few (14%) are at the higher bands of 8d or 9. Consultant midwives have been introduced to provide clinical leadership for midwives. A total of 40 trusts reported having consultant midwives and the majority of these were graded as band 8b (68%) or band 8c (28%).

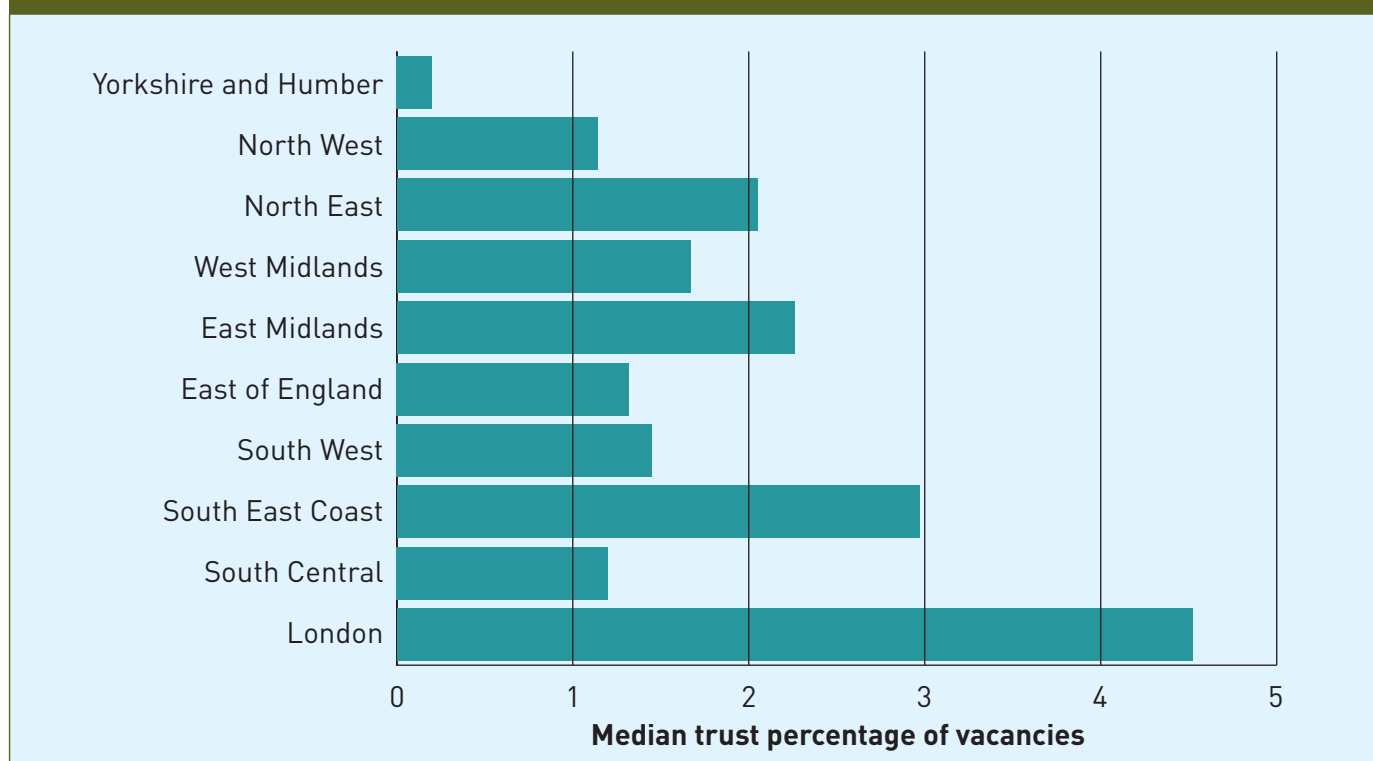
Trusts with their grade mix diverging substantially from the norm should review their staffing structure.

Statutory supervision of midwives

The purpose of supervision of midwives is to protect the public by actively promoting safe standards of care. Each strategic health authority (SHA) has a responsibility as a local supervising authority (LSA) and appoints a local supervising authority midwifery officer to carry out the LSA function.

Each practising midwife has a named supervisor covering her main area of practice who is there to provide professional advice, guidance and support. This represents self regulation of the profession and is embodied in statute to ensure public protection. Supervisors of midwives have received additional training for their role and are appointed by the LSA. Supervisors should not have to supervise too many midwives (referred to as their 'caseload'). But we found this ratio ranging between seven and 28. The ratio recommended by the Nursing and Midwifery Council is usually no more than 15:1, depending on the circumstances.

Figure 20: Midwife vacancies by strategic health authority



Source: Maternity service review trust questionnaire, 2007

It seems there is a problem in recruiting and retaining supervisors in some trusts, which should be explored further. Forty-six per cent of trusts paid supervisors no extra salary and others paid from £500 to £2,000, yet there was no relationship between pay and having sufficient numbers of supervisors. Also, protected time to undertake the role was one or two days a week in three-quarters of trusts, but in 14% of trusts, supervisors were reported as having no protected time.

Vacancies and use of staff from bank and agencies

High vacancies and high rates of staff from bank and agencies (temporary staff) working are related and can both be symptoms of difficulties in recruitment or inadequate budget provision. This can result in a lack of continuity

and communication in the workforce and make a maternity unit more difficult to manage, resulting in adverse effects on the care of patients. The median vacancy rate, calculated from the number of staff in post against the budgeted number (establishment) is 3.7% but can be up to 16%. (Some trusts report negative rates indicating that they have more staff in post than their establishment and these have been disregarded in the median). There is a marked variation between SHA areas, with London trusts experiencing the highest levels of vacancies (see figure 20).

Notably, not all London trusts report high vacancy rates showing that it is possible to overcome difficulties in this area. Trusts that are different from the median need to examine their budgets and recruitment policies.

Turnover and age structure

A stable workforce is a benefit in that it should improve continuity. For most trusts this was the case. The annual turnover rate, including resignations and retirements, was 6.4%, that is the average member of staff stays for 15 years. But for some trusts the annual turnover rate was much higher, up to 29%, which is probably too high. Looking at midwifery units separately, the median turnover rates are lower, with 1.4% for AMUs and 2.7% for FMUs.

There has also been concern expressed about the changing age structure of midwives and with it, the body of experience built up over time. The median proportion of staff aged 50 years across trusts was 28% ranging from zero to 94%. This variation is so great that it might indicate that some trusts are not fully aware of their age profile. Bearing in mind that midwives can retire at 55, trusts should review the reliability of their data and any with high proportions of midwives over 50 should be doing some active workforce planning to avoid shortages in the near future.

Midwifery units

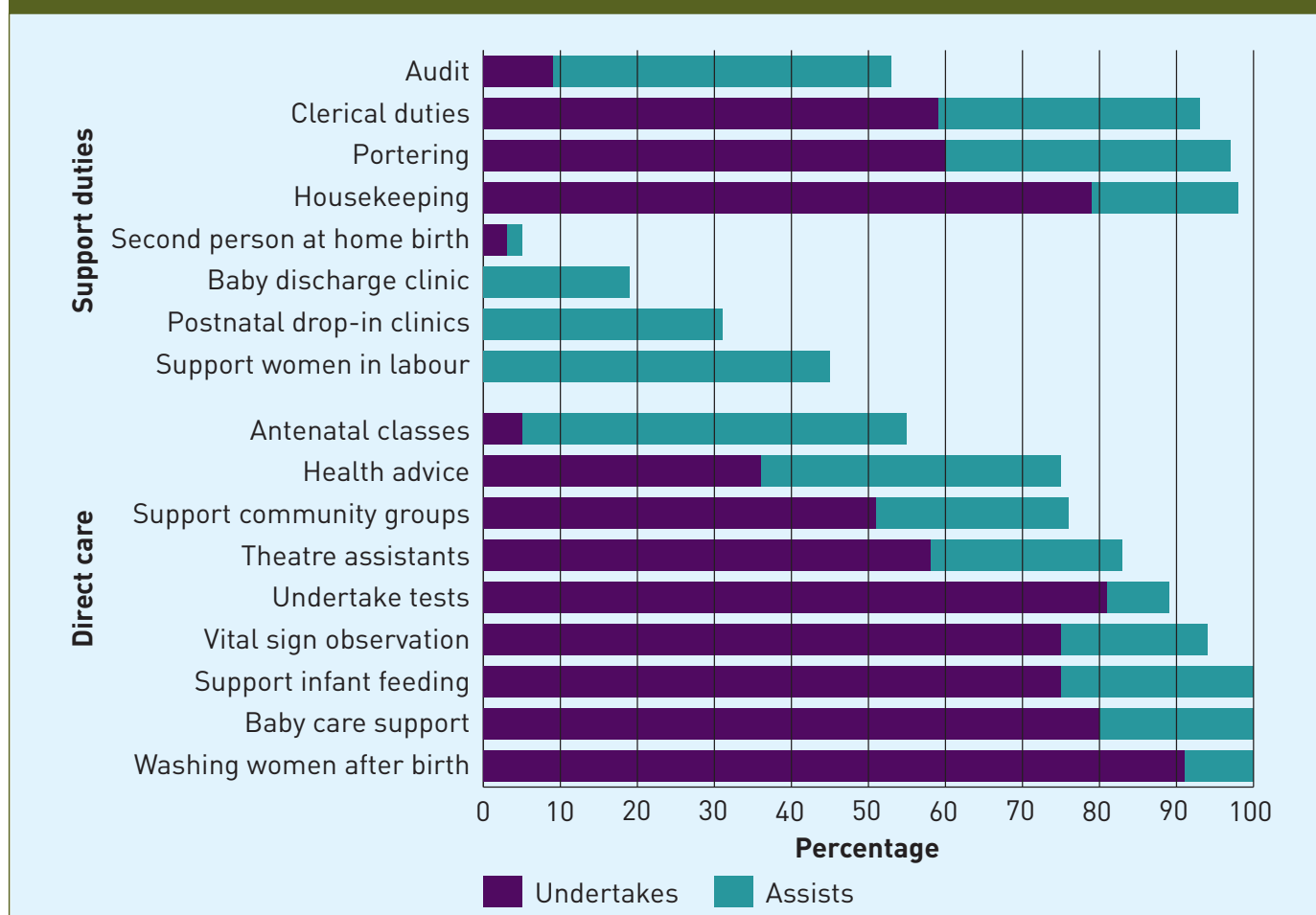
Midwifery units (either AMUs or FMUs), which are staffed just by midwives with no doctors present, are advocated as a means of providing a choice of birth setting for women with a low risk pregnancy. FMUs can also provide a much needed local facility in rural areas where the main hospital is inconveniently far away.

Midwifery units are much smaller than OUs. The median for AMUs is 570 births per year and for FMUs is only 190 births per year, compared with 3,100 for the median obstetric unit. As there are also fewer midwifery units than there are obstetric units, it follows that only a small minority (5%) of births take place in midwifery units.

Establishing the staffing required in midwifery units in order to make comparisons is difficult because in AMUs the staff often move freely between it and the obstetric unit. In FMUs most of the staff are community midwives providing antenatal and postnatal care as well as care in labour and birth, so a simple ratio of staff per 1,000 births per annum would be very misleading. Looking at just hospital midwives should exclude those midwives providing community care.

In the case of OUs the figure is 20 midwives per 1,000 births with a similar, albeit, slightly lower figure for AMUs at 18 midwives per 1,000 births. For FMUs the median figure is much higher at 35 midwives per 1,000 births per annum, but the ratio varies very sharply and the highest values are for very small units with fewer than 150 births per annum, probably because a certain minimum number is needed to keep them open. A quarter of FMUs report a figure of 20 hospital midwives per 1,000 births per annum or fewer, perhaps showing that there is no inherent reason why FMUs should need very high staffing levels.

