Creating a Better Birth Environment

Women's views about the design and facilities in maternity units: a national survey

Mary Newburn and Debbie Singh

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Executive Summary

The National Childbirth Trust is concerned that opportunities for women to have the type of birth they want are diminishing. Many factors impact on women's birth experience, but the physical environment has received limited attention. We conducted a magazine and online survey with nearly 2000 new mothers in England, Wales, Scotland, and Northern Ireland to assess whether the birth environment makes a difference.

Our survey found that:

- Nine out of ten women felt that the physical surroundings can affect how easy or difficult it is to give birth.
- Many women had limited access to facilities that they felt were highly important during labour.
- Most women said that having a clean room with en suite facilities, being able to walk around, and having comfortable furniture for themselves and companions was highly important. Women also wanted to be able to control the heating and lighting and to control who came into their room during labour. They would prefer not to move to a different room for the birth, or to a separate room to use a birth pool during labour.
- Women who gave birth in hospital were less likely to have access to helpful facilities compared with women who gave birth at home or in a freestanding midwife-led unit.
- Women who had access to good facilities were more likely to have a vaginal birth than women who had poorer facilities.
- Women who had an emergency caesarean section were less likely to have had access to good facilities compared with women who had a vaginal birth.

Over half of women who said that the following factors were highly important did not have access to them when giving birth:

- control over the temperature,
- a pleasant place to walk,
- sufficient pillows, floor mats and bean bags,
- a homely, non-clinical, room,
- not being overheard by others,
- control over who came into the room, and
- a place to get snacks and drinks.

Over one third of women who said that the following factors were highly important did not have these facilities when giving birth:

- a birth pool,
- a comfortable chair for their companions,
- an en suite toilet, shower or bath, or easy access to these facilities, and
- control over the brightness of the light.

In order for all women to be able to give birth with dignity, and have every opportunity to experience a straightforward vaginal birth, action should be taken to improve the physical environment and to ensure that midwives and doctors provide individualised care and support.

Building quality standards should be set for the design of rooms used for labour and birth. These standards should ensure that women are able to be as comfortable and relaxed as possible throughout labour, that their movement is not restricted, that they can control the heating and lighting, and that they do not feel exposed when someone enters the room. These building standards should be implemented when new units are built and when existing units are refurbished. Units without a major refurbishment programme can also make a difference to what is available in terms of cleanliness, furnishing, and décor without a lot of capital expenditure.



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Women's views about the design and facilities in maternity units: a national survey

1. Background

The National Childbirth Trust (NCT) wants all women to be supported to give birth with confidence and dignity, and to have every opportunity to have a straightforward vaginal birth. Most women want to give birth without a lot of medical interventions if this can be achieved without harm to their baby or themselves. In a recent national audit, six out of ten pregnant women said they would prefer a birth that was 'as natural as possible'.¹ We are concerned that opportunities are diminishing for women to have the type of birth that they want. In a 12 year period, the caesarean section rate in the United Kingdom has doubled, without a reduction in instrumental deliveries. More than half of all caesareans are emergency operations.² Evidence suggests that two of the contributing factors may be hospital culture and the physical environment in hospital, where most women give birth.³4

The National Childbirth Trust is interested in the whole package of services offered to pregnant women and new parents. The physical environment is only one of many factors that influence women's experience of labour, but to date there has been little discussion about the impact on women's birth experience of architectural design, access to facilities, and use of the available space. In hospital, labour rooms may be designed for carrying out clinical procedures rather than facilitating a normal physiological process or enjoying an important life event. This report looks specifically at the physical environment in which women give birth.

Purpose of the study

We wanted to explore what aspects of room design and furnishings mattered to women, and whether the physical environment made a difference to their experience of labour. The NCT Better Birth Environment Survey was developed to find out:

- what aspects of the physical environment women considered important, and
- to what extent women had a sense of control over their environment during labour.

It is important to compare women's experiences in different environments because:

Without using a comparative approach it is very easy to think that the way things are done in your hospital, region, or country is the best or even the only way to do so.⁵

We investigated what women found helpful or unhelpful during their most recent labour and what facilities were available in different birth settings. We compared the experience of women who gave birth in hospital maternity units with those who used a midwife-led unit or had a home birth. Our aim was to provide practical guidance about how to improve the design and facilities available in birthing rooms and maternity units.

^{1.} Paranjothy TJ. *The National Sentinel Caesarean Section Audit Report.* London: Royal College of Obstetricians and Gynaecologists Press; 2001.

^{2.} NHS Maternity Statistics, England 2001-02. Bulletin 2003 / 09. London: Government Statistical Service; 2003.

^{3.} Chamberlain G, Wraight A, Crowley P (eds). *Home Births. Report of the 1994 Confidential Enquiry by the National Birthday Trust Fund.* London: Parthenon; 1997.

^{4.} Hodnett ED. Home-like versus conventional institutional settings for birth. In: *The Cochrane Library, 2.* Oxford: Update Software; 2001.

^{5.} Van Teijlingen E, Sandall J, Wrede S. Comparative studies in maternity care. Midwives 6(8): 338-340; 2003. p339.

The interaction that women have with the people around them during labour is probably the most important factor affecting their experience of childbirth. While this study focused on the physical environment, it is important to acknowledge that women's experiences were influenced by the care and support they received, and that the physical environment and patterns of care may be connected.

Who provided information?

Between January and March 2003, a self-completion survey including multiple choice and open ended questions was distributed in *Practical Parenting* magazine, the NCT members' magazine *New Generation*, and on the NCT website (see Appendix 1).

Women who had a vaginal birth or an emergency caesarean section within the past five years were invited to participate. As our aim was to explore environmental factors that may be important during labour, the survey did <u>not</u> include women who had a planned ('elective') caesarean section.

Altogether 40,000 questionnaires were distributed, equally divided between Practical Parenting and New Generation. A total of 1944 valid questionnaires were returned, 139 from Practical Parenting (7%), 549 from the NCT website (28%) and 1256 from New Generation (65%). The response rate from Practical Parenting readers appears lower than the response rate from New Generation readers, but it is not possible to confirm what proportion of questionnaires reached the target audience.

Almost two thirds of women who completed a questionnaire had had a baby within the past 15 months, giving birth in 2002 or the first three months of 2003 (60%). A further third (32%) gave birth in 2000 or 2001.

Eighty-five percent of women had had a vaginal birth and 15% an emergency caesarean section. Women were not asked for further details about their labour or clinical care, so it is not known how many of the vaginal births were straightforward and how many involved medical induction or acceleration, epidural anaesthesia, episiotomy, ventouse, or forceps. Women were asked to indicate whether they had had an emergency caesarean section because the rate of emergency caesarean sections is one important indicator of maternity care and, unlike some other interventions, it is easy to identify whether or not a woman has had a caesarean. An emergency caesarean is a major intervention with significant consequences for a woman's health, as well as additional financial costs to the health service. A caesarean section is estimated to cost £1000 more than an uncomplicated vaginal birth.⁶

Altogether, 12% of women had had a home birth, 25% used a midwife-led unit and 61% gave birth in a unit jointly run by midwives and obstetricians ('hospital unit'). The 25% who used a midwife-led unit comprised 2% who gave birth in a unit separate from hospital ('freestanding midwife-led unit'), and 23% who gave birth in a midwife-led unit on the same site as a hospital ('midwife-led unit alongside hospital'). This probably overestimates the proportion of midwife-led units alongside a hospital with obstetric and paediatric services, as some women ticked this option for units that we know are alongside a small community hospital. A small number of women were unsure how to describe the place where they gave birth.

As almost 2,000 women responded from England, Scotland, Wales and Northern Ireland, this survey provides an important insight into the extent to which childbearing women's needs are currently being met in the UK. However, the sample is not representative of all childbearing women. A higher than average proportion of women had had a home birth (one in eight compared with the national average of one in 50)⁷ or had given birth in a midwife-led unit (one in four compared with an estimated national average of about one in 25).8

^{6.} House of Commons Written Answer, Hansard, 1 November; 2001.

^{7.} Office of National Statistics. *Birth Statistics, England and Wales 2001.* Series FM1 No 30. London: Stationery Office; 2003.

^{8.} NHS Maternity Statistics, England 2001-02. Bulletin 2003 / 09. London: Government Statistical Service; 2003. Table 14 of the NHS Maternity Statistics document suggests that 3% of units are 'midwife wards / other wards.' 1% are 'GP wards.' In practice, GP wards and units are now mostly midwife-led.

2. How important is the birth environment?

Most of the women who participated in our survey believed that their surroundings influenced their experience of labour. An overwhelming 94% thought that the physical environment affects how easy or difficult it is to give birth, with half agreeing strongly that the birth environment makes a difference (48%).

Women were asked to explain why they felt that the physical environment was important. Many women suggested that positive aspects of the birth environment are associated with positive outcomes.

