Women's Health Academic Centre

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National Women's Annual clinical report
21-08-15

How can the UK inform the growth of primary birthing units in New Zealand?

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Guy's and St Thomas' NHS
NHS Foundation Trust

King's College Hospital NHS
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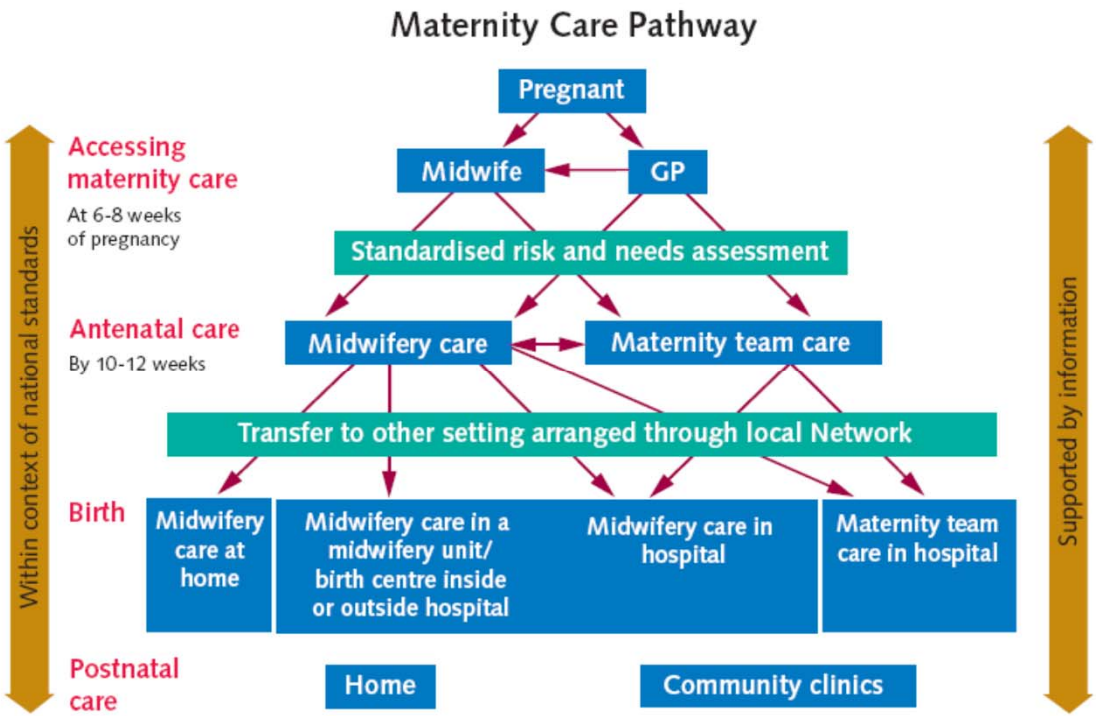
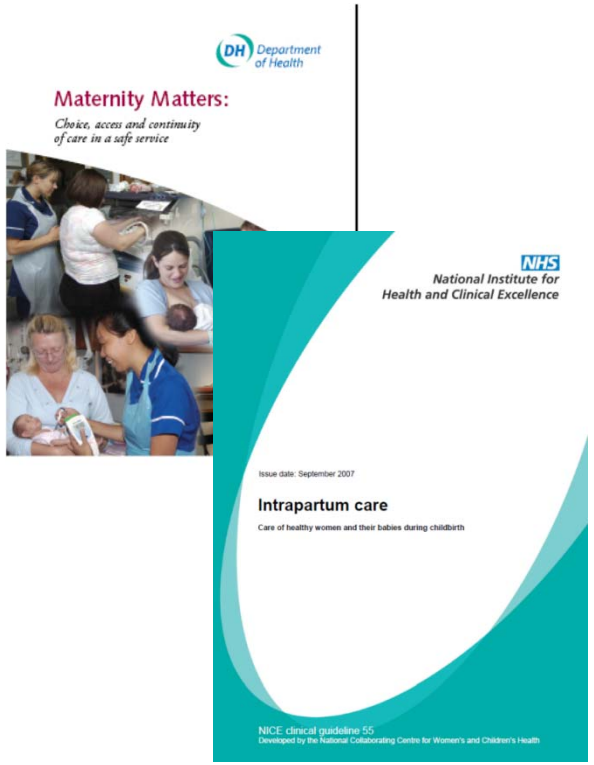
South London and Maudsley NHS
NHS Foundation Trust

Maternity Policy





'*Every woman should be able to choose the most appropriate place and professional to attend her during childbirth based on her wishes and cultural preferences and any medical and obstetric needs she and her baby may have*'

'*…options for midwife-led care will include midwife-led units in the community or on a hospital site'* and that care was to be provided in a *'…framework which enables easy and early transfer of women and babies who unexpectedly require specialist care'*

Department of Health (2004) National Service Framework for Children, Young People and Maternity Services: Maternity Standard 11. London

Birthplace in England Research Programme

Where did women give birth in England ?

Freestanding Midwife Unit (59)
Geographically separate from Obstetric Unit

Obstetric Unit (177)

Alongside Midwife Unit (53)
co-located on same site as obstetric unit

In 2012, 670,627 births, 21,249 midwives FTE and 1,570 consultants and 2,635 registrars, plus Drs in training

Home

NHS Maternity Statistics, England: 2010-11

Birthplace
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NICE criteria

- Medical conditions
- Previous obstetric complications
- Current obstetric complications
- Fetal indications
- Previous gynae history
- Individual assessment

•NICE Clinical Guideline 55 [2007] Intrapartum care Table Table 3.7 – 3.10.