Figure 21: Activities undertaken by support workers



Source: Maternity service review trust questionnaire, 2007

Maternity support workers

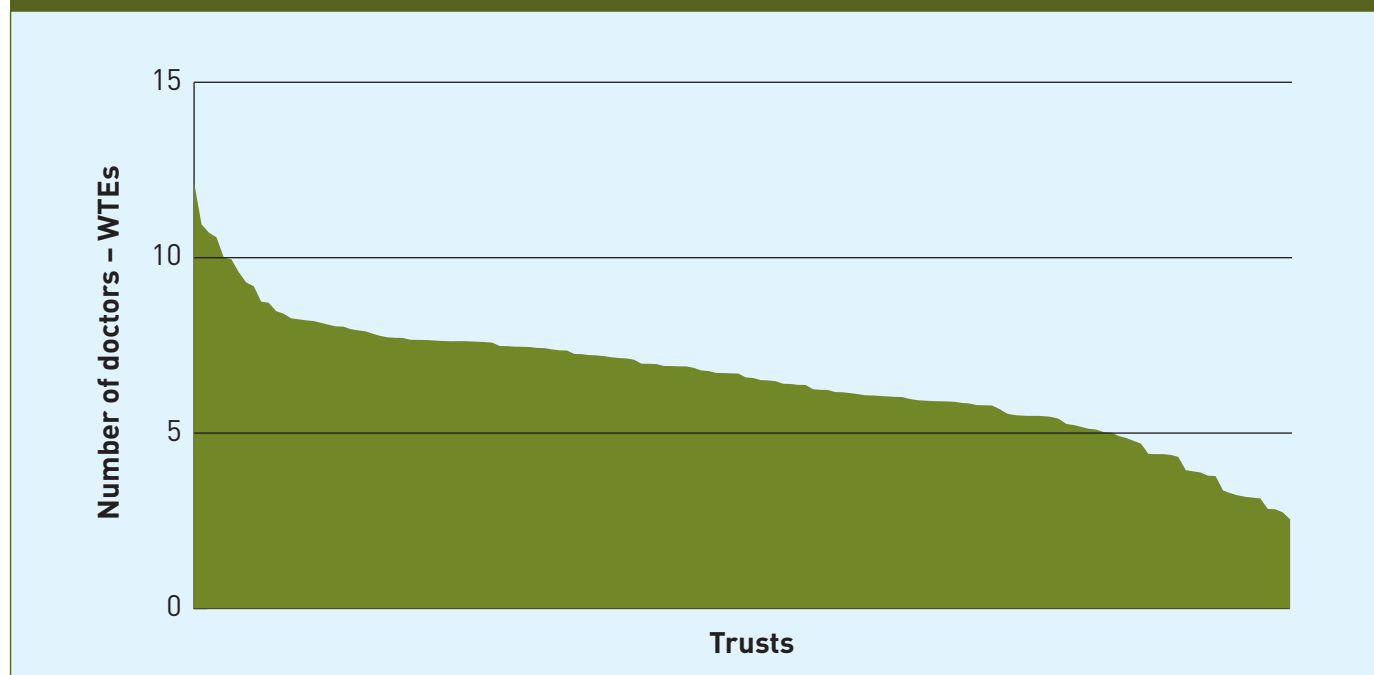
Levels of staffing

Maternity support workers (MSWs) have been introduced to undertake or assist in tasks that would otherwise have to be done by a more highly trained midwife, thus allowing them to concentrate on tasks that require their professional training and experience. Typically there are 7.7 MSWs per 1,000 births, which equates to approximately one for every four midwives, but their numbers range from one to 18 MSWs per 1,000 births. All trusts employ at least some maternity support workers.

Tasks carried out by maternity support workers

Optimum deployment involves using MSWs to carry out as many tasks as possible, but remaining within their skills, experience and training. In more than three-quarters of trusts support workers were engaged in direct care of women and babies in a range of situations during antenatal care, labour and birth and in postnatal care. They also carried out administrative and other support duties of the kind sometimes undertaken by ward clerks, housekeeping staff and porters (see figure 21).

Figure 22: Obstetric doctors per 1,000 births



Source: Maternity service review trust questionnaire, 2007

Levels of competence

MSWs can be trained to different levels of competence. Those at band 3 and 4 should be capable of providing support on more tasks than those at bands 1 and 2, but most are in the lower bands.

Many trusts are not making as much use of MSWs as they could. Greater use of them, if appropriately trained and supervised, has the potential to relieve some of the midwifery staffing problems, especially in the area of postnatal care.

Obstetricians

The medical specialty that provides acute maternity care is obstetrics, but nearly all the doctors combine this with gynaecology. This makes it difficult to identify the level of medical commitment to obstetrics. This is important because one of the key findings from our investigation at Northwick Park hospital was that the consultants, who split their time between obstetrics and gynaecology, were spending insufficient time in obstetrics.

The median number of doctors (all grades from senior house officers to consultants) is 6.6 per 1,000 births, ranging from 12 to 2.5 (see figure 22). Consultants are about a quarter of this with a median of 1.9 and ranging from 3.3 to 0.6 per 1,000 births per annum.

Presence on labour ward

One measure that does identify commitment to obstetrics, improve care and may also reduce caesarean sections is the consultant's presence on the labour ward. *Safer Childbirth*⁷ recommends that this should be 40 hours per week unless the unit has over 5,000 births per annum, in which case it should be 60 hours per week. Sixty-eight per cent of trusts reported meeting this standard. Some reported a very minimal presence, as low as 10 hours per week, that needs to be addressed.

Programmed activities

Presence on the labour ward is only one aspect of the care provided by obstetric consultants. Others include presence on antenatal and postnatal wards and antenatal clinics, theatre activity, audit and supervising more junior doctors. All consultants have job plans that set out their weekly activities by half day session, termed 'programmed activities' (PAs). If properly managed these could clearly set out the total commitment to obstetrics from all the consultants.

However, no information was given on PAs in 13% of obstetric units and the remainder varied between 30 PAs per week and none for every 1,000 births per annum. The extent of the variation in this data is unrealistic and did not provide us with confidence that trusts were clear about how much time their consultants spent on obstetrics. Bearing in mind the importance of obstetric commitment identified above, trusts need to address this with some urgency.

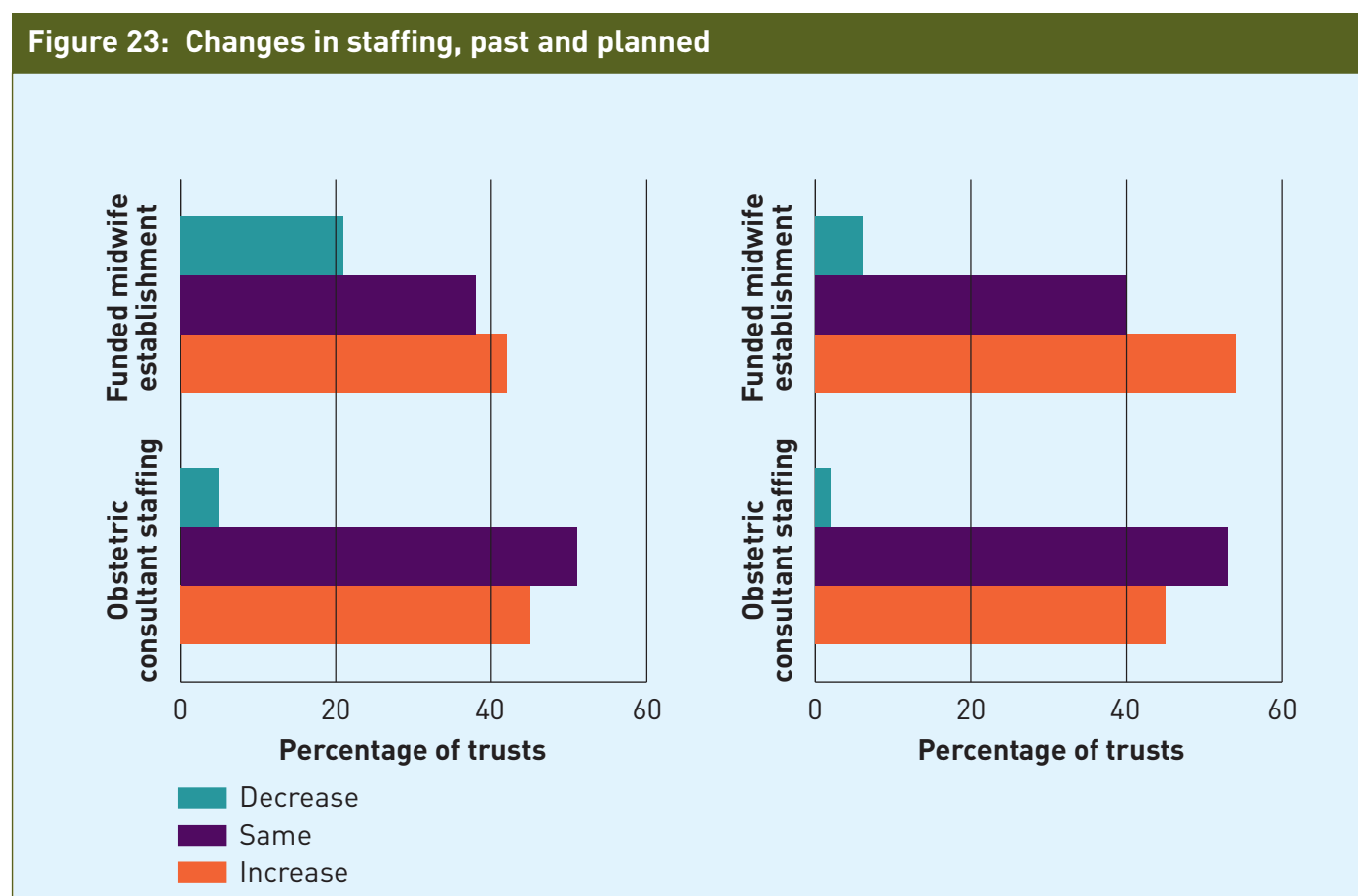
Anaesthetists

Anaesthetists are needed in obstetric units to provide epidural anaesthetics for caesarean sections and for pain relief in labour. Sometimes they will have to administer general anaesthetics for more specific conditions. *Safer Childbirth*⁷, identified that there should be 10 programmed activities for consultant anaesthetists on obstetric units. Just 53% of trusts have reported that they comply with this standard, so the remainder clearly need to consider their compliance with the recommendations of *Safer Childbirth*.

Paediatricians and neonatal nurse practitioners

Paediatricians are needed to check on the newborn, assist with resuscitation and support an infant who requires specialist neonatal care and should be on-call to the delivery suite and to the postnatal ward. Many of the tasks traditionally carried out by paediatricians are now carried out by neonatal nurse practitioners and midwives.

A median of six consultant paediatricians and a median of a further 14 paediatric staff contribute to the on-call rota. Variable use is being made of advanced neonatal nurse practitioners, for example they attend delivery suites in 42% of obstetric units and the postnatal wards in 40% of units. This is important because a substantial proportion of their work is checking the newborn, thus allowing paediatricians to carry out more demanding tasks and preventing unnecessary delays to transfer.



Source: Maternity service review trust questionnaire, 2007

Changes in staffing numbers

Significant changes to clinical staffing have taken place recently and will continue (see figure 23). Consultant obstetric staffing was reported to have increased in 46% of trusts in the last three years and this pattern will continue for the next three years. Midwife staffing increased in 41% of trusts but it also decreased in 21% of trusts in the last three years. However this pattern should change in the coming three years with 53% of trusts planning an increase and hardly any (3%) planning a decrease.

Differences in outlook between professional groups

Trusts need to consider the culture within their maternity services among the professional groups involved. Poor morale and ineffective or authoritarian leadership are commonly linked and are likely to contribute to a less effective service. The voluntary maternity staff survey, in which 86 of the 150 trusts took part and achieved at least 25 respondents each, was included as part of this review to provide trusts with comparative information on a number of aspects of the delivery of a maternity service, some of which reflect on culture.