A more pleasant physical environment, one very clean, welcoming, warm, smelling nice and aesthetically pleasing, can help you relax, particularly when labour is long and you have time to notice these things. Relaxing and feeling at ease is essential in keeping you calm in a situation where things may not necessarily be going to plan or your body is running away with you. [Somerset woman who had a vaginal birth at a hospital unit]

Hospitals are strange and uninviting places where we have usually experienced stress or pain in the past. When giving birth these feelings are apparent because of the environment. By making the labour suite more comfortable and less hospital like, mothers are likely to be more relaxed and have an easier labour. [Fife woman who had a vaginal birth at a hospital unit]

Women also suggested that negative aspects of the birth environment might lead to poorer outcomes.

A hospital can be very overwhelming and busy. I was in hospital for a week before having my baby and had to listen to women going into labour around me, which is horrendous for a first timer! When I was induced I was on a packed ward and I wasn't remotely relaxed. As I really got going at night my husband had been sent home. I was alone and frightened and made bad decisions about pain relief. [Ascot woman who had an emergency caesarean at a hospital unit]

I had one baby in hospital and one at home. Although my care in hospital was wonderful, my labour was much longer, probably because I was stressed to be on a public ward and couldn't kneel comfortably on the hard floor. [woman from Kent]

A small number of women did not think that the physical environment affected the ease or difficulty of labour (6%). This was generally because they felt that other factors were more important.

I think the surroundings are one of many factors that affect how manageable labour seems and actually is. However the environment must be part of an overall set up which supports and encourages you (ie calm, confident, not overworked midwife; hospital (if applicable) that does not make you feel rushed or inadequate etc). Therefore mere window dressing attempts to cover up a harsh environment will not do. [Newcastle woman who had a vaginal birth at a hospital unit]

I consider many other factors such as the baby's position, the midwife, keeping mobile during labour etc as significant factors on how easy the birth is. Both labours I had were in the same delivery room. The first was horrendous, the second easy. The room had no effect on either of my labours. [woman from Kent]

Some women said that the importance of the physical environment varied at different stages of their labour.

I thought that the environment would make a difference, but my experience was that once my labour was established, the surroundings lost most of their significance. However, once the baby was born, I was desperate to get away from the clinical / public environment. [Somerset woman who had a vaginal birth at a freestanding midwife-led unit]

When you are in discomfort because of contractions it is good for everything to be as comfortable as possible. However, once you are in the final stages of labour and in your 'own little world' you could be giving birth anywhere! [West Yorkshire woman who had a vaginal birth at a hospital unit]

Box 1 describes one woman's feelings about how many factors, including the birth environment, shaped her experience of childbirth.

Box 1: One woman's feelings about the importance of the birth environment

I had pre-eclampsia and was sent to hospital two days after I was due, although I had planned a home birth. I didn't have a problem with being in hospital except that my husband was sent home, although I was in pre-labour, at 9pm. By 3.30am I wanted him back (he was my pain relief), but the midwives wouldn't let him back on the ward due to visiting restrictions and told me to have a bath.

Sitting in a hospital bath with contractions every few minutes feeling abandoned was not a good thing! I wanted to be at home and comfortable, where I could be noisy if I wished without disturbing the other women on my ward and without the midwives hearing me cry.

My labour slowed right down for 3 hours until at 6.30am I was allowed to call my husband. Up until then I had spent the night pacing the hospital corridors and trying some exercises, which I'd learnt at NCT classes, in the day room. By 6.30am some of the other women were awake and I felt able to go back to my ward. Strangely enough, as soon as I'd called my husband, the contractions came back thick and fast – as they had been at 3.30am.

Obviously most of this was to do with my husband not being with me, but wasn't helped by the environment. Shortly after he arrived we went to the delivery suite and 6 hours later my little Chloe was born.

The delivery suite was reasonably comfortable, my assigned midwife a star. It became my sanctuary – no one entered without knocking and without my agreement. Amazing that the two places were in the same hospital! So to summarise, where my surroundings were wrong, labour was horrid. Where the surroundings were right, including the people present, labour was OK – even with my waters being broken, being on a bed, being monitored, with a medical student watching, having my blood pressure taken – none of that mattered.

[Devon woman who had a vaginal birth at a hospital unit]

3. What matters to women?

Women were asked to rate the importance of 25 different features of the physical environment during labour (low, medium, or high importance). All of the features which women considered highly important related to access to facilities or to control of their environment. Women valued:

- access to specific facilities such as an en suite toilet, a clean room or space to move around freely, and
- control over aspects of the environment, such as who could see and hear them, who entered the room, and the temperature and lighting.

Fifteen of the 25 items were considered of 'high importance' during labour by at least half of the women (see Table 1). The top three features, considered highly important by around nine out of ten women, were to:

- have a clean room,
- be able to walk around, and
- not be overlooked by, or be within sight of, other people.

It is perhaps not surprising that such a large proportion of women felt that both cleanliness and privacy were highly important. It is noteworthy to learn, however, that 89% of women felt that being able to walk around freely during labour was highly important.

Next in importance was being able to stay in the same room throughout labour. There were several places in the questionnaire where women could describe their experiences and explain their views. One woman commented on how staying in the same room made a difference for her:

The ability to stay in the room for labour, birth and for all my stay in hospital made the experience very personal and tranquil. [woman from Northern Ireland who had a vaginal birth at a midwife-led unit alongside a hospital]

Interestingly, the next feature that women felt was important related to the needs of women's birth partners or companions. Three quarters of women thought that it was highly important for there to be a comfortable chair for their birth partner. One woman put this in historical context.

Thirty five years ago my parents and some of their friends fought fierce hospital opposition to have the fathers present at births. Now we must fight to ensure that fathers' needs are taken care of and that they are comfortable during long labours, which can be stressful for them too. The least we can ensure is that there is a comfortable reclining chair or a spare bed or double bed so that dads can get some rest and be on hand when needed. [woman from Warwick]

Two thirds of women felt it was a high priority to:

- have an en suite toilet,
- be able to control who came into the room,
- have bean bags, pillows and mats to use for positioning during labour, and
- not be able to hear other women giving birth.

Table 1: Importance of 25 different features of the physical environment during labour

	low impt %	med impt %	high impt %	mean score (/3)
Clean room	1	7	92	2.9
Able to walk around	1	9	89	2.9
Not be in sight of or overlooked by others	2	9	89	2.9
Be able to stay in same room throughout	4	15	82	2.8
Comfortable chair for birth partner(s)	4	24	72	2.7
En suite toilet	8	22	70	2.6
Able to control who comes into the room	5	26	69	2.6
Bean bags, pillows and mats to use	6	29	65	2.6
Unable to hear other women giving birth	11	25	64	2.5
Able to control the brightness of the light	7	38	56	2.5
Easy access to snacks and drinks	10	37	53	2.4
Homely looking room (not hospital like)	12	35	52	2.4
Able to control the temperature	6	45	49	2.4
En suite bath	18	32	50	2.3
Sure others could not hear	20	32	48	2.3
Pleasant place to walk	13	47	40	2.3
En suite shower	24	33	43	2.2
Know resus equip is near, but not see it	20	38	42	2.2
Birth pool	21	42	37	2.2
Able to move furniture around to suit	21	36	42	2.2
Nicely decorated room	15	49	35	2.2
Hospital bed	35	33	32	2.0
Clock easily in view	37	31	32	1.9
Divan bed	50	39	11	1.6
Able to see resus or other equipment	57	32	11	1.5

Half of the women said it was highly important to:

- be able to control the brightness of the light and the temperature of the room,
- be in a room that looked homely,
- have an en suite bath, and
- have easy access to snacks and drinks.

Women were divided over the importance of some facilities, including having a clock in view and having access to a birth pool. One third felt that it was highly important to be able to see a clock, but the same proportion considered this of low importance. Some of women suggested that having a clock prominently displayed could have a negative effect.

Having a clock in front of me in the birthing pool made me anxious about the length of my labour. [Leyland woman who had a vaginal birth in a freestanding midwife-led unit]

The clock was right in front of me. I would rather have not known how long my labour was taking. [Manchester woman who had an emergency caesarean]

As many as two fifths of the women in this study felt that access to a birth pool was highly important. In contrast, one fifth said that having access to a birth pool was of low importance. As with other preferences, these views are likely to be affected by the women's knowledge about the potential usefulness of water during labour and their expectations. Many who had used a pool felt that it had helped them to cope with labour.

^{9.} van Teijlingen ER, Hundley V, Rennie A-M, Graham W, Fitzmaurice A. Maternity satisfaction studies and their limitations: "what is, must still be best". *Birth* 30(2): 75-82; 2003.

Both my babies were water babies. I cannot stress enough how much I thought it helped me. [Wiltshire woman who gave birth in a midwife-led unit]

The environment makes you relax if it is right, stops you feeling relaxed if it is wrong. In the later stages I was in a room with a birthing pool, which was nice and dark. [Twickenham woman who had a vaginal birth in hospital]

Few women wanted to be able to see resuscitation and other equipment, but knowing that equipment was available out of sight was highly important for two fifths of the women. Although some women said that it reassured them to have medical equipment in plain view, many women said that they would rather equipment remained hidden to ensure a homely, non-clinical feel.