What was known before

- A lack of accurate quantification of the risk of adverse outcomes associated with births planned in different settings
- Interpreting available evidence has been difficult because ***actual place of birth*** has often been used to make inferences about ***planned place of birth***
- Birthplace in England
- Aim
- To provide high quality evidence about processes, outcomes and costs associated with different settings for birth in the NHS in England

Component studies

- Mapping survey of NHS Providers in England
- Prospective cohort study
- Cost-effectiveness study
- Case studies

Birthplace in England Research Programme

Primary objective

- to compare intrapartum and early neonatal mortality and morbidity
- by planned place of birth at the start of care in labour
- in women judged to be at ‘low risk’ of complications according to current national clinical guidelines

National prospective study of planned place of birth

Objective

Compared the safety of births planned in four settings at the start of face to face care in labour for 'low risk' women

Design

- Prospective cohort study

Sample

- England: all NHS trusts providing intrapartum care at home, all freestanding midwifery units, all alongside midwifery units, and a stratified random sample of obstetric units

Participants (64,538 'low risk' women in total)

- Women with a singleton, term (>=37 weeks gestation), and received antenatal care. Planned caesarean sections, caesarean sections and unplanned home births before the onset of labour were excluded

Comparison groups

- Planned place of birth at the start of care in labour for low risk women at home, freestanding midwifery units, alongside midwifery units, and obstetric units

Analyses adjusted for maternal age, ethnicity, understanding of English, marital/partner status, Body Mass Index (BMI), area deprivation, parity and gestation

Birthplace in England Research Programme

Are there differences between planned birth settings in outcomes for the baby?

Birthplace in England Research Programme

Adverse perinatal outcomes

- 250 primary outcome events
  - 13% intrapartum stillbirth or early neonatal death (n=32)
  - 46% neonatal encephalopathy
  - 30% meconium aspiration
  - 12% shoulder injuries

- 4.3 adverse perinatal outcome events per 1000 births
- Nulliparous women: 5.3 events per 1000 births
- Multiparous women: 3.1 events per 1000 births

Birthplace in England Research Programme

Adverse perinatal outcome by planned place of birth – All women

	Adverse outcomes per 1000 births		Adjusted odds ratio	
	n/1000	(95% CI)	Odds ratio	(95% CI)
All 'low risk' women	**4.3**	**(3.3-5.5)**		
Obstetric unit	4.4	(3.2-5.9)	1	-
Home	4.2	(3.2-5.4)	1.16	(0.76-1.77)
Freestanding Midwife unit	3.5	(2.5-4.9)	0.92	(0.58-1.46)
Alongside midwife unit	3.6	(2.6-4.9)	0.92	(0.60-1.39)

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Perinatal outcome by parity

	Adverse outcomes per 1000 births		Adjusted odds ratio	
	n/1000	(95 CI)	Odds ratio	(95 CI)
Nulliparous women	**5.3**	**(4.0-7.0)**		
Obstetric unit	5.3	(3.9-7.3)	1	-
Home	**9.3**	**(6.5-13.1)**	**1.75**	**(1.07-2.86)**
Freestanding midwife unit	4.5	(2.8-7.1)	0.91	(0.52-1.60)
Alongside midwife unit	4.7	(3.1-7.2)	0.96	(0.58-1.61)
Total (27,669)				
Multiparous women	**3.1**	**(2.2-4.5)**		
Obstetric unit	3.3	(2.2-5.0)	1	-
Home	2.3	(1.6-3.2)	0.72	(0.41-1.27)
Freestanding midwife unit	2.7	(1.6-4.6)	0.91	(0.46-1.80)
Alongside midwife unit	2.4	(1.4-4.3)	0.81	(0.40-1.62)
Total (34,367)				

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Perinatal outcome for babies of ‘low risk’ women by planned place of birth

- For ‘low risk women’, the incidence of adverse perinatal outcomes is low in all birth settings
  - **4.3 adverse perinatal outcome events per 1000 births**
- For multiparous ‘low’ risk women there are no differences in adverse perinatal outcomes between settings
- The risk of an adverse perinatal outcome appears to be higher for nulliparous women who plan to give birth at home (9.3 primary outcome events per 1000 births vs. 5.3 per 1000 births in an obstetric unit)

birthplace
in England Research Programme

How does planned birth in different settings affect intrapartum interventions and other maternal outcomes?

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Secondary maternal outcomes

- Mode of birth
- Maternal morbidity and mortality
- Interventions during labour and birth
  - Forceps delivery
  - Intrapartum caesarean section
  - ‘Normal birth’*

* Normal birth is defined as birth without any of the following interventions: induction of labour, epidural or spinal analgesia, general anaesthetic, forceps or ventouse, caesarean section or episiotomy

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Maternal outcomes by planned place of birth, percentages of women

	Home	Obstetric Unit	Alongside midwife unit	Freestanding midwife unit
Intrapartum CS	2.8	11.1	4.4	3.5
Forceps	2.1	6.8	4.7	2.9
Syntocinon	5.4	23.5	10.3	7.1
Normal birth	87.9	57.6	76.0	83.3
Immersion in water	33.3	9.1	30.2	45.7

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How often are women who plan birth in non-obstetric settings transferred during labour or immediately after the birth?

Birthplace in England Research Programme

Transfers during labour or immediately after birth by parity

	Percentage transferred		
	Home	Freestanding midwife unit	Alongside midwife unit
All women	21.0	22.0	26.0
Nulliparous women	45.0	36.3	40.2
Multiparous women	12.0	9.4	12.5

Birthplace in England Research Programme

Most common reasons for transfer (%)

Reason	Home	Freestanding midwife unit	Alongside midwife unit
Failure to progress in 1st stage	4.5	4.8	5.1
Failure to progress in 2nd stage	2.3	3.3	4.1
Fetal distress	1.5	2.3	2.9
Epidural request	1.1	1.4	3.5
Meconium staining	2.6	2.7	3.2
Retained placenta	1.5	1.6	1.2
Repair of perineal trauma	2.3	1.6	2.2

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Women's experiences of transfer

Concerns around transfer distance meant that many women did not feel they had any realistic choice of place of birth.
Travel distance to OUs was a concern for women living in more rural areas.

