

Evidence Review to Support the National Maternity Review 2015

Report 4:

**A systematic review and narrative synthesis of the
quantitative and qualitative literature on women's birth place
preferences and experiences of choosing their intended place
of birth in the UK**

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1. Introduction

The most recent update of the NICE Guideline for Intrapartum Care (National Collaborating Centre for Women's and Children's Health 2014) recommends that healthy women with straightforward pregnancies should be free to choose the birth setting of their choice and that commissioners and providers should ensure that all four birth settings (home, freestanding midwifery unit (FMU), alongside midwifery unit (AMU) and obstetric unit (OU)) are available to all women. Partly in response to the new evidence that informed changes to the NICE guidance, the number of midwifery units, particularly AMUs, has increased substantially in recent years (Figure 1) and the proportion of women within a 30 minute drive of both a midwifery-led unit and an OU has also increased (from 59% in 2007 to 79% in 2013 (National Audit Office 2013)). Figure 2 shows geographical variations in travel times to an obstetric unit and midwifery-unit across England in 2013. Data from the National Maternity Survey also show an increase in the proportion of women reporting that they had a choice of birth place (Redshaw and Henderson 2015). However, despite the increased availability of access to alternative birth settings, the vast majority of women (87% in 2013) still give birth in an OU (National Audit Office 2013).

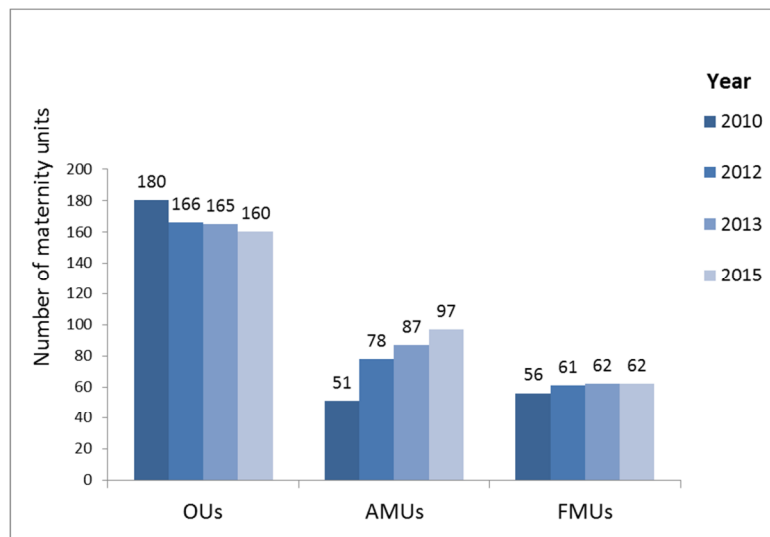


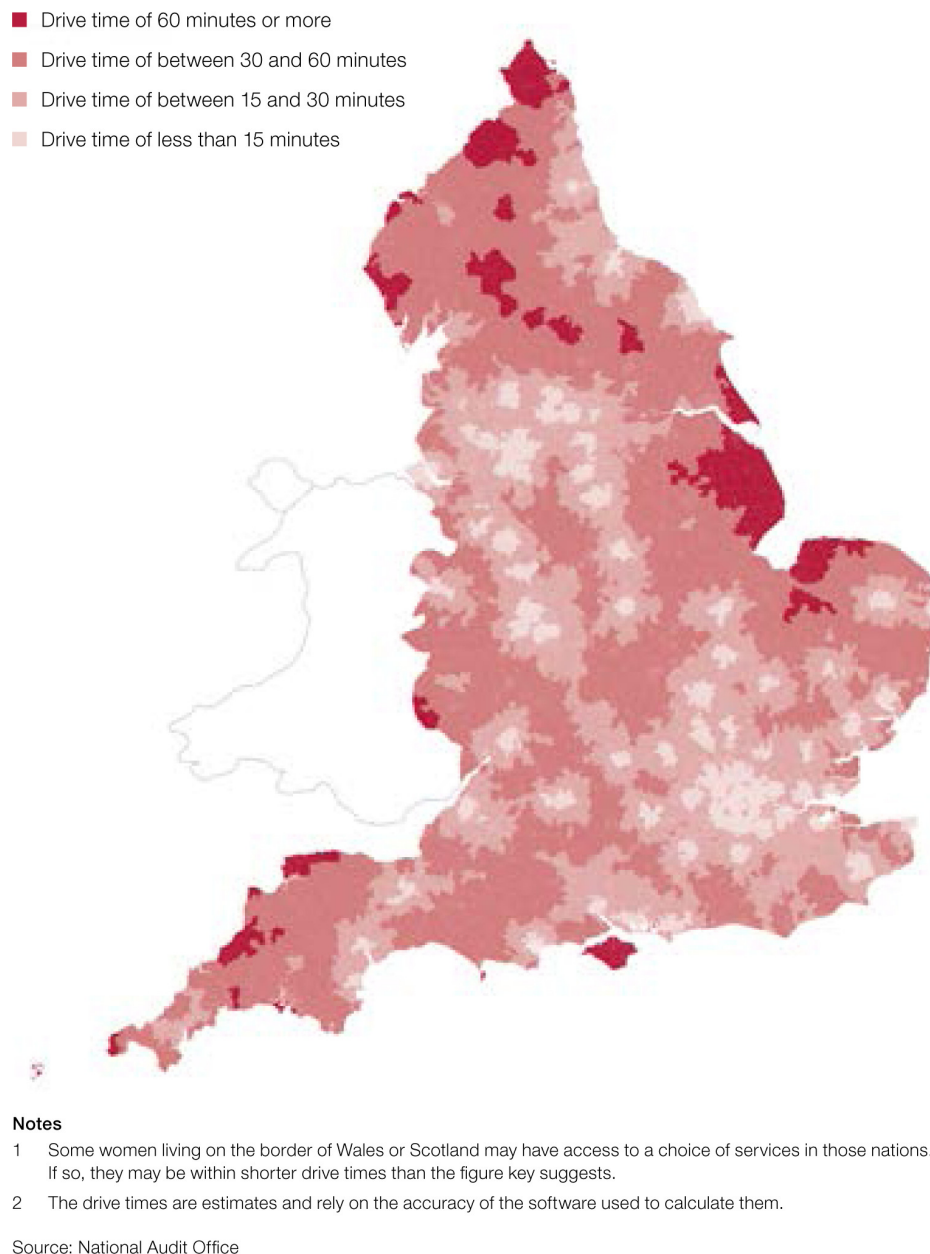
Figure 1: Number of maternity units in England, 2010 -2015

2. Review aims

The aim of this review was to systematically describe and synthesise the quantitative and qualitative evidence on women's birth place preferences and their experiences of finding out about and deciding where to give birth in the UK, with a particular focus on increasing our understanding of:

- the factors that are important to women when making a choice between different maternity units and between different birth settings; and
- the ways in which NHS services and staff support or restrict women's access to choice of planned place of birth.

Average drive times to both an obstetric and a midwifery-led unit, 2013



© National Audit Office. Source: National Audit Office (2013), p28. Reproduced with permission.

Figure 2: Average drive times to both an obstetric unit and a midwifery-led unit, 2013

This rapid review draws on work being conducted as part a broader systematic review and qualitative evidence synthesis which forms part of the ongoing Birthplace Choices project, funded by the Department of Health as part of the programme of work being carried out in the Policy Research Unit in Maternal Health and Care (PRU-MHC) based at the National Perinatal Epidemiology Unit (NPEU).

Fuller details and a more comprehensive analysis of the qualitative literature will be presented in future Birthplace Choices project publications.

3. Brief overview of review methods

3.1 Eligibility criteria and search strategy

We systematically searched major bibliographic databases and screened abstracts and/or full-text articles to identify study reports meeting the following eligibility criteria:

Type of report

- Primary research report, published in a scientific journal between January 1992 and February 2015, in English.

Study design

- Qualitative, quantitative or mixed methods studies including surveys and experimental stated preference studies.

Study population and setting

- 'Low risk' women who have used UK maternity services during pregnancy

Topic of research

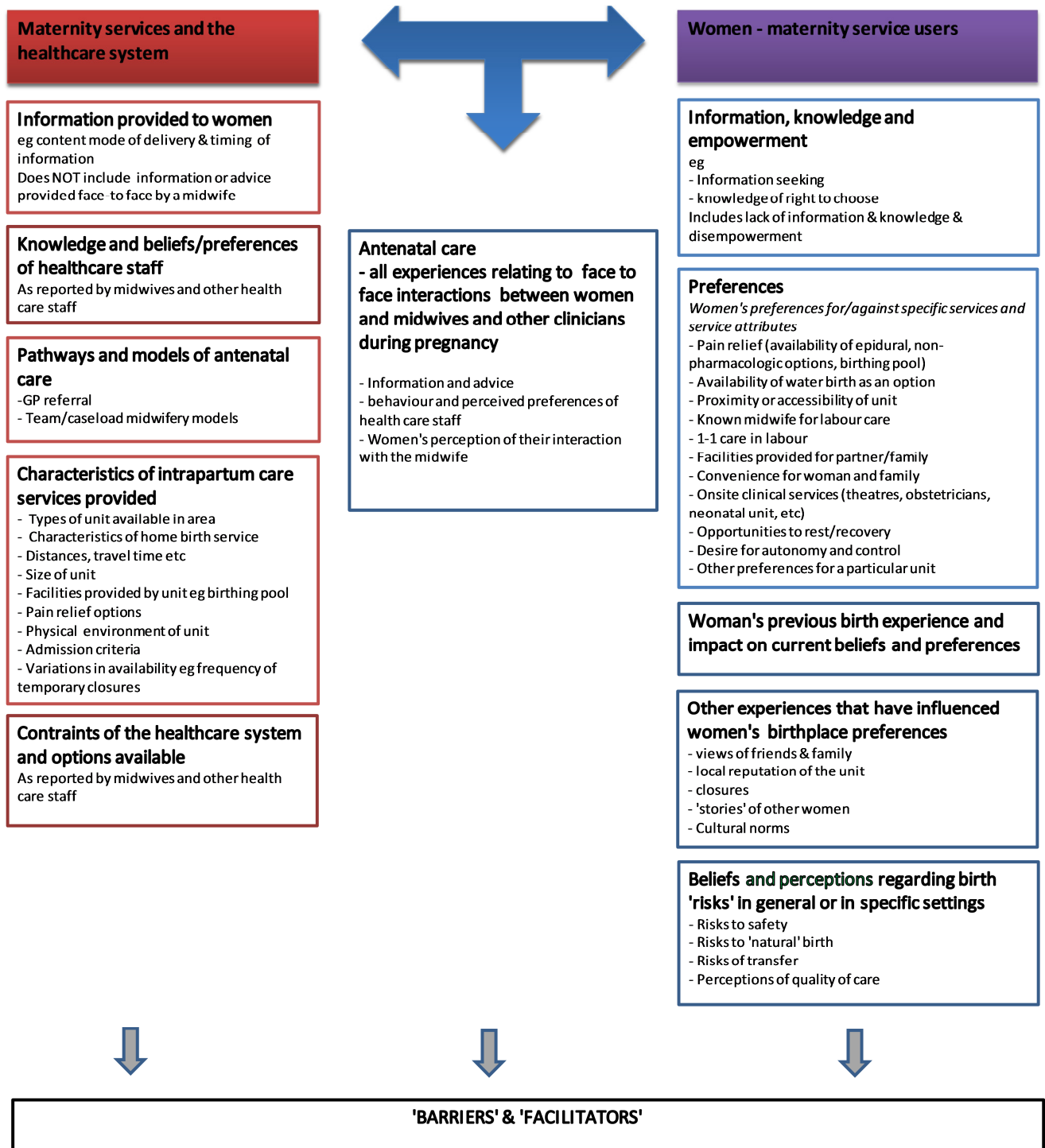
- Any aspects of women's beliefs, preferences, knowledge and experiences affecting their choice of place of birth during pregnancy, including issues relating to the availability of services and characteristics of maternity services and staff

Further details of the study methods are presented in Appendix 1

3.2 Synthesis methods

Quantitative and qualitative data were synthesised using a 'best fit' framework synthesis approach. This pragmatic, rapid and transparent approach to data synthesis uses an existing conceptual model as a starting point to identify *a priori* themes against which to code, map and organise data from included studies (Carroll, Booth et al. 2011, Dixon-Woods 2011, Carroll, Booth et al. 2013).

In this case, a search of the literature identified no pre-existing conceptual framework that accounted for the range of factors that influence decision-making and choice of birth place. We considered a range of models including a shared decision-making model (Charles, Gafni et al. 1997, Charles, Gafni et al. 1999) and Michie et al's behaviour change model (Michie, van Stralen et al. 2011). No existing model was found to apply fully to the range of elements of birth-place decisions. The best-fit model adopted for the synthesis was based on an 'access to care' model proposed by Khan and Bardhwaj (Khan and Bardhwaj 1994). The framework was developed by first adapting the original Khan model to make it applicable to the review topic and then testing and refining the model through discussion with user groups representing pregnant women and parents and with NHS stakeholders. Our final model is shown in Figure 3.



Model adapted from Khan A A & Bhardwaj S M (1994). Access to Health Care A Conceptual Framework and its Relevance to Health Care Planning.

Figure 3 Schematic model of access to choice of planned place of birth

The full model covers a wide range of possible influences on access, decision-making, preferences and other factors potentially influencing women's choices. For the purposes of this rapid review¹, we restricted our attention to the three elements of the framework to which NHS services could respond, or over which they could exert influence:

- Information, knowledge and empowerment
- Preferences
- Face-to face interactions between women and midwives and other clinicians during pregnancy

For the quantitative data, a summary of findings was prepared for each study covering each the following topics:

- Information, knowledge and empowerment
- The offer of choice and the decision-making process
- Stated preference
- Factors that women report influenced their choice of maternity unit or birth setting.

For the qualitative data, a summary of the findings was prepared for each study covering these two main headings, with the following sub-headings:

- Information and the offer of choice
 - Offer of choice
 - Information to facilitate decision-making
 - Interactions with health care professionals that facilitate or restrict choice
- Preferences
 - Continuity
 - Style of decision-making/autonomy
 - Environment/atmosphere
 - Pain relief and birthing pool
 - Fetal monitoring
 - Medical staff involvement/availability of specialist facilities
 - Transfer
 - Distance

A full qualitative synthesis encompassing all elements of the model in Figure 3 is in progress² and will be reported in due course. The findings presented here focus on the topics listed above.

Data for analysis consisted either of qualitative or quantitative findings reported by authors that were clearly supported by study data, or verbatim quotations from study participants. Material from discussion or conclusions sections was not included in the synthesis.

Where findings from the studies did not map onto themes from the framework, an inductive approach was used to create new themes to capture these data.

4. Results

Our search identified 3972 references including 2983 unique references. Following screening of titles and abstracts (n=2983), full-text screening of articles considered potentially eligible based on the

¹ The full framework is being used for the Birthplace Choices project qualitative synthesis.

² See <https://www.npeu.ox.ac.uk/birthplace/birthplace-choices-project>

abstract (n=71) and checking of reference lists of articles eligible for inclusion (see Appendix 1 for details) we identified a total of 32 eligible reports.

4.1. Overview of included studies

The 32 eligible reports included 14 reports of *quantitative* studies (surveys, experimental stated preference studies and mixed methods studies) of which four were linked reports:

- Two were linked reports of a single discrete choice experiment (Hundley, Ryan et al. 2001, Hundley and Ryan 2004). For the purposes of this synthesis we treat these two reports as separate studies since each addresses a different research question: one focuses on preferences while the other focuses on whether access to different services influences preferences.
- Two were linked reports of another discrete choice experiment (Longworth, Ratcliffe et al. 2001, Ratcliffe and Longworth 2002). The report by Ratcliffe focuses on methodology and does not report any findings that are not reported in the earlier report by Longworth. We therefore do not consider the Ratcliffe report further.

The following quantitative synthesis is therefore based on 13 studies, including two 'linked' studies based on the same study dataset.

We identified 24 eligible reports of *qualitative* studies, of which six were linked reports:

- Two are linked reports of data from a dataset generated from 41 prospective, longitudinal narrative interviews with women during pregnancy and up to 6-12 weeks following birth Coxon (2014) and Coxon (2015). For the purposes of this synthesis we treat these two reports as separate studies since each addresses a different research question: one focuses on women's experiences of deciding where to give birth, and the other focuses on women's experiences of pregnancy and birth on decisions about where to give birth in current and hypothetical future pregnancies.
- Two were linked reports of focus groups carried out to explore women's preferences for, and trade-offs between, attributes of intrapartum care (Pitchforth (2008) and Pitchforth (2009)). Pitchforth (2008) reports the findings of eight focus groups and a discrete choice experiment, while Pitchforth (2009) reports the findings of the same eight focus groups and an additional four focus groups. The findings of the discrete choice experiment in Pitchforth (2008) are reported with the quantitative reports, and the findings of the focus groups in both reports are reported with the qualitative studies. For the purposes of this synthesis, we treat these two reports as separate studies.
- Two were linked reports of interviews carried out with women who had had a home birth between three and five years previously. Ogden et al (1997 part 2) reports findings relating to their decisions to have a home birth, and Ogden et al (1997 part 3) reports the subsequent effects of the birth. For the purposes of this synthesis, we treat these two reports as separate studies.

Six of the reports related to mixed methods studies that reported relevant quantitative and qualitative findings (Hundley, Ryan et al. 2001, Hundley and Ryan 2004).

4.2. Characteristics of included quantitative studies

The included quantitative studies are described in in Table 1.

4.2.1. Study periods

Although over half of the quantitative studies were published after 2000, more than half of the studies had collected data in the 1990s (or earlier).

Data collection period	Studies
Pre-1991	One study (Robinson, Sim et al. 1993)
1991-1995	Two studies (Donaldson, Hundley et al. 1998, Emslie, Campbell et al. 1999)
1996-2000	Five studies, including the two linked studies by Hundley (Rennie, Hundley et al. 1998, Hundley, Ryan et al. 2001, Longworth, Ratcliffe et al. 2001, Watts, Fraser et al. 2003, Hundley and Ryan 2004)
2001 – 2005	Four studies (Lavender and Chapple 2005, Barber, Rogers et al. 2006, Barber, Rogers et al. 2007, Pitchforth, Watson et al. 2008)
2006-2010	One study (Rogers, Harman et al. 2011)

The most recent included study (Rogers, Harman et al. 2011) was carried out in 2009.

4.2.2. Study methods

All 13 quantitative studies involved questionnaire surveys.

Information on preferences was elicited in various ways:

- Fives studies used discrete choice or other experimental methods to explore women's preferences. In these studies, women indicated preferences for specific service attributes by making choices between hypothetical scenarios presented to them (Donaldson, Hundley et al. 1998, Hundley, Ryan et al. 2001, Longworth, Ratcliffe et al. 2001, Hundley and Ryan 2004, Pitchforth, Watson et al. 2008).
- Five studies (including two that included a discrete choice experiment) asked women to indicate what aspects of maternity services were important to them by rating the importance of specified services and attributes (Rennie, Hundley et al. 1998, Emslie, Campbell et al. 1999, Hundley, Ryan et al. 2001, Hundley and Ryan 2004, Lavender and Chapple 2005)
- Three studies reported women's reasons for choosing a specific unit or setting (Robinson, Sim et al. 1993, Watts, Fraser et al. 2003, Rogers, Harman et al. 2011); One study asked women to state what factors had affected their booking decision (Emslie, Campbell et al. 1999); and one study, in which women chose between hypothetical maternity units, reported the factors that women said influenced their hypothetical choice (Donaldson, Hundley et al. 1998).
- The two 'before' and 'after' studies reported changes in uptake of different birth settings ('expressed preferences') (Barber, Rogers et al. 2006, Barber, Rogers et al. 2007) and one of

the studies reported some incidental findings on factors considered important by women but did not fully describe how the information was elicited (Barber, Rogers et al. 2006).