Medical equipment was concealed behind a large curtain. I was reassured that it was there, but not frightened by it being really obviously on display. [East Sussex woman who had an emergency caesarean at a hospital unit]

Most women were not concerned about whether a hospital bed or a divan bed was provided. Some women said that any bed would be suitable, as long as it was comfortable. Other women said that an adjustable bed could be helpful for getting into different birthing positions and for sitting up after the birth:

One of those adjustable beds would be good; those ones that go into lots of different positions and help you sit up, squat and relax immediately after the birth. [Bedfordshire woman who had a vaginal birth at home]

There was a hospital bed that shifted into position like a chair. I ended up giving birth kneeling on the bed, holding on to the headboard. The flexibility was good. [Glasgow woman who had a vaginal birth in hospital]

Some women suggested that beds should be pushed to the side of the room or omitted completely in order to promote an active birth. Other women highlighted the benefits of a double bed, saying that this allowed space to get into different positions as well as allowing their partners to lie with them, providing comfort and getting rest.

The double bed allowed me to move around and try different positions. There were lots of pillows. It was in a small homely room which was more relaxing than a 'sterile' hospital environment. [Surrey woman who had a vaginal birth at home]

I was fortunate in that the water birthing pool was organised as an en suite to a larger than average room with a double pine bed, wardrobe etc. It was so much more pleasant to rest on a double bed after the birth. I didn't have to walk to rest with my newborn. [Cheshire woman who had a vaginal birth in a midwife-led unit alongside a hospital]

In summary, this section has begun to identify the types of facilities that women feel are highly important when they are in labour. The quotes suggest the mood or atmosphere that women are hoping to experience or to avoid. Women used words such as 'comfortable', 'personal', 'calm', 'tranquil', 'relaxed', 'flexible', 'adaptable', and 'homely' to describe the type of environments that they valued. They wanted to avoid atmospheres that were 'busy' or 'harsh', or that made them feel 'frightened', 'stressed', and 'anxious.' The following two sections look at these main themes in more detail. Section 4 investigates what facilities women felt had helped or hindered them most during their most recent labour. Section 5 examines the extent to which women's individual preferences and needs had been met.

4. What made a difference in labour?

We asked women to tell us a little about the environment where they last gave birth. We wanted to know what, if any, features of the room where they laboured had been helpful or unhelpful for encouraging the type of birth they wanted. Women were invited to suggest up to three helpful and three unhelpful aspects of the physical environment. These were open questions so women could say anything they wanted to, using their own words. Of all the aspects of the birth environment that women considered important, these results indicate the factors that women said had the most significant effect on the course of their labour.

Helpful aspects

Aspects of the room that women found helpful for encouraging the type of birth they wanted included (in order of most commonly mentioned):

- space for walking and moving around,
- a birthing pool or a large bath,
- en suite toilet / bathroom,
- a comfortable, adjustable bed,
- low lights or adjustable lighting, and
- privacy and quiet.

Unhelpful aspects

Aspects of the room that women found unhelpful for encouraging the type of birth they wanted included (in order of most commonly mentioned):

- a clinical 'hospital room' atmosphere,
- a small room with little space to move around,
- a hard uncomfortable bed, that was not adjustable or was incorrectly positioned.
- lack of privacy, such as having the door open or being able to be heard by others,
- a toilet outside the room, and
- a room that was too hot or cold or where women could not control the temperature.

A full list of features of the environment that women considered most helpful or unhelpful for encouraging the type of birth they wanted is provided in Appendix 2.

5. Do women get what they need?

The sections above outline what women believe is important and what they feel made a difference to the kind of birth they had. This section examines the extent to which women had access to the facilities they needed during their most recent labour. It begins with the three factors considered of highest importance by most women. As detailed in Section 3, these were to have a clean room, to have sufficient space to be able to walk around, and not to be overlooked by or within sight of other people.

Cleanliness

Reflecting on their most recent birth, nine out of ten women said that the room they spent most of their time in during labour had been clean. But some women disagreed strongly, commenting on inadequate hygiene, especially within hospital units.

The room was unhygienic. It seemed dirty, such as wet hair and dead bugs in the birthing pool (which I was told was rarely used and that I could not use it). The toilet was down the hall (too far away) and unclean. There was no access to a clean shower or bath after giving birth. The facilities were upstairs and unclean. [Surrey woman who had a vaginal birth at a hospital unit]

The hospital was old and due to be knocked down so the interior was old and shabby and not as clean as it should have been. The toilet was not en suite and the shower had no handrail and was slippery. The ward was cold and quite noisy. [Kent woman who had a vaginal birth at a hospital unit]

There were a few blood spots on the walls and ceiling that were rather off-putting. It made me wonder what was on the mattress under the sheets. [London woman who had a vaginal birth at a hospital unit]

Space to move

Section 4 described how, compared with any other single factor, more women emphasised the need for space and freedom to move around in order to encourage the type of birth they wanted. Thinking about whether their most recent labour met this need, two thirds of women said they were able to walk around as much as they wanted, although only one third said there was a pleasant place to walk:

It would have been nice to walk around some gardens or even a quiet car park with a few flowers, but there was nowhere but the busy wards to walk. I felt in the way, but my room was so small, I could only do three paces back and forth. [Orkney woman who had a caesarean section in hospital]

Women who gave birth at home or in a midwife-led unit were more likely to say that they could walk around freely compared with women who gave birth in hospital (see Table 2):

My first experience was in a large room with plenty of space to move around and a birthing pool. I felt like I had a lot of options. My second experience was in a very small room with no space to move around and I felt my options were taken away. [Buckinghamshire woman who had her first baby in a midwife-led unit and her second baby by emergency caesarean in hospital]

In our sample, one in three women who thought that having space to walk around was highly important were not able to walk around as much as they wished. As women who gave birth in hospital are under-represented in this sample (61% compared with about 96% for the UK average), the gap between women's desire to walk around and their actual experience is probably even greater.

Table 2: Women's access to facilities during their last labour

	% home birth (n = 229)	% free- standing midwife-led (n = 46)	% unit alongside hospital (n = 431)	% hospital unit (1157)	% all women (1944)
Clean room *	96	98	89	88	89
Not in sight of others	85	82	84	84	84
Able to walk around *	98	87	75	61	69
Able to stay in same room *	96	91	78	73	76
Comfortable chair for partner *	87	67	62	57	61
Easy access to a toilet *	86	84	64	63	66
Control who came into room *	92	56	41	29	40
Bean bags, pillows, and mats *	89	72	45	31	42
Unable to hear other women *	92	56	54	53	58
Control brightness of light *	96	66	50	41	50
Easy access snacks / drinks *	95	68	40	30	41
Room that looked homely *	96	78	40	22	37
Able to control temperature *	94	44	28	25	35
Easy access to a bath *	94	73	66	50	60
Sure others could not hear *	60	43	38	34	39
Pleasant place to walk *	93	60	32	21	34
Easy access to a shower *	89	69	56	46	54
Easy access to a birth pool *	48	76	56	39	46
Able to move furniture to suit *	95	51	42	28	40
Nicely decorated room *	97	89	59	51	59
Clock easily in view	69	79	72	73	72
Comfortable bed *	87	84	73	62	68
Resuscitation equip visible *	20	41	66	75	66

Note: The proportions represent women who said they had the facilities listed. Differences marked * are statistically significant using the chi-square test (p < 0.05). Factors are listed in order of importance to women (see Table 1).

Privacy

As described in Sections 3 and 4, women valued not being overlooked or overheard by others, and considered a lack of privacy unhelpful for achieving the kind of birth they wanted. Yet fewer than half of these women felt they could control who came into the room. One in six women said they were in sight of other people during their labour.

I was in a public ward for most of labour so there was no privacy. The presence of visitors in the public ward was embarrassing. [Gloucester woman who had a vaginal birth at a hospital unit]

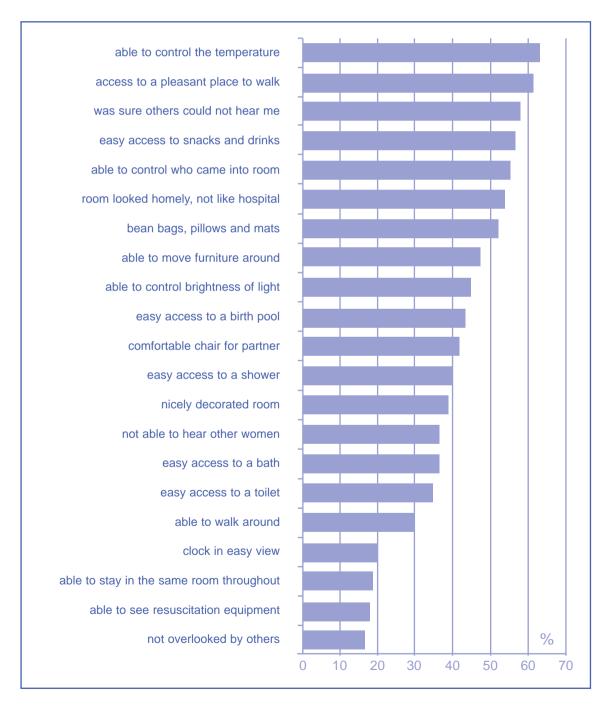
There were too many people walking in and out. The staff were unfriendly and I was given no control or choice. The room was not clean. I felt my birth room was too small and made me nervous because it was so full of people and equipment. [Norfolk woman who had an emergency caesarean in hospital]

Once again there was a substantial difference in women's experiences according to where they gave birth. In hospital units, less than one third of women felt they could control who came in and out of the room, whereas over half of women who gave birth in a freestanding midwife-led unit said they had control and privacy (see Table 2).