- Some women were prepared for the unpredictability of childbirth, others were not expecting transfer.
- Some women found transfer worrying, disempowering or disappointing.
- Careful explanation of events by professionals had a positive effect on women & partners' experiences of escalation and transfer.
- Some women described difficulty in being listened to by staff when they raised concerns about complications they had noticed themselves.
- Not being listened to resulted in frustration, self-blame or anger.
- Good relationships with health professionals facilitated women to express concerns, and staff to respond.

Rowe et al. BMC Pregnancy and Childbirth 2012, 12:129.
Rance S, et al. Quality and Safety in Health Care 2013;0:1–8.

Birthplace in England Study Conclusion

- For ‘low risk women’, the incidence of adverse perinatal outcomes is low in all birth settings at 4.3 adverse perinatal outcome events per 1000 births.
- For multiparous ‘low’ risk women there are no differences in adverse perinatal outcomes between settings.
- The risk of an adverse perinatal outcome appears to be higher for nulliparous women who plan to give birth at home (9.3 primary outcome events per 1000 births vs. 5.3 per 1000 births in an OU). No differences for those planning birth in FMU or AMU.
- All women planning birth in a freestanding or alongside midwifery unit, and multiparous women planning birth at home experience fewer interventions than those planning birth in an obstetric unit, with no impact on perinatal outcomes.

BMJ

BMJ 2011;343:d7400 doi: 10.1136/bmj.d7400 (Published 24 November 2011) Page 1 of 13

RESEARCH

Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study

OPEN ACCESS

Birthplace in England Collaborative Group

Abstract

Objective To compare perinatal outcomes, maternal outcomes, and interventions in labour by planned place of birth at the start of care in labour for women with low risk pregnancies.

Design Prospective cohort study.

Setting England: all NHS trusts providing intrapartum care at home, all freestanding midwifery units, all alongside midwifery units (midwife led units on a hospital site with an obstetric unit), and a stratified random sample of obstetric units.

Participants 64 538 eligible women with a singleton, term (≥37 weeks gestation), and "booked" pregnancy who gave birth between April 2008 and April 2010. Planned caesarean sections and caesarean sections before the onset of labour and unplanned home births were excluded.

Main outcome measure A composite primary outcome of perinatal mortality and intrapartum related neonatal morbidities (stillbirth after start of care in labour, early neonatal death, neonatal encephalopathy, meconium aspiration syndrome, brachial plexus injury, fractured humerus, or fractured clavicle) was used to compare outcomes by planned place of birth at the start of care in labour (at home, freestanding midwifery units, alongside midwifery units, and obstetric units).

Results There were 250 primary outcome events and an overall weighted incidence of 4.3 per 1000 births (95% CI 3.3 to 5.5). Overall, there were no significant differences in the adjusted odds of the primary outcome for any of the non-obstetric unit settings compared with obstetric units. For nulliparous women, the odds of the primary outcome were higher for planned home births (adjusted odds ratio 1.75, 95% CI 1.07 to 2.86) but not for either midwifery unit setting. For multiparous women, there were no significant differences in the incidence of the primary outcome by planned place of birth. Interventions during labour were substantially lower in all non-obstetric unit settings. Transfers from non-obstetric unit settings were more frequent for nulliparous women (36% to 45%) than for multiparous women (9% to 13%).

Conclusions The results support a policy of offering healthy women with low risk pregnancies a choice of birth setting. Women planning birth in a midwifery unit and multiparous women planning birth at home experience fewer interventions than those planning birth in an obstetric unit with no impact on perinatal outcomes. For nulliparous women, planned home births also have fewer interventions but have poorer perinatal outcomes.

Introduction

The relative benefits and risks of birth in different settings have been widely debated in recent years.[1-7] A problem when trying to evaluate the effect of birth setting on perinatal outcomes has been the use of actual place of birth rather than planned place of birth to define comparison groups. Available evidence summarised in the National Institute for Health and Clinical Excellence (NICE) guideline on intrapartum care indicates that, although there is a higher likelihood of a vaginal birth with less intervention for healthy women who plan to give birth at home or in a midwifery unit compared with an obstetric unit, there is a lack of good quality evidence comparing the risk of rare but serious adverse outcomes by birth setting.[8-10]

The primary objective of this study was to compare intrapartum and early neonatal mortality and specific neonatal morbidities for births planned at home, in freestanding midwifery units, and in “alongside midwifery units” (midwife led units on a hospital site with an obstetric unit) with births planned in obstetric units, for babies of women judged to be at low risk of complications before the onset of labour.

In England almost all maternity care is provided by the National Health Service (NHS) and is free at the point of care. Births outside an obstetric unit are relatively uncommon. Of women giving birth in 2007, around 8% gave birth outside an obstetric unit—2.8% at home, around 3% in alongside midwifery units, and just under 2% in freestanding midwifery units.[11]

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Appendices supplied by the author. 1: Study protocol. 2: Outcome variables requiring clinical review and coding. 3: Data collection forms. 4: Categorisation of potential confounders. 5: Sensitivity analysis, trusts/units with a response rate of at least 85%. 6: Sensitivity analysis, propensity score analysis. 7: Summary of missing data. 8: Supplementary results tables. 9: Birthplace in England Collaborative Group (see http://www.bmj.com/content/343/bmj.d7400?tab=related#webextra)

Birthplace in England Research Programme

Issues that Birthplace is not able to address

- Variation between trusts; regions; different models of service provision for home birth services, FMUs and AMUs
- Health economics are limited to intrapartum care and the post-partum period
- We do not know why planned home birth for women having their first baby appears to be more risky

Implications for practice

- Guidance to women on planned place of birth should be updated with more accurate information about maternal and perinatal outcomes and transfer rates. NICE guidance updated 2014.

