# Midwifery Research Review™

Making Education Easy

Issue 6 – 2014


## In this issue:



**Abbreviations used in this issue**

**CS** = caesarean section

**LMC** = lead maternity carer

**WHO** = World Health Organisation



# Welcome to the latest issue of Midwifery Research Review.

The issue starts with an interesting survey of women's experiences in a birthing centre compared with a hospital in a deprived area of London. This is followed by confirmation that we should be aiming for a CS rate in the range 10–15%, plus we report an intervention for reducing the fear of childbirth in pregnant women. We also report the intake of persistent organic pollutants through breast milk in NZ, and the awareness (or not) in Australia of the role and importance of iodine in pregnancy.

I hope you enjoy this issue, and look forward to any feedback you might have.

Kind regards,


**Jackie Gunn**

jackiegunn@researchreview.co.nz


## Survey of women's experiences of care in a new freestanding midwifery unit in an inner city area of London, England: 2. Specific aspects of care

**Authors:** Macfarlane A et al.


**Summary:** This study compared women's experiences of maternity care before and after the opening of a new free-standing midwifery unit in an inner city area (the Barkantine Birth Centre in East London). Women living in Tower Hamlets, a deprived inner city borough in East London, were surveyed about the maternity care they received from the obstetric unit at the Royal London Hospital prior to the birth centre opening (n=259) or from the specialised birthing centre after it opened (n=361). Women at the birthing centre were more likely to use a birthing pool for pain relief during labour, were more likely to be able to move around in labour and choose their position for birth, were more likely to deliver in places other than the bed, and experienced less intervention than those who received obstetric care at the hospital.


**Comment:** Although this survey of women's experiences is part of an evaluation of a new service and therefore specific to that community and style of midwifery care offered there, there are parallels with larger studies. The study is well designed, uses both quantitative and qualitative analyses and is a reasonable size. The women were all interviewed in their own language. There are some interesting findings in the report. The large difference in satisfaction between the women who booked at the hospital and those who booked at the birthing unit are very different from the findings by Grigg in the NZ study commented on in the last issue of Research Review. The NZ model of midwifery care that enables LMCs to provide care for women in all settings maximises continuity of midwife and one-to-one midwifery care, whereas the percentage of women who received either or both of these features of midwifery care in this study was much smaller in the hospital. The qualitative data reflect findings in NZ studies that women feel supported and appreciate the home-like ambience of primary units. Finally, the importance of debriefing labour and birth is again underscored. A number of participants reported that the telephone interview was an opportunity to tell their story especially if their experience had not been ideal. The women highlighted how unsettling, unheard and uninvolved they felt if the 'midwife was rushing'.


***Reference: Midwifery 2014;30(9):1009-1020***


Abstract

**Independent commentary by Jackie Gunn,**

**MA *Massey* BHSC Ng *C.Sturt* RGON RM**

Jackie is a Senior Lecturer in the Dept of Midwifery, Faculty of Health and Environmental Science at AUT University. She has been involved in leadership of midwifery education at AUT University for more than two decades and has practised midwifery in tertiary and primary maternity units and as an LMC midwife. She is national Educational Consultant on the NZ College of Midwives, of which she is a foundation member. Jackie has a particular interest in midwifery practices that support physiological pregnancy, childbirth and transition to parenthood processes, midwifery education, and development of midwifery practice.

**For full bio CLICK HERE.**

## Searching for the optimal rate of medically necessary cesarean delivery

**Authors:** Ye J et al.

**Summary:** This study evaluated caesarean delivery rates, socioeconomic indicators, and health outcomes in 19 countries including Australia, NZ, Japan, North America, and North and West Europe. Information on caesarean delivery rates, human development index (HDI), gross domestic product (GDP), maternal, neonatal, and infant mortality rates in the past 30 years was collated. A 2-level fractional polynomial model was used to model the association between caesarean and mortality rates. Most of the countries had sharp increases in caesarean delivery rates in the past 30 years. Once the caesarean delivery rate reached 10%, further increases had no impact on maternal, neonatal, and infant mortality rates (after adjustment for HDI and GDP).