4.2.3. Geographical areas and services provided in the study areas

Two studies provided a 'before and after' evaluation of an initiative in the Portsmouth and Southampton area in South England (Barber, Rogers et al. 2006, Barber, Rogers et al. 2007). Maternity services in the area include two OUs, both with attached AMUs and six FMUs.

Five studies (Donaldson, Hundley et al. 1998, Rennie, Hundley et al. 1998, Emslie, Campbell et al. 1999, Hundley, Ryan et al. 2001, Hundley and Ryan 2004) were conducted in the same region in Scotland (Grampian). Services in this area included an OU and AMU (in Aberdeen), an FMU around 35 miles away and a consultant-led unit without an epidural service approximately 65 miles from the main OU.

- Two of these studies used samples of women booking at the main OU/AMU (Donaldson, Hundley et al. 1998, Rennie, Hundley et al. 1998);
- One study recruited women resident in the catchment area of the FMU (Emslie, Campbell et al. 1999); and the two linked studies by Hundley (Hundley, Ryan et al. 2001, Hundley and Ryan 2004)) recruited women booking in three units (OU/AMU, FMU and OU without an epidural service).
- The 2001 paper by Hundley reports on responses from the overall sample (Hundley, Ryan et al. 2001), while the 2004 report compares findings in the three areas (Hundley and Ryan 2004).

One further Scottish study was conducted in remote and rural areas of Scotland where services were provided by small community hospitals (<300 births per year) with a mix of consultant-led units (some without neonatal services) and FMUs (Pitchforth, Watson et al. 2008).

Three studies were conducted in London (Robinson, Sim et al. 1993, Longworth, Ratcliffe et al. 2001, Rogers, Harman et al. 2011). In one of these, the local FMU had closed leaving a single under-utilised OU in the area (Robinson, Sim et al. 1993). In another, the evaluation was conducted in an area that was considering shutting its consultant-led unit and converting the local AMU to an FMU (Rogers, Harman et al. 2011). The third was a stated preference study conducted in areas with high home birth rates (Longworth, Ratcliffe et al. 2001).

One study was conducted in a small rural town in England where an FMU had recently opened on the site of an OU that had closed (Watts, Fraser et al. 2003).

One study assessing preferences was conducted in women recruited from a national sample of maternity units across England (Lavender and Chapple 2005).

4.2.4. Timing of data collection in pregnancy

Four studies (one survey (Emslie, Campbell et al. 1999) and three stated preference studies (Donaldson, Hundley et al. 1998, Hundley, Ryan et al. 2001, Hundley and Ryan 2004)) collected data from women early in pregnancy (around the time of booking); four studies collected data from samples of women in later pregnancy (Rennie, Hundley et al. 1998, Emslie, Campbell et al. 1999, Barber, Rogers et al. 2006, Barber, Rogers et al. 2007); one collected data in a cross-sectional sample

of pregnant women receiving antenatal care (Lavender and Chapple 2005); five collected data from samples of women postnatally (Robinson, Sim et al. 1993, Emslie, Campbell et al. 1999, Longworth, Ratcliffe et al. 2001, Watts, Fraser et al. 2003, Pitchforth, Watson et al. 2008); and one collected data in a mixed sample of pregnant and postnatal women (Rogers, Harman et al. 2011).

As described above, two of the studies collected data at multiple time points: Emslie collected data at 14 and 36 weeks gestation and again at 6 weeks after the birth, and used this to explore changing preferences over time (Emslie, Campbell et al. 1999); and Rennie collected data in late pregnancy with a follow-up postnatal survey, again to explore women's changing priorities (Rennie, Hundley et al. 1998).

4.2.5. Study context

It is important to note that preferences may be strongly influenced by the woman's expectations of the services that are available to her. Thus the context in which a study was conducted and the services available to women in the study sample are important to consider when interpreting findings. Several of the quantitative studies explicitly addressed preferences in specific groups of women:

- Two studies focussed on preferences and decisions amongst women who had access to an FMU (Emslie, Campbell et al. 1999, Watts, Fraser et al. 2003). In Emslie's study, participants were resident in the catchment area of an FMU; and the study by Watts focussed on women in a rural town where a consultant-led unit had closed and an FMU had opened.
- The study by Rogers was designed to evaluate whether current AMU users would consider birth in the unit if the attached OU closed and the unit became an FMU (Rogers, Harman et al. 2011).
- The study by Pitchforth examined women's preferences in remote and rural areas of North East Scotland. Study participants lived in areas served by small maternity units (FMUs and consultant-led units with <300 birth per annum) (Pitchforth, Watson et al. 2008).
- The study by Longworth explored and compared preferences in two groups of women: women booked for a home birth and 'low risk' women booked for a hospital birth (Longworth, Ratcliffe et al. 2001).
- The study by Robinson was designed to evaluate why women booked for birth outside a health area where only a single OU was available following the closure of an FMU in the area (Robinson, Sim et al. 1993).
- The two 'before' and 'after' studies' by Barber (Barber, Rogers et al. 2006, Barber, Rogers et al. 2007) were conducted in an area that provided women with a good choice of birth setting, including OUs, AMUs and multiple FMUs.

Only one study was carried out in a national sample. This recruited a cross-sectional sample of women from a purposive sample of maternity units selected to provide socioeconomic, ethnic and urban/rural diversity and a mixture of available birth settings (home, FMU, AMU, OU) (Lavender and Chapple 2005).

The remaining four studies were conducted in and around Aberdeen in Scotland:

- Two were conducted in women booking at the Aberdeen maternity hospital which contains both an OU and an AMU (Donaldson, Hundley et al. 1998, Rennie, Hundley et al. 1998). In Donaldson's study women were 'low risk' whereas Rennie appears to have included a sample irrespective of risk status.
- The two 'linked' studies by Hundley (Hundley, Ryan et al. 2001, Hundley and Ryan 2004) recruited 'low risk' women booking in three maternity hospitals: an OU/AMU (Aberdeen), an FMU 35 miles away and an OU without an epidural service 65 miles from Aberdeen. The second of these two reports analysed and compared responses in women in each of the three areas (Hundley and Ryan 2004).

4.3. Overview of the characteristics of included qualitative studies

The included qualitative studies are described in Table 2

- **Study time period** Many qualitative studies eligible for inclusion did not specify the study period. The majority (16) were published before 2007 with another six published before 2000.
- **Study areas** There was a reasonably wide geographical spread across the studies, covering both urban and rural, central and remote locations. Sixteen studies were conducted in England. Half (8) of the studies conducted in England took place in Southern England (Ogden, Shaw et al. 1997, Ogden, Shaw et al. 1997, Ogden, Shaw et al. 1998, Longworth, Ratcliffe et al. 2001, Madi and Crow 2003, Barber, Rogers et al. 2006, Coxon, Sandall et al. 2014, Coxon, Sandall et al. 2015). Two studies were conducted in Northern England (Jomeen 2007, Houghton, Bedwell et al. 2008), one in the midlands (Walsh 2006), one in multiple sites across England (Lavender and Chapple 2005), and four did not state a specific location in England (Tinkler and Quinney 1998, Watts, Fraser et al. 2003, McCutcheon and Brown 2012, Newburn 2012). Two studies were conducted in Wales (Stapleton, Kirkham et al. 2002, Andrews 2004) and five in Scotland (Mansion and McGuire 1998, Emslie, Campbell et al. 1999, Cheung 2002, Pitchforth, Watson et al. 2008, Pitchforth, van Teijlingen et al. 2009). One study was conducted across the UK using data gathered from telephone calls to the Home Birth helpline (Shaw and Kitinger 2005).
- **Timing of data collection in pregnancy** Data were collected across the studies at different time points in pregnancy or postnatally and at different frequencies. A total of 18 studies collected data from women only once, five antenatally (Mansion and McGuire 1998, Madi and Crow 2003, Lavender and Chapple 2005, Shaw and Kitinger 2005, Barber, Rogers et al. 2006), 10 postnatally (Ogden, Shaw et al. 1997, Ogden, Shaw et al. 1997, Ogden, Shaw et al. 1998, Longworth, Ratcliffe et al. 2001, Watts, Fraser et al. 2003, Andrews 2004, Pitchforth, Watson et al. 2008, Pitchforth, van Teijlingen et al. 2009, McCutcheon and Brown 2012, Newburn 2012), and another three collected data from a mixed cross-sectional sample of both antenatal and postnatal women (Tinkler and Quinney 1998, Stapleton, Kirkham et al. 2002, Walsh 2006). The remaining six studies collected data at multiple time points, including one which collected prospective longitudinal data at two time points antenatally (Coxon, Sandall et al. 2014) and five longitudinal studies that collected data antenatally and postnatally (Emslie, Campbell et al. 1999, Cheung 2002, Jomeen 2007, Houghton, Bedwell et al. 2008, Coxon, Sandall et al. 2015).

- **Sample selection** In nine of the qualitative studies (Ogden, Shaw et al. 1997, Ogden, Shaw et al. 1997, Mansion and McGuire 1998, Ogden, Shaw et al. 1998, Madi and Crow 2003, Andrews 2004, Walsh 2006, McCutcheon and Brown 2012, Newburn 2012), participants were selected on the basis of their choice of a particular birth place (four studies were of women who had chosen a home birth (Ogden, Shaw et al. 1997, Ogden, Shaw et al. 1997, Andrews 2004, McCutcheon and Brown 2012), two were studies of women who had chosen an OU birth (Ogden, Shaw et al. 1998, Madi and Crow 2003), and one each were of women who had chosen AMU (Newburn 2012), FMU (Walsh 2006) or DOMINO³ births (Mansion and McGuire 1998)). Women in the remaining 15 studies were sampled in a variety of ways (see Table 3).
- **Birth place options available to participants** The birth place options available to women were often not explicitly stated. In three studies, the options available included OU, AMU, FMU and home birth (Emslie, Campbell et al. 1999, Barber, Rogers et al. 2006, Jomeen 2007) and in two the options appeared to be restricted to three settings: OU, AMU and home birth (Houghton, Bedwell et al. 2008) and OU, FMU and home birth (Watts, Fraser et al. 2003). In five studies women were recruited from across a number of study sites and the birth options available varied from site to site (Lavender and Chapple 2005, Pitchforth, Watson et al. 2008, Pitchforth, van Teijlingen et al. 2009, Coxon, Sandall et al. 2014, Coxon, Sandall et al. 2015).

The 24 included studies are described in Table 2. One of the 24 eligible studies (Ogden, Shaw et al. 1997) was found to contain no data relevant to the themes covered in this synthesis.

4.4. Information, offer of choice and the decision-making process

Quantitative

Seven studies provided information about ‘information, knowledge and empowerment’ and/or ‘the offer of choice and the decision-making process’.

- Several studies show that women were not necessarily told about all local birth options or offered a choice, even when services were available in the local area (Robinson, Sim et al. 1993, Emslie, Campbell et al. 1999, Longworth, Ratcliffe et al. 2001, Watts, Fraser et al. 2003, Barber, Rogers et al. 2006, Barber, Rogers et al. 2007).
- Two linked surveys found that the midwife was the most important source of information on choices. Most of the information women used to make decisions about place of birth came from discussion with a midwife; very few reported that written information was useful on its own (Barber, Rogers et al. 2006, Barber, Rogers et al. 2007).
- One study in an area with good provision of midwifery-led options found that the offer of choice varied from unit to unit and area to area (Barber, Rogers et al. 2007).
- In some studies the GP was found to have some influence on where women booked (Emslie, Campbell et al. 1999, Watts, Fraser et al. 2003).
- Findings from two studies suggest that only a small minority of women (<10%) consider home birth: in Lavender’s survey in a national sample of maternity units only 7.6% of women had ever considered a home birth (Lavender and Chapple 2005) while in Longworth’s sample

³ DOMINO stands for ‘DOMiciliary In and Out’. Different models exist but typically involve the woman staying at home with her midwife during early labour, being transferred to hospital for the birth attended by her midwife, and returning home a few hours later.

of women who had booked for a hospital birth, only 3% had considered a home birth (Longworth, Ratcliffe et al. 2001).

Qualitative

4.4.1. The offer of choice

- The qualitative literature shows that women's experiences of choice about where to give birth varied from a choice between OU, AMU, FMU and home birth, a choice between two or three of these options, a choice only between two OUs, or no choice at all.
- **Women are sometimes unaware that a choice exists at all.** Houghton (2008) found that many women did not consider they had made a choice or were unaware that a choice was available, and a general assumption was made that the majority of women would give birth in hospital. Madi (2003) report that on multiple occasions in their study, women assumed that there were no alternatives to a hospital birth because no-one had talked to them about other available options. *"Well I am having it at [name of hospital] because, basically, there is nowhere else to have it, I don't think"* (Madi and Crow 2003, p331). Another woman in the same study said, *"I think it is just presumed that [hospital birth] is the decision you make and if you are not giving any other decisions you are sort of rail-roaded into that scenario and you don't think of anything else"* (Madi and Crow 2003, p332). Most of Pitchforth's focus group participants (women who lived in remote or rural Scotland) perceived that they had "no choice" in deciding where to deliver, although some did report "genuine choice" (Pitchforth, Watson et al. 2008, Pitchforth, van Teijlingen et al. 2009). Choice was restricted either by a failure to present alternatives or through active discouragement: *".. they don't offer you the choice even though you really do have the choice; they make it out like you don't have the choice"* (Pitchforth, van Teijlingen et al. 2009, p44). A woman in Newburn's (2012) study only found out about birth place options available locally through her NCT antenatal class (Newburn 2012).
- **Sometimes women believe their only available choice is between a number of OUs** (Ogden, Shaw et al. 1998, Madi and Crow 2003, Houghton, Bedwell et al. 2008). Some women in Madi's (2003) study specifically said that their midwives encouraged them to go to a particular hospital or gave them a choice between two hospitals in the area: *"Oh, it's only been a choice of hospital; I can't even remember being asked the question whether I wanted a home birth"* (Madi and Crow 2003, p332). When asked what she understood by the question of where she wanted to have her baby, another woman in that study responded *"I wasn't asked if I wanted a home birth. I just took it to mean which hospital I want to go to"* (Madi and Crow 2003, p332).
- Ogden (1998) reports that in the main the women described their decision-making processes in terms of which hospital to choose: the option of home birth had been considered only by a minority of women, either at the suggestion of their GP or because friends had had one previously (Ogden, Shaw et al. 1998).
- Similarly, in Houghton's (2008) study, many women described choice as being between two hospitals. They found that women were often surprised or amused when the subject of choice was introduced during the interview. One participant, at 34 weeks' gestation, acknowledged that taking part in this research may have been the only reason she was aware of the issue of choice: *"Chris: 'I didn't know that if they said [name of one local*

hospital] I could say no I'll go to [name of another hospital]. ' Interviewer: *'Right. But you are aware of that choice now?'* Chris: *'As of right now yeah'* [both laugh] Interviewer: *'Right, because I've just asked you about it?'* [both laugh]" (Houghton, Bedwell et al. 2008, p11).

- Some studies reveal instances where women understood that alternatives to OU exist, but these **options are discouraged or denied them** (Mansion and McGuire 1998, Stapleton, Kirkham et al. 2002, Lavender and Chapple 2005, Shaw and Kitzinger 2005, Pitchforth, van Teijlingen et al. 2009). Stapleton (2002) found that women, even if they knew that other options were available, were likely to comply with the suggestions of health professionals: "Researcher: *"Was the option of having this baby at home discussed?"* Woman: *"No ... it did cross my mind. I thought I wouldn't mind considering a home birth but it wasn't mentioned. It was either a choice of [hospital X or hospital Y]"* (Stapleton, Kirkham et al. 2002, p641). Stapleton (2002) notes that staff sometimes made incorrect assumptions about women's ability and willingness to be involved in decision-making. A community midwife says: *"There are some ladies you don't want to be giving the leaflets to because you don't want them thinking they can have choices that aren't available... There are some women who can't read for example... And the young girls don't tend to be that interested"* (Stapleton, Kirkham et al. 2002, p2).
- Four women in Mansion's (1998) study had initially requested home births but were persuaded by their community midwife to opt for a DOMINO birth (Mansion and McGuire 1998). Shaw's (2005) study found that the most common reason for women calling a home birth helpline was that women were having practical difficulties arranging a home birth, either because of staff shortages or, in one case, resistance from a doctor who reportedly said *"we don't do home births here"* (Shaw and Kitzinger 2005, p2378). Lavender (2005) found that, although home birth had been presented as an option, some women clearly did not believe it to be a real option. One reported *"The midwife said I could request a home birth but because of staff shortages there may not be a midwife available anyway, so I didn't see the point"* (Lavender and Chapple 2005, p50). Pitchforth (2009) found that women were more accepting of the restriction of choice when they perceived that it was based on legitimate clinical grounds than when it was based on financial considerations (Pitchforth, van Teijlingen et al. 2009).
- Some studies indicated that the **variation in choices offered was related to groups of health care professional or model of care**. Barber (2006) found that midwives were more likely than GPs to offer alternatives to OU (Barber, Rogers et al. 2006). Tinkler (1998) found that women receiving team midwifery care in a pilot scheme were more likely than those receiving standard care to feel that they had been given a choice of place of birth and that they would be supported in their choice (Tinkler and Quinney 1998).
- Jomeen (2007) found that some GPs gave more information than others about available options, leaving some women feeling that they had been offered choice and had made personal decisions about their care: *"...I went to see the doctor and she sat down and explained all the, you know, all the availability of care in the area and then asked me to make a decision ... I think she gave me a choice of three..."* (Jomeen 2007, p487). Other women in the same study were given restricted, or no, information about their options by any health care professionals.

4.4.2. Information to facilitate decision-making

- Women require information to inform any decision about where to have their baby, and the **content and format** of this information are important. Women in Barber's (2006) study said they would prefer the content to be individualised, locally focused information on their birth place choices. *"I would have liked to have been really clear about what my personal choices were, based on my situation.. Initially, when you are pregnant, you should be given a pack that gives you all the choices in your area"* (Barber, Rogers et al. 2006, p3).
- Madi (2003), Emslie (1999) and Houghton (2008) identify shortcomings of the information given to women about birth place settings and how they differ in terms of facilities and culture and philosophy of care. *"I was just asked where I wanted to have my baby and when I said [name of hospital] that was it, it wasn't taken any further they didn't even explain the difference between the two hospitals"* (Madi and Crow 2003, p332). Houghton (2008) found many women were unfamiliar with the practicalities of birth outside hospital: *"I don't even know if there was a midwife present, I don't know I just knew that she (friend) had chosen to have the child at home"* (Houghton, Bedwell et al. 2008, p11). Emslie's (1999) study found some women believed that the same facilities would be available in the FMU as the OU, because both were in a hospital (Emslie, Campbell et al. 1999). A participant in Madi's (2003) study described how proactive she had needed to be to obtain the information she needed: *"You do have to ask about things, and even when I said I want a home birth, I already knew the process because I had spoken to my neighbour about it, but there was nothing given to me. You have to go looking for it or ask for the information yourself definitely"* (Madi and Crow 2003, p332).
- Barber (2006) and Stapleton (2002) found that women were unlikely to base a decision about birth places on written information alone, and that a verbal cue to consider it was needed: *"Researcher: 'And were you given this leaflet?' [researcher shows woman the Informed Choice leaflet on place of birth]. Woman: 'Oh yes, I had that one but she [midwife] never discussed it with me... I thought she would ask me at the next visit if I'd read it but she never did so I just dropped it really. It wasn't that important... I'm quite happy with [hospital X]. I don't know why she bothered giving it me. I did wonder that...'"* (Stapleton, Kirkham et al. 2002, p641).
Stapleton (2002) found that time pressures meant that women were not always offered the information or time for discussion that they would like: *"It's strange, but I found that there were often things that I felt I needed to know. I was never sure whether I should ask the midwife or not... sometimes they are busy aren't they? ... But if I did ask then they were brilliant... The information was there but you had to ask for it, you couldn't expect it to come pouring out"* (Stapleton, Kirkham et al. 2002, p641). *"I didn't feel happy throughout the pregnancy with the information I received... I constantly felt they [midwives] did not have any time for me. I was given plenty of leaflets but not enough discussion. I was never in the consulting room for any longer than five minutes at any of my antenatal appointments"* (Stapleton, Kirkham et al. 2002, p641).
- Houghton (2008), Jomeen (2007), Madi (2003) and Lavender (2005) report that health care professionals sometimes offer partial or biased information about the likely consequences, risks or uncertainties associated with different options. Information is sometimes presented in a way that appears to influence women to make a particular decision, often biased in

favour of hospital birth, by informing women of the risks associated with giving birth at home or in an FMU, but not about the reduced risk of intervention or the positive psychological or social impact of non-OU birth (Houghton, Bedwell et al. 2008). Jomeen's (2007) study illustrates how information that promotes a medicalised model of childbirth influences the decision about where to give birth: *"I did ask the question obviously if any of them had better care than the others and she said... erm one was probably more specialized and therefore if there were any problems at all then myself and the baby would probably be transferred to one of them during labour and that's how I made the decision..."* (Jomeen 2007, p487).