Leadership

Responsibility for leadership in maternity care is perceived differently, with midwives and medical staff each seeing their own professional group as leading in the management of maternity care (see figure 24). Effective inter-professional working is difficult when the staff do not feel obstetricians and midwives have shared goals (28% of doctors

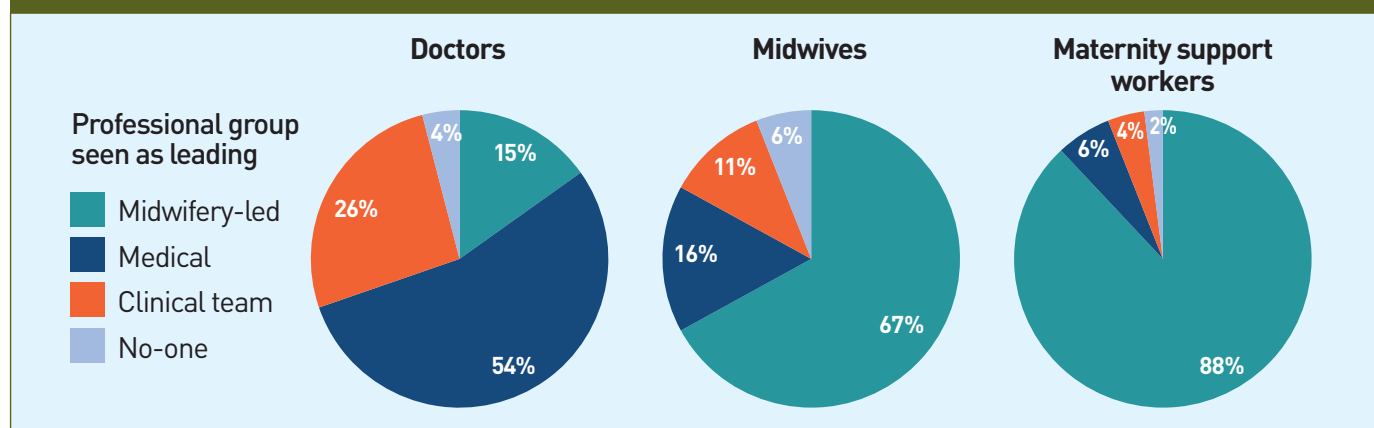
and 58% of midwives surveyed), are not clear about their role within the organisation (12% of doctors and 18% of midwives), or do not feel valued as a member of the multidisciplinary team (9% of doctors and 22% of midwives).

Communication between staff

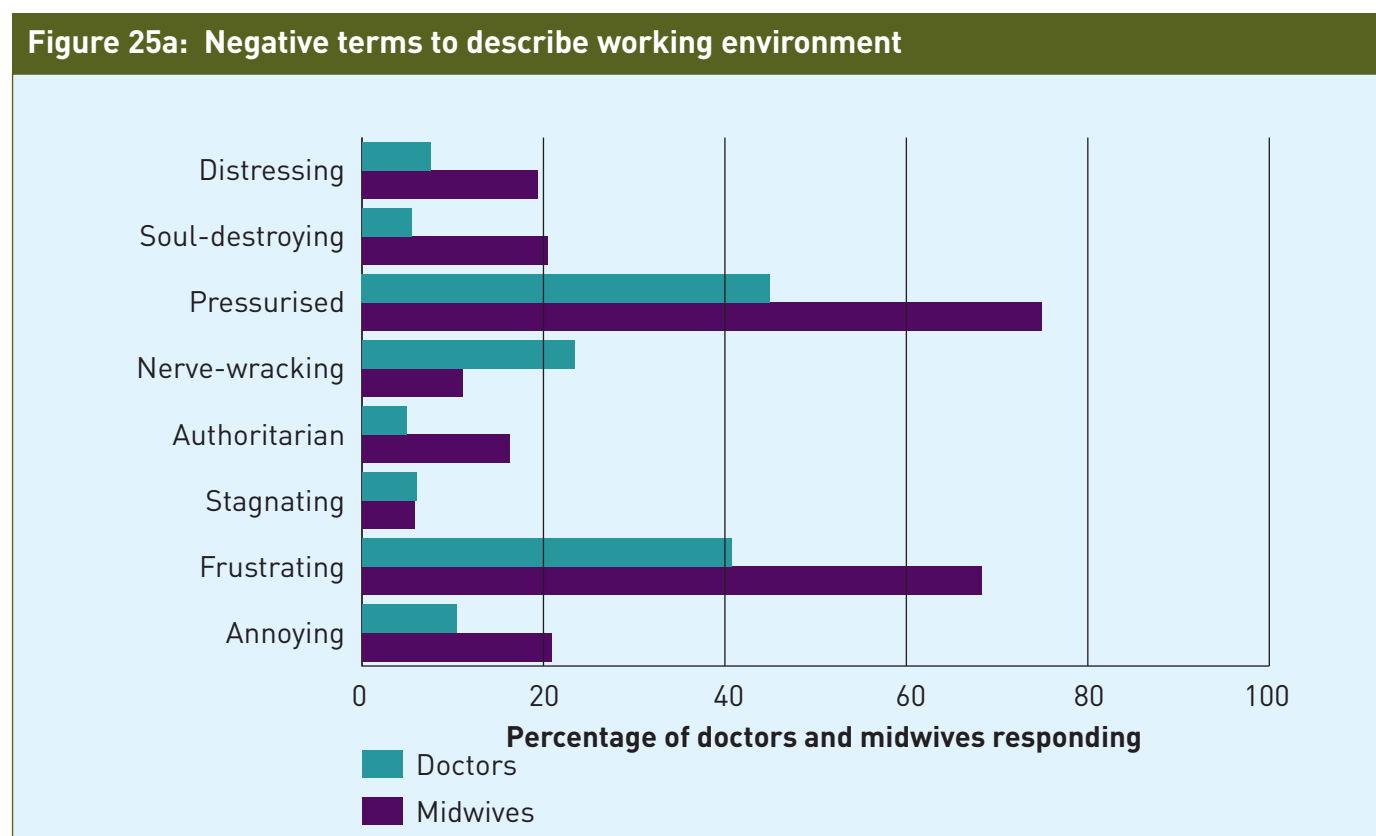
Communication at both meetings and handover times is critical. While very few midwives or doctors thought that insufficient information was communicated at handover (less than 3%), only around a third (31% of doctors and 37% of midwives) thought that a comprehensive set of information was routinely passed on.

When seeking advice from obstetric staff, 83% of midwives reported that it was generally appropriate, though fewer doctors (74%) reported that advice from midwives was appropriate. Similar proportions of midwives and doctors feel that more consultant obstetrician presence is needed in the delivery suite (21% and 24% of those surveyed) and that more senior midwife presence is also needed there (27% and 26%).

Figure 24: Perceptions of sources of leadership in the maternity unit by professional group



Source: Survey of maternity staff, 2007



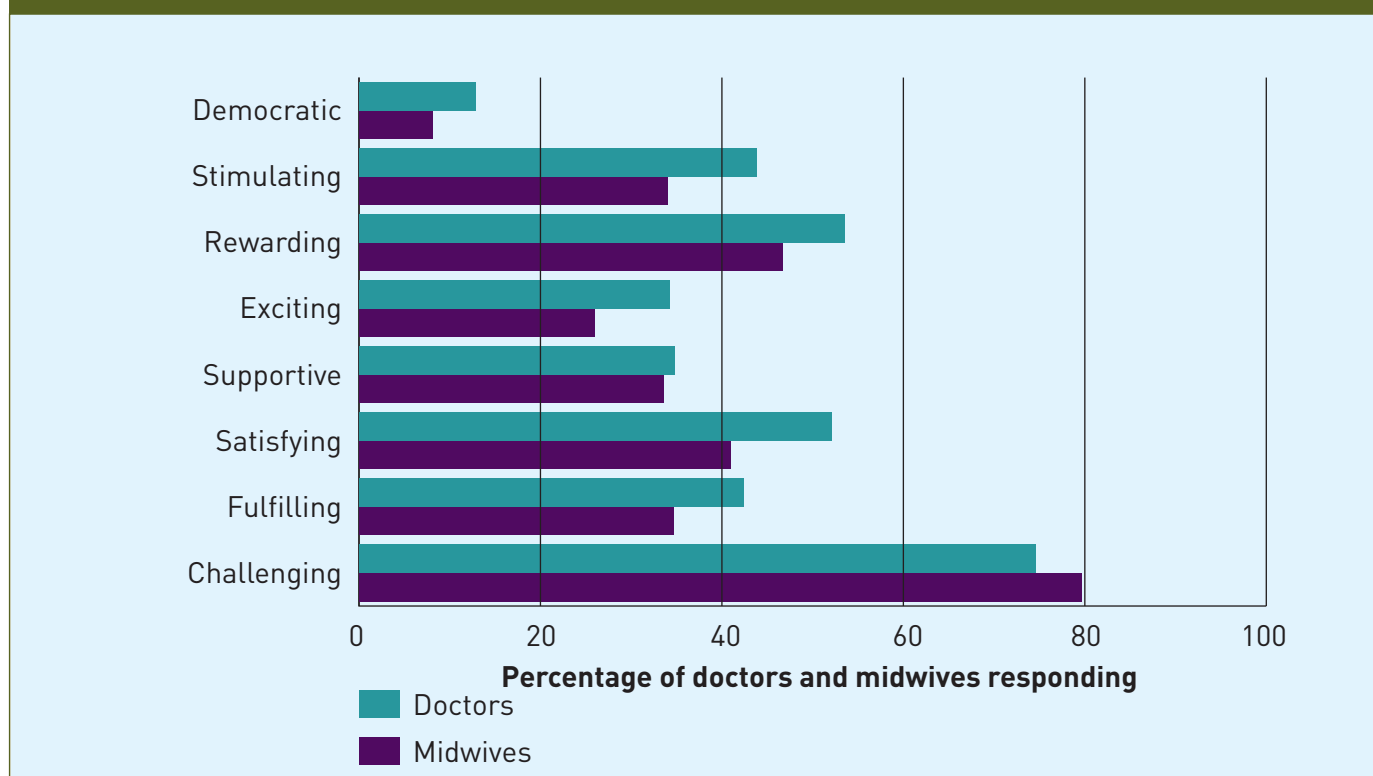
Source: Survey of maternity staff, 2007

Some of the staff surveyed felt that important lessons are not being passed on to them: 19% of doctors and 24% of midwives felt that feedback from incident reporting in trusts was not timely and comprehensive and a further third (34% and 35%) that this was only occurring to some extent. Substantial proportions of doctors and midwives (53% and 44%) are also aware of the gap between discussing recent cases at multidisciplinary meetings and the need to put improvements and learning in practice.

Perceptions of staff and morale

Understanding the attitudes of the professional groups working in maternity care is integral to workforce planning and to providing high quality maternity care. The two key professional groups employed in maternity services see their working environment differently (see figures 25a and 25b). Midwives particularly feel more pressurised and frustrated than medical staff, and there is also greater distress and unhappiness expressed among a greater proportion of midwives than medical staff.