- Expansion of midwife-unit provision.
- Most births (87 per cent in 2012) take place in obstetric units, with 11 per cent in midwife-led units and 2.4 per cent at home (National Audit Office 2013).
- The number of obstetric units in England has fallen slightly from 180 in 2007 to 177 in 2010.
- 152 midwifery-led units in June 2013, an increase from 87 in April 2007. 79 per cent of women are within a 30-minute drive of both an obstetric unit and a midwifery-led unit, compared with 59 per cent in 2007.
- In 2007, the annual number of deliveries in a midwife-led birthing unit ranged from 8 to 548; for an alongside midwifery-led unit, it ranged from 93 to 2,860; and for deliveries in obstetric units, it ranged from 914 to 6,781.

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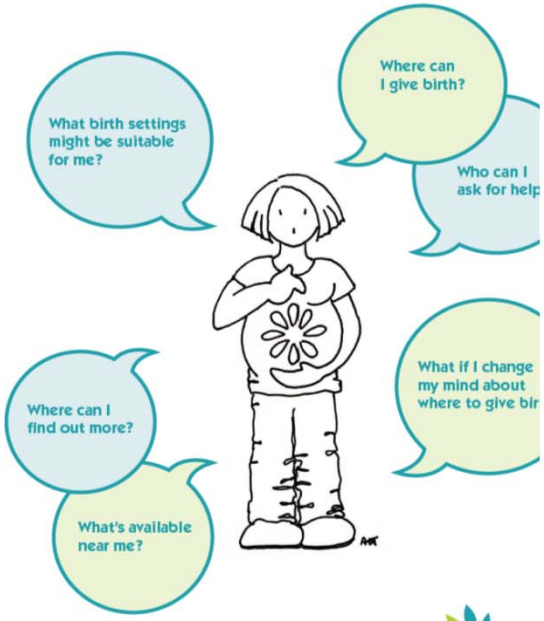
Birth place decisions

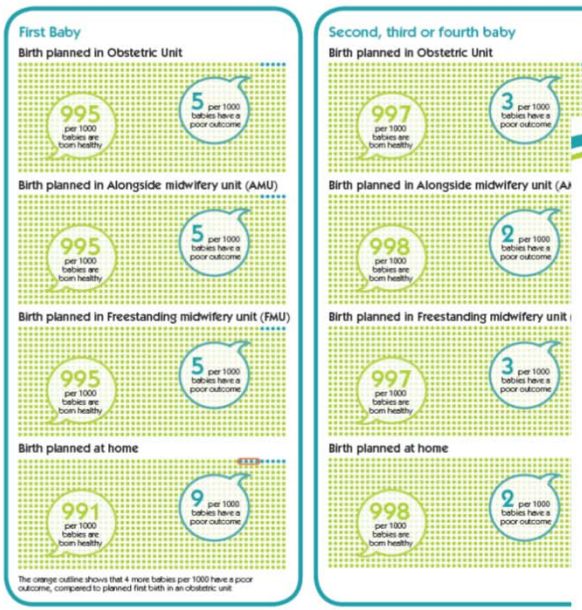
Information for women and partners on planning where to give birth



BirthPlace &

Planned place of birth: outcomes for babies of healthy women at low risk of complications

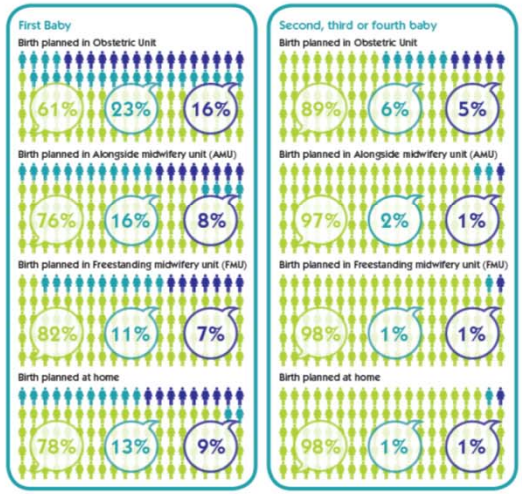
Birth is generally very safe for women at low risk of complications and their babies. These diagrams show outcomes for babies when birth is planned in different settings. In each case, the green circles ● represent a baby born healthy, and the blue circles ● represent a baby with a poor outcome, meaning that the baby was injured, seriously ill or died during or just after birth. These outcomes are very rare amongst healthy women who are at low risk of complications, but they can happen in any birth setting. For women expecting their first baby, a poor outcome, whilst still uncommon, is more likely for planned home births.