Birth pools and large baths

According to women who completed the questionnaire, the second most helpful feature of the labour room for facilitating birth was access to a birth pool or large bath. Yet two fifths of women who thought that access to a birth pool was highly important did not have access to a pool during their last labour (see Figure 1). Women who gave birth in a midwife-led unit were more likely to have access to birth pools than women who gave birth at home or in hospital (see Table 2).

Figure 1: Proportion of women who thought that a factor was of 'high importance' who said that these needs were <u>not met</u> during labour



Note: Appendix 3 contains a more detailed breakdown of women's stated needs and experiences.

En suite toilet / bathroom

When women are in labour, aiming to yield to the power of each contraction and relax their pelvic floor and perineal muscles, they often need to open their bowels frequently. It may be difficult to distinguish between pressure in the bowel caused by the need to pass a motion and pressure from the baby's head as it descends lower. Ready access to a toilet enables a woman to remain relaxed and open up her body without fear of soiling floor mats or the bed. Seven out of ten women said it was highly important to have an en suite toilet.

I had a large room with en suite bath, toilet, shower and sink which enabled me to walk about without embarrassment and go to the loo as many times as I wanted. [Yorkshire woman who gave birth in a hospital unit]

The room was en suite so it gave me a good opportunity to go to the loo whenever I wished without having to leave my room. [Edinburgh woman who gave birth in a midwife-led unit alongside a hospital]

Among women who described unhelpful features of their labour room, having to leave the labour room to go to the toilet featured prominently. Four in ten women giving birth in a hospital or midwife-led unit alongside a hospital said they did not have 'easy access' to a toilet while in labour.

Pillows, mats, and bean bags

Fewer than half of the women who wanted floor mats, extra pillows, or a bean bag to help them relax or change positions said that these aids were readily available.

I would have enjoyed labour more with a double bed and bean bags and pillows. [Southampton woman who gave birth in a hospital unit]

The room was so small there was no room to move about so I felt I had to stay on the bed throughout. There was only one pillow on the bed so I was limited in how to sit. [Monmouthshire woman who gave birth in a midwife-led unit]

Only one third of women who gave birth in hospital said pillows, mats, and bean bags were easily accessible compared with nine out of ten women giving birth at home.

Heating and lighting

As described in Section 3, half of the women said it was highly important to be able to control the temperature, yet almost two thirds of women who said this were not able to adjust the heating during labour (see Figure 1).

Half of women said it was highly important to be able to adjust the lighting with a dimmer switch or low-level lamps. Yet, around half of these women were not able to control the brightness of the light.

I found the hospital labour ward very austere and stark. It was frightening as all the equipment was highlighted by white walls and harsh lighting. I had no control over it. [At my second birth] in the birth centre, the rooms were painted in soft colours with pictures on the wall and there were bedside lamps. It was much more homely and relaxing, making you more relaxed and confident when giving birth. [woman from Kent]

Home comforts

Women's comments suggest that maternity units seem to be designed more around planning for clinical procedures than for ensuring that the women and men who use the services feel relaxed and 'at home'. Cleanliness, attractive decor, appropriate seating and access to refreshments are essential for making people feel welcomed and comfortable in any building. One of the advantages of a home birth is that the sights, smells and facilities are familiar, and have usually been chosen according to cultural preferences and personal taste.

In maternity units the facilities for meeting women and men's social needs tend to be rather limited, sometimes to the point of inadequacy. In particular, the needs of fathers are sometimes overlooked. The majority of women felt that facilities for their partners or birth companions were lacking. Two fifths said there was no comfortable chair available.

My partner could really have used a nice sofa or bed to relax because he stayed and helped me during the 17 hours of labour. We have to think about the men who do a good job too, supporting this wonderful experience. [Hertfordshire woman who had a vaginal birth at a midwife-led unit alongside a hospital]

There was no comfortable seating for my partner, or pillows etc. I think he felt more uncomfortable than me at times! [Warwickshire woman who gave birth in hospital]

Half of the women also mentioned wanting to be able to get drinks and snacks easily.

There was a lack of food, drinks, snacks for my partner. The birth didn't coincide well with hospital canteen opening times. [woman from Sheffield]

Women were concerned that their companions should be able to have something to eat, but access to food and drink is also important for women themselves. One woman described what happened when she went without food for a long period.

There was confusion about when I had to stop eating. I stopped too early and this led to severe exhaustion and a glucose drip. The midwife only asked once I was in this state, 'what have you eaten?' rather than assisting me earlier. [Monmouthshire woman who had a vaginal birth]

Women can be in labour for many hours, particularly with a first baby. They need access to drinks and snacks if they feel thirsty or hungry so they do not become dehydrated or exhausted. A hot or cold drink or something appealing to eat can be very comforting. It is also a pleasant means of passing the time before labour is fully established. Denying a woman opportunities to continue as normal for as long as possible during labour, or preventing her from following her own instincts, may have negative consequences. Grant recommended that unless there are risk factors suggesting the need for general anaesthesia, women who wish to eat and drink should be encouraged to do so, and light, nutritious, and absorbable foods should be offered.

^{10.} Evidence-based guidelines for midwifery-led care in labour. Sheffield: The Central Sheffield University Hospitals; 2000.

^{11.} Grant J. Nutrition and hydration in labour. In: Alexander J, Levy V, Roch S (eds). *Midwifery practice - intrapartum care:* a research-based approach. London: Macmillan Education; 1990.

Less than half of women who thought that it was important to be able to make a drink or get a snack for themselves or their companions had access to refreshments. Hospital units were the least able to provide adequate refreshments and facilities for birth companions. Only one third of women who gave birth in hospital said they could easily get something to eat or drink and two fifths said there was no comfortable chair for their partner. Freestanding midwife-led units were three to four times as likely to have homely rooms and twice as likely to provide refreshment facilities.

In summary, this section has illustrated that there is a significant gap between the facilities women would like access to and what is readily available. Women do not feel that they have sufficient privacy and control over the environment during labour. These deficiencies were greatest in hospital maternity units. Generally, access to facilities, privacy, and control over the environment was greatest at home, though there was better access to a birthing pool for women using midwife-led units. The social needs of both women and men were more frequently met at home than in maternity units. Facilities for fathers often seem to be either overlooked or given low priority. This sends negative messages to men about the importance of their role in supporting their partner and as a father, as well as causing women additional concern during labour.



Positions and equipment for labour

Women often find it most comfortable to keep upright and lean forward onto a worktop or shelf for support.

Sometimes it feels good to stand; at other times sitting and rocking on a birth ball feels good.

It is important to be able to lean on something firm and comfortable at a suitable height.

As labour progresses, immersion in warm water is very comforting.







With a soft protective floor mat or other padding, women can be comfortable on all-fours. The woman's pelvis is not restricted by pressure on her sacrum.





In hospital birth rooms space is often restricted if the bed is in the centre of the room and it may be difficult to find something at the right height to lean against.



Women in labour need enough space and encouragement to try out a range of comfortable positions. Equipment like a birth ball and plenty of pillows make a real difference.



At home it is easy to behave spontaneously and move the furniture around to create support in the right place at the right height.





Megan tries another upright, supported, leaning forward position.



The loving touch of a partner or reassurance of a companion can help women feel secure.

Units should provide space, a comfortable chair and a sincere welcome for birth companions.

As women go deep inside themselves to focus on the overwhelming waves of contractions they need privacy and quiet, and may not want to be touched.







6. If women designed birth rooms ...

We asked women to describe what they would include if they were designing a room to give birth in. They painted graphic and heartfelt pictures. One woman said she would like:

A double bed, curtains, a comfy seating area with TV and an adjoining private kitchen / diner; a private bath / shower and adjustable lighting. (I had all of these in the hospital when I gave birth in Adelaide, Australia in 1998 – not in a private hospital)

In contrast, this woman said that the hospital room that she recently gave birth in in England was 'functional, spartan' and 'not homely', offering only a single bed. [Devonshire woman who had a vaginal birth at a hospital unit]

Another woman suggested that she would like:

Curtains at the window that could be drawn, a clock you could see, space, en suite, large low level bath with overhead shower, toilet that you were allowed to use, nearby vending machine for drinks and snacks so you and birth partners can eat and drink, comfy chairs and bean bags, balls etc available so you don't have to get Pickfords to be able to haul everything that you might need as it only adds to the stress. [woman from London]

Women's suggestions for labour rooms were varied (see Appendix 4), but there were many common elements. A lot of the responses reflected the kind of facilities discussed in previous sections. The most frequently mentioned factors were:

- having comfortable chairs or a sofa (49%),
- use of a CD or cassette player (48%), and
- access to an en suite bathroom with toilet and shower (47%).