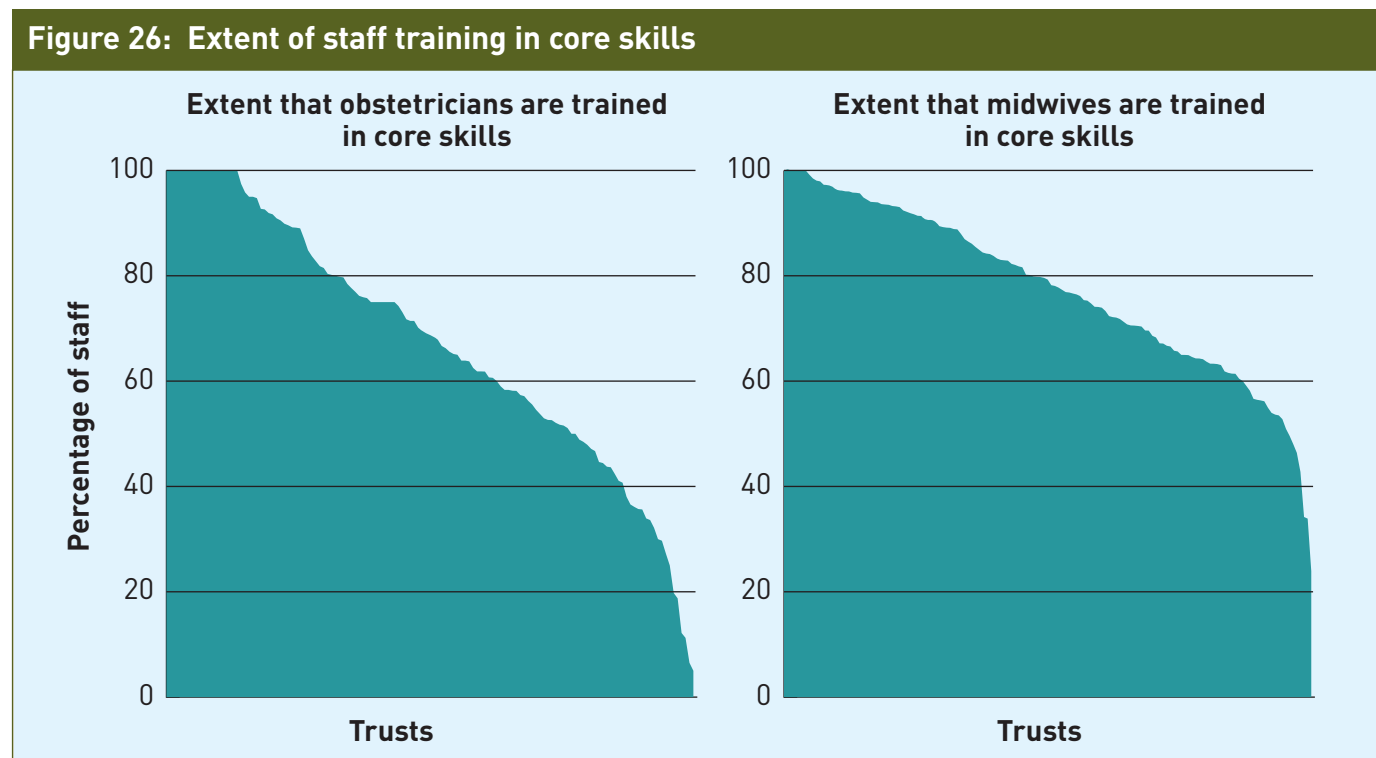
Figure 25b: Positive terms to describe working environment



Source: Survey of maternity staff, 2007

At the same time, significant proportions of both groups value the challenging and rewarding nature of their work, though on average, medical staff were more positive than midwifery staff.

The health and wellbeing of staff is an important issue for trusts that has an impact on the maternity service directly and indirectly. Over 90% of staff surveyed in all the different groups described themselves as well or mostly well. However, it is possible that those off sick at the time of the survey did not participate.



Source: Maternity service review trust questionnaire, 2007

Training and supervision

Levels of attendance at training courses

Training courses for staff in the core skills to handle emergency situations make an important contribution to safety. Specifically these are: cardiotocograph (CTG) training, adult resuscitation training, neonatal resuscitation training (standard or advanced) and obstetric skills and drills training. There was wide variation in trusts' performance (see figure 26), with some trusts reporting virtually universal attendance at courses and others where it was very thin. There was little difference overall in the attendance rates between midwives and doctors and between the different components of the core skills.

Joint training may be one way to encourage better teamworking between professional groups. Levels were reasonable but might be improved. The highest rates were for CTG training, where 95% of trusts reported that courses were run jointly for all professions, and lowest for neonatal resuscitation where only 83% did.

Safety

Multidisciplinary meetings on incidents

Learning from incidents is important if trusts are to reduce maternal and neonatal morbidity and mortality. Regular multidisciplinary meetings to discuss recent incidents should help ensure that learning is shared across a trust and is not just learnt by those present at the incidents. Eighty-five per cent of trusts had

multidisciplinary groups that met at least once a month. Debriefs following significant incidents are one way to ensure that learning is shared as quickly as possible and can also support staff who have been involved. Debriefs take place after all serious incidents in 73% of trusts, however 5% of trusts reported that this occurred for a minority of events. This supports the findings discussed above from the staff survey.

Incidents

The median trust level of reporting was 144 incidents per 1,000 births in 2006/07; 68% of trusts reported an increase in incidents in 2006/07 compared to 2005/06. However, there are differences in thresholds used within trusts for reporting incidents, which make it difficult to compare performance.

The median number of formal complaints was 5.3 per 1,000 births; 56% of trusts reported an increase in complaints in 2006/07 compared to 2005/06. These trends in incidents and complaints are a concern, unless trusts have widened their criteria for reporting them.

Child safeguarding and domestic abuse

Following a number of high profile events, new processes have been introduced to try to improve the quality of safeguarding, or protection, provided to 'at risk' children. There can be significant additional work for midwives who are involved in child protection cases and 131 of the 150 trusts have reported such involvement. The median number of cases reported by trusts for which midwives had to attend at least one case conference in a year is 38.

Criminal Records Bureau checks

As staff working in maternity are likely to come into contact with children and vulnerable adults, they all require appropriate Criminal Records Bureau (CRB) checks. Staff employed prior to the introduction of CRB checks may have had police checks, but trusts should be ensuring that CRB checks are made on all staff. Only 79% of trusts were able to provide data for their key maternity staff groups on their CRB status. The average number of obstetric doctors checked was 79%, midwives 62%, support workers 68% and paediatricians 82%. It is good practice to refresh CRB checks every three years; for the median trust only 40% of staff have CRB checks that have taken place in the last three years.

Domestic abuse

Domestic abuse is a problem that can start or intensify during pregnancy and is linked to child protection. All maternity staff who come into contact with women should be trained to identify signs of domestic abuse and should know the appropriate action to take²⁰. The proportion of staff from our survey that reported they had at least adequate training to support women experiencing domestic abuse ranged from 40% to 100% across trusts and was over 77% in at least half of trusts. Typically 24% of staff reported inadequate training, of which 42% considered this would stop them broaching the issue with women.

Facilities and equipment

A wide range of equipment and facilities is needed to care for women during straightforward pregnancies and births, but more so for those requiring more specialist services. The aspects covered in the review include bed numbers, delivery rooms, technical equipment, bathroom facilities, theatre availability, anaesthetic service, equipment required for home birth, ultrasound and the availability and location of adult and neonatal intensive care.

Antenatal facilities

Early pregnancy unit

Women with problems in early pregnancy, typically defined as up to 20 weeks, are normally cared for in the gynaecology department. Such problems can be very distressing and an early pregnancy unit can provide tailored and sensitive support and treatment. Almost all obstetric units (97%) have them, and so do a few freestanding midwifery units (14%).

Antenatal day assessment units

Pregnancy day assessment units allow women with possible problems to be monitored during the day without being admitted to hospital. Midwives provide care and assessment, but doctors are available if needed. Women attending or planning to give birth in OUs or in AMUs will have easy access to a pregnancy day assessment unit, as these are available on the same site as 95% of OUs. A smaller proportion of FMUs (28%) have day assessment units on the same site.

Fetal medicine units involve more specialised medical care and are only present on the same site as 50% of OUs.

Beds

Delivery beds and utilisation

For the median trust there are 3.6 delivery beds per 1,000 births per year, which means that each bed is used for 0.7 births per day. However, some trusts have as few as two beds per 1,000 births per year, which means that each bed is used for 1.4 births per day. This seems excessive and there is clearly a need to increase the capacity of delivery beds in these units.

Obstetric units have the highest bed use, with the median unit reporting three delivery beds per 1,000 births. Midwifery-led units have much lower use at 6.3 beds per 1,000 births per year for AMUs and 10.2 for FMUs. This is linked to the very much lower levels of activity in midwifery-led units. For AMUs the typical level is 570 births per year and for FMUs it is only 190 births per year. Trusts need to encourage greater use of their midwifery units.

The National Childbirth Trust has promoted more home-like birthing rooms as a way to encourage 'normal birth'. From a survey of women²¹ it found that the features that would make a room feel more homely were: an en-suite toilet, an en-suite bath or shower, space for women to walk around, ability to hide clinical equipment, a comfortable chair, space for and provision of a birthing mat and ropes or bars.

Most trusts only meet these standards in part. They have reported that 55% of delivery rooms have full en-suite facilities, clinical equipment can be hidden in 55% of delivery rooms, 95% of delivery rooms have a comfortable chair, 90% have space for a birthing mat and 17% have bars or ropes. The way in which care is provided in midwifery-led unit rooms means that these are more likely to have, en-suite

facilities as the rooms are more likely to be used throughout labour. Trusts need to upgrade their delivery rooms, particularly by incorporating en-suite facilities.

Very little change has taken place to the capacity of delivery beds in the last three years; 7% of trusts reported an increase and 8% a decrease. But 30% of trusts plan an increase in the next three years, while only 8% plan a decrease.

Beds on maternity wards

Beds are needed both for antenatal admissions for women who have problems during pregnancy, and postnatally to recover from the birth. Most stays are short, often only a day and usually no more than three or four days, but some women with more serious problems can be admitted for much longer. The median trust has 11.4 beds per 1,000 births per annum, or about four days per woman, which seems reasonable, but this varies markedly between 20 and five beds per 1,000 births per year. Trusts at the lower end of the scale need to assess whether they have sufficient beds to allow women to recover properly.

Only 60% of trusts can distinguish between antenatal and postnatal beds, the rest allocate them according to immediate needs. This policy may improve bed use, but means it is possible that antenatal and postnatal women may be on the same ward.

Bathrooms

Labour and delivery rooms

The need for sufficient numbers of bathrooms on the delivery suite was highlighted more than 10 years ago in *First Class Delivery*¹. Water may contribute to pain relief during labour and women may also wish to have a bath or shower after giving birth.

Relatively few units (16.5%) had as many as one bath per delivery room, and only half reported having one or more baths for every four delivery rooms. Shower facilities are more common and more than a third of trusts (38%) of units reported one shower per delivery room, with just over half of units reporting one shower or more for every two delivery rooms. Ideally, all delivery rooms should have a bath or shower room en-suite, but there is clearly a long way to go before this position is reached.

Wards

Fewer bathrooms are needed on the antenatal and postnatal wards but they are still very important. The median trust reported one bathroom for every 13 beds and one shower for every seven beds.

Cleanliness

Cleanliness and hygiene are important aspects of care that women frequently comment on in open text responses about maternity care. Almost all women (97%) found the labour and delivery rooms either “very clean”, or “fairly clean” but less so for the wards where the equivalent figure was 92%.

The toilets and bathrooms were described less positively; in the labour and delivery rooms just 89% of women rated them “very clean” or “fairly clean” and in the wards this was only 81%.

The figures on cleanliness varied considerably across trusts. For example, in the worst trust only 38% of women rated the ward bathrooms “very clean” or “fairly clean”. London trusts were rated noticeably worse for cleanliness than the rest of England.

Availability of equipment

Equipment in hospital

Safe birth and subsequent care requires a range of equipment, in good order, to be available if needed. Information was obtained about the availability of certain key items; cardiotocograph machines (CTG), resuscitaires, portable ultrasound, blood warmers and phototherapy units. All showed large variations between units. For example, the number of CTG machines, one of the most commonly used aids for monitoring the baby’s heart in the uterus, ranged from 2.5 per delivery suite to 0.5. Units at the lower end of the range should assess whether they need to invest in more equipment.

Equipment should be maintained and replaced when appropriate. Trusts reported that generally 30% of equipment was less than three years old but this ranged from 0 to 100% across trusts.

In the maternity staff survey, respondents were asked if they agreed with the statement “Appropriate equipment is always available”. Just 16% of respondents fully agreed with this statement, and a further 37% agreed but only to some extent.

Community working

Community midwives work individually away from their base hospital in various settings, including children’s centres and health centres, GP surgeries and women’s homes. Ideally each community midwife should be equipped with a portable weighing scale, hand-held ultrasound doppler, portable blood pressure machine and a mobile communication device. But this is not always the case; fewer than one portable weighing scale per community midwife was reported by 66% of trusts, and similarly hand-held dopplers by 37%, portable blood pressure machines by 24% and mobile communication devices by 24%*.