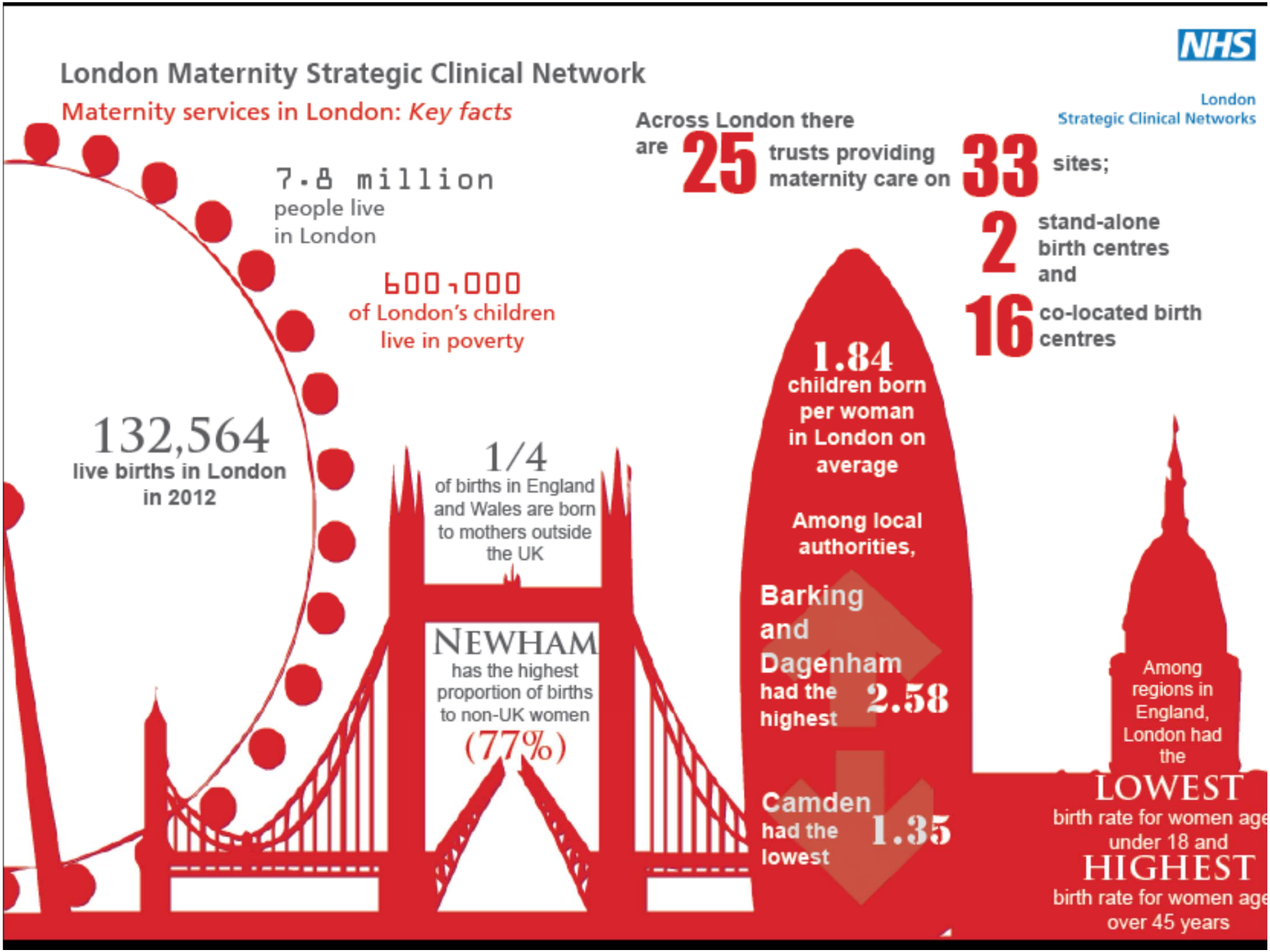
Assisted birth and emergency caesarean section

Ventouse or 'vacuum', and forceps, are sometimes used in the second stage of labour, to help deliver the baby more quickly if there is concern about the wellbeing of the baby or the woman. These interventions may be called 'instrumental' or 'assisted' births, and are only undertaken if there is good reason to think that a quicker birth would be beneficial, and that a caesarean birth may be avoided. Assisted births are associated with complications for women and babies, and recovery may be slower following birth. Overall, about half of assisted births are ventouse/vacuum births, and half are births with forceps. Like caesarean births, assisted births are more common amongst women having their first baby, compared to women having their second or subsequent baby. In some cases, the use of instruments is not successful, and then a caesarean is performed.

The diagrams below show how many women who were at low risk of complications had an assisted birth (ventouse or forceps) or an emergency caesarean in different birth settings. In these diagrams, women who have a caesarean birth are shown by a dark blue figure 🧍. Light blue figures 🧍 represent women who have births assisted by ventouse/vacuum or forceps. Green figures 🧍 represent women who had a straightforward vaginal birth.



Kirstie Coxon, King;'s College, Londonhttp://www.pdcap.cz/Texty/PDF/Birth_place_decision_support.pdf


London Maternity Strategic Clinical Network
Maternity services in London: *Key facts*
NHS
London Strategic Clinical Networks
Across London there are 25 trusts providing maternity care on 33 sites;
2 stand-alone birth centres and
16 co-located birth centres
7.8 million people live in London
600,000 of London's children live in poverty
132,564 live births in London in 2012
1/4 of births in England and Wales are born to mothers outside the UK
NEWHAM has the highest proportion of births to non-UK women (77%)
1.84 children born per woman in London on average
Among local authorities,
Barking and Dagenham had the highest 2.58
Camden had the lowest 1.35
Among regions in England, London had the
LOWEST birth rate for women age under 18 and
HIGHEST birth rate for women age over 45 years

Maternity

Overarching aim: To reduce variation in outcomes and experience of care for women and their babies in London

Co-Clinical Directors: Professor Donald Peebles, Professor of Foetal Medicine, University College London; Donna Ockenden, formerly Chief Midwife and Care Group Director, South London Healthcare Trust

KEY CONTACTS

- SCN Lead: Tracy Parr
- Quality Improvement Lead: Caroline Moren
- Senior Project Manager: Sarah Dunsdon

NHS
London Strategic Clinical Networks

Increasing the number of women who receive continuity of midwife care: *A best practice toolkit*

Aim

To increase the number of women accessing continuity of midwife care in London.