4.4.3. Interactions with health care staff that facilitate or restrict choice

- Women's choices of birth place are influenced by health care professionals' behaviour and the inferences women make from it about their views on the appropriateness of different places of birth (Stapleton, Kirkham et al. 2002, Barber, Rogers et al. 2006, Jomeen 2007).
- Stapleton (2002) found that women tend to comply with the suggestions of health professionals (Stapleton, Kirkham et al. 2002), and Barber (2006) concludes that midwives appeared to have much more influence on women than other health professionals (Barber, Rogers et al. 2006). Jomeen (2007) found that the attitude of a woman's GP to the options for care can leave her feeling she has no choice about where to give birth (Jomeen 2007). Facilitating, or restricting, women's decision-making processes can be done overtly or covertly (Lavender and Chapple 2005).
- Houghton (2008), Madi (2003) and Pitchforth (2009) identify the **initiation of a conversation** about options as an important element of facilitating choice. Information about birth setting options was sometimes withheld or restricted unless the women directly asked about them (Madi and Crow 2003, Houghton, Bedwell et al. 2008, Pitchforth, van Teijlingen et al. 2009). In Madi's (2003) study, a woman was asked why she did not choose a home birth, and her response was that it had not been mentioned. *"When someone plants a seed of thought in your head, like perhaps a home birth, and gives you some information, you may consider it more, but because that seed was never planted, I didn't even consider it"* (Madi and Crow 2003, p333-334).
- Another woman in Madi's (2003) study who had a home birth had found that the onus was on the woman to indicate her interest in a home birth if she wanted one. *"I think a lot of them make an assumption and think well, yes, you come under [name of hospital] or [another hospital] or whatever and say, 'you will be going along there to have the baby, won't you?' And people, unless they have specifically thought about it and are willing to state, 'Well, actually, no, I won't,' then they will not get the option at all. You do have to ask about things, and even when I said I want a home birth, I already knew the process because I had spoken to my neighbour about it, but there was nothing given to me. You have to go looking for it or ask for the information yourself definitely"* (Madi and Crow 2003, p332).
- Madi (2003) also found that for women who knew about home birth and proactively sought that option, sometimes anticipating resistance, the midwives were willing to listen, sometimes actively supportive of the choice, and made no attempt to discourage her. One was nervous of asking her midwife for a home birth, and was surprised that the idea was welcomed (Madi and Crow 2003).

- In some instances health care professionals encouraged women to consider community-based birth settings. Andrews (2004) and Ogden (1998) cite occasions where women were encouraged by their midwife and GP respectively to have a home birth (although in the case of the woman in Ogden's study she chose not to) (Ogden, Shaw et al. 1998).
- Pitchforth (2009), Lavender (2005), McCutcheon (2012), Jomeen (2007) and Ogden (1998) observe ways in which the **framing or endorsement** of options by health professionals influenced women's perceptions of having a choice. In Pitchforth's (2009) study, women commonly reflected that health professionals effectively restricted the choice either through failure to present alternatives or through active discouragement (Pitchforth, van Teijlingen et al. 2009). In Lavender's (2005) research, one midwife's covert disapproval of home birth manifested in her going silent when a woman suggested she would like a home birth, and the woman noted that the midwife seemed pleased when she changed her mind (Lavender and Chapple 2005). McCutcheon (2012) also reports covert influence exerted on a number of women. One said *"I just wanted to be at home, but I had a lot of cheek-sucking from the midwife"* (McCutcheon and Brown 2012, [p6-7])⁴. The participants in Ogden's study all had hospital births. One said that she had considered a home birth but felt that the GP would have been very anxious if she had decided to have a home delivery, and this had influenced her decision not to do so (Ogden, Shaw et al. 1998).
- Jomeen (2007) illustrates how the way choice is presented at an early contact point can covertly influence women's choices: A woman who asked her GP whether any birth settings offered better care than the others was told that one was more specialised and if there were any problems at all she would be transferred there during labour. She said this framing of the issues based on risk and safety informed her decision to have her baby in hospital (Jomeen 2007).
- Houghton's (2008) study illustrates how conversations with health care professionals about birth place, when they happened, tended to be very superficial and **discussion was blocked**: *"Jane: '(I was) talking to the midwife at my GP's surgery and she said would you consider a home birth' [Good eye contact, leaning toward midwife, P also leaning in interested in midwife's opinion.] 'I just worry about it in case something happens if the baby's not breathing or...' Midwife: 'Yes' [silence]. Jane: 'Right ok so...' [The midwife continues with the booking interview without further reference to birth place]"* (Houghton, Bedwell et al. 2008, p10).
- Andrews (2004), Barber (2006), Lavender (2005), Stapleton (2002), Pitchforth (2009) and Jomeen (2007) cite instances of more overt blocking of decision-making by **signalling their approval or disapproval** of particular choices, and even making statements that induce fear, anxiety or guilt in women. Ogden's (1997a) study quotes a woman whose GP and another whose midwife were very supportive of their decisions to have a home birth: *"My doctor at the time had given me so much confidence and support with this, because she had said that the decision was entirely mine and if I wanted a homebirth it was fine... She just gave me the confidence to go ahead with it"* (Ogden, Shaw et al. 1997, p213).
- Andrews (2004) and Ogden (1997) describe women being discouraged from birthing at home by professionals who made negative comments: *"Well she said [the GP]... their*

⁴ Page numbers for McCutcheon (2012) relate to an unpaginated text version available for analysis and not to the original report page numbers.

practice don't do them full stop for whatever the reason... well, one of the reasons was that they wouldn't want to have the responsibility for the baby's death..." (Ogden, Shaw et al. 1997, p214). Barber (2006) shows how within a team the level of support can vary, and how advice from different health professionals made the decision-making process difficult. *"You get conflicting... you get a midwife that is anti-homebirth and you are trying to get your views across. You have to get a midwife who says 'Right, we will do you at home'"* (Barber, Rogers et al. 2006, p612).

- A woman was told by her GP that if she opted for a home birth or a birth centre that if anything went wrong she'd be putting her and her baby's life at risk. *"Well I thought 'have I got a choice?'"* (Jomeen 2007, p487). Similarly, in Lavender's (2005) study, pressure from a doctor was overt: one woman recounts how a hospital doctor had told her she was foolish to put her baby at risk by having a home birth (Lavender and Chapple 2005). A woman in Stapleton's (2002) study describes the change in manner of an obstetrician when she said she wanted a home birth, from being "fine" to saying that if anything went wrong it would be her fault, and how she went home and cried as a result (Stapleton, Kirkham et al. 2002, p4). A woman in Pitchforth's (2009) study was told that if she had her baby at home she would be struck off her GP's list (Pitchforth, van Teijlingen et al. 2009).
- Tinkler (1998) reports that women receiving team midwifery care perceived that they had a greater range of choices of place of birth than women receiving "no change" maternity care and that they were supported in their choice. *"I'm glad with this new pilot scheme, yes I could have a home delivery whereas I was put off in the past and I never had any problems with my pregnancies"* (Tinkler and Quinney 1998, p32). In contrast, women receiving "no change" care were less likely to feel they were given a choice of birth place: *"I was laughed at when I asked for a domino... I asked for a home birth. I imagine they are not keen on home births, I didn't push it because I didn't want to be taken off the [practice] list..."* (Tinkler and Quinney 1998, p32). Women receiving team midwifery appeared to have closer relationships with midwives and felt that they were making choices about their care. Identification with a team and the establishment of a relationship between women and their carers appeared to make a positive impact on involvement in decision-making and choice. Those receiving "no change" care were less likely to feel involved in decisions and more likely to perceive their choices as limited: *"I think mostly the GP and the hospital they want you to do basically what suited them"* (Tinkler and Quinney 1998, p33).

4.5. Preferences and service attributes influencing choice

Eleven quantitative studies provided information about women's preference and four quantitative studies report women's reasons for choosing a particular unit or birth setting. The service attributes used to assess preferences in the included quantitative studies are listed in

.

Twenty two of the qualitative studies provided further information about the services that women valued, their preferences and some of the specific aspect of services that had influenced their choices.

4.5.1. Continuity

The studies eligible for inclusion explored two main aspects of continuity: first, the extent to which women know the midwife who attends them during labour prior to going into labour, and second, whether the same midwife stays with the women throughout labour.

Experimental stated preference studies

- Longworth's study (2001) conducted in women booked for either a home or hospital birth, used conjoint analysis to explore women's preferences (Longworth, Ratcliffe et al. 2001). The analysis identified three distinct groups of women: those with a 'dominant preference for home birth', those with a 'dominant preference for hospital birth' and 'traders' that is women who changed their preferences based on the attributes of the service. The levels of continuity presented to participants were: 'I will not have met any of the midwives who will look after me during labour and delivery until I go into labour', 'I will have met the midwives who will look after me during labour and delivery before I go into labour, but I will not know any of them very well', and 'I will have got to know the midwives who will look after me during labour and delivery very well, before I go into labour'. Amongst women with a dominant preference for hospital birth and women with a dominant preference for home birth, the analysis indicated that women had a significant preference for higher levels of continuity of carer. Amongst 'traders', continuity of carer was the only attribute that significantly influenced preferences, with higher levels of continuity being preferred.
- In Hundley's study (2001), conducted in a sample of women who were predominantly booked to give birth in a hospital with an OU and an AMU, women were asked to state their preference for one of four options relating to continuity of carer (Hundley, Ryan et al. 2001). Findings indicated that 'continuity of midwife' was considered an important attribute by the vast majority of women (95% considered this important or very important), and the majority of women stated a preference for having a known midwife for labour and the same midwife throughout labour and delivery: 69% chose the option 'you meet the midwife during your pregnancy and the same midwife is present throughout labour and delivery' and 23% expressed a preference for 'you meet a team of midwives during pregnancy, one of whom is present throughout labour and delivery'. The remaining two options ('you meet the midwife for the first time during labour [...] and she will stay with you throughout labour and delivery' and 'the unit operates a shift system and this means that you may have several midwives caring for you, depending on the length of your labour') were preferred by only a small minority of women. The discrete choice regression analyses confirmed that women tended to prefer scenarios with more continuity of midwife. However, when asked to state which was the most important attribute if they could only be certain of getting one of their choices, 'midwife' was considered the preferred attribute by 17% of study participants (after 'decision-making' (40%) and 'pain relief' (23%)).
- Further analysis (Hundley and Ryan 2004) that explored whether women's preferences were influenced by the services that women had available in their local areas found that in the study area with least continuity available, women were significantly less likely to prefer the option of labour care from a midwife that they had met during pregnancy (52% vs. 72-75% in

other areas). The authors comment that their findings are consistent with an 'endowment effect', that is expectations influence preferences.

Surveys

- In Lavender's (2005) survey, conducted in 2002 in a national sample of maternity units, a statement regarding the importance of care by a 'midwife I know' for the baby's birth did not elicit strong responses: few strongly agreed or strongly disagreed and respondents were fairly equally divided between agreeing, disagreeing and neither agreeing nor disagreeing (Lavender and Chapple 2005).
- In Emslie's study, 90% of women stated at 14 weeks that seeing the same midwife at each antenatal visit was important, while being cared for by a 'named midwife' in labour was rated as important by only 18% of women at 36 weeks. Women also attached high importance to seeing the same GP at each visit. At 36 weeks, 'being cared for by known staff' was considered important by 28% of respondents (Emslie, Campbell et al. 1999).
- Rennie's (1998) study assessed the intrapartum care factors considered important by women antenatally and explored whether women's priorities differed in the postnatal period. Antenatally, around half of study participants rated having a 'known midwife' as quite or very important and 39% didn't mind. Postnatally, the proportion of women considering this important dropped significantly, with only 29% of women considering this important and almost half saying they didn't mind and 22% saying it wasn't important. Participants attached a higher importance to having the 'same midwife in labour' with 69% and 66% respectively saying this was quite or very important antenatally and postnatally. With regard to access to a midwife during labour, 'easy access' rather than 'all the time' or 'only when I say' appeared to be the preferred option antenatally. Postnatally, 74% of women thought that 'constant attendance of the midwife (during labour)' was important (Rennie, Hundley et al. 1998).

Qualitative

- The significance of relationships built between women and midwives during pregnancy emerged from the literature as a strong theme (Mansion and McGuire 1998, Tinkler and Quinney 1998, Emslie, Campbell et al. 1999, Stapleton, Kirkham et al. 2002, Watts, Fraser et al. 2003, Shaw and Kitinger 2005, Walsh 2006, Pitchforth, van Teijlingen et al. 2009, McCutcheon and Brown 2012). A quote from Stapleton's (2002) study reveals the importance of relationship and trust built between woman and midwife during pregnancy: *"They [midwives] become your friends don't they? It's not just about the pregnancy. They start to know what your husband does, what you did, what you worked as; and it's the trust thing. Going back to that word again, they become part of your life and you do put your trust in that person"* (Stapleton, Kirkham et al. 2002, p643). A free text response to Emslie's (1999) survey highlights the importance for some women of having their baby delivered by the same midwife who had supported her through pregnancy. This respondent chose to give birth at the FMU on the basis of this preference for continuity of care: *"I chose PMU [FMU] because I would like the midwife I have had all through my pregnancy to be the midwife to deliver my baby... After visiting PMU [FMU] and meeting the staff, I never considered having my baby anywhere else"* (Emslie, Campbell et al. 1999, p200). Similarly, Mansion (1998)

found that being delivered by a previously known midwife was considered to be the principal advantage of DOMINO care by more than half of the participants.

- **Trust in midwife** A woman in Watts's (2003) study describes the reassuring effect of the one-to-one care provided by trusted midwives at an FMU: *"at home [in labour] I was a bit scared... the funny thing was once I got under the roof, once I knew I was there [the FMU] I lost the fear ... I can't even explain it as there's nothing there... except the midwives... I have got so much faith in them... that once I knew they were about I just, that's it I wasn't frightened anymore"* (Watts, Fraser et al. 2003, p110).
- For some women, a warm, caring midwife was more important than the history of their relationship itself. In Lavender's (2005) study, a greater concern for many women was that the midwife was caring than that she was known to the woman. *"It is more important that the midwife is kind and caring. You could have a real dragon and be glad to get rid of her!"* (Lavender and Chapple 2005, p51). However, for women who did previously know the midwife who supported them during labour, this was viewed positively, as illustrated by this quote from a woman who chose to give birth in an FMU: *"The midwife saw me throughout my pregnancy and will be there at the birth. She also delivered my last baby which makes it all that more special."* (Lavender and Chapple 2005, p51).
- A woman in McCutcheon's (2012) study describes her fears about being cared for in labour during a home birth by a midwife she didn't know and who was not supportive of home birth: *"I'd never met this woman... and it could have gone horribly wrong... She might not have been a home birth person, she could have been somebody who thought I should be in hospital"* (McCutcheon and Brown 2012, [p6]).
- Pitchforth's (2008 and 2009) focus groups revealed the benefits of the empathic quality of the relationships built between midwives and women during pregnancy, and the contrasts between this and some women's experience of more distant relationships they had with consultants: *"I just think that midwives tend to be sympathetic and have more of an open ear. Consultants tend to think more on outcomes than on the experience"* (Pitchforth, Watson et al. 2008, p564). *"But nobody particularly wants consultant-led care. You want a midwife, somebody who has been with you and is familiar with your history"* (Pitchforth, Watson et al. 2008, p564).
- A woman in Shaw's (2005) study describes the importance of avoiding confrontation with health care staff about their preference for a home birth: *"I don't want all that - I don't need the aggravation, you know. At this stage I just want things to go along smoothly. Rather than having to keep fighting everybody... You know it's a fine line that you cross because I didn't want to get into an argument with my midwife, so I just said nothing"* (Shaw and Kitlinger 2005, p2379).
- Tinkler's (1998) study of the introduction of a "team midwifery" model of care found that women receiving team midwifery care were more likely to say they felt at ease with team midwives. Women receiving "no change" midwifery care did not always appear to have such a high level of involvement or familiarity with those caring for them. *"... you didn't feel that people actually knew what you were experiencing in that pregnancy because you might not see the same person twice the whole way through"* (Tinkler and Quinney 1998, p33). Women felt that establishing relationships with their midwives helped them to feel a sense of involvement in their care, and that team midwives were familiar with their individual needs. *"I haven't had to explain the same old problems like why you're anxious because they already*

know" (Tinkler and Quinney 1998, p33). Some women receiving team midwifery care were happy to be attended in labour by any of the team members: *"I wouldn't mind not knowing as long as they were from the same team, because it's reassuring that you are going to meet someone out of your team"* Other women preferred to have met the midwife who would attend their labour: *"I was quite keen on, you know, having a face that you know... I'd say for feeling more at ease and for extra care"* (Tinkler and Quinney 1998, p34).

- Friendship, advocacy and trust of the midwife's judgement and the feeling that she is on the labouring woman's side were key features of the relationships with midwives described by women in Mansion's (1998) study of DOMINO care, as well as an expectation that it would lead to less intervention and management. *"The friendship is the main reason and what I say to her I know she will do - I trust her basically, you know. I trust her judgment"* *"So there is somebody there who you feel is part of it with you, who is on your side."* *"The feeling I have is that the community midwife would have a more relaxed approach and I don't mean laissez faire here. I think it is just the fact that they will know the individual better"* (Mansion and McGuire 1998, p666).
- **Same midwife through labour and delivery:** In Longworth's focus groups, the women who had booked a home birth identified "Continuity of carer: care from the same midwives throughout labour and delivery" as a distinctive attraction of a home birth (Longworth, Ratcliffe et al. 2001, p406).

4.5.2. Style of decision-making

Experimental stated preference studies

- Longworth's (2001) study, conducted in women booked for either a home or hospital birth, used conjoint analysis to explore women's preferences for birth location, with 'decision-making' being one of the attributes explored (Longworth, Ratcliffe et al. 2001). The three options presented to participants were: decisions made 'by medical staff', 'jointly by medical staff and woman' and 'by woman'. The analysis identified three distinct groups of women: those with a 'dominant preference for home birth', those with a 'dominant preference for hospital birth' and 'traders' that is women who changed their preferences based on the attributes of the service. Amongst women with a dominant preference for hospital birth, conjoint analysis indicated that women had a significant preference for more autonomy in decision-making. Autonomy in decision-making was also one of the attributes found to be important amongst women with a dominant preference for home birth. Amongst women who were 'traders', the findings did not suggest that style of decision-making was important to women who might be prepared to switch setting in order to access services that better met their preferences.
- In Hundley's (2001) study, conducted in a sample of women who were predominantly booked to give birth in a hospital with an OU and an AMU, the vast majority of women expressed a preference for being involved in decision-making: 48% preferred the option 'the staff give you their assessment, but you are in control of the decision' and 42% preferred 'the staff discuss things with you before reaching a decision'. When asked to state which was the most important attribute if they could only be certain of getting one of their choices, decision-making was the most frequently chosen attribute, with 40% of women selecting this as the most important (Hundley, Ryan et al. 2001). Further analysis (Hundley and Ryan

2004) indicated that decision-making preferences did not appear to be affected by the services available to the woman.