**Comment:** This study is part of an emerging group of publications. The American College of Obstetricians and Gynaecologists and Society for Maternal-Fetal Medicine published 'Obstetric Care Consensus No.1: Safe prevention of primary caesarean delivery' in March this year. There are two extensive and approachable commentaries on the subject by a member of the Consensus group and US Childbirth Educator Penny Simkin in the same issue of *Birth* as this study. The authors of this study are Geneva-based at WHO. They have explored whether the 10–15% for CS that has been the standard WHO recommendation for decades is still accurate for today. They have examined and analysed CS rates in affluent countries with ready access to CS and low maternal, neonatal and infant mortality and report that the rate for medically necessary CS should still be in the range of 10–15%. Of note, New Zealand has one of the highest CS rates in the world. Promoting uncomplicated childbirth continues to be a key midwifery activity.

***Reference: Birth 2014;41(3):237-244***
Abstract

## Women's experiences of labour pain and the role of the mind: an exploratory study

**Authors:** Whitburn L et al.

**Summary:** This Australian study examined women's experiences of labour pain and the role of the mind. 19 women who gave birth in a large maternity hospital were interviewed by telephone the following month. The women's descriptions of their pain experiences suggested two states of mind. The first was characterised by the mind staying focussed, open and accepting of the experience (including pain). This state was accompanied by a more positive reporting of the labour experience. The second state of mind was characterised by the mind being distracted, and thought processes included pain catastrophising, self-judgment and a negative evaluation of pain. These two mind states were distinct but women could shift between them during labour. Pain evaluations were also influenced by the women's personal beliefs, desires, the context and the social environment. In conclusion, a woman's state of mind during labour may set the stage for the cognitive and evaluative processes that construct her pain experience.

**Comment:** Another qualitative study of women's experiences of pain in labour. The mind-body connection suggested here mirrors findings from small qualitative studies over the last 20–25 years. Exploratory studies help to understand perceptions, feelings, experiences etc. when little is known about the topic. Midwives have known, forever probably, that women's states of mind matter in relation to labour and birth progress, and that there are ways to support women to manage their labour and labour pain. Studies like this one provide affirmation of our practice knowledge.

***Reference: Midwifery 2014;30(9):1029-1035***
Abstract

## A randomized controlled trial of a psycho-education intervention by midwives in reducing childbirth fear in pregnant women

**Authors:** Toohill J et al.

**Summary:** The BELIEF study investigated the efficacy of an antenatal psycho-education intervention performed by midwives for reducing women's fear of childbirth. 339 pregnant women attending 3 hospitals in South East Queensland who reported high fear were randomised to intervention (n=170) or control (n=169) groups. All women received a decision-aid booklet on childbirth choices. The intervention group received telephone counselling at 24 and 34 weeks' gestation and the control group received usual care offered by public maternity services. The primary outcome was reduction in childbirth fear from second trimester to 36 weeks' gestation. There were significant differences between groups after the intervention for fear of birth ($p<0.001$) and childbirth self-efficacy ($p=0.002$). Decisional conflict and depressive symptoms also tended to reduce in the intervention group (p=NS).

**Comment:** This randomised controlled trial was conducted in Australia. It is a well-designed study using validated tools that is thoroughly reported. The psycho-education intervention was telephone based and conducted by midwives. It significantly reduced fear and increased confidence for women with high levels of pre-labour fear. The authors are active midwife researchers. Keep an eye out for other research linked to this area. It is nice to see a randomised controlled trial beginning to provide some cause and effect evidence that such interventions are effective. Especially given the discussion above relating to reducing primary CS, and the growing understanding of the neurohormonal physiology of labour and birth.

***Reference: Birth 2014; published online Oct 9***
Abstract

## Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care

**Authors:** Renfrew M et al.

**Summary:** This report examined the contribution midwifery makes to the quality of care of women and infants globally. Over 50 short-, medium-, and long-term outcomes that could be improved by care within the scope of midwifery were identified, including maternal and neonatal mortality and morbidity, stillbirth and preterm birth, unnecessary interventions, and psychosocial and public health outcomes. Midwifery was associated with more efficient use of resources and better outcomes if the midwives were educated, trained, licensed, and regulated. The findings supported a system-level shift from maternal and newborn care focused on the minority, to skilled care for all. Midwifery is pivotal to this approach, which requires effective interdisciplinary teamwork and integration across facility and community settings.