Adequate space and comfort for women themselves and, importantly, their birth companions was a recurring theme. For maximum comfort and flexibility, women wanted somewhere soft to sit themselves and a reclining chair or sofa-bed so that their partner could get some rest. Other factors that women thought were important can be grouped in terms of general physical comfort, facilities and pastimes, specific labour aids, privacy, visual interest and ambiance. Women's suggestions provide practical guidance about how to improve the physical environment in maternity units, particularly in hospital units which offer fewer helpful facilities and tend to limit women's sense of control.

Physical comfort

Women suggested having:

- enough space to be able to move around freely,
- adjustable heating, air conditioning, and lighting,
- bean bags, cushions, and pillows for use on the floor, sofa or bed,
- an adjustable, comfortable bed that they could position in the room as needed,
- access to a duvet, blankets, clean sheets, towels, and gowns,
- soft flooring surfaces, such as carpeting or foam mats, and
- adjustable, under-floor heating, so the floor was a comfortable temperature.

Facilities and pastimes

Labour can last for many hours. For some of that time the pace is not urgent. Patience may be needed and diversions can help to pass the time pleasurably. Some of the women's suggestions for improving birth rooms had significant cost implications, but others would require little additional expenditure. Suggestions included access to:

- a mini-kitchen with fridge, or tea and coffee making facilities,
- a TV, and perhaps video,
- magazines, books, games, and puzzles,
- a telephone, and
- a cupboard to store personal items brought from home.

Later on, when labour becomes intense, and usually painful, women want facilities that help them to cope and feel empowered to give birth. They want to feel that additional help is at hand if it is needed. Important features included access to:

- a large bath or birthing pool,
- a fridge, iced water, and ice chips,
- Entonox available wherever in the room they could get most comfortable, and
- a call button for the midwife.

Many women suggested that medical equipment should be readily available, but kept concealed.

Labour aids

In order to help them adopt upright, yet supported, positions during labour, many women requested things to hold onto, move with, sit on, or lean over. These included:

- a birthing ball,
- a rocking chair,
- a birthing stool or chair,
- rails on the wall, or a supportive frame or table, and
- a mirror for seeing the baby's head and the birth.

Privacy

Women emphasised the need to feel that they would be neither overlooked nor overheard while in labour. To increase their sense of secure personal space they suggested having:

- blinds for the windows,
- a shielded entrance to the labour room,
- locks on labour room doors.
- a cupboard with a lock to secure personal items, and
- a means of choosing who may enter or see into the room.

Visual interest and ambiance

Many women emphasised the importance of having a window in the room, and the added value of a beautiful or interesting view. Women suggested that paintings, posters, or music could also help to take their mind off the pain and give them something to focus on during contractions. Some women thought that posters of birth positions or pictures of babies would encourage them to move positions or feel positive:

I was in one birthing room for about 36 hours and being hooked up to five machines, couldn't move around. The wall I was staring at got fairly boring! It would have been good to have things to look at on the walls. [Milton Keynes woman who had an emergency caesarean in hospital]

Empty and bare walls can be off-putting and could be a depressing place to give birth. Having a pleasant picture to focus on would make all the difference. [Essex woman who had a vaginal birth with ventouse in hospital]

Women felt that the ambiance of birth environments could be enhanced by using aromatherapy oils, candles, or other means of creating pleasant smells. Flowers or plants were also suggested by some women, as were more ambitious features including a fountain or other water feature, or a tank with tropical fish.

7. Levels of control in different birth environments

As discussed in Section 4 and 5, compared with women who gave birth in hospital, women who gave birth at home or in freestanding midwife-led units were more likely to suggest that the birth environment contained features that were helpful during labour (see Table 2). The place of birth was also associated with differences in how relaxed or in control women felt.

Home birth

Women who gave birth at home were overwhelmingly positive about their birth experience. Most of their comfort and support needs were met and they had considerable control over how they spent their labour. The atmosphere was friendly, they felt secure and uninhibited, and their personal needs were the main focus of attention.

I had a home birth and, although I have nothing to compare the experience with, I felt relaxed and in control in my own environment, which in turn made labour easier to bear and ensured I had the experience I wanted. I know that in hospital I would have felt less at ease and been less likely to cope with the labour. [Cheltenham woman who had a vaginal birth at home]

It was home – my private space. Other people there were visitors invited in, so I controlled the physical space. There was space for everything I needed without being cramped. [Bristol woman who had a vaginal birth at home]

Some women felt that giving birth at home was profoundly different from birth in hospital. One woman described how she found reserves within herself to cope with labour because of the supportive environment at home. She emphasised how being at home helped her and her partner adjust to life as new parents. She also appreciated not having to transfer home after the birth (see Box 2).

Box 2: One woman's home birth experience

I recently gave birth to my first child, Henry. He was born at home and although the labour was hard, the effect of the home birth was huge. Compared to all my friends who had hospital births, I was so well adjusted afterwards. But most of all Henry was such a relaxed, happy baby. There was no transition or change on bringing him home. We all spent the first night together. I did not have 101 experts giving their advice.

It is so easy to ask for help and advice but I didn't have the opportunity which I strongly believe was a good thing. The midwife who delivered Henry visited each day for the next week and would have been at the end of a telephone should I have needed her, so I was by no means 'cut off', just left to settle into motherhood at my own pace and in my own manner.

One of the most memorable parts of the day was after everyone had left. (There were two midwives and one student). The three of us were sat on the sofa and Mike said 'so what would you like for tea?'!!! To think what all my friends went through when their husbands had to go home, just makes me feel sad for them.

I strongly believe that the physical environment makes a huge difference to not only the birth, but the first few months too. With reference to the actual birth, I think the differences between a home and hospital birth are almost immeasurable. There were no drugs available other than gas and air so there was never an option to ask for anything. But on the other hand, because I was in my own home environment the thoughts of serious intervention never crossed my mind. Everything was so relaxed and friendly! The pain I felt seemed almost more acceptable because I was at home. I know that if I was in hospital with such an unknown environment, experiencing such an unknown pain, I would have been demanding huge needles and paralysis.

[woman from Ascot]

Midwife-led units

Midwife-led units appear to be growing in number across the United Kingdom. Some freestanding units have previously been GP-led units, some have been set up when a hospital unit on the same site has been closed, and a few birth centres have been established 'from scratch' to provide a homely environment to facilitate straightforward birth. Birth centres that are more home-like than conventional hospital labour wards are associated with fewer medical interventions and greater satisfaction with care. One woman commented:

I started in a midwife-led unit, but unfortunately had to be transferred. I am convinced I would have had a caesarean if I had started off in the consultant-led unit, due to posterior positioning. [Gloucester woman who had a vaginal birth at a hospital unit]

Women are more likely to have access to facilities that they value and find useful for coping with labour at home and in midwife-led units compared with hospital units. For example, women who gave birth in a midwife-led unit often commented on the value of the labour aids provided.

There was an exercise ball which I found invaluable for support, plenty of floor space and mats to move around easily as I laboured on the floor. There was an en suite toilet and shower which was great as I spent some time during the second stage on the loo. [Berkshire woman who gave birth in a midwife-led unit alongside hospital]

The only way I managed to have such a positive birth experience was by being totally focused on what I was doing (ie managing pain through breathing etc.) If anything distracts you (eg other external factors) this is less achievable. The room was large and spacious, so I was able to move about freely and change positions. There were various different seating / squatting / lying options available (eg bean bags, mats, chairs, tables, beds). There was calm music playing, calm colours and calm lighting. The midwives had a very personal, flexible approach – I led, the midwives followed. [West Country woman who gave birth in a midwife-led unit]

Women using midwife-led units or freestanding birth centres also commented about feeling well supported and in control:

Being allowed to trust my instincts about where I wanted to be and when I wanted to push was important. Nobody was shouting push, push, push. I had a midwife with me throughout labour. I needed the comfort and support of a caring and qualified female presence. I knew that the birth centre was next to the hospital if I needed to go there in an emergency of if I couldn't cope, but I knew that I was in control and it was far enough away for nobody to interfere. [Kent woman who had a vaginal birth at a freestanding birth centre]

Control is a vital part of coping with labour. If you are in an environment over which you have little or no control it will affect how you feel mentally and, therefore, how you cope physically. [Somerset woman who had a vaginal birth at a midwife-led unit]

This sense of control was sometimes enhanced by already having a relationship with the midwife caring for them in labour.

^{12.} The National Childbirth Trust. Reconfiguring Maternity Services – Views of User Representatives. The National Childbirth Trust: London; 2003.

^{13.} Hodnett ED. Home-like versus conventional institutional settings for birth. In: *The Cochrane Library, 2.* Oxford: Update Software; 2001.