Surveys

- Rennie's (1998) study assessed the intrapartum care factors considered important by women antenatally and explored whether women's priorities differed in the postnatal period. Antenatally, around two thirds of women considered reaching a decision together with health care staff to be 'very' or 'quite' important, with other respondents almost equally split between 'staff decides' and 'woman decides'. Respondents were asked about the importance of being 'in control' and having 'preferences and wishes followed'. These attributes were considered 'very important' or 'quite important' by the vast majority of respondents with only a small minority (<15%) saying that they 'didn't mind' or that these factors were not important (Rennie, Hundley et al. 1998).
- In Emslie's (1999) study, 53% of women stated at 36 weeks that 'being involved in decisions' was important to them (Emslie, Campbell et al. 1999).

Qualitative

- The qualitative literature demonstrates that women vary in their preferences for decision-making and desire for autonomy and control over a number of elements of intrapartum care. These preferences have a bearing on where they choose to give birth.
- In the qualitative phase of Longworth's (2001) study, the women who chose to birth at home identified "decision-making: choice and control over the management of labour and delivery lie with the woman herself" as a distinctive attraction of home birth. In contrast, "decision-making: health care professionals take decisions about labour and delivery in the best interests of the mother and baby" was identified by the hospital birth group as a distinctive attraction of a hospital birth (Longworth, Ratcliffe et al. 2001, p406).
- Pitchforth (2009) introduces a classification of women according to their choice strategies as "acceptors" and "active choosers". For acceptors, discussions around choice were very low-key, reflecting a willingness to move with prevailing forces: *"It's kind of like, just something you have got to do. You know, regardless of what's set up and whether it is consultant-led or midwife-led or whatever, it is just wherever you are living and you just go with the flow with whatever is in your area"* (Pitchforth, van Teijlingen et al. 2009, p44). Alternatively, it might indicate a considered decision to delegate decision-making to trusted professionals: *"I wasn't so much interested in the choices I could make. I would rather be advised, 'this is best for you and this is best for your bab.'"* (Pitchforth, van Teijlingen et al. 2009, p44). Active choosers used language that depicted a more active stance such as having to fight for what they wanted.
- Women who opted for a non-OU birth often wished for freedom during labour to meet their needs for things that made them feel relaxed, that included to eat what they chose, have a bath, light candles or to watch television, controlling cleanliness, to be somewhere that felt familiar and safe, and to go to one's own bed. Women wanted to be able to determine who was present during labour and birth, to choose their position and their movement (Andrews 2004, Shaw and Kitzinger 2005, McCutcheon and Brown 2012, Coxon, Sandall et al. 2014).

- Women believed that choosing a home birth would mean they had more freedom to do what they pleased and more control over what would happen during labour and birth, and feel less inhibited. *"It would feel more normal and I could say well, I fancy a jam sandwich now and watch tele and do what I wanted. It was about being able to do more of what I wanted to do"* (Andrews 2004, p521). *"We talked a lot about what I wanted and planned for and I expected to be in control"* (Andrews 2004, p521). A woman in Coxon's (2014) study who chose a home birth said, *"You've got control over your environment, you can decide what position you're in, whether you need something to eat or a bath or a scented candle or, you know, you might want none of those things, you might have time for none of those things. And being somewhere that is familiar and safe and happy and that is not intruded on by other people and their various dramas, positive or negative. And where you can control the cleanliness and the food and anything else, and you can go to your own bed afterwards and... yes, It just feels to me some... more comfortable"* (Coxon, Sandall et al. 2014, p62).
- Participants in Shaw's (2005) study of women who used a home birth helpline *contrasted hospital birth in which "you're suddenly at the mercy of what they want you to do and strapped to beds and legs up in stirrups"* with home birth where *"you are very much in control because it's your home—it's your territory"* (Shaw and Kitlinger 2005, p2377). A concern raised in McCutcheon's (2012) study was that in an OU one would be "surrounded" by strangers and that people would walk into the room, either by accident or to perform an unwelcome examination of the woman (McCutcheon and Brown 2012). Women in McCutcheon's study reported anxiety about hospital restrictions regarding duration of labour before interventions were applied: *"I was quite scared of going into hospital because then you get interventions... they're kind of timing you, that's the impression I get"* (McCutcheon and Brown 2012, [p7]). A woman in Ogden's (1997a) study described the influence of a previous hospital birth on her decision to choose home for her next birth: *"When I became pregnant with my second one, I thought I couldn't cope being somewhere where everybody was telling me that I was doing it wrong, I wasn't fitting in and I was causing trouble and I thought I want to have this next one at home"* (Ogden, Shaw et al. 1997, p213). Another woman in the same study described her experience of giving birth in an OU had led her to choose a home birth: *"Things happen like they left you to it for ages and ages because they didn't have a bed which was fine, and then as soon as they had space in the labour ward they dragged you up and told you that you would have to be monitored all the time and weren't allowed to move"* (Ogden, Shaw et al. 1997, p213).
- One woman highlighted that, given the reading and research she had carried out and the potential for doctors to make mistakes, she would rather rely on her own judgement than that of a doctor: *"Doctors... they're just human beings and they can get things wrong and I like to think that I'm well read and well researched... I'd rather make my own choices that are not their choices"* (McCutcheon and Brown 2012 [p8]).
- A nulliparous woman in Mansion's (1998) study had chosen DOMINO care on the grounds that it would offer her more freedom from rules and regulations about what she would be allowed to do. In contrast to findings that women tend to feel wherever they birthed was the best place for them to give birth, in Mansion's study, women who had experienced obstetric intervention in previous births and were dissatisfied with their experience were motivated to birth in a different setting in subsequent births. They tended to attribute problems to a lack of autonomy during labour (rather than to obstetric difficulties that were

likely to recur) and considered that DOMINO care would offer them more control, and for some, the opportunity to choose the style of care they wanted in labour. *"It was a really traumatic experience and for the last 2 ½ years we were very much angry with the hospital and angry with the decisions they made."* *"I felt very much that once you were in the system... I was still sort of overwhelmed by it and let them do things that in retrospect I should never have done"* (Mansion and McGuire 1998, p665).

4.5.3. Environment and atmosphere

Experimental stated preference studies

- Longworth's (2001) study, conducted in women booked for either a home or hospital birth used conjoint analysis to explore women's preferences for birth location, with 'maternity unit with a home-like environment' as one of the 'location' options. Other 'location' options were: 'hospital labour ward' and 'home'. The analysis identified three groups of women: those with a dominant preference for hospital birth, those with a dominant preference for home birth and 'traders'. The findings suggested that around two thirds of participants had a dominant preference for either hospital or home birth. Amongst women who were 'traders', the findings did not strongly suggest that a 'homely environment' was important to women who might be prepared to switch setting in order to access services that better met their preferences (Longworth, Ratcliffe et al. 2001).
- In Hundley's (2001) study, 92% of women expressed a preference for a unit that had a 'homely or homelike appearance', rather than a 'clinical appearance'. The discrete choice analysis confirmed that women tended to choose options that provided a 'homely or homelike' room. However, when asked to state what was the most important attribute if they could only be certain of getting one of their choices (see Table 3 for list), less than 2% considered the appearance of the room to be the most important attribute. Further analysis of the data (Hundley and Ryan 2004) did not suggest that women's preferences for a homely room were affected by the characteristics of the local services available to them (Hundley, Ryan et al. 2001).

Surveys

- In Emslie's (1999) study, a 'homely atmosphere' was stated to be important by 18% of women. In contrast, a 'quiet atmosphere' was considered important by the vast majority of women (Emslie, Campbell et al. 1999).
- In Roger's (2011) study which investigated whether AMU-users would choose to have their baby in the unit if it became an FMU, the majority said that they would, with 'homely/small' being one of the most commonly cited reasons for using the FMU (cited by 67% of those who said they would choose the FMU) (Rogers, Harman et al. 2011).

Qualitative

- For women who chose a non-OU birth, the set of factors that made a birth environment more attractive included feeling homely (Watts, Fraser et al. 2003, Barber, Rogers et al. 2006, Walsh 2006, Jomeen 2007, Houghton, Bedwell et al. 2008); familiar (Andrews 2004); relaxed (Ogden, Shaw et al. 1997, Watts, Fraser et al. 2003, Andrews 2004, Barber, Rogers et al. 2006, Walsh 2006, Jomeen 2007); having access to personal possessions, privacy and personal space (McCutcheon and Brown 2012); a calm pace, lack of frenetic activity and smaller, more intimate surrounds (Walsh 2006). Walsh's (2006) participants who chose an FMU liked that instruments were hidden and valued a non-high-tech environment: *"The psychological effects of being there, it was like being at home really in terms of environment, it was very, very comfortable and calming, relaxing. It was the room itself, the way it's made up. It's got homely things in it. Most of the instruments are hidden away. They're not on display"* (Walsh 2006, p231). One participant in Jomeen's study described the atmosphere at the birthing centre (it is unclear whether this is an AMU or FMU) as relaxed and "less traumatic" than being in hospital (Jomeen 2007, p488).
- Women in both Newburn's (2012) (AMU births) and McCutcheon's (2012) (home birth) studies, referred to the physiological impact of their surroundings on the progression of labour. One commented: *"If you don't get the environment right for the birth, you are never able to release the hormones that make labour happen effectively"* (McCutcheon and Brown 2012, [p9]).
- Houghton's (2008), Emslie's (1999) and Lavender's (2005) studies, all of which included women who had chosen to give birth in different environments, revealed a range of preferences for physical characteristics of birthing environments. "Physical environment: a familiar, relaxing and 'domestic' environment in which to give birth" was identified by the home birth group as a distinctive attraction of a home birth. "Physical environment: a clean, spacious and 'clinical' environment in which to give birth" was identified by the hospital birth group as a distinctive attraction of a hospital birth (Longworth, Ratcliffe et al. 2001, p406).
- A home-like physical environment was not universally sought. Some participants in Cheung (2002) and Houghton's (2008) studies found a hospital environment reassuring. Cheung's (2002) participants, who had all chosen a hospital birth, found no appeal in the comfort and familiarity of home birth since the absence of clinical facilities failed to inspire confidence. In Houghton's (2008) study, the six women who wanted their birth environment to look like a hospital were reassured by clinical cleanliness and visible equipment. For them, the hospital environment was conducive to feeling secure, protected and more at ease, knowing that *"if anything went wrong, everything is there for me"* (Houghton, Bedwell et al. 2008, p8). *"There's no equipment on show or anything, that'd just put me off. I'd want there to be a little bit of equipment."* And *"Oh no, that would frighten me that. Big bath. [laughs]. Birthing pool. No, there's no machines. So, I'd feel like I was going on me happy hols in that [laughs] not going in to give birth [on seeing a photo of a birth centre room]"* (Houghton, Bedwell et al. 2008, p13).
- In Pitchforth's (2008) study, OUs were associated with increased safety, but the risk of a lack of personal care, and a sense of being on a "conveyor belt" (Pitchforth, Watson et al. 2008, p564), in contrast to the midwife-led unit's hotel-like quality where staff are available to offer care and support.

- In Coxon's (2014) study, being somewhere that feels familiar and safe, that will not be intruded on by *"other people and their various dramas"* was found to be important (Coxon, Sandall et al. 2014). A participant in Ogden's (1997a) study of women who chose a home birth described being put off the OU by the sound of other women giving birth and *"screaming their heads off"* (Ogden, Shaw et al. 1997, p213). A further theme that arose in Coxon's (2014) study was the signals that women picked up from the physical environment about the quality of the care they would receive. Cues that indicated high quality care included spaciousness, décor, and a sense of not being "squashed together", crowded and chaotic. These conveyed a risk that women in these centres might have to compete for attention, that mistakes would be made, and that the proximity to other people in crowded wards would increase exposure to disease and put the woman or her baby at risk. So women had to trade the benefits of good emergency care provision against the risks of crowded, overstretched maternity facilities. *"I just know how easily mistakes are made, and it worries me, that I'm putting my faith and the life of my child... in an overrun crowded hospital full of people giving birth... yes, does make me a bit nervous. But... we'll see"* (Coxon, Sandall et al. 2014, p60).
- Others were also concerned about exposure to other people's physical or social conditions: *"You're more at risk because you're with people, you're surrounded by however many, 20 beds or something, and you know, another 40 couples that are having their babies and you don't know their health. And so disease, not disease but you know, things do spread"* (Coxon, Sandall et al. 2014, p60).
- Emslie's (1999) participants noted that they would prefer not to have to choose between the proximity and relaxed atmosphere of the FMU and the availability of specialist facilities at the OU: *"I am very unsure where to have my baby. Aberdeen has all the facilities available if needed, but PMU [FMU] is nearer and the atmosphere is more relaxed... I would be a lot happier if the same facilities were available at PMU as there are in AMH [OU], to save unnecessary stress during labour if I have to be transferred"* (Emslie, Campbell et al. 1999, p200).

4.5.4. Methods of pain relief, availability of birthing pool

Experimental stated preference studies

- Longworth's (2001) study (Longworth, Ratcliffe et al. 2001), conducted among women booked for either a home or hospital birth explored women's preferences. The analysis identified three distinct groups of women: those with a 'dominant preference for home birth', those with a 'dominant preference for hospital birth' and 'traders' that is women who changed their preferences based on the attributes of the service. Women with a dominant preference for hospital birth exhibited a significant preference for access to all forms of pain relief, whereas (as might be expected) this was not important to women with a dominant preference for home birth. Pain relief options did not appear to be of importance to women who were 'traders' (that is potentially willing to switch setting in order to access services better meeting their preferences) (Longworth, Ratcliffe et al. 2001).
- In Hundley's (2001) primary study conducted in a sample of women who were predominantly booked to give birth in a hospital with an OU and an AMU, 84% of respondents indicated a preference for having all methods of pain relief available and this

appeared to be the second most important attribute to participants (after style of decision-making) (Hundley, Ryan et al. 2001). However, a subsequent analysis (Hundley and Ryan 2004) that explored whether women's preferences were influenced by the services that women had available in their local area found that 'pain relief' was not a significant attribute of care affecting women's stated preferences amongst women who lived in areas where the local maternity unit (FMU or OU) did not have an epidural service. The authors comment that their findings are consistent with an 'endowment effect', that is expectations influence preferences (Hundley and Ryan 2004).

Surveys

- In Lavender's (2005) survey conducted in a national sample of maternity units, half of respondents agreed or strongly agreed with the statement "It is important to me to be able to have an epidural at any time of day or night", although the authors note that this did not necessarily mean that they were intending to have one. Availability of a birthing pool elicited a more uncertain response: 46% of respondents neither agreed nor disagreed with the statement "It is important to me that a pool is available for my labour/birth". Around a quarter agreed or strongly agreed with this statement (Lavender and Chapple 2005).
- In Emslie's (1999) study of women living in an FMU catchment area, women rated the importance of 'choices in pain relief' fairly highly, with importance increasing in later pregnancy (81% considered 'choices in pain relief' important at 14 weeks increasing to 95% at 36 weeks). However, more than half of the respondents were booked to give birth in an FMU and it should be noted that the responses related to 'choices in pain relief' and not necessarily to the availability of all options or of epidural. The authors note that "a sizeable proportion of women would have liked to know more [about pain relief], especially about natural methods such as massage, breathing, and the role of different positions" (Emslie, Campbell et al. 1999, p203).
- In Rennie's (1998) study of women booked for birth in a hospital with an OU and AMU, women were asked at 34 weeks to rate the importance of three options relating to pain relief: 'pain free with drugs', 'minimum drugs' and 'drug free labour/other'. Most women (69%) rated 'minimum drugs' as quite important or very important with only 14% rating 'pain free with drugs' as quite important or very important and 11% rating 'drug free labour/other' as quite important or very important: 'minimum drugs' therefore appeared to be considered more important by most women antenatally than being either pain free or having a drug free labour. Postnatally almost all women (95%) said that 'effective pain relief' was quite important or very important (Rennie, Hundley et al. 1998).

Qualitative

- For some women, it was important and reassuring to know that all types of pain relief, including epidural, were available (Lavender and Chapple 2005, Pitchforth, Watson et al. 2008). Women in Lavender's (2005) study who said they wished an epidural to be available did not necessarily mean they intended to use it. Similarly, women in Pitchforth's (2008) study having their first baby described the availability of all types of pain relief as: *"like a safety net. The knowledge of it being there, even if you don't want it. It's there and that's like a, takes away fears"* (Pitchforth, Watson et al. 2008, p566). Another woman in Lavender's

(2005) study questioned whether she would choose to give birth in the AMU because she was concerned that if she needed an epidural, women already in the OU would be given priority over women who had chosen to birth in the AMU. Women in Pitchforth's (2008) study, however, reported that access to an epidural would not influence their decisions about where to give birth, and that they would not travel further to a unit solely to have access to an epidural: *"You wouldn't take [name of referral unit] just so you could get an epidural"* (Pitchforth, Watson et al. 2008, p566).

- Other studies describe a preference for birth places characterised by a combination of a more relaxed environment and a more "natural" approach to pain management (Andrews 2004, Jomeen 2007, Coxon, Sandall et al. 2014). A woman interviewed antenatally in Andrews' (2004) study hoped that feeling more relaxed in a home environment would mean that childbirth was less painful and that she would have less need for pharmacological pain relief: *"I was hoping that I wouldn't have much pain at home to be honest [laughs]"* (Andrews 2004, p521). In Jomeen's (2007) study, the presence of a birthing pool was important but was considered to be secondary in importance to the atmosphere of the birth centre: *"I just liked the whole atmosphere, the fact that it was so relaxed, and I liked the birthing pool. I mean, I know they've got a birthing pool at the main unit as well, but I just liked the whole atmosphere"* (Jomeen 2007, p488). In Coxon's (2014) study, a nulliparous woman asserted her preference not to have an epidural: *"I just really don't want to give birth in hospital [OU]. I don't like the environment very much and I prefer it to be kind of more natural, and without intervention as much as possible. So hence why I prefer to go to the [FMU] because it's kind of more natural and they kind of leave you to it, I don't really want epidurals or anything like that, I just want to kind of keep active throughout and... and do it all that way"* (Coxon, Sandall et al. 2014, p62). A second woman described her desire to take labour at her own pace and to manage the pain, and that she felt she would be more likely to have the opportunity to do this if she chose to give birth at an FMU. She wished to avoid an experience of intervention similar to that of her friend: *"a close friend has given birth in hospital [OU] because she had to be induced, and the whole procedure... it just seems kind of more forced on you and more... scary, rather than just doing it at your own pace and dealing with it and the pain and everything that's happening at that time yourself. So ideally I'd stay [home] as long as possible and then go to the FMU"* (Coxon, Sandall et al. 2014, p62). A woman in McCutcheon's (2012) study who had chosen a home birth stated that a sense of feeling in control helped her to relax with the pain: *"I think it's all down to positive thinking on how your birth is. I think if you feel out of control, and you feel frightened, then it can only make you have more pain"* (McCutcheon and Brown 2012, [p10]). The Chinese participants in Cheung's (2002) research expected technology and pain relief to be brought to bear during childbirth. One woman felt that, since the option for pain relief in hospital was on offer, it made sense to use it, although she recognised the contradiction between her wish to have a "natural" birth and that it be painless: *"I feel I contradict myself. I like to have a natural childbirth but I would like to have something to make my labour painless [laughter]. I think if I have not had this option, I may have done so. But since I have this option, why not use this option? So I think I am going to make use of everything"* (Cheung 2002, p207).
- Coxon (2015) and Houghton (2008) interviewed women after OU births with epidurals, whose experiences had led them to doubt that they could give birth without epidural pain relief and therefore discount the possibility of future non-OU births. A woman interviewed

in Coxon's (2015) study reflects on her experience of giving birth to her first baby. Having planned to have a water birth in the AMU, she was admitted to the OU for induction and had a forceps delivery under epidural anaesthesia. With hindsight, she thought she would have been unable to give birth without any pain relief (Coxon, Sandall et al. 2015). Similarly, Houghton (2008) cites the experience of a woman who had considered a home birth for her first baby but had been encouraged to use the OU, where she too had had an epidural. This experience had put her off considering giving birth at home in her second pregnancy: *"If I hadn't had an epidural last time, I think there's no doubt I would have thought really hard about having a home birth this time"* (Houghton, Bedwell et al. 2008, [p10])⁵.