Equipment for home births

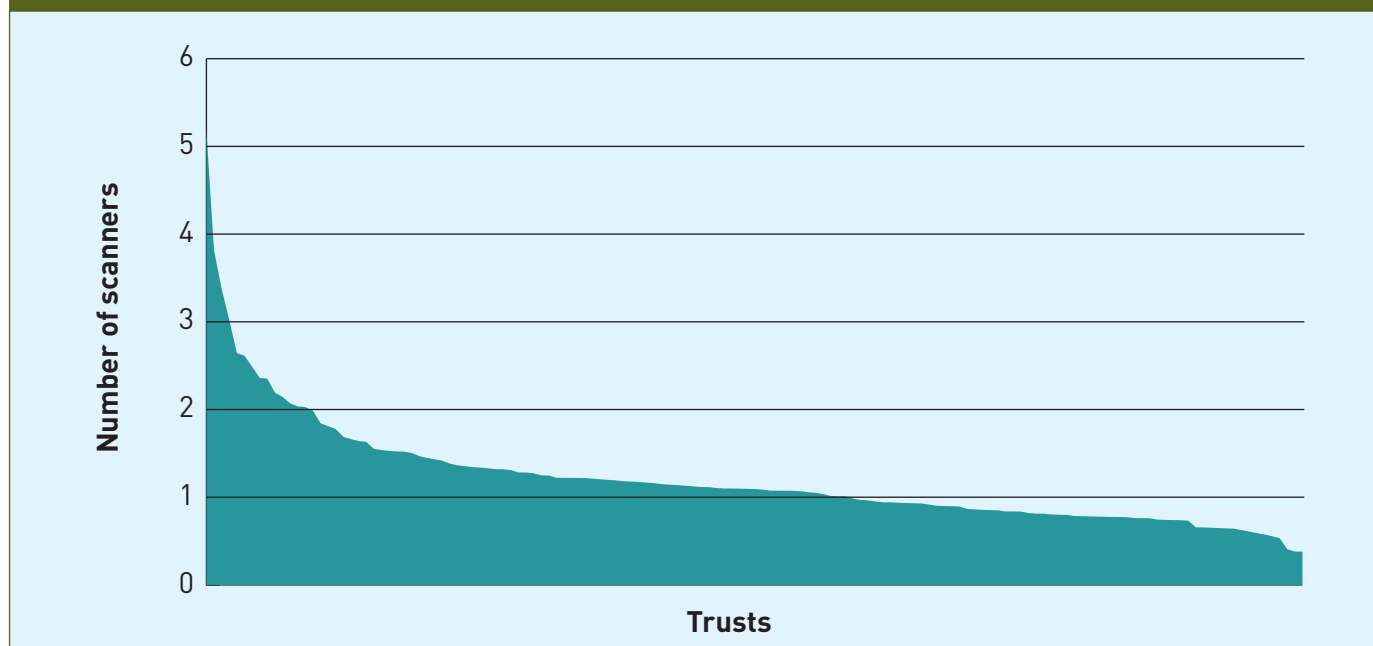
It is important that the equipment needed for home births should be readily available to midwives at short notice. In general this was the case, but small numbers of trusts did report such problems, the most frequent was 3% of trusts reporting problems with supply of Entonox.

Ultrasound

As indicated earlier, ultrasound is used in a number of tests and procedures. In addition, unscheduled scans may be required where potential problems are identified, for example, babies with less than expected growth, multiple

* Communication equipment is required both for personal security and to ensure a midwife can call for support and advice in an emergency.

Figure 27: Ultrasound scanners per 1,000 women booked



Source: Maternity service review trust questionnaire, 2007

babies or babies thought to be in a breech position. Ultrasound is also required when conducting amniocentesis and chorionic villus sampling (CVS) procedures.

Ultrasound equipment and staffing

To meet NICE guidelines, trusts need sufficient ultrasound scanning machines and trained staff to undertake scans. They may also need to ensure that referrals for scans are appropriate (that the average number of scans, taking into account the trust's chosen Down's syndrome test, does not appear excessively high).

Typically trusts have 1.1 ultrasound scanning machines per 1,000 women booked into maternity care (equivalent to about two hours of scanning time per booked woman). However, this can range from five down to less than 0.5 (see figure 27). The numbers of obstetric sonographers (which can include radiographers) who generally

undertake obstetric scans varies between trusts. The median trust reported average sonographer time available per booked woman as 1.5 hours; that is less than the two hours of available ultrasound time. Thus sonographer time appears more limiting than time available on ultrasound scanning machines.

However, doctors and midwives can be trained to undertake some ultrasound scans, and may need to use this technology to undertake medical procedures. Almost all trusts (93%) reported doctors undertaking such scans, while a smaller proportion of trusts (60%) reported that midwives undertake ultrasound scans. However, over one in five trusts (23%) reported that some staff who undertook ultrasound scans did not possess, as a minimum, a certificate in ultrasound issued by either their professional body or an approved university supported by Centre for Advancement and Support of Education.

Operating theatres

Access to theatres

Operating theatres are required in maternity for planned elective caesareans, which can be scheduled in advance, and also for emergency care, which cannot be scheduled and therefore a degree of spare capacity is needed. All obstetric units have dedicated maternity theatres, but the theatre time available varies from 9.6 hours per birth down to just 1.8 hours, with a median of 3.9 hours. More than one in 10 units reported at least one instance in the previous three-month period of a problem getting access to theatres and those with five or more instances all had no more than two hours of theatre time per birth.

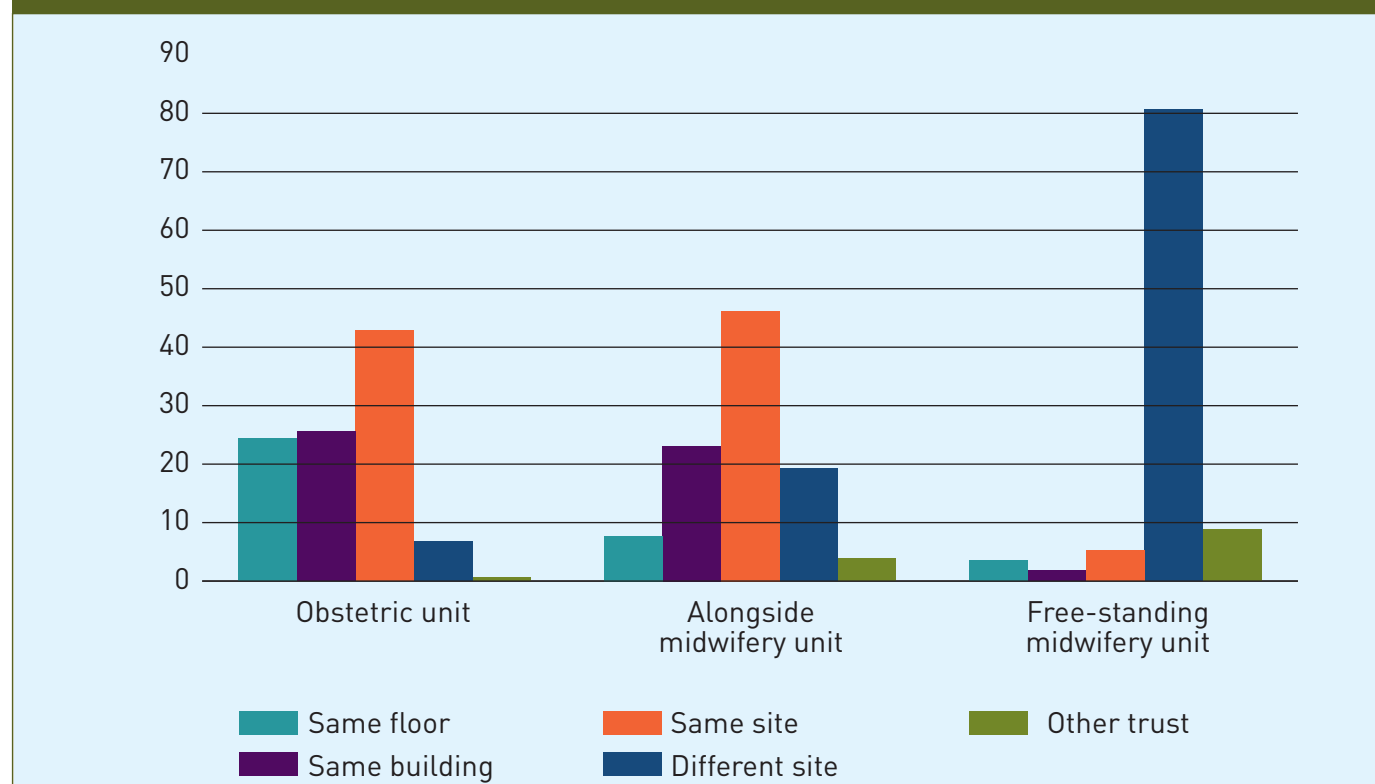
Intensive and high dependency care for women

Access to intensive care

Serious problems in pregnancy and during labour and birth may require a woman to be transferred to an adult intensive care unit (ICU). The proximity of the different types of maternity unit to an ICU is shown in figure 28.

Nearly all obstetric units (95%) have an ICU on site. Very few freestanding midwifery units have an ICU on site but this is to be expected, and as all the women should be classed as low risk, such a facility would be rarely needed. However, should an ICU be needed, it is desirable to be within a reasonable distance, but this could be up to 70 miles.

Figure 28: Locations of adult intensive care unit



Source: Maternity service review trust questionnaire, 2007

High dependency care

For women with less serious problems but still needing specialist care, half of obstetric units have a high dependency facility. Most of these (78%) consist of one room with an average of 2.3 beds. These facilities have the advantage compared with ICU that they allow the mother and baby to be in the same area of the hospital. If high dependency care is to be offered in maternity departments it is important that staff are trained to provide the appropriate level of clinical care. Typically 5.5 midwives are trained in high dependency care per bed, but it varied very widely across trusts. Only 32% of trusts with high dependency units have reported some specialist training of obstetricians to work on these units.

Interventional radiology

Interventional radiology can be a vital aid to identify the source of a haemorrhage and to treat it, which in extreme cases can be life saving. To provide the service there must be sufficient access to the appropriate equipment and to radiologists with interventional radiology skills who can attend in a timely manner in an emergency situation. Just over a third of obstetric units (35%) always have this service available on site, 26% sometimes have the service on site, 9% reported that it is always available off site and 4% that it is sometimes available off site. However, a quarter of trusts (26%) have no access to this service. The distance for off-site services ranged from 0.1 miles to over 50 miles (median 13 miles).

Blood transfusion

Women who have experienced a serious blood loss may need a blood transfusion. Almost all obstetric units (96%) reported having a blood transfusion service on site, and if not, the

distance away was no more than 13 miles. FMUs, which should only need the service rarely, reported anything from 0 to 70 miles (median 16 miles) to the nearest blood transfusion service. Cell salvage systems, which can retrieve and clean a patient's own blood were available in 52% of obstetric units. Forty-seven per cent of trusts reported having O negative blood held on the delivery suite for an emergency and typically two units are held.

Neonatal care facilities

Neonatal care facilities are classified at three levels. Level 1 units provide special care, but do not aim to provide any continuing high dependency or intensive care. Level 2 units provide high dependency care and some short term intensive care as agreed within the network. Level 3 neonatal units provide the whole range of medical neonatal care, but not necessarily specialist services such as surgery. All obstetric units have access to special care, but less than half (46%) have access to a level 3 unit on site.

Protocols for admission

To ensure consistently high quality care, it is helpful to have a protocol that describes the criteria that lead to a baby being cared for in a neonatal care unit. These should be set to ensure mother and baby are not separated unnecessarily and that neonatal unit capacity is used appropriately. Weight and gestational age criteria are used in admission criteria and increasingly agreed within the network to which a trust belongs. Babies born at term, or not prematurely, with specific problems, for example those requiring surgery or in poor condition at birth, may also be admitted.

Neonatal networks and transport

To coordinate care and manage transfers between trusts, there are 23 neonatal networks in England, each comprising between four and 10 trusts. Trusts reported that they had clear guidelines for transfers. These arrangements appear to be working in the sense that of the 10% of babies who were admitted to a neonatal unit, 12% were transferred for care in another trust, and very few (less than 1%) were transferred to another neonatal network. Admission rates vary across different SHA regions from 8% to 12%.

