Do we have enough evidence to judge midwife led maternity units safe?

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YES The view that birth outside hospital is less safe than hospital birth prevails despite evidence to the contrary. Discussion about maternity services often becomes polarised around the comparative safety of different places of birth, and argument over a single measure of safety, perinatal mortality. The dominance of the medical view of birth has led to an exponential rise in medical and surgical interventions in childbirth in most of the developed world and parts of the developing world. The risk of unnecessary intervention, for mother, baby, and future generations is ignored.

One consequence is the steady and continuing rise in the rate of caesarean sections.[1] In the developed world (including Europe, North America, Japan, Australia, and New Zealand) the proportion of caesarean births is 21.1% (range 6.2% to 36%).[2] Yet, as Bertran and colleagues concluded: "higher caesarean section rates do not confer additional health gain."[2] Caesarean section is associated with a higher maternal mortality,[3 4] and complications in future deliveries.[5]

Reducing interventions

Midwifery led care, particularly out of hospital care, may reduce the risk of intervention and increase the possibility of normal birth. A systematic review of the outcomes of home birth indicates that planned home birth is no less safe than hospital birth for women and babies without complications and that planned home birth is associated with a lower intervention rate[6] and provides a more positive experience for many women.[7]

The development of birth centres has provided a further choice for women about place of birth. Birth centres have also provided clinical environments where midwives can fully use their skills and provide support for normal birth avoiding unnecessary intervention. One structured review of studies of women and their babies who planned to give birth in a birth centre in developed countries found no reliable evidence about clear benefit or harm associated with birth centre care.[8] Another review based on Cochrane guidelines found lower intervention rates for women in midwifery led out of hospital birth centres, although there were concerns about the quality of the individual studies.[9]

Uncontrolled social experiment

The move to have all women give birth in hospital was one of the biggest uncontrolled medical and social experiments of the 20th century. From 1954 to the 1980s in the UK the percentage of births at home fell from about 35% to 1%.[7] In most of the developed world close to 100% of women give birth in hospital. The shift has resulted in a loss of social support, which can not be supplanted by professional care in the hospital.[10]

Much of the motivation for the drive to hospital birth was the belief that this would increase safety and reduce the inequalities of care.[11] The move to hospital birth was never evaluated and an increase in safety or a reduction in inequalities in outcomes has never been proved. Significant differences in both perinatal and maternal mortality remain between different groups of women and different populations.[12 13]

Government policy in England in the early 1990s recognised a growing sense of discontent with the maternity services.[14] This discontent should not have been surprising. The institutionalisation of birth was associated with several problems, particularly where hospitals are large. There is a tendency to dehumanisation and difficulty in providing personal care appropriate to individual needs. Midwifery had been taken from its community base to the fragmented care of hospital and lost professional autonomy and influence.[15]

The institutionalisation of birth was associated with several problems

Although there is some overlap in their sphere of practice, midwives and doctors bring different philosophies, approaches, skills, and expertise to maternity services. Midwifery is based on the need to respect, recognise, and support physiological processes while recognising deviations from the norm. An important aspect of effective midwifery is supporting a positive transition to parenthood and family formation. Midwifery care is more likely to provide a positive experience of care and to reduce the intervention rate when continuity of carer is provided.[16] Obstetrics is concerned with the care of mothers and their babies when complications occur or are likely. Women and their babies need midwifery care and some additionally need obstetrical care. The system needs both approaches in balance.

Since the 1980s new policy in many parts of the world has started to improve maternity care and bring the system back into balance. This includes provision of home birth, the development of midwife led services, birth centres both inside and outside of hospital, and the development of continuity of care to women and their families.

A one size fits all approach to maternity care is neither advisable nor sustainable. Women at low risk should be offered home birth, as this may confer considerable benefits for them and their families.[17] Some women may wish to give birth in hospital with midwifery led care. A network of services is required[18] so that women may be referred and transferred when necessary and cared for by the appropriate professional. Consultant obstetricians have valuable skills that need to be concentrated on the care of women with complicated pregnancies. Safer maternity services are those that recognise and respond to the effects of inequalities and ethnicity, recognise the risk of unnecessary interventions, and support all professionals to play their full part in care.