- A woman in Watts' (2003) study who gave birth in a FMU felt the pain relief available had been inadequate: *"The care I received from the midwives was really good... but if there had been better facilities [more effective pain relief] I may possibly have had an easier time"* (Watts, Fraser et al. 2003, p5).

4.5.5. Fetal monitoring

Experimental stated preference studies

- In Hundley's (2001 and 2004) studies, 78% of women expressed a preference for intermittent fetal monitoring, but the discrete choice experiment findings suggested that women tended to prefer scenarios with continuous fetal heart rate monitoring (Hundley, Ryan et al. 2001, Hundley and Ryan 2004).

Qualitative

- A woman in Ogden's (1998) study of women who chose to give birth in an OU, described how her wish to avoid being monitored meant she delayed her arrival at hospital, but it did not play a part in her decision about where to give birth: *"I didn't want to go to hospital early because they put you on monitors and they prod and pull you about... so I gave the kids their tea and got my partner doing the ironing so he wouldn't notice that I was doing anything different, and got them to bed. I didn't call the hospital until the contractions were coming every two minutes"* (Ogden, Shaw et al. 1998, p343).

4.5.6. Medical staff involvement/availability of specialist clinical services

Experimental stated preference studies

- Hundley's (2001) primary study explored women's preference for medical staff involvement (involved in care vs. only involved if complications develop). When asked to state a preference, two thirds of participants (67%) said that they preferred to have 'medical staff (doctors) only involved if required (i.e. a complication occurs)' and when asked to state what was the most important attribute if they could only be certain of getting one of their choices, only 13% chose the 'medical staff' attribute. However, in the discrete choice regression analysis, findings indicated that women were more likely to prefer maternity units that offered routine involvement of medical staff (Hundley, Ryan et al. 2001). Hundley's (2004) subsequent analysis further investigated whether the local services available to a woman

⁵ Page numbers for Houghton (2008) relate to an unpaginated version available for analysis and not to the original report page numbers.

affected her preferences and found some differences amongst women in different areas. However, findings relating to preference for medical staff involvement did not appear to be affected by the services available to the woman (Hundley and Ryan 2004).

Surveys

- In Lavender's (2005) survey, conducted in a national sample of units, 62% of women agreed or strongly agreed with the statement "I would feel unsafe if a specially trained doctor was not immediately available when I am in labour"; while 20% agreed or strongly agreed with the statement "I want to be looked after by midwives and not have doctors involved" (Lavender and Chapple 2005).
- In Emslie's (1999) study, 'availability of specialist staff/equipment' was considered important by 65% of women when asked at 36 weeks about their preferences for labour care, with only 'partner being there' considered more important (Emslie, Campbell et al. 1999).
- In Roger's (2011) study which investigated whether AMU-users would choose to have their baby in the unit if it became an FMU, 57% of nulliparous women and 71% of multiparous women said that they would choose to have the baby in the unit if the OU closed and the AMU became an FMU. Amongst women (n=21) who said that they would not choose the unit if it became an FMU, 81% said that they would prefer a midwife-led unit on the same site as an OU with 67% stating that they would 'feel safer' elsewhere (Rogers, Harman et al. 2011).

Qualitative

- The qualitative literature reveals the importance to many women of access to clinical services such as obstetricians, neonatal units and theatres (Longworth, Ratcliffe et al. 2001, Cheung 2002, Watts, Fraser et al. 2003, Lavender and Chapple 2005, Barber, Rogers et al. 2006, Jomeen 2007, Houghton, Bedwell et al. 2008, Pitchforth, Watson et al. 2008, Coxon, Sandall et al. 2014).
- Hospital was regarded as the safest option by women in studies by Barber (2006), especially with the first pregnancy, and by Cheung (2002), because hospitals have medical cover and equipment and this made them feel safer: *"Because hospital has medical cover and equipment"* (Scottish woman); *"... it is safer in hospital"* (Chinese woman), *"From the safety point of view, hospital is a better place.... I still feel this [home delivery] is impossible despite the knowledge that I know they will come to my assistance"* (Chinese woman). *"Hospital for me and it gives me confidence, you know. If anything goes wrong, help is there"* (Cheung 2002, p207). Some participants in Coxon's (2014) study also associated hospital with safety and reassurance: *"In deciding where to have the baby, I guess I was pretty determined I'd have it in hospital [OU]. Both my sister and my mother had problems during birth, I was born by emergency caesarean and my sister had an emergency caesarean with her first child, and then an elective caesarean for her second, so it made sense given the experiences of people close to me that I'd like to be somewhere with good medical care on hand, if something goes wrong"* (Coxon, Sandall et al. 2014, p58). For another woman in this study, giving birth somewhere without doctors was said to equate to *"risking the baby's life"* (Coxon, Sandall et al. 2014, p58). A multiparous woman felt an OU birth was safer: *"... I think it's a safer place, in case of any kind of emergency it's better to be at the hospital where there's a doctor close*

by" (Coxon, Sandall et al. 2014, p59). A multiparous woman who was planning an OU birth thought it strange when her partner asked whether she'd like to give birth at home: *"Because for me, being [from a Nordic country], when you want to have babies, you go to the hospital, just like if you want to have an operation you go to hospital!"* (Coxon, Sandall et al. 2014, p59). Watts' (2003) study included a user of the FMU who felt the absence of onsite clinical services was unsafe: *"I feel that it is unsafe, because if you or the baby was to suffer difficulties during or after birth, there is no adequate facilities so therefore you would have to endure a very distressful journey to the Host unit [OU]"* (Watts, Fraser et al. 2003, p110). Jomeen (2007) found several women believed that hospital with medical presence remains the safest option for birth: *"Yea, well I do want the birth centre but if anything goes wrong then I don't want any doubt about it." "I think if there was anything wrong everything's handy, doctor and all that sort of stuff, whatever you need is all nearby"* (Jomeen 2007, p487). Longworth (2001) found that "Medical facilities: specialist medical facilities to deal with any problems which might arise for mother or child are available on site, precluding the need to transfer during labour" was identified by the hospital birth group as a distinctive attraction of a hospital birth (Longworth, Ratcliffe et al. 2001, p406). Pitchforth's (2008 and 2009) participants associated consultant-led care with covering every eventuality: *"having everything there"* or *"the ultimate safety net"* (Pitchforth, Watson et al. 2008, p5), *"So you kinda want to go where there is everything and get back to][name of local unit] as soon as possible"* (Pitchforth, Watson et al. 2008, p564), *"If you're in a hospital I think you feel safe"* (Pitchforth, Watson et al. 2008, p566).

- Some studies showed that for some women, the availability of specialist services led to feelings of security, protection and relaxation (Cheung 2002, Lavender and Chapple 2005, Houghton, Bedwell et al. 2008). Some women described feeling more secure and protected, and therefore more at ease and relaxed, in hospital: *"I would feel a lot more comfortable being in a medical sort of environment knowing that if anything went wrong, everything is there for me rather than at home, where OK you might feel more comfortable being at home, but I would still have quite a few reservations about being at home. I'd feel a lot happier at the hospital"* (Houghton, Bedwell et al. 2008, p8). Lavender (2005) notes that women might be unaware of midwives' capacity to "work autonomously, identify risk and deal with obstetric emergencies" (Lavender and Chapple 2005, p52).
- Some women viewed non-OU birth as a risk to their, or the baby's, life: *"... I'm not risking that, I'm not risking the baby's life or my life. So... you know, it's just eliminating all the risks as much as you possibly can"* (Coxon, Sandall et al. 2015, p58).
- Coxon (2015) observes that experiencing birth in an OU, whether difficult or straightforward, led women to believe that a hospital OU was the preferred option for hypothetical future births, because it led them to associate safe birth with the acute care environment (Coxon, Sandall et al. 2015).
- Some women acknowledged that the probability of problems developing that would require specialist services was low, but hospital was seen as the best way to cover all eventualities: *"I think it would be safer in hospital. I mean if you've got the midwives at home and you've got the midwives in the hospital, you could say you've got the same thing, but as I say, you just don't know what else you're going to have to use"* (Houghton, Bedwell et al. 2008, [p6]). *"Although I don't think my baby will have a problem it is nice to know that the special care baby unit is there if I need it"* (Lavender and Chapple 2005, p51).

- However, other women in Houghton's (2008) study regarded induction of labour, epidural, instrumental delivery and even caesarean delivery to be part of normal birth. Women's expectations that interventions would be available limited their consideration of birth places (Houghton, Bedwell et al. 2008).
- Emslie (1999) found that having to choose between proximity and a relaxed atmosphere in a birth place, and one where specialist facilities were available, could present women with very difficult decisions. It was considered desirable to have both in the same place: *"I am very unsure where to have my baby. Aberdeen has all the facilities available if needed, but PMU [FMU] is nearer and the atmosphere is more relaxed... I would be a lot happier if the same facilities were available at PMU as there are in AMH [OU], to save unnecessary stress during labour if I have to be transferred"* (Emslie, Campbell et al. 1999, p200).
- Some women who chose non-OU births spoke with health care staff about their safety concerns, and about what would happen in an emergency (Andrews 2004, Houghton, Bedwell et al. 2008). *"She [the midwife] kind of reassured me a bit on a few things, you know, what happens in an emergency and that kind of thing... Just basically about what would happen in an emergency and you know how often they would come across this, are they equipped to deal with a baby that needs resuscitating, which they were"* (Houghton, Bedwell et al. 2008, [p7]). One participant, who worked as a neonatal nurse, looked into the risk factors, talked to doctors about neonatal admissions and asked about the provision for dealing with a need to resuscitate at a home birth: *"I also spoke to the community midwife and asked her what sort of resus equipment she had and basically just checked out what she had safety-wise"* (Andrews 2004, p520).
- Women who had opted for a non-OU birth, were less likely to believe specialist back-up was necessary (Lavender and Chapple 2005, Walsh 2006). *"I'm not worried about having a special care baby unit. I have had a home birth before and know the midwives can deal with problems. The chances of anything going wrong are so small anyway"* (Lavender and Chapple 2005, p51). Women in Walsh's (2006) study did not base their choice of birth place on "biomedically defined safety information" and were indeed put off booking an OU birth by the focus on what could go wrong and by the technological environment in a large hospital.

4.5.7. Transfer

Experimental stated preference studies

- Longworth's (2001) study, conducted in women booked for either a home or hospital birth, explored women's preferences for birth location, with 'probability of transfer during labour' being one of the attributes explored. They found that women with a 'dominant preference for hospital birth' had a significant preference for somewhere without the need for transfer, whereas this was not significant for women with a 'dominant preference for home birth' or amongst 'traders' (Longworth, Ratcliffe et al. 2001).

Surveys

- Lavender's (2005) survey asked women to rate their agreement or disagreement with the statement "I would not want to transfer to a hospital a few miles away if my baby or I develop a problem". The authors report that 'half of the women questioned said that they

would transfer to another hospital if a problem developed.' However, the wording of the statement is such that it is unclear whether respondents will have interpreted this as a question about their preferences or a statement about their intentions should the need for transfer arise (Lavender and Chapple 2005).

Qualitative

- Concerns about the need to transfer during labour are closely related to distance from birth place to OU and to and preference for access to medical staff involvement.
- Some women in Lavender's (2005) study stated they would not consider a home birth or an FMU because they wanted to avoid the risk of transfer during labour: *"I am going to X unit because I know that everything is there if I need it. I don't see the point in going to a small hospital when you could get transferred anyway"* (Lavender and Chapple 2005, p52).
- Similarly, the women in Longworth's (2001) focus groups who had chosen a hospital birth identified *"specialist medical facilities to deal with any problems which might arise for mother or child are available on site, precluding the need to transfer during labour"* as a distinctive attraction of a hospital birth (Longworth, Ratcliffe et al. 2001, p406).
- A few participants in McCutcheon's (2012) study of women's experience of home birth described the importance of accepting they might need to be transferred if they chose to have their baby in a non-OU setting: *"I trusted her [the midwife] to make the right decision. So if she'd said to me, 'S it's not going as it should be going, we need to go into hospital', I would have gone to hospital"* (McCutcheon and Brown 2012, [p8]).
- Yet women in Lavender's (2005) study who had previously been transferred during labour did not share an aversion to the possibility of transfer: *"[they] would rather have started off in the stand-alone unit and been transferred than never have been there in the first place"* (Lavender and Chapple 2005, p52).
- A woman in Houghton's (2008) study who had chosen a home birth said she worried about circumstances where she would need to be transferred to hospital but, having satisfied herself that midwives were equipped to deal with emergencies such as resuscitating a baby, was reassured: *"it might be even safer to have the baby at home with me having such a quick labour [last time]"* (Houghton, Bedwell et al. 2008, [p7]).
- For some women in Houghton's (2008) and Ogden's (1997) studies, the option of quick transfer to hospital provided important reassurance: *"I only live... ten minutes' drive from the hospital so I felt if I had to go in... we'd take the decision early enough to get there"* (Houghton, Bedwell et al. 2008, p8). *"The house was easily accessible for emergency services and not very far from the hospital"* (Ogden, Shaw et al. 1997, p215), and *"Oh God am I making a risky choice... I don't know whether I would feel different if I lived in the middle of the countryside... quite a long way from hospital... but it is so close... I sort of felt that if anything was going to go wrong, I would be bailed out... that was a security in my mind"* (Ogden, Shaw et al. 1997, p215).
- A participant in Ogden's (1997) study asserted that transfer to emergency intrapartum facilities was as quick from home as from a labour ward: *"Statistics have actually shown... that if you have a homebirth and it goes wrong you can get into emergency just as quickly as you can from the labour ward"* (Ogden, Shaw et al. 1997, p214).

- Another of Ogden's (1997a) participants believed that access to emergency support would be sufficient: *"I knew some people who had haemorrhages and things and had been whipped in and it all ended quite safely... so I wasn't too alarmed about anything that went wrong"* (Ogden, Shaw et al. 1997, p125).
- Participants in several of Pitchforth's (2008) focus groups reflected that a home birth might be unsuitable for them because of their remote and rural locations and distance to their local maternity unit: *"I think if you lived somewhere like [name of referral city] or a city or whatever, you might choose a home birth, knowing that the hospital is there because if you choose a home birth here it's a different kettle of fish altogether. Because, you imagine people staying in a big city might choose a home birth thinking, I'm five minutes up the road from the hospital anyway so, I can be there"* (Pitchforth, Watson et al. 2008, p45).

4.5.8. Distance

Experimental stated preference studies

- In Pitchforth's (2008) study, conducted in women living in remote and rural areas in Northern Scotland, women preferred shorter travel times to access intrapartum care, preferred to deliver in a maternity unit rather than at home and findings showed that an OU was the preferred option. The analysis revealed that women were prepared to travel up to 133 minutes from home to receive consultant (OU) care and that they would travel 16 minutes further to receive consultant-led care vs. alternatives. However, the authors note that this differed from women's stated preferences during piloting of the DCE questions: when presented with a choice between an FMU 60 minutes away and an OU 90 minutes away, respondents often chose the FMU because they favoured midwife-led care and shorter travel times. Remoteness clearly influenced women's willingness to travel with women living in particularly remote areas willing to travel further (Pitchforth, Watson et al. 2008).

Surveys

- In Lavender's (2005) survey conducted in a national sample of maternity units, women were asked to state their level of agreement or disagreement with a series of statements (see Table 3 for list). Two of the top five statements that elicited the strongest agreement related to distance: 68% agreed or strongly agreed with a statement about travelling to receive higher quality care ("I would be willing to travel if it meant I would receive higher quality care for my baby and me around the time of birth"), and 72% agreed or strongly agreed with the statement relating to the proximity of *antenatal* care ("It is important that my antenatal appointments are at a location close to where I live") (Lavender and Chapple 2005).

Distance/proximity was also fairly commonly mentioned as a reason for choosing a particular unit:

- In Roger's (2011) study investigating whether 'AMU-users' would choose to have their baby in the unit if it became an FMU, the majority said that they would, with 'easy to get to' being the fourth most commonly cited reason for using the FMU (cited by 54% of those who said they would choose the FMU). Notably, however, amongst women (n=21) who said that they would not choose the unit if it became an FMU, 81% said that they would prefer a midwife-led unit on the same site as a labour ward (Rogers, Harman et al. 2011).

- In Emslie's (1999) study, 'distance from home' and 'convenience for family' were the two most frequently cited reasons nulliparous women gave for choosing a unit (59% and 51% respectively). For multiparous women 'previous experience' was the most common reason but 'distance from unit' and 'convenience for family' were jointly the second most commonly cited reasons (44% in both cases) (Emslie, Campbell et al. 1999).

Qualitative

- The qualitative literature reveals variation between women's preferences for proximity of birth place to home.
- Women in Pitchforth's (2008 and 2009) study generally accepted some travel time to the delivery unit as being part of living in a remote and rural area. However, women who had to travel to a distant unit were concerned about whether they would reach it before the baby was born. Women living on islands also had to contend with the possibility that adverse weather conditions would affect travel to the mainland: *"I was worried she would be born in the lay-by beside the road. I was really worried about that. It didnae happen, thank goodness, but that was my biggest concern"* (Pitchforth, van Teijlingen et al. 2009). Travel time was interpreted differently depending on location. Women who lived on islands felt that two hours' travel by road was acceptable, but when they had to add air or sea transport to this, the travel time from home to birthing unit became significantly longer and made it difficult for family to visit.
- Proximity to home was cited as a consideration in choosing the FMU in Walsh's (2006) study: *"Largely I wanted to go there because of my first child, I did not want to be too far away from home"* (Walsh 2006, p230).
- Women in Lavender's (2005) study, however, asserted that distance would not be an impediment to choosing a particular birth place if they believed they would receive good care there: *"I had heard so much about this unit [FMU]. I was told how personal it was and would have travelled any distance to get here"* (Lavender and Chapple 2005, p51) or would avoid poor quality care: *"[name of OU] isn't my nearest hospital. I had to pass my local hospital to get here but it was worth it. My experience of labour was much better this time. You just want the best for you and the baby"* (Lavender and Chapple 2005, p51).
- Pitchforth's (2008) and Emslie's (1999) studies revealed the conflict presented by the need to trade proximity against other factors; proximity to home was highly valued, but so was proximity to specialist medical facilities: *"So you kinda want to go where there is everything and get back to [name of local unit] as soon as possible"* (Pitchforth, Watson et al. 2008, p5). *"I still can't make my mind up. The midwives are trying to say, you know, you can deliver here and there's just always that in the back of your mind where you know everything is there in [name of referral unit]. There's not everything here"* (Pitchforth, Watson et al. 2008, p5).
- A woman in Emslie's (1999) study preferred to choose somewhere close to home with a relaxed atmosphere, but that had specialist facilities so a stressful transfer during labour could be avoided. *"I am very unsure where to have my baby. Aberdeen [hospital with OU and AMU] has all the facilities available if needed, but PMU [FMU] is nearer and the atmosphere is more relaxed... I would be a lot happier if the same facilities were available at PMU [FMU]"*

as there are in AMH [OU/AMU], to save unnecessary stress during labour if I have to be transferred" (Emslie, Campbell et al. 1999, p200).