Nearly three-quarters of trusts (72%) reported being in a network with its own transport service and 22% of trusts shared a transport service with another network, but 5% had no

neonatal transport service. Approaching half (45%) of these transport services were available 24 hours for seven days a week. If babies do need to be transferred by road, it is to be hoped that the nearest suitable neonatal unit is not too far away. The median distance reported by all maternity units was 17 miles but in one instance it was 100 miles.

Temporary closures of units

Many neonatal units are running very close to full capacity and therefore have to close to admissions from time to time. During the six-month period to 31 March 2007, more than half (56%) of neonatal units had been closed to all admissions (including babies from their own trust) for one or more days. The average length of closure was 14 days and five units were

Figure 29: Neonatal staff vacancy rates by SHA



Source: Maternity service review trust questionnaire, 2007

closed for three months or more. The most usual reason for closure was that all cots were occupied, but insufficient staff was also very frequently cited.

Staffing neonatal units

Insufficient staff is a frequently reported reason for closing neonatal units and this shows up in the high vacancy rates, which average 7.4% for nurses in neonatal units compared with 3.7% for maternity units (see earlier section on midwifery staffing). Vacancy rates vary sharply across SHAs; the lowest is the North West with no more than 1% vacancies (half of trusts reported no vacancies at all) and the highest is London with a median vacancy rate of 13% (see figure 29).

Security

Security is important in maternity units and trusts need to have in place suitable barriers to manage the risk of unauthorised people gaining access to the maternity unit. Trusts have a number of options for providing security and they all provide one or more barriers to entry. The most commonly used are security codes or access cards which are required to enter 92% of units and entrance CCTV in 91% of units. Day receptionists manage entry into 78% of units, but baby tagging is only used in 30% of units.

Information

Systems for information about maternity

Maternity units need good information systems to report accurately on the services they deliver, so that they can identify areas where improvements might be made and also to support effective commissioning. The survey of trusts exposed major weaknesses in this area. Trusts are required to provide datasets on hospital activity and outcomes for both mothers and babies to a central system known as ClearNet which then forms the basis for published national statistics. This data was checked and found that data was missing for many trusts.

Trusts also found difficulty in providing data for our review. Only 60% of trusts reported having an information system which is compliant with Connecting for Health*, while 23% had a system that was not, and the remaining 17% reported having no maternity information system at all. For those trusts with an information system, 55% of the systems only covered intrapartum care (during labour and birth) and just 15% of trusts reported systems that covered both intrapartum and community care (antenatal and postnatal).

Clinicians have expressed frustration at the lack of quality information from which they can assess and compare practice. From the maternity staff survey, between 0 to 81% of staff reported that their information system was inadequate or not well maintained (in over half of trusts 43% or more of staff gave one of these responses). All trusts should invest in a suitable maternity information system covering both community and intrapartum care.

* Connecting for Health is an agency of the Department of Health that supports the NHS's computer systems and services.

Engagement with stakeholders

Maternity services have many different stakeholders who may focus on different aspects of care. There is therefore a variety of forums and avenues for gathering feedback.

Labour ward forums

Labour ward forums are operational risk management groups that provide an opportunity for staff involved in hospital maternity services to come together, with other stakeholders, to consider recent events and identify areas for service improvement. All trusts reported having at least one labour ward forum and a fifth of trusts (21%) reported that their labour ward forum met at least once a month, while 9% reported meetings of less than once a quarter, which seems rather low to be effective.

Guidelines are usually written by individuals or a small group, circulated and then agreed at meetings more formally. Ninety per cent of trusts reported that one or more guidelines had been approved by their labour ward forum in the last year, which suggests that the forum is achieving worthwhile results.

Typically, trusts reported four doctors and eight midwives on a forum. Stakeholder representatives attended 90.5% of trusts' labour ward forums and 98.7% of trusts' forums had risk management representation.

Maternity services liaison committees

Maternity services liaison committees (MSLCs) have a much wider remit than labour ward forums and should be established, organised and maintained by primary care trusts (PCTs), although they may be provider or community

based²². They should be an effective multi-disciplinary forum where those who commission, provide and use maternity services bring together their different perspectives in partnership to plan, monitor and improve local maternity services.

All providers should have representation on an MSLC or equivalent. The committee should comprise clinicians from all specialties involved, together with commissioners, managers, public health and social care representatives, and at least a third of members should be women who use services.

A large majority of trusts (82%) reported having committees that had met at least once in the last year, and nearly three-quarters (72%) had committees that had met four or more times. The Department of Health guidelines²² suggest that they are most effective when they meet six times a year.

Only 41% of trusts reported sharing recommendations from their committee with the trust board in the last year, although the guidelines recommend that the MSLC chair and vice chair should meet with the chief executive or lead director annually. This suggests that many MSLCs could have more influence with their trust's high-level management.

Representation of users

The average number of user representatives on MSLCs is four, though the range is from 0 to 15 with seven trusts reporting no users or users' stakeholders. Stakeholder groups typically represent 2.2 places on a committee and the frequency representation of some of the groups is shown in table 11. Payment of expenses seems to increase the extent of user representation.

Table 11: Percentage of trusts with categories of stakeholder on their MSLCs

Stakeholder group	Percentage of trusts with representation
Ethnic minority groups	38%
Faith groups	15%
Disabled parents	12%
Teenagers	37%
Women's refuge	10%
Fathers	13%

Source: Maternity service review trust questionnaire, 2007

Effective commissioning

To be effective, PCTs need to understand what is required to deliver a high quality maternity service and should have clear agreements with their trusts of the services they expect to be provided. The finance required should be accurately assessed and PCTs should reassure themselves that it is spent on maternity care.

Agreements

The review found that only 64% of trusts had an agreement in place with PCTs that covered the three important areas of finance, service levels and quality, while 15% had yet to finalise an agreement. Where there is some form of agreement in place or in draft, 94% of trusts reported that it covered finance, 93% reported that it covered service levels but only 79% reported that it covered quality. PCTs need to increase the coverage of their service agreements.

Funding and costs

On average trusts have reported £2,620 per delivery from commissioning PCTs though values have been reported that range from £1,500 to £3,500 per delivery. It is very difficult to relate these figures, however, to trusts' actual costs.

The costs to trusts are expressed as their 'reference costs' for different kinds of delivery, but they only identify hospital care. Antenatal admissions are also included but linked to the numbers of admissions, not the numbers of births. Community care, accounting for a third of midwife staffing, is not included in reference costs. We estimate that the average cost of hospital care per delivery is £2,088. Until trusts have better information on their overall costs of maternity services, it will be difficult to ensure that sums for commissioning are properly related to actual costs and that these sums are indeed spent on maternity.

Working across trusts and with other providers of services

The majority of women will receive their postnatal care from the same organisation that cared for them during pregnancy and labour and birth. Trusts, however, need to coordinate themselves better so that women can choose and access different services from different trusts, including specialist services, that are provided within a network of trusts. For example, where women are transferred into the care of another midwifery service, the discharging organisation needs to ensure that both mother and baby are fit for transfer and communicate with the women's local maternity service at the right time to ensure appropriate postnatal care is provided. Midwifery services should be working closely and cooperatively where there is cross-boundary care to ensure an appropriate level of care.

Maternity networks

Trusts are encouraged to work in maternity networks to help manage various aspects of maternity care. Fifty-eight per cent of trusts reported being part of a maternity network with

27% of trusts reporting that the network had some funding. Forty per cent of London trusts reported not being part of a network, and given the extent to which women can exercise choice in London, it is surprising that a significant proportion of trusts are not working within a maternity network.

Population

Population differences and changes can have a significant effect on the pressures that individual maternity units face.

Birth rate

The most marked change taking place at present is the general increase in birth rate, which rose by 1.6% in England from 584,100 in 2004/05 to 593,400 in 2005/06. This conceals local variations that can vary significantly from the average. Trusts and commissioning PCTs need to be aware of these trends and make adequate resource available to accommodate them.

Women from minority ethnic groups

There is concern that women from minority ethnic groups will have difficulty accessing the maternity services and thereby receive less optimum care and feel they have had a less favourable experience. This has been studied in some detail in a separate analysis by the Healthcare Commission (appendix C). The most numerous groups, other than white women, were women of Asian and Black origin, forming 6.2% and 3.9% of the respondents to the mothers' survey respectively.

The most significant shortfall in the service to women of Asian and Black origin was in

the antenatal phase. They first saw a health professional later, they were less likely to be booked within 12 weeks, they felt they had less choice as to where to have their baby and they were less likely to have a scan at 20 weeks. Their reactions to the quality of service were variable; they had less confidence in the staff during labour and birth and were more likely to be left alone and worried by it. But they answered many of the questions about their perceptions of care in a similar way to the majority or even more favourably, for example they rated dignity and respect during postnatal care and explanations during postnatal care as better than average.

Mothers from minority ethnic groups are heavily concentrated in London. The median reported by London trusts is 52% women from minority ethnic groups and this rises to 85% in one trust. Women from Asian communities can be up to 59% of mothers and women from black communities up to 39%. There are other areas of high concentration; in particular West Birmingham and Bradford where trusts have reported more than 40% of mothers from minority ethnic groups.

A more recent development is the increasing percentage of mothers from Eastern Europe. Again these are most heavily concentrated in London where the median trust reports 4.2%. Other areas that are higher than average include South Central and Yorkshire and Humberside where the median is 2.8% but it can rise to 10% in individual trusts.

Ethnicity and staffing

A House of Commons report considered whether services might be more culturally sensitive if the staff ethnicities are more aligned with service users' ethnicity²³. Employees with

Table 12: Staff and service users ethnicity profiles

Ethnic grouping	White	Asian	Black	Chinese and Other	Mixed
% women	78%	10.5%	6.2%	3.3%	1.5%
% staff (doctors, midwives and support workers)	83%	5.9%	8.1%	2.4%	1.1%

Source: Maternity service review trust questionnaire, 2007.

an Asian background are under-represented in staff groups when compared to service users and higher proportions of white staff and black staff are slightly over-represented (see table 12).

Language barriers

Caring for women whose main language is not English can lead to difficulties for the staff and may result in women receiving less optimum care due to lack of communication. Some clue as to the extent of the problem can be gained from the women's survey where significant numbers of mothers said they mostly spoke a language other than English at home. In one trust this was nearly half at 47%, but is more usually around a quarter for trusts with a high proportion of women from minority ethnic groups.

Trusts can help by having staff who speak commonly used languages, by having access to the language line interpreting service, providing an advocate who speaks the language or providing translated literature. It seems that trusts are making efforts in this direction; in 61% of trusts all such mothers were sometimes or always given the information or explanations they needed antenatally. In the remaining 39% of trusts the percentage reporting one of these responses ranged from 33 to 93%.

Ninety-two per cent of trusts reported there was access to either advocates or language line for staff working in women's homes, a community location or hospital.

Women are provided with a great deal of written information, including the Department of Health's *Pregnancy Book*. Each trust will need to tailor its information as far as possible to its own population. However, trusts may be aided in this if central government publications and support group publications provide information in more of the languages that are currently in use in England.

Age

The age of mothers can have a significant effect on the character of the service provided by trusts. In particular higher caesarean section rates are associated with increasing maternal age. Older mothers also answer significantly more favourably to nearly all attitudinal questions in the mothers' survey.

The average age of mothers responding to the survey was 30, but it can vary sharply across trusts and also by geographical area. The median trust reported 3.7% of mothers under 19 years old, but this was 6% in the North East but only 2% in London – although one trust reported 4.5%. At the other end of the scale, for mothers over 35, trusts in the North East report medians of only 15% whereas trusts in London, South Central and South East Coast report 24% rising to 34% in an individual trust.

Checklist for trusts and commissioners for implementing the recommendations

Access to antenatal care

- All trusts and commissioners should have a target date for initial assessment (booking) by 12 completed weeks of pregnancy*, or within two weeks of first contact with a health professional if after 12 weeks.
- Trusts should ensure that all women, booking by 12 weeks and giving birth at term, receive at least the NICE recommended number of antenatal checks.
- All pregnant women, whether having their first or subsequent baby, should be given the *Pregnancy Book*.

