Welcome to the tenth issue of Midwifery Research Review.

We begin this issue with an interesting local study investigating the kinds of messages South Australian midwives are currently giving pregnant women about the importance of monitoring fetal movements, and discover some out-dated practices that need addressing. Following on, we gain valuable insight into the factors that effectively push Australian women into feeling they have no option but to seek the services of unregulated birth workers for support during home birth. Also in this issue we look at the issues of second trimester termination for fetal abnormality, birth trauma and prevalence of post-traumatic stress, how NZ midwives maintain ongoing competence, and Propess® vs Prostin for induction of labour.

We hope you enjoy reading this review and look forward to your comments and feedback.

Kind Regards,
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Fetal movements: What are we telling women?

Authors: Warland J and Glover P

Summary: This study reports a summary based on a survey of South Australian midwives (n = 72) of the kinds of messages they currently give pregnant women about the importance of monitoring fetal movements. To a question on what information midwives routinely provide to women about fetal movements, the main recurring words and phrases were: “10”, “normal”, “kick charts” and “when to contact” their care-provider. To a question about their advice to women reporting reduced fetal movements, the recurrent words and phrases were “ask questions,” “suggest fluids,” “monitor at home and call back” or “come in for assessment”. These suggest that South Australian midwives are providing inconsistent information about the monitoring of fetal movements, often in conflict with best practice evidence.

Comment (MS): While the number of participants in this study is small, it is of concern that the authors have identified out-dated practices. I am sure readers will identify with the themes in this paper and may even be providing women with kick charts and giving similar advice in their own practice. Clearly, this topic requires our professional attention to ensure consistency of advice and application of evidence into practice. Women are keen to know how best to monitor their unborn babies wellbeing, and in recent years there has been a proliferation in the development of phone apps and websites offering advice on monitoring fetal movements. As the authors indicate there remains a fixation with “counting to 10”, but no consistency around application and timing of “counting” advice. This leaves women potentially falsely reassured, or more anxious and confused. Women need to be able to talk directly with a person who can guide and advise them according to the best evidence available. This paper reports that women would prefer that to be their midwife, and every effort should be made to increase opportunities for women to receive continuity of care from a known midwife facilitating this. Where a strong trusting relationship exists between the woman and her midwife there is a greater likelihood that the woman will seek advice and help sooner. The onus then is on midwives to read the relevant research and ensure the information they give is consistent with best practice guidelines. I would therefore strongly recommend that you discuss this paper with your colleagues in order to stimulate the discussion and debate that may be needed at a local level to identify non-evidence based practice in order to transform practice where appropriate.


Abstract

This study reports a summary based on a survey of South Australian midwives (n = 72) of the kinds of messages they currently give pregnant women about the importance of monitoring fetal movements. To a question on what information midwives routinely provide to women about fetal movements, the main recurring words and phrases were: “10”, “normal”, “kick charts” and “when to contact” their care-provider. To a question about their advice to women reporting reduced fetal movements, the recurrent words and phrases were “ask questions,” “suggest fluids,” “monitor at home and call back” or “come in for assessment”. These suggest that South Australian midwives are providing inconsistent information about the monitoring of fetal movements, often in conflict with best practice evidence.

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Midwifery Research Review

Why do women choose an unregulated birth worker to birth at home in Australia: a qualitative study

Authors: Rigg EC et al.

Summary: This study examines reasons why women (n = 5) choose to give birth at home with an unregulated (not a registered midwife or doctor) birth worker (Doula, ex-midwife, lay midwife; n = 4). Thematic analysis of in-depth interviews identified four themes: “a traumatising system”, “an inflexible system”, “getting the best of both worlds” and “treated with love and respect versus the mechanical arm on the car assembly line”. The women interviewed for this study were either experienced or exposed to mainstream care, which they found traumatising, and were not able to access their preferred birth choices, which they perceived as the system being inflexible, and interpreted as having no choice when choice was important to them. Their motivation then became to seek alternative care options that would meet their needs, and avoid repeated trauma.

Comment (MS): This is an interesting paper that provides an in-depth exploration around why women chose to birth “outside of the system”. Often the first reaction from midwives and doctors to hearing that a woman has made this choice is surprise, but then many will move on to judge, wondering how a woman can make such an “unsafe” choice. Some midwives would describe the women who participated in this research as “being on the fringe”, but we know that many women feel trapped “within the system” accepting their choices are denied as they conform to the medicalised process of birthing. This is why it is important that we listen carefully to women who have not conformed, and are willing to share their stories and learn to respond, not react.

This paper provides us with the opportunity to effectively listen and reflect. In doing so we gain valuable insight into the factors that effectively push women into feeling they have no option but to seek the services of unregulated birth workers. Professional regulation is described as a safeguard that provides an element of protection to the public from unsafe practitioners. Despite good intentions what this paper highlights is that the strict enforcement of policy and regulation of practice, alongside the lack of opportunity to access midwife-led services has caused women to avoid mainstream services, seeking instead the services of unregulated birth workers with whom they feel secure, safe, respected and supported. Rather than find ways to add deeper levels of regulation that will further restrict choice by making it illegal to have an unregulated birth worker support a woman birthing at home, we should be striving to humanise maternity care. All women should have access to continuity of care from a supportive midwife who is supported by “the system” to truly be with women.

Abstract

Responses to birth trauma and prevalence of posttraumatic stress among Australian midwives

Authors: Leinweber J et al.