4.5.9. Other preferences

Other attributes that surveys found were important to at least 50% of respondents included:

- Having a birth companion present (Rennie, Hundley et al. 1998, Emslie, Campbell et al. 1999)
- Information and being kept informed (Rennie, Hundley et al. 1998, Emslie, Campbell et al. 1999)
- Quiet atmosphere (Emslie, Campbell et al. 1999)
- Having a special care baby unit (SCBU) on site (Lavender and Chapple 2005)

In one study of AMU users, 'wants natural childbirth' and 'family can be involved' were reasons mentioned by two thirds of women who had said that they would still choose the unit if it became an FMU (Rogers, Harman et al. 2011).

4.5.10. Variations in preferences by parity, ethnicity, socioeconomic status and area of residence

The included studies provided limited data on whether preferences differed according to the women's characteristics.

- In Lavender's (2005) survey women's views did not differ by age or level of area deprivation. Nulliparous women were significantly more likely than multiparous women to say that they were willing to travel for antenatal care (72% vs. 64%) and were more likely to say that the availability of a pool was important to them (32% vs. 19%). Compared with white European women, ethnic minority women (n=303) were more likely to say that it was important to have antenatal care close to where they lived (81% vs. 71%); were significantly more likely to feel unsafe if a doctor was not immediately available (78% vs. 60%); and were more likely to consider it important to have a SCBU available where they gave birth (84% vs. 73%) (Lavender and Chapple 2005).
- In Pitchforth's (2008) stated preference study, women's risk status, the type of care at the last birth, and remoteness all influenced women's willingness to travel. Women were more likely to prefer the birth setting that they had recently given birth in (home, FMU, OU), and women who had experienced episodes of high risk during pregnancy or labour were more likely to prefer an OU (Pitchforth, Watson et al. 2008).
- Several studies found that multiparous women's choices appeared to be influenced by their previous birth experience (Robinson, Sim et al. 1993, Emslie, Campbell et al. 1999, Pitchforth, Watson et al. 2008, Rogers, Harman et al. 2011).

5. Discussion and conclusions

5.1. Summary of key findings

Information and the offer of choice

Quantitative

- Women are not necessarily told about all local birth options or offered a choice, even when services are available in the local area.
- The midwife is the most important source of information on choices. Written information may be useful but only if there is a discussion with a midwife about the information provided.
- The offer of choice may vary from unit to unit and area to area.
- In some areas the GP may influence where women book.
- Only a small minority of women (<10%) appear to consider home birth.

Qualitative

- Information given to women about their options for birth place is sometimes biased towards particular units/settings or incomplete and this affects the choices women make. Some women are made aware that a range of choices of place of birth is available to them, but for others this information is restricted, and so they perceive that the only choice available is one between different OUs. In other cases, women are aware that other choices are available, but are discouraged from exercising choice because the options are not presented to them by their health care professionals.
- In some cases, women are aware that non-OU birth is an option, but they are told that they may not have one. The qualitative literature suggests that this restriction of choice may be more acceptable to women when they perceive it is based on legitimate clinical factors than when it is perceived to be based on resource constraints.
- Information about available options is sometimes withheld by health care professionals on the basis of assumptions they make about women's ability and willingness to be involved in decision-making. Health care professionals' behaviour can overtly or covertly impede women making choices according to their values, attitudes to risk, social circumstances, etc. This influence is more often exerted to persuade women away from using a community-based setting and towards an OU environment. Covert means include: initiating (or not initiating) a conversation about choices; framing options in a particular way; implying approval or disapproval of a decision through tone of voice, body language, etc; and framing options in a particular way or closing down a discussion about options. Decisions may be influenced overtly by making statements that evoke negative feelings such as fear.

Preferences - continuity

Quantitative

- The evidence suggests that women have a preference for continuity of midwife, particularly seeing the same midwife during antenatal care and having the same midwife present throughout the labour and birth. However, although antenatally many women would prefer to have their antenatal midwife attending the labour/birth, women do not necessarily prioritise this over other aspects of intrapartum care. The evidence also suggests that

women's preferences are shaped by the services on offer to them so women who do not have access to continuity may not attach high importance to this and vice versa.

- The limited quantitative evidence available suggests that continuity may be an important 'choice' consideration for a proportion of women who actively seek a birth setting that meets their preferences.
- The available quantitative evidence is insufficient to determine if women attach greater importance to a 'known midwife' for labour care or to having the same midwife present throughout labour.

Qualitative

- Relationships built between women and midwives during pregnancy are valued and for some women are a deciding factor in where they book to give birth.
- Trust, empathy and shared values with the midwife are important. Warmth, caring and sensitivity to women's emotional needs are sometimes matter more than an ongoing relationship with a midwife.
- The qualitative literature suggests that trusting relationships may be nurtured more under some models of care, such as team midwifery and DOMINO care.

Preferences - style of decision-making

Quantitative

- Many women attach considerable importance to models of decision-making in which the woman is involved in decisions about her care.

Qualitative

- Some women prefer to take an active role in decision-making, while others prefer to delegate decisions to trusted health care professionals.
- Decision-making preferences relate to both clinical and non-clinical aspects of the birth experience: some women wish to have control over the birth environment, for example control over who can be present, and to other 'non-clinical' aspects such as freedom to move around during labour.

Preferences - 'homely' environment/atmosphere

Quantitative

- Women tend to prefer more homely environments but preferences tend to be weaker than for other attributes.

Qualitative

- While some women are reassured by a calm, spacious, quiet, non-clinical environment over which they have some control, others are reassured by the clinical facilities available at an OU, associating them with a sense of safety.
- Aspects of the physical environment, including a sense of spaciousness, chaos or calm, convey signals to women about the quality of the care they might receive there. A setting that feels crowded and potentially overstretched can compromise a woman's sense that she is safe there.
- The physiological impact of their surroundings on women's emotional and psychological state and, therefore, on the progression of labour is a factor that influences some women's decisions about where to give birth.

Preferences - pain relief

Quantitative

- Women attach considerable importance to the availability of pain relief options. Some women wish to have access to an epidural if needed, without necessarily intending to use this form of pain relief.
- Women's pain relief preferences appear to be influenced by their expectations of the options available to them.

Qualitative

- Knowing that all methods of pain relief, including epidural, are available is important and reassuring to some women. However, views differ about whether this is a factor that strongly influences choice of place of birth.
- Some women consider that feelings of control and being in a relaxed environment in non-OU settings will help them manage the pain of labour and childbirth with fewer interventions/more naturally.
- Some women feel that since technological approaches to pain relief are available, it makes sense to use them.
- The experiences of women who had planned or considered non-OU births, but had subsequently given birth in an OU with an epidural, sometimes lead them to doubt their ability to give birth without pain relief.

Preferences - medical staff involvement/availability

Quantitative

- A substantial proportion of women have a strong preference for care in a hospital setting where medical staff are not necessarily involved in their care, but are readily available.
- The limited evidence available suggests that the proportion of women who have a preference for settings where medical staff are involved or available may be slightly higher amongst ethnic minority women.
- Women with preference for an OU appear to be willing to travel further to access consultant-led care but may 'choose' a nearer FMU if the travel time is excessive.

Qualitative

- For some women, the availability of specialist services leads to feelings of security, protection and relaxation.
- Many women regard hospital as the safest option. Some regard the need for technological interventions as a normal part of childbirth, and view non-OU birth in terms of risking their, or the baby's, life. This limits their considerations of birth places.
- Some women recognise that the likelihood of needing specialist services is low, but prefer to be somewhere they are available "just in case."
- Women may underestimate midwives' capacity to identify and manage obstetric emergencies. Women who opt for non-OU births tend to believe the likelihood of needing specialist back-up is low, and have more trust that midwives can manage emergencies, should they arise.

Preferences – transfer

Quantitative

- Women who prefer a hospital birth tend to express concern about transfer, whereas women who prefer a midwifery-led setting tend to be less concerned about transfer.

Qualitative

- Some women decide against non-hospital births altogether in order to preclude the risk of transfer. Others accept transfer as a possibility when choosing to birth in an FMU or at home.
- Women who have previously been transferred to an OU during labour may feel less concerned about the possibility, and in fact may prefer to begin labour away from hospital even if it means being transferred later on.
- Women who understand that midwives can manage certain emergency situations, such as resuscitating a baby, or who have heard of other women who have been transferred during labour with good outcomes, are less fearful of the risk of transfer.
- Where the transfer distance is short, women are less concerned than where the transfer distance is long.

Preferences - distance

Quantitative

- Proximity of services and/or travel time are important considerations for most women. Many women have preference for a local unit and in some instances will trade-off other preferences in order to attend a local unit, but women who have a strong preference for a consultant-led unit (or for specific services only available in a hospital with an OU) will travel further in order to access a unit where they feel safe. Convenience for family and visitors is also a consideration for some women.
- Women's willingness to travel appears to be influenced by their expectations, so that women living in remote areas may accept long travel times whereas women living in urban areas where hospitals are typically closer may be less prepared to travel. One implication of this is that concern about longer travel times may be particularly acute when there is a sudden change in an area, for example if a local unit closes or becomes an FMU, which results in women having to travel further to access a hospital with obstetric services.

Qualitative

- Women's preferences for proximity of the maternity unit to their home vary.
- Women who live rurally accept the need to travel to a birthing unit, but are concerned about whether they will reach it before the baby is born.
- For some women, particularly those who have other children, proximity is a salient factor in the decision about where to give birth. For others it is less important than quality of care.
- Women would prefer not to have to trade proximity to home against other attributes of their birthing environment, such as a relaxing atmosphere or availability of specialist medical facilities. The need to choose between them can present a challenging dilemma.

Preferences – variations by parity, ethnicity and socioeconomic status

Quantitative

- Multiparous women's preferences are influenced by their previous birth experience.

- There is some evidence suggesting that nulliparous women may be willing to travel further to a maternity unit that they perceive provides 'higher quality care'.
- There is limited data suggesting that ethnic minority women may be more likely to prefer a hospital birth and to have a range of medical facilities available on site.

5.2. Strengths and limitations of the review

The main strengths of this review are that we have systematically identified and synthesised the evidence from reports of quantitative and qualitative studies published in scientific journals since 1992, providing evidence gathered from women in the UK about their birth place preferences, and experiences of deciding where to give birth. Building on the ongoing work of the Birthplace Choices project funded by the Department of Health, we have synthesised findings using a best-fit framework approach. We have used a conceptual model that has enabled us to focus our evidence synthesis on areas of the literature of particular relevance to NHS maternity services: specifically on factors that are important to women when making a choice between different maternity units and different birth settings and on ways in which NHS services and staff support or restrict access to choice of birth place.

The literature searches, data extraction and synthesis for this review have been conducted rigorously, but the project's short timeline has necessitated a pragmatic approach to some elements of the review: in particular we have restricted our attention to specific themes rather than attempting a comprehensive synthesis covering all elements of our analysis framework, and have not, to date, conducted formal critical appraisal of the included studies. Further work, including analysis of qualitative data relating to other themes in the analytic framework and a full quality appraisal of all included studies is ongoing as part of the Birthplace Choices project, and will be reported fully in due course.

For pragmatic and methodological reasons we took the decision to include only reports published in scientific journals and have not included grey literature or PhD theses.

Our search strategy and inclusion/exclusion criteria were fairly broad but were nevertheless designed to capture a quite specific and circumscribed area of the literature, that is reports of studies that collected data reported by women about their preferences and any aspect of their experiences of decision-making and choosing their intended place of birth. We have not therefore included evidence relating to health care professionals' views and experiences or to the experiences of women's partners. Nor have we searched for evidence relating to the evaluation of decision-making tools or other interventions supporting women's choices.

Our synthesis has been shaped by the use of an 'access to care' model in a best-fit framework analysis. The conceptual model was tested and refined through discussion with women's user groups and NHS stakeholders and was felt to capture important themes of relevance to women in a way that would be meaningful to policy makers, commissioners and service providers. However, other models and approaches would have been possible. For example, Michie's behavioural change model (Michie, van Stralen et al. 2011) might have been more relevant if there was a desire to understand how to facilitate and motivate women to exercise choice or to understand ways in which beliefs and preferences might be influenced.

5.3. Strengths and limitations of the available literature

The relevance of the findings of this review to policy and practice is somewhat limited by the age of many of the included studies and the paucity of recent evidence. For example, only three of the reports included (Rogers, Harman et al. 2011, Coxon, Sandall et al. 2014, Coxon, Sandall et al. 2015) are based on data collected since the publication of Maternity Matters in 2007 (Department of Health 2007). Given this, it is not possible to determine the extent to which some of the findings summarised here reflect current practice: for example, are women now presented with a wider range of choices at the booking visit and do they receive better information explaining these options? Although not eligible for inclusion in our review, the National Maternity Survey conducted in 2014 provides some more recent relevant data which suggest that most women currently perceive that they have been offered choice, but that the choices actually offered may be quite limited. For example, a large proportion of women (70%) reported that they had been given enough information by a midwife or doctor to help them decide where to have their baby and there was quite good awareness of AMUs as an option, but only a quarter of women were aware of all four birth options (Redshaw and Henderson 2015).

A further issue relating to the contemporary relevance of the studies reviewed is that there has been a substantial expansion of midwifery-led services in recent years and there is evidence from our review that women's preferences are influenced by their expectations of the services available to them. Hence it is possible that the data presented here on women's preferences may no longer fully reflect women's current preferences. Indeed, much of the expansion in midwifery-led care has taken place in the period for which we have little evidence: in 2007 just over 3% of trusts had an OU, AMU and FMU (Redshaw, Rowe et al. 2011), whereas BirthChoiceUK data for 2015 indicate that currently 17% of Trusts in England provide all three options (Miranda Dodwell, personal communication).

A further limitation of the literature is that it provides very little evidence that directly illuminates how women make choices between specific settings e.g. AMU vs. FMU.

The ongoing Birthplace Choices project is currently conducting focus groups with pregnant women that will provide data on women's current experiences and an experimental stated preference study is planned.

5.4. Conclusions and implications for policy and practice

The findings of this review suggest that there are some service attributes that are almost universally valued by women. These include local services, seeing a known midwife during antenatal care, being attended by a known midwife throughout labour and, for most but not all women, a preference for a degree of control and involvement in decision-making. Women's views and preferences differ markedly for other attributes, such as on site availability of medical staff and specialist services, the availability of epidural vs. other pain relief options and a 'homely' vs. clinical appearance of the delivery rooms. This suggests that policy makers, commissioners and service providers might usefully consider how to extend the availability of services that most women value while offering a choice of options that enable women to access a service that best fits their needs and preferences.

Policy makers, commissioners and service providers also need to be aware that women's beliefs and preferences are not necessarily fixed. Initiatives such as the Portsmouth Birth Place Choices (See Barber (2006) and Barber (2007)) project have demonstrated that the acceptability and uptake of

midwifery-led options – which the 2014 NICE intrapartum care guideline recommends as the most suitable option for low risk women – can be increased through high-level organisational commitment and by implementing specific measures, including training and support for midwives, to ensure that the information and guidance given to women is evidence-based.

Although much of the evidence synthesised here is relatively old, recent data show that many women are still not offered and do not have access to the full range of birth place options recommended in the NICE intrapartum care guideline. Our findings relating to the offer of choice and the decision-making process highlight the crucial importance of the information given and the discussion that takes place between the woman and her midwife at the booking visit, and the need for an opportunity for each woman to review and change her decision later in pregnancy if her preferences or needs have changed. The findings suggest that in order to provide women with access to choice there is a need:

- To ensure that women are consistently provided with information about all the local options available to them which clearly explains how these options differ, for example with regard to differences in intervention rates and outcomes (as recommended by NICE⁶) and to services available (e.g. pain relief options, availability of specialist care), but also to other less tangible but nevertheless important attributes such as philosophy of care. There is little in the qualitative literature to suggest that women are routinely told about the likely consequences, risks or uncertainties associated with different options, or that they are helped to examine the implications of the options available in relation to their preferences, values, attitudes to risk and social circumstances.
- To ensure that the discussion between the woman and her midwife regarding birth place options is evidence-based, includes time for questions and careful consideration, and supports the woman to make a choice that suits her preferences and needs. This discussion most commonly takes place at the booking visit, but consideration should be given to whether this is the most appropriate time for this decision to be made, and/or whether choices made early in pregnancy should be discussed again later in pregnancy in order to give each woman an opportunity to review options and change her decision if her preferences have changed.
- To consider whether midwives require additional training or other support (possibly including additional time) to enable them to support women's decision-making in an appropriate, evidence-based and non-judgmental way.
- To identify and address any organisational and cultural barriers that may prevent women from accessing their preferred option.
- To increase the provision and geographical spread of midwifery-led options and to consider measures to influence the beliefs and behaviours of health care professionals that appear to make an obstetric unit birth the 'default option' for low risk women whose preferences may be better met in a midwifery-led setting. This may require a substantial cultural shift amongst women and health care professionals, but would be in line with national guidance on planned place of birth for low risk women.

⁶ See NICE guideline (National Collaborating Centre for Women's and Children's Health, 2014), recommendations 1.1.1-1.1.10.

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Table 1: Description of included quantitative studies

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
Barber (2006)	This study is part of a broader study (Birth Place Choices Project) to understand factors influencing women's decision-making and to explore whether the provision of information and other initiatives to increase women's knowledge of birth place choices might increase the proportion of women choosing midwifery-led and home birth options. As phase one of the project, this study aimed to identify factors that influence women's decision. The study was conducted in the Southampton and Portsmouth areas, both of which provided multiple birth setting options (two obstetric units (OUs)/alongside midwifery units (AMUs) and 6 freestanding midwifery unit (FMUs) in total with well supported home birth services).	<p>This was one of several component studies in the broader Birth Place Choices Project (i.e. phase one of the project). It involved a cross-sectional survey of pregnant women over 30 weeks gestation attending antenatal care in the Southampton and Portsmouth areas. This survey was one component of a mixed methods study.</p> <p>Sample characteristics Respondents had a mean age of 29, were between 29 and 40 weeks gestation and were slightly older and more likely to be white, English speaking graduates than the local maternity service user population. Of the multiparous respondents 3.4% had previously had a home birth.</p> <p>Response rate 43%, n=398.</p>	November 2003	All options were available in the local areas.
Barber (2007)	This study is a follow-up study to evaluate the impact of interventions introduced as part of the Birth Place Choices Project in the Southampton and Portsmouth areas. The purpose of	<p>The study involved a cross-sectional survey of pregnant women attending antenatal care in the Southampton and Portsmouth areas.</p> <p>Sample characteristics</p>	January 2005	All options were available in the local areas.

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
	the maternity service user survey component of phase two was to evaluate changes in women's knowledge and decisions about midwifery-led and home birth options. The initiatives carried out in phase two of the project are described elsewhere (Barber, Rogers et al. 2006).	<p>The profile of respondents was similar to phase one (Barber (2006). Their mean age was 28 years with the majority living with a partner and 82% in full time employment. Respondents were between 24 and 40 weeks gestation (cf. 29-40 weeks in phase one).</p> <p>Response rate 32%, n=270.</p>		
Donaldson (1998)	This study was conducted in Aberdeen (Scotland), an area with an OU and an AMU in the same hospital, to assess the feasibility of the use of 'willingness to pay' as a measure of women's strengths of preference for intrapartum care (OU vs. AMU).	<p>Willingness to pay study designed to evaluate 'low risk' women's preference for type of intrapartum care (OU vs. AMU) at around the time of the booking visit. Respondents were provided with a description of the key features of the two types of unit (including style of decision-making, one-to-one care from a midwife, electronic vs. 'traditional' fetal monitoring) and quantitative information about, for example, the chances of transfer, the proportions of women able to move around freely, having an epidural, transferred for an epidural. 'Low risk' women were mailed the questionnaire before booking with two subsequent reminders sent three and six weeks later, possibly after the booking visit.</p> <p>Sample characteristics Women at 'low obstetric risk'. No details reported.</p> <p>Response rate</p>	May 1994	Hypothetical attributes of OU vs. AMU.