Antenatal classes

- Trusts should work towards providing sufficient antenatal classes to meet women's requirements and which cover the desired topics.

Continuity of care

Trusts should comply with NICE guidance throughout the pathway of care, specifically:

- Women with straightforward pregnancies should be cared for by midwives and GPs providing continuous care throughout the pregnancy.
- Women should, as far as practicable, receive one-to-one care from a midwife in established labour.
- Women should see the same midwife for most postnatal contacts as antenatal contacts.

* The latest NICE guidance on antenatal care published in March 2008, after this review was completed, suggests an ideal of 10 weeks.

In addition:

- Trusts and commissioners should ensure that women receive the same standards of community care for women, even if they receive it from a different trust from the one where they gave birth (delivering 'out of area').

High risk pregnancies and special services

- Trusts with particularly high or low referrals of women to consultant clinics should review their referral criteria.
- Trusts should review the provision of joint clinics and specialist midwives for women with medical conditions, in particular diabetes, and ensure that they meet NICE guidelines.

Screening

- Trusts should ensure that all eligible women are offered an early dating scan.
- Trust need to take steps to make women feel that they have a choice over scans and understand the reasons for scans and blood tests.
- All trusts should have a screening coordinator in post for both antenatal and newborn screening, with sufficient protected time to support and monitor the service.

Choice

- Trusts should provide a choice of locations for antenatal appointments where practicable and make more antenatal appointments available outside normal working hours.
- Trusts should promote normal birth and review the availability and organisation of midwife-led care to ensure that it is genuinely available to all women.

Care during labour and birth

- Trusts should ensure that all women get the pain relief they request in all settings within practical and safety constraints.
- Women should not, in principle, be left alone during or just after labour, but if necessary it should be accompanied with clear explanation and agreement.
- As far as possible, women should be encouraged to move around during labour and adopt positions that feel most comfortable.
- Trusts with high levels of continuous monitoring of the baby's heart (cardiotocography) should review their policies.
- Trusts should review their use of partograms and establish protocols and audit the results.
- Trusts should monitor and audit their rates for vaginal birth after caesarean and external cephalic version to correct the breech position, with a view to increasing them where practical.

Women with mental health needs

Trusts need to improve their provision in several ways:

- Trusts and PCTs should secure access to a specialist perinatal mental health service with acceptable waiting times for referral. Midwives should be authorised to make referrals.
- Trusts need to incorporate the NICE guidelines into their booking appointment checklist.
- Trusts need to review their provision of specialist midwives for mental health needs.
- All trusts should have access to a psychiatric mother and baby unit providing care for mothers with serious mental health needs and their babies.

Postnatal care

Postnatal care needs to be given higher priority; it is consistently rated the least satisfactory aspect of the pathway of care by recent mothers.

- Mothers should not be transferred from hospital too early, particularly after a caesarean section. A woman's length of stay in hospital after birth should be negotiated (within reason), taking into account the health and wellbeing of the woman and her baby and the level of support available after transfer.
- Trusts need to establish more highly rated post natal care packages, including, where indicated, increasing the number of contacts with mothers after going home and addressing issues such as crying and skin care.
- Commissioners should ensure that the six-week post natal check of all mothers' health and wellbeing takes place.

Feeding

- Trusts with low initiation rates for breastfeeding should take measures to increase them, including making sure that all women understand the benefits of breastfeeding.
- Trusts need to pay particular attention to helping women who have started breastfeeding to continue and prevent drop-out, particularly among women from minority ethnic groups.
- Trusts need to provide consistent and supportive advice to mothers whether they choose breast or bottle feeding.
- Additional care needs to be provided for women with learning difficulties.

Levels of staff – midwives

- Trusts with significantly low levels of midwife staff need to employ more midwives as soon as practicable.
- In the longer term, trusts should take account of the standard set out in *Safer Childbirth*⁷. A target date should be set for achieving this.
- Trusts with high vacancy rates should review their midwifery establishment, recruitment methods and retention strategy with a view to closing the gap.
- Trusts with a high proportion of midwives aged over 50 should plan a recruitment strategy to replace them when they retire.
- Trusts with unbalanced proportions of midwives in different bands should review their mix of skills.
- Local supervising authorities should recruit supervisors in accordance with local needs and circumstances. Trusts should provide protected time and remuneration.
- Trusts should review their use of maternity support workers and look at how they might be trained and supported to meet gaps in service delivery within their competence.

Levels of staff – doctors

- Trusts that do not meet the standard of having a consultant obstetrician present on the labour ward for 40 hours per week (60 hours for large units) should remedy this without delay (*Safer Childbirth*).
- Trusts should ensure that consultants have job plans and that the numbers of programmed activities committed to obstetrics are clearly stated and understood.

- Trusts with conspicuously low levels of obstetric staffing (particularly consultants) should correct this, subject to the recommendation above.
- Trusts which do not meet the standard of 10 programmed activities available in the maternity unit from anaesthetists should remedy this.

Safety and training

- Trusts should ensure that serious incidents are subject to debriefing among staff, and can be discussed in multidisciplinary meetings that are held at least once a month.
- Trusts with low levels of in-service training in core skills should remedy this urgently, and as far as practicable the courses should be jointly attended by doctors and midwives and other professions.
- All clinical staff should have Criminal Records Bureau checks and trusts should work towards renewing these every three years.
- Trusts should ensure that sufficient midwives are trained to detect and care for women who are suffering domestic abuse.
- Trusts need to develop staff communication skills for working in maternity care particularly involving women and their partners in decisions and in providing explanations about care.

Beds and other facilities

- Trusts with relatively few beds, either in the delivery suite or on the wards, should review their provision, particularly if they have short postnatal lengths of stay.
- Trusts should work towards all delivery rooms having en-suite facilities.
- Trusts should offer adjustable height cots where appropriate for women with mobility or physical needs.

- Trusts without access to interventional radiology should consider establishing the service, particularly if they have a high risk case mix.
- Trusts that received a poor cleanliness rating in the survey of new mothers should increase cleaning resources.
- Trusts with a poor rating on food should consult women using the service and review the quality and quantity of food available.

Information systems

- All trusts must have a maternity IT system, able to provide activity and operational data relating antenatal, intrapartum and postnatal care in and out of hospital. This must include capturing data for women who give birth at a hospital outside their local trust area (cross border flows).
- Trusts should collect more accurate and more systematic information on maternal and perinatal morbidity, in line with the recommendations in the Royal College of Obstetricians and Gynaecologists Maternity Dashboard.
- Trusts should review their costing information to ensure that their reference costs accurately reflect the costs of providing their maternity service.

Commissioning

Many of the recommendations apply to PCTs as commissioning bodies as well as to the trusts that provide maternity services. These recommendations are specific to PCTs:

- PCTs need to increase the scope of their service agreements with providing trusts, particularly to include quality.
- Trusts should be clear about all aspects of their costs of maternity services and PCTs should ensure that the funds provided are closely monitored and spent on maternity care.

Engagement

- PCTs should ensure that all trusts are represented on a maternity services liaison committee (MSLC) or equivalent.
- PCTs with less than a third of the core membership of their MSLC made up of user representatives should remedy this.
- Trusts should raise the profile of their MSLCs and encourage them to have an annual programme of work and submit recommendations to the trust and PCT board every year.

Networks

Trusts and commissioners should increase membership of maternity networks (all trusts are members of perinatal networks). The development of network-wide agreements and protocols could facilitate improvements, such as a better handover between hospital and community when women have been cared for 'out of area'.

References

- 1 Audit Commission, *First Class Delivery – improving maternity services in England and Wales*, 1997.
- 2 Department of Health, National Service Framework for Children, Young People and Maternity Services, 2004.
- 3 Department of Health, *Maternity Matters*, 2007.
- 4 National Institute for Health and Clinical Excellence, *Antenatal care: Routine care for the healthy pregnant woman*, guideline CG6, 2003, updated to guideline 62, March 2008.
- 5 Confidential Enquiry into Maternal and Child Health (CEMACH), *Saving Mothers' Lives – Reviewing maternal deaths to make motherhood safer 2003-2005*, December 2007.
- 6 Maternity Care Working Party, *Consensus Statement*, November 2007.
- 7 Royal College of Obstetricians and Gynaecologists, *Safer Childbirth*, October 2007.
- 8 Royal College of Obstetricians and Gynaecologists, *Maternity Dashboard, Clinical Performance and Governance Scorecard*, Good Practice Guide No 7, January 2008.
- 9 HM Treasury, PSA Delivery Agreement 19: Ensure better health for all, October 2007.
- 10 HM Treasury, PSA Delivery Agreement 12: Improve the health and wellbeing of children and young people, October 2007.
- 11 National Institute for Health and Clinical Excellence, *Antenatal and postnatal mental health: clinical management and service guidance*, CG45, 2007.
- 12 National Institute for Health and Clinical Excellence, *Diabetes in Pregnancy*, guideline 63, March 2008.
- 13 National Institute for Health and Clinical Excellence, *Intrapartum care: Care of healthy women and their babies during childbirth*, guideline 55, 2007.
- 14 National Institute for Health and Clinical Excellence, *Caesarean Section*, guideline 13, 2004.
- 15 Royal College of Obstetricians and Gynaecologists, Clinical Effectiveness Support Unit, The National Sentinel Caesarean Section Audit, 2001.
- 16 Royal College of Obstetricians and Gynaecologists, Green-top guideline No 45, Birth after previous caesarean, 2007.
- 17 Royal College of Obstetricians and Gynaecologists, Green-top guideline No 20a, ECV and reducing the incidence of breech presentations, 2006.
- 18 National Institute for Health and Clinical Excellence, *Routine postnatal care of women and their babies*, guideline 37, 2006.
- 19 Jean A Ball and Marie Washbrook, *Birthrate Plus, A Framework for Workforce Planning and Decision-making for Midwifery Service*, Books for Midwives Press, 1996.
- 20 Department of Health, *Responding to Domestic Abuse, A handbook for health professionals*, December 2005.
- 21 National Childbirth Trust, *Creating a Better Birth Environment, women's views about the design and facilities in maternity units: a national survey*, 2003.
- 22 Department of Health, *National Guidelines for Maternity Services Liaison Committees (MSLCs)*, February 2006.
- 23 House of Commons Health Committee – Eighth Report of Session 2002-03, *Inequalities in Access to Maternity Services*, 2003.

Acknowledgements

The Healthcare Commission would like to thank the advisory group and the large number of individuals, regional and national groups who have contributed their time and expertise to help us to design the review, interpret the results and draw conclusions.

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The following NHS trusts and organisations assisted with the development of the review:

Barts and The London NHS Trust
Barking, Havering and Redbridge Hospitals
NHS Trust
Basingstoke and North Hampshire
NHS Foundation Trust
Chelsea and Westminster Hospital
NHS Foundation Trust
Hillingdon Hospital NHS Trust
Leeds Teaching Hospitals NHS Trust
Mayday Healthcare NHS Trust
Southampton University Hospitals NHS Trust
Surrey and Sussex Healthcare NHS Trust
Wiltshire Primary Care Trust, as a provider
of maternity services
Isle of Wight NHS Primary Care Trust,
as a provider of maternity services

Barking and Dagenham Primary Care Trust
West Midlands Primary Care Trust
South Central SHA

Joint working

The web-based trust survey was developed jointly with the Birthplace research team at the National Perinatal Epidemiology Unit in the University of Oxford. The data is being shared and contributing to the Birthplace Study.

Appendix A:

Indicators used in the scored assessment

Does the trust provide a high quality value for money maternity service?