Hospital maternity units

Some women were positive about giving birth in hospital, particularly when they felt that their needs were met by a midwife or doctor. Women appreciated it when they already knew the staff caring for them, or when they received continuous support.

I spent as long as possible at home. I am convinced that made me feel a greater sense of control and confidence. In the unit, the gas and air tubing was very difficult to access and use, everything was covered in plastic and the window didn't open, so it was too hot. But the physical environment was far less important to me than the midwife staff, consultants and special care unit staff. All were exceptional. [woman from Sheffield]

One woman whose baby son died before birth described how care from staff and the hospital 'SANDS room' made the experience easier to bear.

I was induced after my baby died at 36 weeks. The induction was very painful but once labour was established everything was fine. It was a traumatic but peaceful experience. I had a double bed so I could rest with my husband and feel close and secure. There was a reclining chair for my mum so she could stay with me. The en suite bathroom ensured privacy. The room was pleasantly decorated with pictures, curtains, and a duvet set which helped us relax.

Resuscitation equipment was more likely to be visible in hospital units, which was highly valued by 11% of women (see Table 1). No doubt additional numbers of women felt secure being in hospital where obstetric and neonatal services were available on site. But women who gave birth in hospital were more likely to be critical of the environment in which they gave birth than other women. In particular, women who gave birth in hospital were more likely to comment on the stark clinical atmosphere (27% versus 18% other women); being unable to dim harsh lighting (12% versus 9% other women), and having a hard uncomfortable bed, or one that could not be adjusted into different positions (22% versus 19% other women).

Women using hospital units were less likely to be able to access the facilities they wanted, particularly if these were facilities which tend to be restricted to use for 'low-risk' women only. This means that women with more complex pregnancies and additional support needs - who usually arrange to have their baby in hospital - often miss out in terms of comfort aids and the chance to feel in control. Also, healthy women with a normal pregnancy who use hospitals tend to have less access to facilities which they might find helpful in labour, including birthing pools, birth balls, or wall bars. Many first-time mothers have never heard about the advantages of trying immersion in warm water, or rhythmic movement and upright postures to help them cope with contractions.

It was important to have a pool. I wanted a water birth but this was just not available or possible at my nearest hospital. We were told we could hire one privately, but no one would help my husband fill it with water at the hospital. [Somerset woman who gave birth in a hospital unit]

Being stuck on the bed with the monitor, I found it very difficult to manage contractions. I don't feel I had any control over my birth experience, it was a terribly lonely day where I tried the best I could, but I felt there was nobody who listened to my needs or gave me support. [Northumberland woman who had an emergency caesarean]

In summary, women who gave birth at home or in midwife-led units were more likely than women who gave birth in hospital to have access to facilities that they valued and that helped achieve the kind of labour they wanted. Many of the deficiencies in the birth environment in hospital units could be addressed by more woman-centred designs and building specifications.

8. Does the environment influence the birth?

The place where a woman gives birth can affect how relaxed, confident, and in control she feels. These factors, and others, may influence the pattern and progress of labour, affecting both the number of vaginal births without major interventions and the rate of emergency caesarean sections. In our survey, women who had a vaginal birth were more likely than women who had an emergency caesarean to have experienced facilities that they felt were important (see Table 3). Women who had emergency caesarean sections were less likely than those having a vaginal birth to have had access to 21 out of 23 important environmental factors.

For example, women who had an emergency caesarean section were more likely to say that their opportunities to move around freely had been restricted. Less than half of women who had an emergency caesarean were able to walk around as much as they wanted compared with 70% of women who had a vaginal birth. Women who had a caesarean section were also less likely to have had a pleasant place to walk.

Women who had an emergency caesarean were more likely to have been overlooked by other people while in labour and less able to control who came into their room. They were also less likely to have had pillows, mats, or other comfort aids. They were less able to control the temperature and lighting in the room and less likely to have access to a birthing pool or bath. The chances of having a comfortable bed, a nicely decorated room, or access to a clock were also more limited.

Table 3: Differences in access to important features of the birth environment

	All women		Women w birth in h		
	% vaginal birth (n = 1652)	% emerg c-section (n = 292)	% vaginal birth (n = 929)	% emerg c-section (n = 211)	
Clean room	90*	86	89	86	
Not in sight of or overlooked by others	85*	77	86	77	
Able to walk around as much as I liked	74*	45	69*	47	
Able to stay in same room throughout	81*	57	78	57	
Comfortable chair for my birth partner(s)	64*	51	60*	52	
Easy access to a toilet	68*	58	64	59	
Able to control who came into room	43*	23	33*	23	
Bean bags, pillows and mats to use	45*	24	37*	24	
Able to hear other women giving birth	41*	49	47	49	
Able to control the brightness of the light	53*	35	45	35	
Easy access to snacks and drinks	44*	25	34*	25	
Room looked homely (not like hospital)	39*	20	28*	21	
Able to control temperature to my liking	38*	17	28*	17	
Easy access to a bath	62*	47	55*	47	
Sure others could not hear me	39	37	35	37	
Access to a pleasant place to walk	36*	17	26*	16	
Easy access to a shower	56*	42	51*	41	
Easy access to a birth pool	47*	34	46*	34	
Able to move the furniture around to suit	42*	28	33	28	
Nicely decorated room	62*	44	55*	44	
Clock easily in view	74*	66	75*	66	
Comfortable bed	70*	57	67*	57	
Able to see resuscitation / other equipt	64*	77	72	76	

Note: Figures are the proportion of women who said they had experienced each factor during their most recent labour. Differences marked * are statistically significant using the chi-square test (p < 0.05).

What makes a difference?

These findings suggest that the environment in which women spend their labour affects their birth outcome. It is unlikely that facilities alone, or lack of them, are the only factors at play. It seems probable that in settings where the facilities meet parents' needs, the attitudes and support from midwives and other staff may also differ. Green and colleagues found that women's expectations influence both what happens during labour and how they feel about their experience. They suggest that positive expectations are associated with positive experiences and that women's satisfaction is strongly related to a sense of being in control and, in particular, being able to control panic. It seems that controlling anxiety and panic are more important than reducing pain, because many women can tolerate pain provided they do not feel in a panic. Thus, a combination of low expectations, poor facilities, limited staff support, and a sense of panic puts women at a disadvantage. This may increase their need for pharmacological pain relief and other interventions, reducing their opportunity for a straightforward vaginal birth and increasing the chance that they will have an emergency caesarean section.

Improving the physical environment, increasing women's expectations and confidence through antenatal support and preparation, and increasing their sense of being supported and in control during labour could make a significant difference to the number of women who achieve the kind of birth they want, decreasing the need for emergency surgery. A recent systematic review found that supportive care from birth companions and hospital staff 'may enhance normal labour processes and thus reduce the need for obstetric intervention'. Women who received continuous labour support were 'less likely to use pain medications, and were more likely to be satisfied and to give birth 'spontaneously' (with neither caesarean, nor vacuum, nor forceps)'. Interestingly, in general, labour support was more effective when provided by a woman who was not part of the hospital staff. The reviewers could not explain why this is so, but they put forward some factors that may be influential.

Divided loyalties, additional duties besides labour support, self-selection, and the constraints of institutional policies and routine practices may all have played a role. Childbirth environments influence the health care professionals who work in them as well as the women who labour and give birth in them.¹⁶

Thus, there is growing evidence that the attitudes and behaviour of staff are linked to the culture and demands of the institution in which they work, and there may be a range of constraints and disincentives preventing more effective support of women. As yet, it is not clear to what extent staff attitudes and behaviour impact on, or are influenced by, the design of rooms and the facilities provided, or whether these are largely independent of one another. Further work is needed on the relationship between facilities, care, and labour outcomes.

NHS trusts, and primary care trusts with responsibility for commissioning maternity services, should ensure that:

- facilities in birth rooms and opportunities for control are improved, and that associations between the physical environment and caesarean section rates are investigated;
- women have every opportunity to ease the pain of contractions without using a morphinebased drug or an epidural as a first resort because pharmacological methods of pain relief carry additional risks and adverse effects for the baby and for the mother;
- there is training available, with on-going mentoring and encouragement, for midwifery and medical staff, tailored to the specific needs of students, the newly qualified, and experienced staff.

^{14.} Green JM, Coupland VA, Kitzinger JV. *Great expectations: a prospective study of women's expectations and experiences of childbirth.* Hale, Cheshire: Books for Midwives; 1998.

^{15.} Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth (Cochrane Review). In: *The Cochrane Library 3.* Oxford: Update Software; 2003.

^{16.} ibid, page 12 of 15 (electronic version)

9. Improving facilities

During labour women may be uniquely vulnerable to environmental influences; modern obstetric care frequently subjects women to institutional routines, high rates of intervention, unfamiliar personnel, lack of privacy, and other conditions that may be experienced as harsh. These conditions may have an adverse effect on the progress of labour and on the development of feelings of competence and confidence; this may in turn impair adjustment to parenthood and establishment of breastfeeding, and increase the risk of depression.¹⁷

Changes are needed in labour and delivery room design, in the way rooms are furnished and maintained, and in the support provided by staff. New building specifications and more woman-centred designs could improve the physical environment in hospitals and midwife-led units significantly. This section outlines the practical implications of our findings.

