Midwifery Research Review™

RESEARCH REVIEW 10 YEARS
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In this issue:

Abbreviations used in this issue
CS = caesarean section
PPH = primary postpartum haemorrhage

Welcome to the latest issue of Midwifery Research Review.

Highlights include an Australian study extolling the benefits of midwifery-led continuity of care for primigravid women, and a very readable report of the importance of empathy and spiritual care in midwifery practice. We also present a study from The Netherlands that reminds us of the precious nature of our own midwifery service, plus a report of the protective effect of skin-to-skin contact and breastfeeding at birth against PPH. A study of vitamin D deficiency in pregnant women in NZ contributes to the debate about universal supplementation in pregnancy as opposed to individual assessment and prescription. A small study examining the effect of common labour drugs on early suckling during skin-to-skin contact is also included.

Research Review is ten!! The first ever issues of Research Review were delivered to inboxes in February 2006. Fast forward ten years and we now publish 48 regular reviews to which there are over 160,000 subscriptions. We're grateful to each and every one of you for your support and are looking forward to even bigger and better things over the coming years.

I hope you enjoy these and the other selected studies, and look forward to any feedback you may have.

Kind regards,

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Getting the first birth right: a retrospective study of outcomes for low-risk primiparous women receiving standard care versus midwifery model of care in the same tertiary hospital

Authors: Wong N et al.

Summary: This Australian study compared outcomes after standard care versus a midwifery model of care in low-risk primiparous women attending the same tertiary hospital. Data for 426 women experiencing continuity of midwifery care and 1220 experiencing standard public care in 2010–2011 were reviewed. The midwifery continuity cohort had increased rates of normal vaginal birth (57.7% vs 48.9%; p=0.002) and spontaneous vaginal birth (38% vs 22.4%; p<0.001), and decreased rates of instrumental birth (23.5% vs 28.5%; p=0.050) and CS (18.8% vs 22.5%; p=0.115). No between-group differences were found for neonatal outcomes.

Comment: This Australian comparative cohort study appears to be the first that has focused specifically on outcomes related to different models of care for low-risk primigravid women. It adds to the body of knowledge related to improved outcomes for low-risk women when they receive continuity of care in a midwifery-led setting. While this is a retrospective, cohort design, the results are in a similar range to those of McLachlan et al's 2012 study of a subset of the COSMOS randomised controlled trial. The study appears carefully designed and adjustments have been made for possible confounders. Results from this study showed statistically better outcomes for normal birth, water birth, CS, assisted vaginal birth, and spontaneous vaginal birth in the midwifery-led continuity of care group. In addition, the continuity of care group also had less analgesia in labour, fewer epidural anaesthetics and planned induction of labour and fewer episiotomies. No differences between the groups were seen in neonatal outcomes. As the authors comment in their introduction, much of the CS rate is made up of women having repeat CS. It seems like common sense to try to avoid CS for low-risk women in the first place. The emerging evidence shows that providing midwifery-led continuity of care is an important way of contributing to this.

Reference: Women Birth 2015;28(4):279-84

Abstract

Empathy and spiritual care in midwifery practice: contributing to women's enhanced birth experiences

Authors: Moloney S et al.

Summary: This article reported women's experiences of midwives' empathy and spiritual care during birth. Ten interviews and 7 focus groups were conducted with 48 women, including mothers, midwives and staff from a women's service. Women's birth experiences were enhanced when midwives' empathy and spiritual care were evident, leading to more confident mothering. Conversely, a lack of caregiver empathy, compassion or spiritual care was associated with more birth trauma and bonding difficulties.

Comment: This article describes a study undertaken for a PhD thesis. The topic is important and not commonly found in the literature. Such studies are often undertaken as part of a higher academic qualification because funding for this type of research is not readily available. Which is a pity. Among others, recent publications by NZ-based midwives Lennox and Crowther also discuss the sacred aspect of birth and dawning motherhood. Empathy is a key characteristic of midwifery care and is seen when the woman is kept at the centre of care, the midwife is 'present' with the woman and family, and childbirth and becoming a mother is recognised for the transformative process it is. This study highlights how women perceive these characteristics in the midwife and describes the effect on women when these characteristics are absent. It is a very readable study that repays the effort to read it in full.

Reference: Women Birth 2015;28(4):323-8
Abstract

Women's suggestions for improving midwifery care in The Netherlands

Authors: Baas C et al.

Summary: This Dutch study reported women's suggestions for improving midwifery care in the current maternity care model. Clients were recruited from 20 midwifery practices and were asked "Do you have any suggestions on how your midwife could improve his/her provision of care?" A total of 3,499 answers were collected. Overall themes for improving care to women and their families included more continuity of the care provider during the prenatal, natal, and postnatal periods; more information and information specifically tailored to the individual; client-centred communication and a personal approach.