Clinical focus	
Does the trust have strong processes and practices to ensure the maternity service is safe and effective?	
Are there high standards of antenatal monitoring?	Indicator 1: Women not receiving NICE recommended number of antenatal appointments
How effective is the test and screening programme?	Indicator 2: Availability of NICE recommended screening
Are there appropriate levels of intervention during delivery?	Indicator 3: Appropriate use of caesarean sections
Are there good outcomes from delivery?	Indicator 4: Maternal morbidity
Are there high standards of postnatal care?	Indicator 5: Postnatal care of women and babies
Is there adequate service provision for additional needs?	Indicator 6: Progress on implementing mental health NICE guidance
Do staff have adequate training and recent experience?	Indicator 7: Extent that staff are trained in core maternity skills
Does the trust have a strong safety culture?	Indicator 8: Teamworking and supervision

Women-centred care	
Are women informed, counselled and supported to ensure that they have a positive maternity experience?	
How readily can women access maternity care and information?	Indicator 9: Average time between first making contact and booking appointment
How much choice do women have in how their antenatal care is provided?	Indicator 10: Choice and continuity for antenatal care
How much choice do women have for tests and scans?	Indicator 11: % of women offered an informed choice for screening tests
Do antenatal classes meet women's and their partners' needs?	Indicator 12: % of women attending NHS antenatal classes who wanted to
How much choice do women have in the birth of their babies?	Indicator 13: Extent of choice in labour
How well are women supported to care for their babies?	Indicator 14: Support for infant feeding
How effective is the discharge process?	Indicator 15: Quality of support in caring for the baby after discharge
Are stakeholders engaged effectively to help improve services?	Indicator 16: Stakeholder involvement in service planning and evaluation

Efficiency and capability	
Is there adequate funding to provide an acceptable service and are management and improvement processes ensuring women get the best care for the money spent?	
Is there adequate staffing?	Indicator 17: Staffing levels
	Indicator 18: Integration of support workers
What is the cost per delivery?	Indicator 19: Average cost per delivery
	Indicator 20: Delivery of hospital-based antenatal care
What is the capacity to record activity and plan?	Indicator 21: Data quality
Are there adequate facilities and are service configured to use these effectively?	Indicator 22: Appropriate involvement of obstetricians and midwives in antenatal care
	Indicator 23: % of women who considered their length of stay was about right
	Indicator 24: Homeliness of birth rooms
	Indicator 25: Women's view of cleanliness of delivery and postnatal areas

Appendix B: Birthrate Plus

The most commonly used method that is employed for determining the number of midwife staff required is the method known as Birthrate Plus. Trusts collect a large sample of data on births, allocating each to one of five categories of complexity ranging from simple straightforward birth to emergency caesarean section, and the average birth time or time requiring care is measured for each of these. As births become more complex, for example emergency caesarean sections, the number of staff involved increases as well as the time taken.

Using the category data reported by trusts, the Birthrate Plus methodology would suggest that 35 midwives per 1,000 births are needed for the average obstetric unit, with 32% deployed on the labour ward, 31% in the community and 36% on antenatal and postnatal wards in the hospital.

The results of the Birthrate Plus system for estimating midwifery staffing requirements in hospital and in the community were reported by trusts for most obstetric units (72%), fewer AMUs (23%) and less than half of FMUs (42%).

All but 15 (8%) of the obstetric units reported a shortfall of midwives and the overall median shortfall was 15 midwives when compared with the midwifery establishment (the budgeted number) and 19 compared with the number of whole time equivalent midwives in post.

In AMUs and FMUs the estimated figures were much closer to the actual staff in post, with the median difference being close to zero but still with some variation either side.

Appendix C: Variations in the experiences of women using NHS maternity services in England – summary of findings

Background

The Healthcare Commission coordinates a national programme of surveys of people who use NHS services, covering all NHS trusts in England. The surveys are designed to provide trusts with feedback from patients about their experiences of using NHS services, with a view to identifying areas for improvement in the quality of care provided. Information from the surveys is also used by the Commission in its assessment of the performance of NHS trusts.

In 2007 the Healthcare Commission undertook a national survey of recent mothers about their experiences of NHS maternity services in England. The survey results provide a detailed picture of the care provided to these women and their views about the choice and quality of services. The Healthcare Commission survey followed the publication in March 2007 of *Recorded Delivery*, an England-wide maternity survey developed and conducted by the National Perinatal Epidemiology Unit (NPEU) and co-funded by the Healthcare Commission. This new, larger survey was designed to complement *Recorded Delivery* by providing information at individual NHS trust level, using a set of questions adapted from the NPEU questionnaire.

This is the largest survey of women using maternity services conducted in England, with 26,325 women aged 16 years and over responding to the survey, a response rate of 59.3%. We used these data to examine national variations by age, parity, ethnic group, self-reported disability, family composition, educational attainment and region in the reported experiences of women using maternity services in England.

Methods

The sample was drawn from the records of 149 acute trusts and two primary care trusts (PCTs) providing maternity services in England.* Some of the services described are provided by all PCTs, hence the overall number of organisations providing the maternity services referred to by respondents is much larger than 151.

The responses of women to 36 questions from the survey were analysed. Responses to the individual questions were used in multiple logistic regression analyses as the outcomes of interest, and strategic health authority (SHA) of trust and a number of characteristics of women (age, parity, ethnic group, self-reported disability, family composition, educational attainment) were identified as independent explanatory variables influencing their responses. The regression models examine the relationship between individual levels of a variable, relative to their reference level and the question of interest, while holding other variables adjusted for constant, including an underlying variable stratification for trusts to take account of the trust from which the patient was sampled.

* The survey was carried out by 151 trusts in total (149 acute trusts and two PCTs). However, when the trust level results were published on the Healthcare Commission's website, the results from two trusts were excluded due to them having considerably smaller maternity units, hence a small number of women in the sample. Results from a third trust were excluded due to a data quality issue. These issues were not relevant to this national analysis, so those respondents have been included within the findings reported here.

Results

Age

Overall, older women responded more positively than younger women. For questions about the quality of services (for example, cleanliness) this could reflect genuine differences in experiences of using services, or differences in expectations and perceptions, or some combination of these factors. However, older women were more likely to experience unexpected complications such as requiring a hospital stay during pregnancy or an unplanned caesarean, and having their baby cared for in a neonatal unit.

Ethnic group

There were differences between the minority ethnic groups. Overall, women from black and minority ethnic groups were more likely to access services late and less likely to have a scan at 20 weeks than women from the White British group. They were more likely to experience complications such as needing a hospital stay during pregnancy, having a longer stay in hospital after birth, and having their baby cared for in a neonatal unit. They responded more negatively to questions about care during labour and birth, and were less likely to say they had a choice about the place of birth. On the other hand, women from these groups were more likely to say they were treated with respect and dignity, and had been given adequate information, during pregnancy and afterwards. And they were more likely to breastfeed.

Self-reported disability

Women with a self-reported disability responded more negatively than those not reporting a disability to most questions about the quality of care before, during and after birth. They were more likely to access services late, need a hospital stay during pregnancy, have a longer stay in hospital after birth, and to have their baby cared for in a neonatal unit. They also responded less positively to questions about having a choice about the place of birth, being treated with respect and dignity, receiving enough information, being able to move around during labour, being left alone during labour when worried, and adequacy of pain relief during labour. They were also less likely to breastfeed.

Family composition

With few exceptions, single women (that is, those without a husband or partner) responded more negatively to questions about care during pregnancy, delivery and after birth than women with a husband or partner. They were less likely to access care within the first 12 weeks of pregnancy, have a scan at 20 weeks, attend NHS antenatal classes, and have a postnatal check up, and were more likely to experience complications and to feed their baby formula milk rather than breast milk. Single women also responded more negatively to questions about having a choice of place of birth, being treated with respect and dignity, care during labour and birth, and having enough contact with a midwife after birth.

Educational attainment

Age at completing full-time education was used in this analysis as a proxy for social class. Women with lower educational qualifications (16 or younger at completing full-time education) were less likely to: access services early, exercise choice, attend antenatal classes, have Down's screening, breastfeed, and have a postnatal check-up than women completing education at 19 plus. They were also more likely to experience some negative outcomes such as a hospital stay during pregnancy and having their baby cared for in a neonatal unit. However, they were less likely to be critical of several aspects of services during pregnancy and after, which could reflect social class differences in expectations.

Region

Women can access community and hospital services from different trusts, and possibly from different SHAs throughout their maternity care. However, given that SHAs represent large areas, cross-border flows are likely to be small in comparison with overall volumes of service usage, so our analysis used SHA of acute trusts as a proxy for examining geographical differences in women's experiences of maternity services. Although no inter-SHA differences were apparent for seeing a health professional within 12 weeks, early booking was less likely in London than all other SHAs. London also compared less favourably on a range of other aspects of maternity care, such as choice about place of delivery, midwife contact details, being treated with respect and dignity, adequacy of information and pain relief, cleanliness, having confidence and trust in staff, postnatal support, and women's overall ratings of care during pregnancy and after (although screening take-up for Down's syndrome was more likely in London than elsewhere).

Conclusions

Our analysis shows some significant variations in the experiences of subgroups of women using maternity services in England, and some consistency with findings from *Recorded Delivery**, the NPEU survey. Variations in care and perceptions of care were apparent by age, parity, ethnicity, disability, family composition, educational status and region. In particular, some groups known to be at risk of poorer maternal and infant outcomes (women from black and minority ethnic groups, single mothers, those from socially disadvantaged backgrounds) access services late, have poorer outcomes, and report poorer experiences of some aspects of their maternity care. Women with a self-reported disability gave fairly consistent negative feedback on their experiences of maternity care.

These findings indicate the need for maternity services to be more responsive to the particular needs of these groups of women, providing greater support and tailored care as needed. Those using maternity services in London SHA also responded negatively overall compared with women elsewhere. This highlights the need for a detailed focus across the health economy on the factors that might be contributing to this markedly inferior performance in the capital, and investment to ensure that women in London receive and report acceptable standards and quality of care.

The Department of Health has published several policy initiatives designed to improve the quality of and access to maternity care for all women (for example the national service framework, *Maternity Matters*, NICE guidelines etc).

* *Recorded Delivery – a study of women's experience of maternity care*. NPEU, March 2007.

These have led to improvements in maternity services and outcomes over the years, as reported by others. However, our findings show variations in women's reported experience of maternity care, which may reflect differences in need, perception and timing and quality of engagement with services. It is pertinent that women from high-risk groups report late access and poorer experiences of care. The Confidential Enquiry into Maternal and Child Health (CEMACH) notes that women from 'vulnerable' groups are more likely to experience a higher risk of death or morbidity and higher levels of neonatal complications. They also note that women who need maternity services most use them the least, and are less likely to seek antenatal care early in pregnancy or to stay in regular contact with maternity services.

The Department of Health has a Public Service Agreement (PSA) target with the treasury on reducing social class inequalities in infant mortality, which is highest in 'sole registered births' (those registered by a mother only), a group not included in the target. Our findings that single mothers access maternity services late, have poorer experience of services and more maternal complications, and are less likely to breastfeed suggests that health promotion services need to be more proactive with this potentially high risk group, and that they need more support when they do engage with maternity services. Although breastfeeding has been identified by the Department as one of the key interventions for reaching the target, we found that women from educationally disadvantaged backgrounds are also less likely to breastfeed, as are women in the north of England.

From 2008-2011 a new PSA target has been proposed, measuring rates of assessment by a health professional by 12 completed weeks of pregnancy. Achievement of this target will require PCTs, trusts and the wider community to identify and encourage newly pregnant women to make contact with health professionals as early as possible so that their care can be planned and they can be provided with information and support as required. Our findings emphasise both the importance and challenge of this target in ensuring that women from groups proven (by CEMACH and others) to be most at risk of poor outcomes are recognised and supported early.

Choice is a key element of the Department of Health's policy on maternity services, designed to offer women choice about the type and place of maternity care and birth. We found that some groups of women were less likely to say they were offered choice about the place of birth than others – namely, younger women, those from black and minority ethnic groups, those with a disability, single mothers, and those receiving services from a trust in London.

While our survey showed that, overall, the care provided by maternity services, and women's perceptions of that care, were generally positive, our analyses show variations in both aspects between subgroups of women. We recommend that these findings are used by commissioners, trusts and healthcare professionals to ensure the services they provide or commission are tailored to address the particular needs and expectations of their local community and inform further improvements in maternity services.

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**This publication is printed on paper made
from a minimum of 75% recycled fibre**

ISBN 978-1-84562-194-0



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