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
		75%, n=113 (only 102 questionnaires (69%) were used for analysis for various reasons).		
Emslie (1999)	This study was conducted to explore women's preferences and experiences following the opening of an FMU in the study area (Peterhead near Aberdeen in Scotland). Women in this area had four choices: home birth, FMU and both OU and AMU available approximately 35 miles away in Aberdeen). A DOMINO (Domiciliary in and out) delivery service was also available to women registered with the FMU. The FMU was based in the Peterhead Community Hospital. The largest general practice is located in Peterhead with two rural practices in the surrounding area.	<p>For the survey component of the study, questionnaires were mailed to women in the FMU's catchment area at around 14 weeks gestation with one reminder letter sent after three weeks. Further questionnaires were sent at 36 weeks gestation and 6 weeks postnatally. This survey was one component of a mixed methods study.</p> <p>Sample characteristics Over half (59%) of respondents (n=254) were registered with the main GP practice in the FMU catchment area; 41% of women were nulliparous; 70% were aged under 29 years and 28% were under 24 years of age.</p> <p>Response rate 77% for 14 week survey, n=254. Of these 83% responded to 36 week survey, n=210.</p>	January to December 1995	Study focuses on FMU vs. hospital (OU/AMU) choices made by women in the catchment area of a newly opened FMU.
Hundley (2001)	Pilot study to explore feasibility of using discrete choice experiment to assess women's preferences for aspects of intrapartum care. The study was conducted in three areas in Grampian, Scotland where different models of care were available. Linked study: Hundley (2004).	A discrete choice experiment in which 'low risk' pregnant participants were asked to choose between pairs of hypothetical scenarios. These scenarios were based on attributes identified in the literature as potentially important to women and which could vary between units. The attributes covered: continuity of carer (four levels varying in the extent to which the woman would know the midwife providing labour care); pain relief (three levels: all methods, all methods but transfer	January to November 1999	Study evaluates preferences for different service attributes.

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
		<p>required for epidural, all methods other than epidural); type of fetal heart rate monitoring (continuous vs. intermittent), appearance of room (homely vs. clinical), involvement of medical staff (yes, vs. only if required), and involvement in decision-making (four levels ranging from no involvement to women deciding). 'Low risk' women were recruited at booking in three areas in Grampian (Scotland). Data were collected by postal questionnaire. A reminder system was not possible for data protection reasons.</p> <p>Sample characteristics Of the 301 'low risk' respondents, the mean age was 28; 55% were nulliparous; the vast majority (91%) were married or cohabiting. The women were more socioeconomically advantaged than the national population.</p> <p>Response rate Estimated response rate was 40%, n=301.</p>		
Hundley (2004)	This study was conducted to investigate the effect of service provision on consumer preferences, in particular, whether women who have access to systems of care which offer particular attributes value these attributes more highly than women for whom the attributes are not a realistic	A discrete choice experiment in which 'low risk' pregnant participants were asked to choose between pairs of hypothetical scenarios. These scenarios were based on attributes identified in the literature as potentially important to women and which could vary between units. See Hundley (2001) for details. Three groups of women were recruited at booking: (a) women booking at Aberdeen Maternity Hospital who were eligible for AMU	January to November 1999	Preferences for particular service attributes in women with access to: OU/AMU vs. FMU ~30

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
	option. Three groups of 'low risk' women participated from areas with different services available (OU/AMU, FMU and OU/AMU without an epidural service). The areas also differed in the degree of continuity of carer offered. For primary report see Hundley (2001).	<p>care; (b) women booked at the FMU in Peterhead Community Hospital; and (c) 'comparable' women booked at Dr Gray's Hospital, Elgin, a hospital providing 'shared care' (obstetricians and midwives at the hospital and GP/midwives in the community) with medical interventions available but without an epidural service. Data were collected by postal questionnaire. A reminder system was not possible for data protection reasons</p> <p>Sample characteristics See Hundley (2001) for characteristics of the overall sample. 'Low risk' women in the three study groups were similar, but there were more nulliparous women in the Aberdeen (OU/AMU) group and women in the Elgin (OU/AMU without epidural service) group were less deprived. The Peterhead and Elgin groups were relatively small (n=48 and n=60) compared to the Aberdeen group (n=193).</p> <p>Response rate Estimated response rate overall was 40%. Response rate varied by area (33% - 44%), n=301 (193 from the Aberdeen group, 48 from the Peterhead Group and 60 from the Elgin group).</p>		miles from OU/AMU vs. OU/AMU without an epidural service.
Lavender (2005)	This project was commissioned by the Department of Health (UK) to inform the Children's National Service Framework. The aim was to identify	A survey of pregnant women in a purposive sample of 12 maternity units in England. Units were sampled to ensure the inclusion of units serving women from various socio-economic/ethnic backgrounds and from	January to March 2002	Preferences for a range of service attributes.

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
	models of maternity care which provide a safe, equitable and sustainable service that meets the needs of the current and future population and offers choice to women.	<p>urban and rural areas. Units were included that offered different birth settings (home, FMU, AMU and OU) and varied in size (50 births to 6000 births). The study sample appears to have been a cross-sectional sample of women receiving antenatal care. The survey questionnaire included both open and closed questions and a series of statements that women were asked to either agree or disagree with. This survey was one component of a mixed methods study.</p> <p>Sample characteristics Half (51%) of the 2071 questionnaires returned were from district general hospitals (presumed to be OUs), 38% were from university hospitals incorporating midwife-led units (presumed to be OU/AMUs) and 11% were from FMUs. The mean age of participants was 29 and the mean gestational age was 29 weeks. Just over half (54%) were multigravid with most having given birth to one child previously (46%); 84% were 'white-European' and 90% had English as a first language.</p> <p>Response rate Overall 71%, with unit response rates varying from 59% to 85%. n=2071.</p>		
Longworth (2001)	This was an experimental study conducted in samples of women in two maternity units in London areas (inner and outer London) with high home	The study used conjoint analysis to assess preferences for different aspects of intrapartum care comparing women actively choosing home birth to women who had booked for a hospital delivery. Literature and focus	May 1998 to April 1999	Study focusses on attributes of services

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
	birth rates to assess the relative values attached to main characteristics with maternity care for women who actively chose home birth in comparison to women who delivered in hospital.	<p>groups were used to identify attributes that were important to women. Scenarios based on these attributes were developed covering: continuity of contact with the same midwifery staff (unknown midwife, have previously met midwives, midwife well known to woman), location (labour ward, midwifery unit, home), pain relief (gas and air only, gas and air+ birthing pool, all types of pain relief including epidural), decision-making (by medical staff, shared, by woman), transfer (none, low probability, high probability). Two samples of women were selected from each of the two maternity units: (a) women who had booked for a home delivery; (b) 'low risk' women who had booked for a hospital delivery. The women appear to have been surveyed by postal questionnaire postnatally with one reminder sent to non-respondents after 4 weeks.</p> <p>Sample characteristics</p> <p>The mean age was 32 years with more younger women in the hospital birth group (20% aged 25 and under vs. 3% in the home birth group); 95% were qualified to O level/GCSE or above, but with a higher proportion of graduates/postgraduates in the home birth group (59% vs. 39%). The vast majority (99%) of the home birth group had successfully delivered at home while 9% of the hospital group were reported to have delivered in an 'other' location (not described). 84% of the hospital group had achieved an unassisted vaginal birth vs. 98%</p>		rather than setting per se.

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
		<p>of the home birth group. Parity is not reported.</p> <p>Response rate 55% overall (n=257); 61% for home birth sample (n=118), 48% for hospital sample (n=139). Note that the hospital group was over-sampled to achieve a balanced sample allowing for differential non-response.</p>		
Pitchforth (2008)	A discrete choice experiment to evaluate preferences for key attributes of intrapartum care in women living in remote rural areas in Scotland served by FMUs and small consultant units without neonatal facilities.	The study involved a discrete choice experiment in which women were asked to choose between hypothetical scenarios. Three attributes were varied in eight different scenarios: type of unit (midwife-led (MU) vs. consultant-led (OU)), pain relief (all methods vs. no epidural) and travel time to unit (home (0 mins) vs. 30 mins from home vs. 60 mins vs. 90 mins vs. 120 mins). Eight small maternity units (<300 births per annum) were purposively selected to provide a spread of staffing/service models. The sample included four community FMUs and one FMU adjacent to a non-obstetric hospital, one GP-run community maternity unit, and two consultant-led units (OUs) both without neonatal facilities. Women resident in the catchment areas of these units who gave birth in the study period were sent a postal questionnaire six weeks after the birth with one reminder two weeks later. Women who had delivered in three non-study obstetric units in the region were included. These non-study OUs included two with neonatal facilities and one without. Data were also	April 2004 to January 2005	Preference for hypothetical attributes of midwifery-led vs. consultant care (different travel times and availability vs. non-availability of epidural).

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
		<p>collected from medical notes on participants' risk status during pregnancy and at the time of the birth.</p> <p>Sample characteristics The mean age of respondents was 30 years, 43% women had delivered their first baby.</p> <p>Response rate 62%, n=877 (including 22 of whom returned blank questionnaires).</p>		
Rennie (1998)	A pilot study to identify women's preferences for aspects of intrapartum care and to evaluate whether they differ in the postnatal period compared with late pregnancy.	<p>A questionnaire survey in which a stratified sample of women expecting a first or second baby, living within Aberdeen city and booked for delivery in Aberdeen Maternity Hospital (OU or AMU) were recruited in antenatal care at 34 weeks. A follow-up questionnaire was given to women to complete at home 10 days after the birth. Follow-up of non-responders included an initial telephone call and a second postal reminder if required and was the same antenatally and postnatally. Additional data were extracted from medical notes.</p> <p>Sample characteristics Despite stratified sampling there was a preponderance of nulliparous women (65%); 81% of participants were married and two thirds (66%) were owner occupiers. Most (70%) were planning to attend antenatal education. The mean age of respondents was 27.</p>	February to March 1996	Study focuses on service attributes preferred antenatally vs. postnatally.

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
		Response rate 96% for the 34 week survey (n=207); 86% of respondents also completed the postnatal questionnaire (n=185).		
Robinson (1993)	This study took place in an outer London district where a substantial proportion of women were giving birth outside the local OU. At the time of the study an FMU serving the area had recently closed and only half of the residents gave birth in the local OU. The study was designed to explore how birth place choices were made.	A questionnaire survey of women resident in the district who gave birth during the study period, irrespective of where they had given birth. The questionnaire with both open and closed questions was delivered to new mothers seen by community midwives during the 10 days following a birth. Women who had not booked were excluded. Follow-up of non-responders was not possible due to anonymity. Sample characteristics Overall, 48% of the sample (n=166) delivered outside the district, 29% were in rented accommodation and 18% were aged less than 25 years. These characteristics were similar to women resident in the district who gave birth in 1987, the latest year for which information was then available. Response rate 70%, n=166.	July to August 1989	Study focuses on preferences in an area with an under-utilised OU and a recently closed FMU but with alternative services in surrounding areas.
Rogers (2011)	This study was conducted to evaluate the viability of converting an AMU in outer London to an FMU following the planned closure of the OU in the hospital. The study focused on whether users of the existing AMU	A questionnaire survey was conducted amongst a cross-sectional sample of 'AMU users': women who were either booked, considering booking or who had given birth at the AMU situated in a hospital where a relocation of the OU was planned.	October 2009	AMU vs. FMU (would AMU users use an FMU).

Study ID	Study context/objective	Methods, sample characteristics, response rate and sample size	Study period	Choices compared
	would choose the new FMU or would look for an alternative.	<p>Sample characteristics</p> <p>The majority of study participants were pregnant (89%) and the remaining 11% had just had a baby. Sixty percent of participants were nulliparous.</p> <p>Response rate</p> <p>53%, n=121.</p>		
Watts (2003)	An evaluation of the views and experiences of women living the 'catchment area' of a recently opened FMU in a small rural town in England. The FMU had opened on the site of a former consultant-led OU.	<p>A postal questionnaire of women who had given birth during the study period who: (a) gave birth in the FMU; (b) gave birth at home following antenatal care by FMU employed midwives; (c) transferred from the FMU or home to the OU; (d) gave birth in the OU but eligible for birth in the FMU. The survey took place in the first full year of operation of the FMU and was one component of a mixed methods study.</p> <p>Sample characteristics</p> <p>Approximately half of the sample had given birth in the FMU, around a third had given birth at home and around 10% had chosen to give birth in the OU. Under 10% had been transferred from the FMU or home to the OU. No other characteristics of the sample were reported.</p> <p>Response rate</p> <p>66% overall, n=122 (or 164 depending on whether ineligible women are included). The response rate varied by setting and was lowest for women eligible for the FMU but had planned birth in the OU.</p>	April 1999 to March 2000	Study compares preferences in women who have given birth in different settings (OU, FMU, home).

Note that the for some studies, the calculation of response rates varied between reports. In these instances we directly quote the response rate reported by the authors.

Table 2: Description of included qualitative studies

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
Andrews 2004	<p>The study was carried out in South Wales and conducted to explore women's experiences of home birth including women's decision-making process, their expectation of home birth, people's reactions to their decision to give birth at home and how they differed from previous experiences of hospital birth.</p> <p>The paper does not state which options of birth place were available to the women.</p>	<p>A sample of eight women was recruited via community midwives in a South Wales Trust. They were drawn from post-industrial, industrial, affluent urban, semi-rural and rural areas.</p> <p>Semi-structured interviews took place at women's homes at one time point, postnatally.</p>	<p>All eight women had a planned home birth in the 6 months before the study and 7 women had experienced hospital birth before. Seven women were gravidae.</p>	pre-2004
Barber 2006	<p>The Birth Place Choices project was a collaboration between Southampton University Hospitals NHS Trust and Portsmouth Hospitals NHS Trust. The project aimed to: identify factors influencing women's decisions with regard to birth place; determine if bespoke information and educational initiatives increased women's knowledge of choices of birth place; study whether implementing these initiatives was associated with an increase in the number of women giving birth outside the consultant-led unit.</p> <p>Women had choice of OU, AMU, FMU and</p>	<p>This was a mixed method study using a survey followed by focus groups. Five focus groups were held in Southampton and Portsmouth with women using the maternity services. They were recruited through community clinics, GP surgeries and antenatal classes.</p>	<p>398 completed surveys were returned. Respondents were older, more likely to be white, English speaking and graduates than the local population. A total of 20 women at between 29-40 weeks' gestation took part in the focus groups. Focus group participants' parity and demographic information are not recorded.</p>	Pre-2006

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
	home birth.			
Cheung 2002	<p>The study was conducted to identify experiences of Chinese and Scottish childbearing women in Scotland.</p> <p>The range of birth place options available was not stated.</p>	<p>This was a mixed methods study combining longitudinal interviews with participant observations.</p> <p>It gathered longitudinal data ante- and postnatally.</p> <p>Four semi-structured interviews were carried out with each of 10 Chinese and 10 Scottish women in Scotland. The first was in the early stages of pregnancy, the second in late pregnancy, the third was carried out five or six days following birth and the fourth at 6 months after birth.</p>	<p>20 participants were enrolled in the study: 10 Chinese women and 10 Scottish women. All gave birth in an OU.</p> <p>Age range 25-42 years. All the Chinese women were first-generation migrants, 8 were having their first baby and two their second baby, all completed at least undergraduate education except one who came from Hong Kong. Of the Scottish women, 9 were having their first baby.</p>	Pre-2002
Coxon 2014	<p>This study is linked to Coxon 2015, and focuses on women's experiences of deciding where to give birth. Women were users of one of three maternity services in the south of England: two serving an inner-city area and one serving a larger, semi-rural area. Site one women had two choices: OU and home birth, site two: OU, AMU, and home birth, and site three: OU, AMU, FMU and home birth.</p>	<p>A prospective longitudinal narrative interview design was used. Women were first interviewed between 12 and 24 weeks' gestation and again at 36-40 weeks. Interviews were conducted face to face or over the phone.</p>	<p>41 women, aged 19- 42 years, mixed ethnicity and socioeconomic status. 44% were expecting their first baby.</p>	2009-2010

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
Coxon 2015	This study is linked to Coxon 2014 and explores the influence of pregnancy and birth experiences on women's intended place of birth in current and future pregnancies. Study sites and birth place options available are the same as in Coxon 2014.	A prospective longitudinal narrative interview design was used. Women were first interviewed between 12 and 24 weeks' gestation, once at 36-40 weeks, and again following birth at 6-12 weeks. Interviews were conducted face to face or over the phone.	The sample characteristics are the same as in Coxon 2014	As in Coxon 2014
Emslie 1999	The study aimed to examine how women make choices and decisions about maternity care and factors that influence the decision-making process, including choice of place of birth, following the opening of an FMU in the Peterhead locality of north-east Scotland. The FMU is approximately 35 miles from the main OU. Women had the following choices: home birth (discouraged), a modified DOMINO service, FMU, OU or AMU.	<p>Longitudinal survey and longitudinal in depth interviews at three different time points during pregnancy were used. Three questionnaires were sent to women: at 14 weeks' gestation, 36 weeks gestation and 6 weeks after delivery.</p> <p>In depth interviews also took place at 30 weeks gestation and 9 weeks after delivery.</p> <p>All women attending maternity booking clinics within the maternity unit catchment area were eligible for inclusion in this study.</p>	254 women responded to the initial questionnaire (response rate 77%). 20 survey respondents, stratified by area and parity, were interviewed.	1995
Houghton 2008	The study aim was to explore the rationale behind women's choices and the influences	This longitudinal, mixed methods study used questionnaires, non-	30 women were interviewed. 18 were primips and 12 multips. 94%	2006

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
	on their decision-making with regard to birth place in an urban area in north-west of England, the area served by a large teaching hospital. Women in this area had three choices: OU, AMU or home birth.	participant observation and in depth interviews. 50 women, stratified by parity and indices of multiple deprivation were asked to complete a questionnaire at 12 weeks and then were observed during their first hospital antenatal clinic appointment. At 34 weeks' gestation and at 28 days postnatally they were asked to complete a further questionnaire and participate in a semi-structured interview.	were white British, the median age was 29 years (range 18-39 years). A diverse range of educational and occupational status was evident. One woman had a planned home birth, 7 gave birth in the AMU, 16 in the OU and 6 in the OU's operating theatre.	
Jomeen 2007	<p>The study was conducted to explore women's choices of maternity care and birth place, the rationale for these choices, and their experiences of care.</p> <p>The setting was a large maternity unit in the North of England where maternity services had recently been reconfigured and now offered the options of OU, AMU, FMU and home birth.</p>	This longitudinal study used in-depth qualitative interviews with 10 women at four time points: 12-16 weeks' and 32-34 weeks' gestation, and at 14 days and 6 months postnatally. Participants were a convenience sample of volunteers from a larger cohort study. One-to-one conversational interviews were determined by issues important to the participants relating to their choices, expectations and feelings about their maternity experiences	<p>Ten women from a larger cohort study who were over 18 years, with no medical or obstetric complications were interviewed.</p> <p>The report does not state how many participants chose each of the available birth place options.</p>	Pre-2007
Lavender	This project was commissioned by the	A survey method was used. Closed	The average gestation was 29 weeks,	Between