This toolkit has been produced as part of the London Maternity Strategic Clinical Network's strategy to identify areas of good practice for implementation across all maternity units in the capital, ensuring equally good outcomes for all pregnant women and their babies.

This toolkit presents the evidence that continuity of midwife care improves maternal and infant outcomes, improves maternal experience of care and uses resources more effectively.

It also reinforces Department of Health policy and the NHS Mandate that *"every woman has a named midwife who is responsible for ensuring she has personalised, one-to-one care throughout pregnancy, childbirth and during the postnatal period, including additional support for those who have a maternal health concern"*[1].

Current National Institute for Health and Care Excellence (NICE) antenatal[2] and postnatal quality care standards both state women should have a named midwife.

In the postnatal period, this person is referred to as a named healthcare professional[3].This should be available to all women including those of social complexity[4].

The toolkit is intended to cover all pregnant and childbearing women in all maternity units across London.

Background and rationale

A woman who receives care from a known midwife is more likely to:

- Have a vaginal birth.
- Have fewer interventions during birth.
- Have a more positive experience of labour and birth.
- Successfully breastfeed her baby.
- Cost the health system less.

A woman who receives care from a known midwife is less likely to:

- Experience preterm birth.
- Lose their baby before 24 weeks' gestation.

This applies to low and mixed risk populations of women[5].

Other studies have found that women who carry social complexity and find services hard to access in particular value continuity[6] and increased advocacy and care co-ordination[7]. Women also experienced increased agency and control, and more empathic care[8].

Comments from mothers

The below comments are direct quotes, received from the Family and Friends Test at Guy's and St Thomas' NHS Foundation Trust.

"Fantastic midwife team. Have had an appointment to meet all the midwives but also having an assigned midwife to do home visits is so appreciated. Given me a lot of confidence as this is my first pregnancy and continuous contact during past weeks is excellent."

"Like flexibility of home visits and comfortable by consistency of midwife so don't have to repeat medical history/situation which makes visits more efficient."

"The care I have received from the valley team midwives has been excellent. Completely different to the care I received three years ago with my first. I feel very well looked after and feel as though they really got to know me and my baby as always saw the same person. All women should have this level of maternity care."

There appears to be a cost-saving effect for midwife-led continuity of care as compared to other care models, in which the estimated mean cost saving for each maternity episode is £12.38.

However, the level of implementation of continuity of midwife care and the number of women who have a named midwife who cares for them throughout their pregnancy and birth is unknown. In the last national survey of 23,000 women's experiences of maternity care in England in 2013, 34 per cent of women saw the same midwife every time during pregnancy, and 27 per cent during the postnatal period.

NHS
London Strategic Clinical Networks

Increasing the number of births at home and in midwifery led units: *A best practice toolkit*

Aim

To increase the number of eligible women accessing midwifery led settings in London (midwifery led units and home births).

This toolkit has been produced as part of the London Maternity Strategic Clinical Network's strategy to identify areas of good practice for implementation across all maternity units in the capital, ensuring equally good outcomes for all pregnant women and their babies.

This toolkit presents the evidence that midwifery led settings improve maternal outcomes, increases maternal satisfaction and uses resources more effectively. It also reinforces Department of Health policy and national guidance that pregnant women should be offered a wide range of choice of maternity services including choice of where to give birth and information to support the choices available. This should be available to all women including those of social complexity.

The toolkit is intended to cover healthy women with uncomplicated pregnancies entering labour at low risk of developing intrapartum complications[1] ('eligible women').

Background and rationale

The evidence shows that midwife-led settings lead to better outcomes for women at low risk of developing intrapartum complications. The Birthplace in England study was a large cohort study that compared outcomes for births in different settings. The study found that for women at low risk of complications in birth, birth is as safe for babies in freestanding midwifery units (FMUs) or alongside midwifery units (AMUs) as it is in obstetric units, but with a lower rate of intervention and a decreased use of pain relief. It has also been demonstrated that planning to give birth outside an obstetric unit is more cost-effective than planning to give birth in an obstetric unit[1].

Yet, despite all of the evidence associated with midwifery led settings, the proportion of women birthing in midwifery led units has only shown a small increase in recent years. This is in spite of the number of services providing Birth Centre facilities increasing from 16 to 23 in London.

Approximately 45 per cent of women at the end of pregnancy are eligible to access midwifery led settings[3,4], however, the average midwifery led birth rate stands at 15 per cent in London. It ranges from between 1.4 per cent in a unit without a midwifery led unit to 23.9 per cent where there is both an alongside and an associated freestanding midwifery led unit.

The home birth rate has also continued to decline on a year by year basis[5].

A recent maternity services survey of all women's perception of choice in London, found that less than half of women considered that they were offered a choice of giving birth in an alongside or freestanding midwifery unit, whilst only a quarter of women perceived that they were offered a choice of giving birth at home[6].

A further report has also highlighted that women from lower socio-economic groups in the UK report a poorer experience of care during pregnancy, have a higher likelihood of hospital admission, transfer during labour and unplanned caesarean delivery[7].

Increasing midwifery led birth rates and ensuring all women are made aware of this choice at booking has been identified as a priority for maternity services and the Strategic Clinical Network.

London wide definitions

There is variation in how birth place settings are defined. To be able to compare outcome data standardised definitions should be adopted by all units.

Place of birth settings

- ***Alongside midwifery unit (AMU)*** - An NHS clinical location offering care to women with straightforward pregnancies during labour and birth in which midwives take primary professional responsibility for care. During labour and birth diagnostic and treatment medical services, including obstetric, neonatal and anaesthetic care are available, should they be needed, in the same building, or in a separate building on the same site. Transfer will normally be by trolley, bed or wheelchair[8].
- ***Freestanding midwifery unit (FMU)*** - An NHS clinical location offering care to women with straightforward pregnancies during labour and birth in which midwives take primary professional responsibility for care.