Comment: It is sad to see this study coming from The Netherlands. The NZ Ministry of Health consumer satisfaction survey shows that NZ women are very satisfied with, and value, the aspects of the NZ maternity service that the women in The Netherlands are asking for in this study. The Dutch community-based midwifery service provided continuity of care and was regarded as the most woman-centred in industrialised countries as little as 25 years ago. I have included this study as a reminder of the precious nature of the midwifery service in NZ and the high quality of woman-centred, continuity of care provided in the NZ primary maternity system. The NZ system, ironically, was modelled on that long ago Dutch midwifery service. Vigilance is needed to protect and sustain the NZ midwifery service that enables midwives to continue to provide midwifery care that is exemplified by the characteristics and qualities identified in this and the previous study (Moloney et al).

Reference: Birth 2015;42(4):369-378
Abstract

Does skin-to-skin contact and breast feeding at birth affect the rate of primary postpartum haemorrhage

Authors: Saxton A et al.

Summary: This Australian study examined the effect of skin-to-skin contact and breastfeeding within 30 minutes of birth on the rate of PPH. 7548 births at 2 obstetric units and a freestanding birth centre in New South Wales in 2009–2010 were reviewed. After adjustment for covariates, women who did not have skin-to-skin contact or breastfeeding were almost twice as likely to have a PPH compared with women who had both skin-to-skin contact and breastfeeding (adjusted odds ratio 0.55; p<0.001).

Comment: Yet another study that provides some evidence for benefits from skin-to-skin contact and breastfeeding within 30 minutes of birth. This retrospective cohort study indicates that skin-to-skin contact and breastfeeding within 30 minutes of birth may reduce the rate of PPH, particularly for women at lower risk of this complication. Results from retrospective chart analyses are not as statistically strong as either prospective studies or randomised controlled trials. Nonetheless, given the high rates of skin-to-skin contact and early breastfeeding after birth in NZ, it would be interesting to see if the effect seen in this study holds true here.

Reference: Midwifery 2015;31(11):1110–17
Abstract

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Predictors of vitamin D status in pregnant women in New Zealand

Authors: Ekeroma A et al.

Summary: This NZ study evaluated the prevalence of vitamin D deficiency during pregnancy. 259 ethnically diverse pregnant women enrolled with a community maternity clinic in South Auckland were included. Measurement of serum vitamin D levels at 27 weeks' gestation revealed that 109 (42%) of the women had vitamin D deficiency. Enrollment season (p<0.001) and ethnicity (p=0.003) were independently associated with vitamin D deficiency, but sunlight exposure and dietary vitamin D intake were not. Of women enrolled in winter/spring, 43% of European, 67% of Māori, 80% of Pacific and 59% of women of other ethnic groups had vitamin D deficiency.

Comment: The debate about universal vitamin D supplementation in pregnancy for NZ women has continued back and forth for some time. This study adds to the debate. The findings suggest that winter/spring is a time when pregnant women may be more likely to experience vitamin D deficiency that warrants supplementation. Women who live in parts of NZ that have longer periods of darkness and poorer weather in winter are currently part of the group considered for individual supplementation. This study was conducted in South Auckland. The main result relates to seasonality rather than sunlight exposure. The study contributes to the debate about the need for pregnant women to be offered universal supplementation of vitamin D.

Reference: NZ Med J 2015;128:1422
Abstract

The association between common labor drugs and suckling when skin-to-skin during the first hour after birth

Authors: Brimdyr K et al.

Summary: This study examined the impact of intrapartum drugs (fentanyl and synthetic oxytocin) on suckling within the first hour after a vaginal birth while in skin-to-skin contact. 63 low-risk mothers self-selected to labour with intrapartum analgesia/anaesthesia or not. Video recordings of infants during the first hour after birth while being held skin-to-skin with their mother were analysed. There was a strong inverse correlation between the amount and duration of exposure to epidural fentanyl and synthetic oxytocin and the likelihood of achieving suckling during the first hour.

Comment: Examining the complex nature of relationships between maternal exposure to drugs in labour and newborns' suckling behaviour is complicated and demanded a carefully constructed research design. The US based, low risk women in this prospective, correlational study were exposed to fentanyl analgesia/anaesthesia and/or synthetic oxytocin or not. The results show that even while holding the newborn skin-to-skin for an hour postpartum (the usual practice at the hospital where the study was undertaken) babies were significantly less likely to achieve suckling by the first hour if the mother had received either or both of these drugs. Unsurprisingly, women who received intrapartum oxytocin received more fentanyl than those who received fentanyl alone. The authors note that the possible interaction between fentanyl and synthetic oxytocin was not examined. The report does not identify how many of the babies who did not achieve suckling in the first hour had been exposed to both drugs *in utero*. The research process is meticulously described. Statistical analyses are fully reported and there does not appear to be any missing data. NZ midwives administer both of these drugs to labouring women. This study is a timely reminder that administration of any analgesia/anaesthesia to women in labour medication in labour is not without some effect on newborns.

Reference: Birth 2015;42(4):319-28
Abstract

Planned cesarean delivery at term and adverse outcomes in childhood health

Authors: Black M et al.