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
2005	<p>Department of Health to inform the Children's National Service Framework. The study aim was to identify models of maternity care which provide a service that is safe, equitable, sustainable, meets the needs of women and offers choices of place of birth in England to women living in both rural and urban areas.</p> <p>The included units varied in the range of birth place options available. All should have been able to offer OU or home birth, while at some AMU and/or FMU were also available.</p>	<p>and free-text questions within a survey distributed to pregnant women from 12 maternity units in England.</p> <p>A purposive sampling strategy was adopted to select the maternity units included in the study, to ensure coverage of units that serve women from a range of socio-economic and ethnic backgrounds, and a mix of urban and rural geographical areas. The units also varied in size from 50 to 6,000 births.</p> <p>No detail is given about the sampling strategy for women within the units, but in some units interpreters were made available to assist with completing the questionnaire.</p>	<p>54% multiparous, mean age 29 years, 84% were White and English was the first language for 90%.</p> <p>Interpreters were available for ethnic minority women.</p>	January and March 2002
Longworth 2001	<p>The aim of this study was to assess the relative importance attached to a range of attributes of intrapartum care for women who chose to deliver at home relative to those who chose to deliver in hospital.</p> <p>The study was set in two maternity units with</p>	<p>This is a mixed method study using focus groups and a survey in a conjoint analysis. Two focus groups were carried out, one with women who had booked to deliver at home in the previous 12 months, and one with women who had booked an OU</p>	<p>10 women participated in each focus group. No sample characteristics are provided.</p>	1998-1999

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
	<p>a relatively high proportion of home births, one in inner London and one in outer London.</p> <p>There is no indication of whether either unit included an option of AMU or FMU.</p>	<p>birth. The focus groups were used to develop the research instruments for the conjoint analysis.</p>		
Madi 2003	<p>This qualitative study explored the information women had about birth place options, and midwives' practices around giving women information and facilitating choice. The fieldwork was carried out in two areas in the south east of England. The only options considered in the study are "hospital" and home. AMUs and FMUs are not mentioned in the report suggesting that these may not have been options available in the area.</p>	<p>The study used qualitative interviews with 33 low risk pregnant women between 32 and 42 weeks' gestation. They were recruited by midwives during antenatal visits.</p>	<p>20 of the women were planning a hospital birth and 13 were planning a home birth.</p> <p>A greater proportion of the home birth sample than the hospital sample was nulliparous, and the home birth women were more likely to have college or university degrees.</p>	Pre-2002
Mansion 1998	<p>This study aimed to explore women's reasons for choosing DOMINO care.</p> <p>It was conducted in a mainland Scottish Health Board area.</p> <p>Availability of other birth place options is not stated.</p>	<p>This qualitative study used semi-structured interviews with pregnant women. They were recruited by midwives and interviewed at home between 22 and 37 weeks' gestation.</p>	<p>A convenience sample of 8 women who had chosen DOMINO care took part in the study. They ranged from 21 to 35 years of age. All but one was multiparous.</p>	Pre-1997
McCutcheon 2012	<p>This study explored the experiences of women who had had, or had knowledge of, a home</p>	<p>The study used semi-structured interviews carried out between 12 days and 45 years since most recent</p>	<p>Nine women took part in the study. Age ranged from 27-78 and parity</p>	Pre-2012

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
	<p>birth.</p> <p>No information is given about birth place options available.</p> <p>Geographical location is not stated, but the majority of participants were born in the Midlands.</p>	<p>birth.</p> <p>Women were recruited through NCT, two independent midwives and a voluntary organisation offering support to women from ethnic minority groups.</p>	<p>from 1-6.</p>	
Newburn 2012	<p>This study explored women's, their partners' and midwives' perspectives on care delivered in an AMU in an inner-city location in England.</p> <p>No information is given on the birth place options available to the women.</p>	<p>The study used qualitative ethnographic methods (observation and interviews) postnatally, either in the birth centre or at home. Women attending the birth centre for antenatal care were invited to participate by the researcher, and midwives introduced the researcher to women who had given birth in the AMU within the last 24 hours.</p>	<p>A convenience sample of 11 women took part in the study, 3 of whom transferred to the OU, and the remainder of whom gave birth in the AMU. The sample was mixed in terms of social class and ethnicity.</p>	Pre-2012
Ogden 1997 Part 2	<p>This study explored the factors involved in deciding to have a home birth.</p> <p>The paper does not state what alternative birth place options were available.</p> <p>The study took place in the London boroughs of Lambeth, Southwark and Lewisham.</p>	<p>Women were recruited by four GPs and one independent midwife who were members of a home birth support group. They were interviewed in their own homes between three and five years after they had had a home birth.</p>	<p>25 women participated in the study, and all had given birth at home between 3 and 5 years previously. They varied in terms of age, parity, number of subsequent births, and experiences of hospital births.</p>	1995

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
	This study is linked to Ogden 1997 Part 3			
Ogden 1997 Part 3	<p>This study describes the impact of having a home birth on women's perceptions of themselves and future decisions about birth.</p> <p>The paper does not state what alternative birth place options were available.</p> <p>The study took place in the London boroughs of Lambeth, Southwark and Lewisham.</p> <p>This study is linked to Ogden 1997 Part 2</p>	<p>Women were recruited by four GPs and one independent midwife who were members of a home birth support group. They were interviewed in their own homes between three and five years after they had had a home birth.</p>	<p>25 women participated in the study, and all had given birth at home between 3 and 5 years previously. They varied in terms of age, parity, number of subsequent births, and experiences of hospital birth.</p>	1995
Ogden 1998	<p>This study explored women's decision to have a hospital birth, as well as their experiences of the birth.</p> <p>The paper gives no indication of whether any alternatives to hospital birth other than home birth were available to women, nor of whether there was an AMU at the unit.</p> <p>The study took place in the London boroughs of Lambeth, Southwark and Lewisham.</p>	<p>The study used in depth interviews with women who had experienced hospital birth between 3 and 5 years previously. Women were selected for the study by GPs who were asked to select women with routine births, including forceps delivery, but not caesarean sections.</p>	<p>25 women participated in the study, and all had given birth in an OU.</p>	Pre-1998
Pitchforth 2008	<p>The study was conducted to explore women's perceptions and experiences of place of birth in remote and rural areas in the north of</p>	<p>This mixed method study involved a discrete choice experiment and focus groups.</p>	<p>Eight focus groups were carried out involving 47 women. The average number of participants in each</p>	Pre-2007

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
	<p>Scotland.</p> <p>The 8 study sites included 4 FMUs, 2 OUs with no neonatal or epidural facility, one FMU adjacent to a non-obstetric hospital, and one GP-run community maternity unit.</p> <p>This study is linked to Pitchforth 2009</p>	<p>A purposive sample of eight maternity units with low annual delivery numbers was selected, stratified by staffing/service model of care.</p> <p>8 focus groups were carried out with a total of 47 women recruited from mother and toddler groups within the catchment areas of the 8 units.</p>	<p>group was six (range 4-9).</p> <p>Participants were women aged 24–45 years, whose parity ranged from 1-7 and whose most recent intrapartum experience varied from 4 months to 7 years previously.</p>	
Pitchforth 2009	<p>This qualitative study explored the perceptions of choice of place of delivery of women who lived in remote and rural areas in the north of Scotland. The research took place across eight study sites including 4 FMUs, 2 OUs with no neonatal facility or epidural, one FMU adjacent to a non-obstetric hospital and one GP-run community maternity unit.. This study is linked to Pitchforth et al 2008</p>	<p>This study used 12 focus groups, including the 8 described in Pitchforth 2008.</p> <p>They were recruited purposively from mother and toddler groups.</p>	<p>A total of 70 participants were recruited. They were women aged 24–45 years, whose parity ranged from 1-7 and whose most recent intrapartum experience varied from 4 months to 7 years previously. Four participants were pregnant at the time of the focus groups.</p>	Pre-2007
Shaw 2005	<p>This study aimed to document the problems and barriers women encounter in the UK when trying to arrange home birth, and the strategies the call-taker uses to help her to exercise her right to give birth at home.</p> <p>Birth place options are not stated.</p>	<p>This paper examines recordings of 80 calls made by 56 callers to a UK-based home birth helpline.</p>	<p>80 calls, mean duration 30 minutes. 54 were women calling on their own behalf.</p> <p>The majority of women gave birth at home. No demographic data were available.</p>	Pre-2005

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
Stapleton 2002	<p>The study was conducted to examine the use of evidence-based leaflets on informed choice in maternity services in 13 maternity units in Wales.</p> <p>Choices available were not explicitly stated but home birth and OU birth were mentioned.</p>	<p>This study employed semi-structured interviews and observations of antenatal consultations in maternity units. An opportunistic sampling strategy was used.</p>	<p>886 women were observed during their antenatal consultations and 163 women were interviewed: 85 were interviewed antenatally and 78 postnatally.</p>	<p>May-December 1998</p>
Tinkler 1998	<p>This study explored women's experiences of maternity care in England, including their experiences of communication, being informed and making choices, being involved in the process of care and their perceptions of care.</p> <p>It compared the experiences of women who receive team midwifery care in a pilot scheme with those receiving "no change" traditional midwifery care. It focuses particularly on the women's relationship with the midwife.</p>	<p>The study used individual and group qualitative interviews.</p> <p>Interviews were conducted antenatally and postnatally with a group of 8 women who were receiving team midwifery care.</p> <p>Group interviews were conducted with 14 women antenatally and a different 16 women postnatally, all of whom received team midwifery care. These women were recruited by the lead midwife in each of six pilot team midwifery teams.</p> <p>Group interviews were conducted with 14 women antenatally and a different 16 women postnatally, all of whom received "no change" maternity care. These women were</p>	<p>A total of 68 women participated, selected to reflect a range of socio-economic backgrounds, age and parity, although demographic details are not given in the paper.</p>	<p>Pre-1998</p>

Study ID	Study context/ objective	Methods & sample strategy	Sample characteristics	Study period
		recruited by GPs.		
Walsh 2006	The study aim was to explore the culture, beliefs, values, customs and practices around the birth process within an FMU. The FMU was in the middle of England, 15 miles from the nearest OU. Birth place options are not stated.	Interviews and ethnographic methods were used. 30 women, users of the FMU, were interviewed and five gave consent for the researcher to observe their labour and birth.	Women who were using or had used the FMU. No demographic data on participants is reported.	Pre-2005
Watts 2003	<p>This study aimed to determine the impact of changes from consultant-led to midwife-led care in a local maternity service. It included an exploration of the reasons behind women's choice of birth place.</p> <p>The study was set in rural England where women had a choice between home birth, FMU or OU.</p> <p>The local OU had been replaced with an FMU. The nearest OU was now 25 miles away along small country roads. The rate of home births had increased dramatically since the introduction of the FMU.</p>	<p>This mixed-methods study used postal survey, semi-structured interviews, observations and analysis of records.</p> <p>Questionnaires were sent to women who had chosen a home birth, those who had chosen the FMU, those who would have been eligible for an FMU birth but chose to use the OU, and women who had planned to use the FMU but had been transferred to the OU.</p> <p>A consecutive sample of 10 women who had given birth since April 2000 were invited to take part in face-to-face interviews, and 8 agreed to.</p>	<p>No demographic data about participants is given.</p> <p>59 of the survey respondents gave birth in the FMU, 38 at home and 12 in the OU.</p>	2000

Table 3: Maternity service attributes used to assess preferences in included quantitative studies

Listed in reverse chronological order by study period.

Study & method	Preferences evaluated
Pitchforth (2008) <i>Discrete choice experiment</i>	Model of care: <ul style="list-style-type: none"> - Consultant-led vs. midwife-led care - Pain relief: all methods available vs. no epidural Distance ('time travelled'): <ul style="list-style-type: none"> - zero (home birth) vs. 30 mins vs. 60 mins vs. 90 mins vs. 120 mins
Lavender (2005) <i>Questionnaire survey</i>	Women were asked to state their level of agreement/disagreement with the following: <ul style="list-style-type: none"> - It is not important for me to have my baby in the same place as I receive antenatal care - It is important that my antenatal appointments are at a location close to where I live - I would be willing to travel if it meant I would receive higher quality care for my baby and me around the time of birth - It is important to me that a midwife helps me to give birth to my baby even if complications develop - I would feel unsafe if a specially trained doctor was not immediately available when I am in labour - It is not important to me that a midwife I know helps me to give birth to my baby - It is important to me to that [sic] a special care baby unit is in the same place that I give birth - It is important to me to be able to have an epidural at any time of day or night - It is important to me that a pool is available for my labour/birth - I want to be looked after by midwives and not have doctors involved - I would not want to transfer to a hospital a few miles away if my baby or I develop a problem
Longworth (2001) <i>Conjoint analysis</i>	Continuity: <ul style="list-style-type: none"> - Have not met midwives prior to labour vs. have met midwives but don't know them well vs. know midwives well Location: <ul style="list-style-type: none"> - Labour ward vs. maternity unit with a home-like environment vs. home Pain relief: <ul style="list-style-type: none"> - Gas & air/breathing only, no epidural, no birthing pool vs. gas & air and birthing pool, no epidural vs. all options including epidural Decision-making during labour and delivery: <ul style="list-style-type: none"> - Midwives and doctors will decide vs. decisions will be made jointly following discussion vs. woman will make own decisions Probability of transfer to another hospital during labour

Study & method	Preferences evaluated
	<ul style="list-style-type: none"> - No need for transfer if problems develop vs. low probability of transfer vs. high probability of transfer
<p>Hundley (2004), Hundley (2001)</p> <p><i>Discrete choice experiment</i></p>	<p>Continuity (midwife):</p> <ul style="list-style-type: none"> - Meet midwife antenatally, same midwife present throughout labour/birth vs. meet team of midwives antenatally, one present throughout labour/birth vs. previously unknown midwife but present throughout labour/birth vs. midwives working shifts may change during labour/birth <p>Pain relief:</p> <ul style="list-style-type: none"> - All methods except epidural vs. all methods available but epidural requires transfer vs. all methods available. <p>Fetal monitoring:</p> <ul style="list-style-type: none"> - Continuous, movement may be restricted during labour vs. intermittent unless complications develop, then continuous if required <p>Appearance of room:</p> <ul style="list-style-type: none"> - Homely vs. clinical appearance <p>Medical staff:</p> <ul style="list-style-type: none"> - Involved in care vs. only involved if complications develop <p>Decision-making:</p> <ul style="list-style-type: none"> - staff make decisions vs. staff make decisions but keep woman informed vs. staff discuss things with women before deciding vs. staff give woman assessment, woman in control of decisions
<p>Rennie (1998)</p> <p><i>Questionnaire survey</i></p>	<p>Aspects of intrapartum care rated by study participants:</p> <ul style="list-style-type: none"> - Birth companion - Known midwife - In control - Few interventions - Able to do what you want - Same midwife in labour - Not to lose control of behaviour - Preferences and wishes followed - Attendance of midwife: <ul style="list-style-type: none"> o all the time vs. easy access vs. present only when I say - Information: <ul style="list-style-type: none"> o constant flow vs. staff to decide vs. only when asked for - Option for pain relief <ul style="list-style-type: none"> o pain-free with drugs vs. minimum drugs vs. drug free labour/other - Decision-making in labour: <ul style="list-style-type: none"> o Staff decides vs. reach decision together vs. woman decides
<p>Emslie (1999)</p> <p><i>Questionnaire survey - longitudinal follow-up</i></p>	<p>Features of place of birth rated by women at 14 and 36 weeks (selected list – not all reported)</p> <ul style="list-style-type: none"> - Quiet atmosphere - Baby with you at all times - Availability of specialist facilities

Study & method	Preferences evaluated
	<ul style="list-style-type: none"> - Convenience for visitors - Choices in pain relief - Choices in delivery <p>Aspects of labour management rated by women (at 36 weeks):</p> <ul style="list-style-type: none"> - Partner being there - Availability of specialist staff/equipment - Being kept informed - Being involved in decisions - Time alone with partner - Choice of pain relief - Freedom to choose different positions - Handed baby immediately - Cared for by known staff - Not being left alone - Homely atmosphere - Cared for by named midwife - Being introduced to people - Provision of music/TV
<p>Donaldson (1998)</p> <p><i>Willingness to pay</i></p>	<p>Labour ward vs. midwives unit</p> <p>Labour ward characterised as:</p> <ul style="list-style-type: none"> - Doctors more likely to be involved in decision-making; midwives involved but women will not see the same midwife all the time; Electronic fetal monitoring; because of monitoring/other reasons 1 in 2 women have limitations on movement during labour; 1 in 12 women try alternative positions for delivery; 1 in 5 have an epidural; 1 in 3 have episiotomy <p>Midwives unit characterised as:</p> <ul style="list-style-type: none"> - Decisions made by women and midwives; most care from one midwife; traditional fetal monitoring, transfer to labour ward needed if continuous monitoring required; 1 in 4 women transferred to labour ward for electronic monitoring; because of monitoring/other reasons 1 in 3 have limitations on movement during labour; 1 in 8 try alternative positions for delivery; all types of pain relief available but transfer to labour ward required for epidural; 1 in 7 have an epidural; 1 in 4 have episiotomy

Appendix 1: Review methods – additional details

Methods for the identification of studies

We used the a search strategy based on the SPIDER tool (Cooke, Smith et al. 2012):

SPIDER Tool	Search Terms relating to:
Sample	Pregnant women Matern* or pregnan* OR women Pregnant women/ Mothers/
Phenomenon of interest	Maternity unit/midwifery unit/birth centre/home birth/intrapartum careplace of birth Maternity adj2 (care or unit* or setting? Or center? Or centre? Or hospital? Or service*) obstetric adj2 (unit? or center? Or centre?) midwi* adj2 (unit? or center? Or centre?) Home birth* or home childbirth or home delivery birth adj2 (unit? or center? Or centre? Or place) intrapartum care Place of birth/ Birthing Centers/ Delivery Rooms/ Home Childbirth/
Design	NA
Evaluation	Preferences/choice/experiences/decisions/views/influences/experiences/attitudes/expectations Prefer* or choice* or choos* or option? Or decision* or decid* or view* or experience* or need* or suggest* or influenc* or attitude* or satisf* or value* or expectation* or inform* or advice* or consum* or “Consumer – led”
Research setting	United Kingdom/Great Britain/England/Scotland/Northern Ireland/United Kingdom/British/NHS United kingdom or uk or britain or gb or england or wales or scotland or northern ireland or british or nhs or national health service or Great Britain

Databases searched

- Applied Social Science Index and Abstracts (ASSIA)[Proquest]
- Cumulative Index to Nursing and Allied Health (CINAHL) plus [EBSCOHost]
- EMBASE [OvidSP]
- Medline [OvidSP]
- PsycINFO [OvidSP]
- Science Citation Index [Web of Science Core Collection]
- Social Sciences Citation Index [Web of Science Core Collection]

Databases were searched from 1992 to mid-March 2015.

Screening

Titles and abstracts of all retrieved references were screened independently by two reviewers. Full text of references considered potentially relevant were retrieved and screened by two reviewers. Any discrepancies were discussed and resolved within the team, with the involvement of a third reviewer if required.

References of all included papers and references of relevant systematic reviews identified by the searches were also checked to identify additional studies that were not identified in the initial searches.

Data extraction

Data extraction forms were designed to hold information about the study aims, methods, participants, study period, etc.

Critical appraisal

Critical appraisal was not undertaken in this rapid review.

Data management and analysis

Data were analysed using Eppi-Reviewer 4 software.

Data extraction forms corresponding to the themes in the study framework model were created in Eppi-reviewer and used to record results extracted from the study reports.

Additionally, the line-by-line coding feature in Eppi-Reveiwier 4 was used to extract data from the qualitative reports.

For the quantitative data analysis, the data were extracted by one reviewer and the extracted data cross-checked against the original reports by a second reviewer. A narrative synthesis was then prepared by one reviewer and again checked by the second reviewer. All discrepancies were resolved by discussion.

In this rapid review, qualitative data were extracted and synthesised by a single reviewer. Analysis and synthesis by a second reviewer is being undertaken as part of the ongoing evidence synthesis for the Birthplace Choices project.