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The UK government claims it is trying to give women more choice by converting local maternity units to midwife led services. **Lesley Page** believes such units improve the birth experience, but **Jim Drife** remains worried about the risks of delivering outside hospital

SHOUT/ALAMY

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NO

Major changes are being made in the UK's maternity services for political, economic, and clinical reasons. Much has already happened. Antenatal care is provided mainly by midwives outside hospital, with general practitioners playing little or no part and obstetricians seeing only high risk cases. Maternity hospitals are being merged because of pressure to increase consultant presence in labour wards and reduce junior doctors' hours. Large units seem more efficient and can offer more backup when complications occur. Closing small hospitals is unpopular, however, and a politically attractive alternative is to convert consultant units to free standing midwife led maternity units. The NHS, which has a near monopoly of childbirth, is promoting midwife units as a way of offering choice[1] and is advising women that they are safe for low risk pregnancies. This advice is not based on evidence.

Problem of defining risk

Safety can never be absolute. Nevertheless, hospital delivery has become steadily safer. In 2003, the risk of fetal death during labour was as low as 1 in 7642 across the three large hospitals in Dublin.[2-4] Such up to date figures are often ignored when births inside and outside hospital are being compared.

Maternal complications during childbirth are no less frequent than they were in the past. National audits in Scotland report life threatening emergencies once in 200 births. The most common, severe haemorrhage, occurs once in 300 births and is usually unpredictable. Of 156 such cases in 2004, only a minority were antepartum haemorrhage, but 32 women bled during labour and 116 after delivery.[5] Prompt treatment saves lives every day across the UK, and national maternal mortality is low because emergencies are managed effectively.

Nevertheless, pregnancies are now classed as high or low risk (a false dichotomy as most are in between). Risk classification is based on the history given by the woman at booking. This is no easy task. A woman in her first pregnancy does not have an obstetric history. Family history is often incomplete. Complications such as pre-eclampsia and fetal growth restriction cannot be predicted. The result is that women labelled low risk have a higher corrected singleton perinatal mortality than high risk women.[6]

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Research on performance

Evidence on safety of midwife led units is lacking. A 2005 Cochrane review found no trials of freestanding birth centres.[7] There was, however, a trend towards higher perinatal mortality in "home-like settings" with a relative risk of 1.83 (95% confidence interval 0.99 to 3.38). An earlier systematic review comparing continuity of midwifery care with standard maternity services found that midwifery care was associated with an increase in perinatal death "bordering on statistical significance" (odds ratio 1.60; 95% confidence interval 0.99 to 2.59).[8] In both reviews the confidence intervals included 1.00 (though only just), so the trends were not significant. Nevertheless, they should worry those who want to change patterns of care.

Many UK maternity hospitals have a consultant unit and a midwife led unit in the same building, and staff prefer this arrangement. Even in such units, however, the evidence is not entirely reassuring. In the midwife led unit of the Stockholm Birth Centre (one floor below a standard delivery ward) perinatal mortality among primiparous women was significantly higher than among Swedish women receiving standard care (relative risk 1.8; 1.06 to 3.00). For multiparous women, rates were not significantly different.[9] When data for first pregnancies were recalculated, the rate of fetal death in labour in the birth centre was 1 in 493, over seven times higher than the rate of 1 in 3779 with standard care in Sweden.[10]

Free standing midwife led units may be some distance from medical help. Transfers may save lives but are often precautionary and have a negative psychological effect on women.[11] Rates of transfer before labour in the Cochrane review were 29-67%.[7] In Stockholm the transfer rate during labour was 18%.[9] In a Scottish unit rates were 30% before labour and 27% during labour for primiparous women, and 22% and 10% for multiparous women.[12] In a US study of midwife led units in the 1980s, 7.9% of women had serious complications in labour and transfer rates among primiparous and multiparous women were 29% and 7% respectively.[13]

The National Perinatal Epidemiology Unit says: "a structured review carried out in 2005 concluded that high quality evidence was needed about whether there are important differences in experiences and outcomes for women and babies in these alternative locations and systems."[14] Others have also called for better evidence: "if women at low obstetric risk are offered a choice between free-standing MLMU (midwife led maternity units) and hospital, they should be aware that the safety and effectiveness of delivery in the two settings has not been reliably compared."[15]

It is disturbing that in an era of evidence based medicine, midwife led units are being promoted before their safety has been established. The attractions of a relaxed environment and non-intervention are easy to understand, but most women put the highest premium on safety for their baby. Last year the National Perinatal Epidemiology Unit began an evaluation of alternative locations for labour and birth.[14] Further change should await reliable evidence on safety.

Competing interests: JD is an obstetrician in a tertiary centre and works on the labour wards. He is an obstetric assessor for the national Confidential Enquiry into Maternal Deaths

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