During labour, women's bodies need to soften and open to let the baby be born. They need to feel safe and secure, be protected from disturbances and adverse stimulation, and be able to relax in order to let their body work most effectively. Labour rooms which are hard and cold, too hot, or open to uninvited visitors do not facilitate straightforward birth. Nor do environments that leave women and their partners feeling isolated or unsupported. Relaxing surroundings, deep baths, soft pillows, comfortable sofas, and pleasant views may make all the difference, helping women to tune into their body's needs.

Design standards

Quality standards should be set for the design of birth rooms. These standards should ensure that women are able to be as comfortable and relaxed as possible throughout labour, that their movement is not restricted, that they can control the heating and lighting, and that they do not feel exposed when someone enters the room. Some of these standards could be implemented through refurbishing existing units. Many units have been upgrading their toilet and bathroom facilities using additional capital funding announced by Alan Milburn, when Secretary of State for Health. ¹⁹ Currently, many services are being reconfigured and a large rebuilding programme is in progress. This provides further opportunities to plan maternity units around the needs of women and their families. Building standards are needed to ensure that labour rooms include:

- an en suite toilet,
- an en suite shower,
- access to a birthing pool for all women who would like to try immersion in water,
- sufficient space for moving around,
- sufficient space to allow the bed to be moved to one side or out of the room to accommodate
 mats and cushions on the floor or a fixed raised birth platform,
- access to a pleasant space to walk around, such as a secluded garden or indoor room with plants and water features,
- access to fresh air and an attractive view,
- variable heating and air conditioning which women can control,

^{17.} ibid, page 2 of 15 (electronic version)

^{18.} Anderson T. Out of the laboratory and back to the darkened room. MIDIRS Midwifery Digest 2002; 12: 65-9.

^{19.} Speech at The Royal College of Midwives Annual Conference, 2 May 2001.

- variable lighting designed to create a soft, calming atmosphere,
- sound insulation to reduce the volume of noise heard between rooms,
- fixed wall bars and ledges at different heights to provide places where women can support themselves in different positions, and
- minimal disruption in labour and afterwards, perhaps with combined labour, delivery and postnatal care rooms.

In addition, adjustable under-floor heating or soft floor coverings should be available so that women who like to spend time on their hands and knees do not feel cold and uncomfortable.

It is important that delivery suite managers reconsider how space is used, and whether women can be afforded greater privacy and control. Information about the facilities available in different units should be readily available to women so that they can make an informed choice about where they would prefer to give birth. First-time mothers, in particular, may have limited understanding of the range of options available and the advantages of labour aids for encouraging the kind of birth they want. Women need opportunities to see facilities before labour and should be encouraged to try less well-known methods of coping with pain in labour.

Furnishing and maintenance

The way labour and delivery rooms are furnished and maintained makes a crucial difference to women's experiences. Many improvements could be made to help women have the type of birth they want without major additional expense. Ideally, this would be done in conjunction with meeting standards for the design of the building. However, units without a major refurbishment programme can make a difference to what is available in terms of cleanliness, furnishing, and décor without a lot of capital expenditure.

All women should have access to:

- a clean room and clean bathroom facilities,
- soft, washable mats so that the floor can be used for different birthing positions,
- a generous supply of pillows, bean bags, and a birth ball,
- a duvet, blankets, clean sheets, towels, and gowns,
- at least one, preferably two, comfortable chairs or a sofa-bed so that both the woman and her partner or any other birth companion can rest comfortably,
- a wide, comfortable, and adjustable bed which is not the central focus of the room,
- a CD player, television or other distractions,
- tea and coffee making facilities and a mini-fridge in the room, or access to a kitchen or drink and snack machine close by,
- furniture or wall bars at different heights to enable women to support themselves in different positions,
- encouragement to move the furniture to suit their needs,
- help to set up and fill a portable birth pool if a plumbed in pool is not available,
- a waterproof pillow for use in the birth pool,

- a curtain or screen to shield the door, and consideration of locks if the unit cannot implement a policy of knocking and awaiting an invitation to enter,
- a fan,
- a table lamp if dimmable lighting is not available,
- storage facilities and a place to put drinks, photographs, aromatherapy oils and so on,
- colour coordinated decoration and soft furnishings to provide a homely feel,
- pictures or mounted posters, and
- books, magazines and games, including some activities for children.

Women and their companions should be actively encouraged to move furniture to meet their needs. This would not only ensure that women's preferences are met, but also that they feel more in control of the birthing environment. For example, although some women like a clock in easy view, others find this distracting or off-putting. Staff should encourage women to cover or remove clocks if they wish. Staff can also assist by making suggestions about what other women have found helpful, and being flexible and responsive to parents' ideas. For example, staff should help women and their companions move beds and chairs, and allow mattresses to be placed on the floor if desired.

Photographs

Women need sustained emotional support throughout labour, as well as appropriate equipment. The photographs on pages 15-18 of this report show the kinds of positions women may want to adopt at different stages of labour.

Many women feel inhibited in hospital, especially if they believe that spontaneous behaviour might be frowned upon. Women need to feel that midwifery and medical staff will encourage them to try a range of positions, immersion in water, and soothing movements to ease the pain. The NCT believes that if women feel supported to try these techniques, they may have more positive expectations of labour, as well as feeling more relaxed and confident to move around freely. The layout and design of the room and surrounding space may signal the culture of the maternity unit and attitudes of staff. Floor mats, a birth ball, a birth pool, wall bars and so on indicate that women have 'permission', and are encouraged, to move around, stay off the bed, and to find support in other ways. Birth positions posters and photographs of a range of different women in labour and giving birth, such as the photographs included in the centre of this report, may also help to signal that the staff support spontaneous birth with a minimum of interventions.

10. Conclusions

Many factors influence women's experiences of giving birth. The physical environment is one important factor that has tended to be neglected. Other crucial factors that play a major part in women's experience of labour such as staff attitudes, midwifery care, and continuity of support have been more extensively researched.

The results of our survey can be summarised as follows:

- Women believe the birth environment can affect the ease or difficulty of labour.
- Women have clear preferences about the kind of environment, facilities, and control they need for maximum comfort and support during labour.
- The birth environment in maternity units, particularly in hospital units, often falls short of meeting women's needs,
- The facilities provided or withheld may influence opportunities for a vaginal birth or the risk of needing emergency surgery.

Women who participated in our survey said that having a clean room, being able to move around freely, and having comfortable furniture for themselves and companions were high priorities. Women also wanted to be able to control the heating and lighting and to control who came into their room during labour. They would prefer not to have to move out of their own private space once labour is established, finding it disruptive, inhibiting, and uncomfortable to have to walk along corridors to the toilet, to a separate delivery room, or to use a birthing pool.

Women who gave birth at home or in a birth centre separate from hospital were more likely to have access to the facilities they valued compared with women who gave birth in hospital. These women felt that their birth environment helped to encourage the type of birth that they wanted. Women who had an emergency caesarean were more likely than women who had a vaginal birth to have limited access to facilities. They also felt less in control of their environment. While this is not a controlled study, this relationship between the birth environment and emergency intervention merits further investigation.

Women need both a supportive physical environment and sympathetic care from staff. Neither is sufficient on its own, though both factors can go a long way to empowering women to give birth as they want to. If the physical environment and facilities provided demonstrate an understanding of and respect for women's needs in labour, this may encourage staff to respond to women in a more supportive way. If the physical environment provides no comfort, aesthetic qualities, natural light or air, space or pleasant places to walk, and little privacy or control, this may discourage staff from seeing women in labour as individuals whose physical, emotional, social, and spiritual needs should be met.

In order for all women to be able to give birth with dignity, and have every opportunity to experience a straightforward vaginal birth, action should be taken to improve the physical environment and to ensure that midwives and doctors provide individualised care and support.

Appendix 1: Creating a better birth environment questionnaire

The NCT wants all parents to have an experience of pregnancy, birth and early parenthood that enriches their lives and gives them confidence in being a parent. We are working to improve labour and delivery rooms in the United Kingdom. We are interested in what labour and birth rooms look like, what equipment is available, and the noise level, temperature and lighting. If you have had a baby during the **last five years** please help us influence how maternity units are designed in future. If you have **been in labour**, you can help us by completing the questionnaire.

How important is the birth environment?

First, we would like to know how important you think the birth environment is and what parts of the birth surroundings you feel are most significant.