**Comment:** This first in a series of papers is of interest not only because it takes a global approach, but also because of the way that the systematic reviews of midwifery practice have been mapped to the scope of midwifery practice. The identification of the outcomes that can be improved by care within the scope of midwifery practice is extensive. The improved outcomes and effective use of resources highlighted by having a workforce of educated, trained licensed and regulated midwives is derived from the review and in line with the International Confederation of Midwives (ICM) definitions and competencies. The authors have developed a quality framework that also incorporates the philosophical underpinnings to maternal and newborn services that emphasise women's involvement in decision making, respectful relationships, informed choice and a known midwife.

***Reference: Lancet 2014;384(9948):1129-1145***
Abstract



## Estimated infant intake of persistent organic pollutants through breast milk in New Zealand

**Authors:** Mannetje A et al.

**Summary:** This NZ study estimated infant intake of chlorinated persistent organic pollutants (POPs) through breast milk. Breast milk of 39 first-time mothers aged 20–30 years was collected in 2007–2010 and analysed for POPs (including dioxin-like compounds and organochlorine pesticides). The quantity of POPs consumed by infants assuming exclusive breast feeding was calculated as the Estimated Daily Intake (EDI). The EDI of dichlorodiphenyltrichloroethane (DDT) was the highest of all the POPs quantified (1.6 µg/kg/day), and above the tolerable daily intake (TDI) of 0.5 µg/kg/day. The mean EDI for dioxin-like compounds was 19.7 pg TEQ (toxic equivalency) /kg/day, which is among the lowest reported worldwide (although still above the TDI of 1 pg TEQ/kg/day). The EDIs of hexachlorocyclohexane, hexachlorobenzene, dieldrin, heptachlor and mirex were all below current TDIs. Maternal age was positively associated with higher infant EDIs.

**Comment:** This quantitative study was undertaken in 2008 and replicates two previous studies that were conducted 10 and 20 years prior to this one. It is one of the ways newborn exposure to these groups of chemicals that persist in our environment long term has been monitored. Each study has shown a lowering of the levels, and the overall levels were low to average. There have been significant public health initiatives undertaken in NZ to reduce the environmental levels of these chemicals over the past 25 years. Hopefully the levels will continue to decline.

***Reference: N Z Med J 2014;127(1401):56-68***
Abstract

## Antenatal shared care: are pregnant women being adequately informed about iodine and nutritional supplementation?

**Authors:** Lucas C et al.

**Summary:** This Australian study examined whether pregnant women are receiving adequate information about iodine from providers of antenatal shared care (ANSC). 142 pregnant women enrolled in ANSC completed a knowledge and practices survey and a validated iodine-specific Food Frequency Questionnaire. 61 general practitioners (GPs) and nurses in the ANSC programme also completed a short survey. Both groups had poor knowledge of the role and importance of iodine during pregnancy. 82% of the women were taking a supplement, and 70% were taking a supplement containing iodine. The median iodine intake of pregnant women was 189 µg/day which meets the estimated average daily requirement (160 µg/day). Dietary iodine was mostly provided by dairy foods (52%) but also by fish/seafood (7%). Only 26% of GPs discussed iodine supplementation with their pregnant patients, but 74% of healthcare providers were interested in receiving ongoing professional education about iodine in pregnancy.

**Comment:** This is an Australian study which recruited GPs and Practice Nurses to undertake the questionnaires. It would be interesting to know whether NZ GPs and Practice Nurses are more informed. It would be expected that they would be, given the universal iodine supplementation for pregnant women in this country. It would be interesting to know if NZ women feel they fully understand the reasons for the supplementation and whether they take the supplement according to the recommended regimen.