Summary: This study investigated the relationship between planned caesarean delivery and subsequent health problems in childhood. 321,287 first-born offspring born in Scotland in 1993–2007 were followed-up until February 2015. Offspring born by planned caesarean delivery in a first pregnancy (n=12,355) were compared with those born by unscheduled caesarean delivery (n=56,015) and with those delivered vaginally (n=252,917). Compared with offspring born by unscheduled caesarean delivery, those born by planned caesarean delivery were at increased risk for type 1 diabetes (adjusted HR, 1.35) but not asthma requiring hospital admission, obesity at age 5 years, inflammatory bowel disease, cancer, or death. Compared with children born vaginally, those born by planned caesarean delivery were at increased risk for asthma requiring hospital admission (adjusted HR, 1.22), salbutamol inhaler prescription at age 5 years (adjusted HR, 1.13), and death (adjusted HR, 1.41), but there were no significant differences in risk of obesity at age 5 years, inflammatory bowel disease, type 1 diabetes, or cancer.

Comment: This Scottish study of first-born children born by planned caesarean section is of interest because of the high rates of childhood asthma in NZ and our not inconsiderable planned CS rate. In addition, at a glance, it is easy to misinterpret the risk reported in this study as a cause and effect result. Which it is not, as the authors clearly state. The results show a small, real increase in risk for asthma associated with planned CS. The study has a long follow-up period which gave time for the variables being studied to manifest themselves. The study adds to our understanding of some of the possible effects of planned CS.

Reference: JAMA 2015;314(21):2271-9
Abstract

Consultation about sexual health issues in the year after childbirth

Authors: McDonald E et al.

Summary: This cohort study investigated the prevalence of postnatal sexual health issues, and the extent to which primary care practitioners routinely inquire about them. 1,507 first time mothers were recruited in early pregnancy and followed up at 3, 6, and 12 months postpartum. Sexual health issues were assessed at every follow-up. 89% of women reported sexual health issues in the first 3 months postpartum, including loss of interest in sex, pain during sex, vaginal tightness, and lack of lubrication. 51% continued to report loss of interest in sex at 12 months postpartum, and around 30% reported persisting pain. Only 24% of women recalled being asked about sexual health issues by general practitioners and 14% by maternal and child health nurses. Women who had a caesarean delivery were just as likely to report persisting sexual health issues, but were less likely to be asked about them.

Comment: While this US study reports the situation for the women at 3 months postpartum, in NZ, part of the discussion when women are being discharged from midwifery care is the return to normal bodily functioning and usual sexual activity. This study highlights issues that are pertinent to this discussion. Directly asking about or discussing the issues identified in this study may foster early identification and advice/intervention.

Reference: Birth 2015;42(4):354-61
Abstract

Counseling about weight gain guidelines and subsequent gestational weight gain

Authors: Wrotniak B et al.

Summary: This study investigated the prevalence and impact of counselling about weight gain during pregnancy. 134 women with a mean pregravid body mass index of 28.0 kg/m^2 were interviewed in maternity recovery rooms at two large urban hospitals. 67% of them reported receiving gestational weight gain recommendations (78.6% of healthy weight women compared with 53.8% of overweight women and 64.9% of obese women; p=0.04). Of the women given information about gestational weight gain, 54.8% received recommendations consistent with those of the 2009 Institute of Medicine (IOM) and 45.2% received discrepant information. Healthy weight women were significantly more likely to be given information in accordance with the IOM recommendations (86.8%) than women who were overweight (12.5%) or obese (26.3%).

Comment: This is an interesting study from the USA. It is hard to tell if a similar study in the NZ context would yield similar results. Not only because of the difference in population diversity, but also because of the very different maternity care system in the USA. However, the finding that women who are overweight or obese are less likely to be informed of gestational weight gain recommendations, and that overweight and obese women who did get information were less likely to receive accurate information in line with the IOM guidelines, does prompt the question "Does this also apply here in New Zealand?" The Ministry of Health guidance for weight gain in pregnancy is based on the IOM's guidelines. Weight gain is such a sensitive issue for many women (and health providers) that the study results cannot be completely ignored. At the very least, these results may prompt us to look at our own practice to determine whether our information-giving about recommended weight gain in pregnancy varies in a similar fashion.

Reference: J Womens Health 2015:24(10):819-24
Abstract

Pelvic girdle pain: Are we missing opportunities to make this a problem of the past?

Authors: Fishburn S & Cooper T

Summary: Treatment of pelvic girdle pain has evolved to provision of hands-on therapy to restore symmetry of pelvic joint movement and function, rather than rest, crutches and support belts. The intention of this article was to raise awareness of the change of treatment and promote its adoption across the UK, in line with national guidelines. Midwives are ideally placed to identify women with pelvic girdle pain early and make the most of the opportunity to access effective treatment.

Comment: Sarah Fishburn, one of the authors of this clinical practice article in the *British Journal of Midwifery*, is the Chair of the UK pelvic partnership charity that provides information for women on this subject. The article is not a research report, rather it aims to raise awareness of the efficacy of early diagnosis and treatment. It reminds practitioners that pelvic girdle pain may persist for a long time after birth and provides a summary of the literature related to effective modes of treatment. The journal is often available through DHB libraries for those midwives who wish to read this very accessible article in full.

Reference: Br J Midwifery 2015;23(11):774-8
Abstract

Independent commentary by Jackie Gunn MA *Massey* BHSC Ng *C.Sturt* RGON RM

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