Some people think that your surroundings commay make your labour seem harder or more your labour seem more manageable and strate environment can affect how easy or difficult your labour.	complicated. Som aightforward. Do yo	e environme	ents may make	
2. Why do you say that?	No, strongly disagree No, disagree Yes, agree Yes, strongly agree Yes, strongly agree			
3. During labour how important do you think it i	is to			
be able to control the temperature be able to control the brightness of the light be able to walk around have a pleasant place to walk have a hospital bed have a divan bed have an ensuite bath have an ensuite shower have an ensuite toilet have a birth pool have a clock easily in view have easy access to snacks and drinks have comfortable chair for birth partner(s) be able to control who comes into the room be unable to hear other women giving birth be sure others could not hear you not be in sight of or overlooked by others have bean bags, pillows and mats to use be in a room that looks homely be able to see resuscitation equipment know resuscitation equip is near, but not see have a room you feel is clean be in a nicely decorated room be able to move the furniture to suit you be able to stay in the same room	low importance	medium	high importance	

4. If you were designing a room for labour and /or birth what would it include?

Your most recent experience of giving birth

5. Now we would like you to tell us a little about the environment where you **last gave birth**. (If you used more than one room during labour and birth, please provide details about the room in which you spent the longest period of time).

	strongly disagree	disagree	agree	strongly agree
I was able to control the temperature to my liking I was able to control the brightness of the light I was able to walk around as much as I liked I had access to a pleasant place to walk I had a comfortable bed I had easy access to a bath I had easy access to a shower I had easy access to a birth pool I had easy access to a birth pool I had easy access to a toilet There was a clock easily in view I had easy access to snacks and drinks There was a comfortable chair for birth partner(s) I could control who was coming into the room I was able to hear other women giving birth I was sure others could not hear me I was not in sight of or overlooked by others I had bean bags, pillows and mats to use I was in room that looked homely I was able to see resuscitation and other equip I had a clean room I had a nicely decorated room I was able to move the furniture to suit me I was able to stay in the same room throughout 6. What, if any, physical aspects of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the room whe encouraging the type of birth you wanted? (list up to the property of the property of the room whe encouraging the type of birth you wanted? (list up to the property of			find helpf	ful for
a.				
b.				
c.				
7. What, if any, physical aspects of the room did y birth you wanted? (list up to three factors)	ou find unhe l	pful for end	couraging	the type o
a.				
b.				
c.				

Other important factors

but using one will save NCT money.

8. Apart from your physical surroundings, (list up to three factors)	what other factors had a positive effect on	the birth?
a.		
b.		
C.		
Apart from your physical surroundings, (list up to three factors)	what other factors had a negative effect on	the birth?
a.		
b.		
C.		
Other information about your most rec	cent birth	
10. When did you last give birth?	1998-1999	3 🗌
11. What sort of birth did you have?	Vaginal birth Emergency caesarean Other (please explain)	
12. Where was your baby born?	Home Midwife-led unit separate from hospital Midwife-led unit / centre on site of hospital Obstetrician & midwife-led hospital unit Don't know Other (please explain)	
13. If you would like to add any other comsheet:	nments, please feel free to do so below or on a	separate
win £50 worth of NCT Maternity Sale	nnaire. If you would like to be entered in the es catalogue vouchers, please insert your o identify your responses or for any other	contact
Name		
Address		
ongoing campaigning for women and t	these questions. Your answers will help to gheir families. Please return this form to The London W3 6BR by 21st March . No stamp is	National

Appendix 2: Helpful and unhelpful aspects of the labour room

1436 women listed up to three physical aspects of the labour room that they felt helped them have the type of birth they wanted. These were grouped into common themes:

- Space for walking / moving around (26%)
- Birthing pool / large bath (21%)
- En suite toilet / bathroom (20%)
- Height adjustable / comfortable bed (18%)
- Dimmer switch / low lights / adjustable lighting (17%)
- Privacy / quiet (15%)
- Homely atmosphere (12%)
- Windows / view (11%)
- Music centre / stereo / CD player (11%)
- Sink / kitchen / food (11%)
- Bean bags / floor mats to lie / kneel on (10%)
- Equipment on hand if needed, including 'gas and air' (9%)
- Birthing stool / ball (8%)
- Nicely decorated (7%)
- Good temperature / could control temperature (5%)
- Clean (5%)
- Comfortable place / seat for birth partner (5%)
- Rocking chair / useful chair (4%)
- Television (4%)
- Rail to lean on / something to lean on / hold on to (3%)
- Equipment / bed tucked away so not the focus / can't see it (2%)
- Curtain / door so people can't see in / knock before entering (2%)
- Clock in sight (2%)
- Clean floor (1%)

1326 women listed up to three physical aspects of the room where they laboured that they felt were unhelpful for promoting the type of birth they wanted. These were grouped into themes:

- Clinical / 'hospital room' atmosphere (24%)
- Small room / little space (22%)
- Hard / uncomfortable bed / not adjustable / in wrong place (21%)
- Lack of privacy eg having door open or being able to be heard / hear others (18%)
- Toilet was out of room / down corridor (15%)
- Poor temperature: too hot / stuffy, too cold or no control (15%)
- No bean bags, stools, cushions or other aids (12%)
- Bright / harsh lighting / unable to dim (11%)
- Birth pool in use / no birth pool (11%)
- No chair / uncomfortable chair for partner (9%)
- Dirty / not as clean as would like (7%)
- No place to walk (7%)
- Forced to stay in bed because of monitoring or short gas / air cords (7%)
- No mat on floor / hard floor (6%)
- No shower / bath in room (6%)
- Couldn't move furniture (4%)
- Clock in wrong place / clearly visible (3%)
- Unpleasant / bright / sterile colours (3%)
- No access to snacks / drinks (3%)
- No bed / resting space for partner during and after birth (3%)
- No music / TV /distractions (3%)
- No view / poor view / no window (2%)
- No storage / place for putting personal things (1%)

Appendix 3: Do women get what they need?

Comparing women's top 10 preferences with their experiences during labour

	% said factor of high importance	% of total said had factor in last labour	% whose experience did not meet their needs
Clean room	92	89	11
Not in sight of or overlooked by others	89	84	16
Able to stay in same room throughout labour	82	76	19
Able to walk around	89	69	30
Easy access to toilet	70	66	35
Not able to hear other women giving birth	64	58	37
Comfortable chair for birth partner(s)	72	61	42
Able to control the brightness of the light	56	50	44
Able to control who comes into the room	69	40	55
Bean bags, pillows and mats	65	42	52
Easy access to snacks and drinks	53	41	56
Room that looks homely, not like hospital	52	37	54
Easy access to bath	50	60	37
Able to control the temperature	49	35	62
Sure others could not hear	48	39	58
Easy access to shower	43	54	40
Able to move furniture around to suit you	42	40	47
Have a pleasant place to walk	47	34	61
Birth pool	37	46	43
Nicely decorated room	35	59	39
Clock easily in view	32	72	20
Able to see resuscitation / other equipment	11	66	18

Note: The "% whose experience did not meet their needs" column represents the proportion of women who thought that a factor was highly important who did not experience that factor during their last labour. Factors are listed in stated order of importance to women.

Appendix 4: Examples of women's suggestions about birth rooms

A comfortable room with lots of things to look at (pictures, photos etc) with en suite facilities and a good window. A decent, preferably reclining, chair for the partner and possibly a fridge for snacks and drinks brought from home. [woman from Glasgow]

Subdued lighting, lots of pillows and soft furnishings to kneel on / lie on, no-one looking into room, allowed to bring music in with favourite tunes, maybe plants and the look of a home environment. [woman from Derry]

En suite toilet and either a shower or bath, birthing pool nearby (or ideally the ability to select a room with a birthing pool if this was deemed feasible), soft lighting, ability to play own music, not hear others in labour, and have somewhere to walk, preferably with a nice view or something to distract you. [woman from Cardiff]

Lots of space, somewhere for the labouring woman to sit other than the bed, not have the bed as the focal point of the room – should be encouraged to give birth in a better position than on your back, en suite loo at the least, separate from the ward so the partner wouldn't be sent home. [woman from Durham]

Natural light, bean bags / cushions. Armchairs, high backed chair to lean on, access to a pool (bath if not possible), shower and toilet, fresh air, CD player, gentle lighting, telephone, something to lay on, plants, a fridge or cool box, enough space to avoid claustrophobia, easy access to important equipment, though not as focal point in birthing room, access to a garden. [woman from Bradford]

Dimmer switch, stereo, double bed, en suite bathroom with bath, large window, great views, TV, access to phone, drinks and snacks, tastefully decorated in calming colours, spacious airy, light, quiet and welcoming. [woman from London]

Bean bags, cushions, chair(s) to lean / sit on and move as necessary, windows, pictures on walls, television, stereo, comfy bed. [location unknown]

En suite toilet. Comfy chair for my birth partner. Comfy bed for me. Birth pool and lots of pillows to kneel on. It is nice if the room feels homely with dim lighting and a calm quiet atmosphere. [woman from Suffolk]

(Birth) balls, stereo, fan, tap for water, natural light. [woman from Kent]

Mat on the floor, 'dance bar' on the wall to hold on to. [woman from Berkshire]

A large birth pool; temperature, sound and lighting controls; en suite facilities; wall murals (calming landscape scenery); cupboards; sink etc. for medical equipment; a large double bed. [woman from Surrey]