Case study findings
Organisation and delivery of care

Variations existed at provider level in support given to out-of-hospital births, and functioned best when embedded into system, supported by all staff, and not just seen as a midwifery concern.

Strong midwifery and obstetric leadership and a culture of mutually supportive professional teamwork essential.

Deployment and resourcing of community midwifery was variable.

Many women did not feel they had any realistic choice of place of birth due to travel and transfer distance.

Access to good quality information often differed across social groups.

Women's concerns about safety were not always listened to by staff.

Being heard and receiving timely support were aided by continuity of carer and/or presence of a birth partner or relative.

C McCourt, J Rayment, S Rance, J Sandall (2012) Organisational strategies and midwives' readiness to provide care for out of hospital births: An analysis from the Birthplace organisational case studies, Midwifery, Oct;28(5):636-45.

Birthplace in England Research Programme

Midwife Led Units

Why do we need to know more about AMU and what do we need to know?

Alongside Units: What do we need to find out?

- What are optimum staffing models and organization of care.
- What is the impact of competing philosophical, political, and administrative pressures on the operation of home-like settings.
- What are the effects of home-like settings on birth outcomes. ✓
- What is the impact of transfer on women, care providers, and decision-making processes regarding the need for intervention. ✓
- What are women's preferences for traditional labour ward care compared to birth centre care.

- Hodnett ED, Downe S, Walsh D, Weston J. Alternative versus conventional institutional settings for birth. Cochrane Database of Systematic Reviews 2010, Issue 9.
- C McCourt, J Rayment, S Rance, J Sandall (2012) Organisational strategies and midwives' readiness to provide care for out of hospital births: An analysis from the Birthplace organisational case studies, *Midwifery*, Oct;28(5):636-45.

Key themes

Improvements needed

- Unequal access to information about midwife-led care
- Admission, problems gaining access early labour
- Transfer out to higher level care felt too slow
- Women needed to be assured of support with coping with pain and easy transfer for epidural

Strengths

- Opt-out approach reduced inequality in information access
- Excellent support once service is known about, and access gained
- Women felt safe, especially when accompanied by partners
- Calm and relaxing environment in which women feel valued and cared for
- Care during labour was person-centred
- Staff able to listen, and acknowledge women's concerns and needs

Discussion

Aspects of the AMU environment, model and philosophy of care were highly valued by all women and partners.

Some areas of improvement (Access, early labour, transfer)

We still can't tell from this study whether environment or care are most important. Can changing the décor in an OU be sufficient?

Some indications that the AMU was beginning to shift OU practices in the two services with the newer units.

Most women still give birth in an obstetric unit, and the intervention rates for low risk women planning to give birth in obstetric units was significantly higher in the Birthplace study. There is an important need for research on the impact of obstetric units offering similar features, where possible on women's experience and childbirth processes and outcomes.

46% women eligible to give birth outside an OU, currently 8% in total, how to scale up?

Ongoing activities

- Reduce variation in out of hours cover, training, experience and professional support for midwives and transport arrangements for home birth provision.
- Need to address higher intervention rates in obstetric units and low rates of normal birth.
- Audit and review of intra-partum transfers and management.
- Maternity services review
- In 2012 45% of women at end of pregnancy eligible to plan birth in a midwife led unit or home (Sandall et al 2013)
- Update of RCOG/RCM standards

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Implications for further research

- What are the aspects of clinical care and service delivery associated with poorer intrapartum outcomes and what are the potentially modifiable?
- How can the frequency of interventions be reduced for low risk women planning birth in obstetric units?
- To what extent do socially disadvantaged women have reduced access to choice of birth setting, and what strategies might improve equity?
- How can the experience of intrapartum transfer be better managed and the experience improved for women and partners?
- How to improve ongoing assessment of complications and early detection and referral in late pregnancy and early labour.
- Do models of care (team and caseload midwifery) that provide continuity a cross settings improve quality and safety of care?

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BMJ
RESEARCH
Cost effectiveness of alternative planned places of birth in woman at low risk of complications: evidence from the Birthplace in England national prospective cohort study
OPEN ACCESS
Elizabeth Schroeder health economist, Stavros Petrou health economist, Nishma Patel health economist, Jennifer Hollowell epidemiologist, David Puddicombe researcher, Maggie Redshaw senior research fellow/social scientist, Peter Brocklehurst professor of perinatal epidemiology, on behalf of the Birthplace in England Collaborative Group
Abstract
BMJ
RESEARCH
Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study
OPEN ACCESS
Birthplace in England Collaborative Group
Abstract
Introduction
Downloaded from qualitysafety.bmj.com on February 24, 2013 - Published by group.bmj.com
Original research
Local guidelines for the transfer of women from midwifery unit to obstetric unit during labour in England: a systematic appraisal of their quality
Rachel E Rowe
ABSTRACT
BMC Pregnancy & Childbirth
RESEARCH ARTICLE
Open Access
Women's experience of transfer from midwifery unit to hospital obstetric unit during labour: a qualitative interview study
Rachel E Rowe, Jennifer J Kurinczuk, Louise Locock and Ray Fitzpatrick
Abstract
Background
BioMed Central
ARTICLE IN PRESS
Midwifery
ELSEVIER
Organisational strategies and midwives' readiness to provide care for out of hospital births: An analysis from the Birthplace organisational case studies
Christine McCourt, BA, PhD (Professor of Maternal and Child Health), Juliet Rayment, BA, MA, PhD (Research Associate), Susanna Rance, PhD (Research Associate), Jane Sandall, RN, RM, PhD (Professor of Women's Health)
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Women's safety alerts in maternity care: is speaking up enough?
Susanna Rance, Christine McCourt, Juliet Rayment, Nicola Mackintosh, Wendy Carter, Kylie Watson, Jane Sandall
ABSTRACT
INTRODUCTION
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Further Information