***Reference: Aust N Z J Obstet Gynaecol 2014; published online Sep 8***
Abstract

## Weight and height measurement: potential impact in obstetric care

**Authors:** Jeffs E et al.

**Summary:** This study assessed the accuracy of reported weight and height measurements in a pregnant population. 248 women were recruited when they attended their nuchal translucency scan with a laboratory form that had their weight and/or height recorded. Trained recruitment staff then measured the women's weight and height, and calculated their body mass index (BMI). Only 56 participants (23%) had a weight recorded on the form that was within ±0.5kg of their measured weight: weight was under-reported in 62% of women and over-reported in 15%. Only 30% of participants had a correctly reported height (under-reported in 26% and over-reported in 44%). BMI was correct for only 6% of the women (under-reported in 69% and over-reported in 25%).

**Comment:** Now this is a very interesting study. It is so hard to undo a changed practice isn't it? When the precursor to the Cochrane library was published in the 1990s one of the first practices to be labelled a waste of time was weighing pregnant women at every antenatal visit. Weight is such a sensitive issue that scales disappeared from antenatal clinics with alacrity. Enkin et al. were right of course, weighing women to see if they have oedema isn't particularly useful as a diagnostic tool. Today of course, there are different reasons for weighing pregnant women and calculating their BMI. How hard it is to reintroduce a practice that was abandoned, even though it is for very different reasons. However, whoever is recording the measurements, accuracy of weight and height measurements is important if the data are to contribute to clinical decisions.

***Reference: N Z Med J 2014;127(1392):17-26***
Abstract

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## A qualitative descriptive study of the group prenatal care experience: perceptions of women with low-risk pregnancies and their midwives

**Authors:** McDonald S et al.

**Summary:** In group prenatal care (GPC), a group of 8–12 pregnant women of similar gestational age meet with a health care provider to receive their prenatal check-up and education in a group setting. This Canadian study examined the GPC experiences of low-risk women and their care providers. Data were gathered through 3 focus group interviews: 2 with women who had completed GPC at a midwifery clinic in Ontario, Canada, and 1 with the midwives at the clinic. Nine women and 5 midwives participated in the focus groups. Reported benefits included learning from the group, normalising the pregnancy experience, better preparedness for labour and delivery, and improved relationships. Concerns with GPC, such as insufficient time with the midwife, generally diminished with experience. Suggestions for change included content, environment, partners, and access to the midwives.

**Comment:** This is a very interesting little study. Individualised one-to-one care by a known midwife has been shown to improve both outcomes and women's satisfaction. I wonder if the longstanding nature of the practice in this community has had the effect of the participants not knowing any other way of receiving or providing antenatal care. Nonetheless, in these times of scattered families and geographical mobility, perhaps a group clinic might help to develop social links for isolated women. It would seem that the monthly meet the midwives coffee group meetings held by many lead maternity carer practices may fulfil that function more readily. Food for thought. I also think the finding of reduction of the midwives workload is a not necessarily a good reason to coalesce care as described here.

***Reference: BMC Pregnancy Childbirth 2014;14:334***
Abstract

## Local impact of 'antenatal screening for Down syndrome and other conditions' on diagnosis and outcomes in a fetal medicine centre in New Zealand

**Authors:** Mulligan A et al.

**Summary:** An early pregnancy screening programme for detecting genetic anomalies was launched in NZ in 2010. This study investigated the local impact of this screening programme on women attending a South Island Fetal Medicine Centre. Two representative time periods were reviewed to compare outcomes before and after introduction of the programme: February 2009 to January 2010 (T1) and May 2010 to April 2011 (T2). 6210 babies were born in Canterbury in T1 and 6072 babies were born in T2. All of the women who delivered in T2 would have been offered the new antenatal screening programme; 51% of them underwent screening. The number of invasive procedures performed decreased from 4.1% in T1 to 2.9% in T2 (p=0.0003), but the proportion of procedures undertaken by Chorionic Villus Sampling and amniocentesis did not change. In both T1 and T2, no babies with Down syndrome were born after mothers were screened and classified as low risk.

**Comment:** I have included this paper as it is a retrospective audit of the effectiveness of a newly implemented screening programme for pregnant women. The results are good. In addition it would be very nice to see a wider view of the community based information and pre-testing 'counselling' type of issues, or whether there are any. Overseas studies have highlighted these types of issues as barriers to implementation. It will be interesting to see if there are similar issues being managed by the workforce, but unseen by others.

***Reference: N Z Med J 2014;127(1403):24-31***
Abstract