Full reports

Health Services and Delivery Research Programme

http://www.nets.nihr.ac.uk/projects/hsdr/081604140

The Birthplace in England Research Programme (Birthplace)

www.npeu.ox.ac.uk/birthplace

National Perinatal Epidemiology Unit

University of Oxford

NHS Choices

http://www.nhs.uk/news/2011/11November/Pages/hospital-births-home-births-compared.aspx

NICE Guideline Intrapartum Care December 2014 CG190

https://www.nice.org.uk/guidance/cg190


SDO Network

NHS CONFEDERATION

research digest

June 2012 Issue 3

BIRTHPLACE IN ENGLAND – NEW EVIDENCE

Availability, safety, processes, and costs of different settings for birth

This digest highlights new evidence from recently published research on maternity services across England. It provides authoritative findings from the Birthplace Research Programme, commissioned in 2007 to address key gaps in the evidence, including a national prospective cohort study of low-risk women [see glossary] giving birth in different settings. The Birthplace cohort study is the largest study of its kind in the world, designed to inform those who plan, commission and deliver maternity services. The first four studies were completed in November 2011 and a further two are due to complete during 2012.

Overview

The last ten years has seen clear policy direction on the importance of offering healthy women choice in where they give birth[1]. However, to date, the evidence on the quality, safety and costs of different settings has been limited to small scale and inadequate studies. Maternity services are complex, covering a range of providers from community midwives supporting uncomplicated home births to specialist units delivering high dependency care for sick women and babies. Different models of care have developed in each locality, reflecting local patterns of services and national changes in medical training, restricted junior doctor hours, new maternity staffing standards and reconfigurations of neonatal care[2]. In addition to consultant-led obstetric units based in hospital, many areas have midwife-led units, or birth centres, either as freestanding units or alongside hospital obstetric units. Different services are configured in different ways, but these are poorly described and understood.

At the same time, maternity services have come under increasing scrutiny. Around 60 per cent of all litigation payments are for obstetric and gynaecology cases[3]; consistent messages emerge from examination of unexpected deaths[4] and safety concerns have continued to have high profile in local and national press. Regulators have highlighted uneven access and standards of

Read more to find out:

- what maternity services are provided in England and how they vary
- the latest data on costs, quality and safety in different birth settings
- how local services are rising to the challenge of providing a choice of high-quality services for women giving birth.

Contents

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http://www.kcl.ac.uk/schools/medicine/research/wh/

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Additional slides

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Complicating conditions at start of care in labour

- Higher prevalence of complicating conditions recorded at the start of care in labour suggested possible differences in the risk profile of the groups

Conducted additional analyses restricted to women without complicating conditions at start of care in labour

Unexpected differences in the proportion of women with complicating conditions recorded by the midwife at the start of care in labour:

	OU %	Home %	FMU %	AMU %
Prolonged rupture of membranes (>18 hours)	7.4	2.4	2.1	2.3
Meconium stained liquor	6.4	1.5	1.2	1.4
Proteinuria (1+ or more)	1.8	0.5	1.0	2.2
Hypertension	2.6	0.6	0.7	0.7
Abnormal vaginal bleeding	1.4	0.2	0.2	0.2
Non-cephalic presentation	0.6	0.2	0.2	0.2
Abnormal fetal heart rate	2.0	0.4	0.5	0.4
Other	0.3	0.1	0.2	0.1
% with a complicating condition	**19.5**	**5.4**	**5.5**	**6.9**

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Midwifery staffing

- Birth at home
  - 1:1 midwifery care (continuous) plus another midwife for time of birth of the baby
- FMU / AMU
  - 1:1 midwifery care (continuous)
    - sensitivity analysis: 80-100%
- OU
  - set to 65% intermittent across labour care
    - sensitivity analysis: 50-85%

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Economic evaluation

Planned birth at home, in a free standing midwifery unit or an alongside midwifery unit generates incremental cost savings compared to planned birth in an obstetric unit but effectiveness, as measured by adverse perinatal outcome avoided, differs by parity for planned home births.

- For nulliparous 'low risk' women, planned birth at home generates incremental cost savings but increases adverse perinatal outcomes
- For multiparous 'low risk' women, planned birth at home generates incremental cost savings with no significant effect on adverse perinatal outcomes
- For nulliparous 'low risk' women, planned birth at home is likely to be the most cost-effective option (probability of cost effectiveness of 0.63 at a £20,000 cost-effectiveness threshold).
- For multiparous 'low risk' women, planned birth at home was found to be the most cost-effective option (100 % probability of being the most cost-effective option across all cost-effectiveness thresholds).

For maternal outcomes, planned birth at home was the most cost-effective option.

Birthplace in England Collaborative Group (2012) Cost effectiveness of alternative planned places of birth in woman at low risk of complications: evidence from the Birthplace in England national prospective cohort study, *BMJ*. 2012 Apr 18;344:e2292.

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Cost effectiveness analysis

- Total costs captured
  - all resource use and the unit costs of intrapartum care and immediate postnatal period after birth, including any higher level care for the mother or baby
  - all costs allocated to planned place of birth

Cost effectiveness analysis

- Mean differences in costs per woman for planned OU and non-OU births were weighted, adjusted and bootstrapped in an additional analysis
- Means costs of births in planned non-OU settings were cost-saving when compared with the mean cost of births planned in OUs:
  - £366.8 (home)
  - £182.1 (FMU)
  - £129.3 (AMU)