Summary: This online survey of members of the Australian College of Midwives assessed post-traumatic stress symptoms among midwives who witness traumatic birth events. Over half (58%) of 95% respondents (271/471) who witnessed a traumatic birth event reported experiencing care-related trauma features, and recalled strong emotions (horror 74.8%, guilt 65.3%) during or shortly after the event. Midwives witnessing events that included care-related features were more likely to recall peri-traumatic distress including horror (OR 3.89, 95% CI 2.71-5.59) and guilt (OR 1.90; 95% CI 1.36-2.65) than midwives witnessing non-interpersonal birth trauma. Probable post-traumatic stress disorder (PTSD) criteria were met by 17% of midwives (95% CI 14.2-20.0). Post-traumatic stress was more severe in those witnessing abusive care versus other types of trauma.

Comment (MS): Maintaining the health and wellbeing of the midwifery workforce is crucial in order to provide sustainable maternity services now and into the future. This paper adds to the growing evidence that the impact the work environment and events that occur at work have on the midwives emotional wellbeing. There are increasing reports of stress burnout and depression amongst midwives and this paper provides more insight into the prevalence of PTSD amongst midwives who witness birth trauma. What is interesting within this paper is the inclusion of care-related trauma including disrespectful and abusive care. Many readers of this paper who have witnessed birth trauma will recognise and identify with feelings of helplessness, guilt, shock and sadness when recalling their own experiences of birth trauma, and like the midwives in this paper will recognise that too often those feelings are evoked by the actions of another care provider. It is everyone’s responsibility to act to stop the abusive treatment of women, and midwives must be in a position to adopt self-care strategies to protect their own wellbeing in order to enable them to support and protect women from the abuse of others. The authors present a number of suggestions including the introduction of education sessions for students and midwives around the topic of birth trauma, with a focus on strategies that may reduce the impact on those individuals witnessing the trauma. They also discuss the concept of trauma stewardship, which will be of interest to those readers interested in looking at this topic in more depth.

Abstract

All Midwifery Research Review is an Australian College of Midwives CPD Recognised Course. Individuals are advised to undertake a process of reflective writing when using CPD. A template for undertaking a reflective activity after reading an article can be found on the ACM website at https://www.midwives.org.au/education
EXPLORING THE SCIENCE OF THE SENSESTM
IN HEALTHY BABY DEVELOPMENT

A strong body of foundational and emerging research suggests that multisensorial stimulation—or the concurrent stimulation of tactile, olfactory, auditory, and/or visual stimuli—benefits the social, emotional, cognitive, and physical development of babies.

A baby’s brain creates up to 1.8 million new synaptic connections per second between 2 months of gestation and two years after birth, and a baby’s experiences will determine which synapses will be preserved. Multisensorial stimulation—what a baby feels, smells, hears, and sees—helps promote the long-term survival of synaptic connections.

Stimulation is essential early in development; within the first 3 years of life, there is rapid development of most of the brain’s neural pathways supporting communication, understanding, social development, and emotional well-being.

**Multisensorial Enrichment Increases Alertness in Preterm Infants**

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<thead>
<tr>
<th>Week</th>
<th>Change in Alertness (%)</th>
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<tr>
<td>1</td>
<td>7.8</td>
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<td>2</td>
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Stimulating multiple senses sends signals to the brain that strengthen the neural processes for learning. Through consistent multisensorial experiences, research shows that babies gain healthy developmental benefits, such as reduced stress in healthy and preterm infants, and better quality and quantity of sleep in healthy babies, as well as improved weight gain which led to earlier hospital discharge in preterm infants.

**Multisensorial stimulation**—what a baby feels, smells, hears, and sees at every moment—helps promote the long-term survival of synaptic connections during brain development.

Everyday experiences in a baby’s life can develop and stimulate his or her senses and provide parents an opportunity to nurture their baby’s ability to learn, think, love, and grow. A simple ritual of bath time and massage is an ideal opportunity to create a multisensorial experience. Bath time provides an opportunity for increased skin-to-skin contact (touch stimulation) and direct eye contact, as well as the introduction of new textures, sights, sounds, and smells that can stimulate a baby’s tactile, visual, olfactory, and auditory senses. The sense of smell, in particular, is directly linked to emotional memory, a mother’s scent can help soothe a crying baby, while a pleasant scent during bath time is shown to promote relaxation in both baby and parent.

**Making Bath Time Part of a Routine Improves Sleep**

When bath time is part of an everyday ritual, the benefits have been shown to help generate a predictable and less stressful environment for the baby and parents.

Although science has made advances in understanding the long-term benefits of multisensorial stimulation, there is more to be done to translate this research into everyday practice. By encouraging parents to view everyday rituals, such as bath time and massage, as opportunities for multisensorial stimulation, experiences can be created that can contribute to a lifetime of healthy development.

**Bath time provides an ideal opportunity to create an enriched multisensorial experience.**

**References:**


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“Working towards being ready” A grounded theory study of how practising midwives maintain their ongoing competence to practise their profession

Authors: Calvert S et al.

Summary: Grounded theory, an interpretive research methodology, was used to examine the process of maintaining ongoing professional competence in New Zealand urban and rural midwifery practice settings (n = 26). The grounded theory of “working towards being ready” is a continuous process of working to maintain practice competence and comprises professional positioning, identifying needs, strategising solutions and reflecting on practice. New Zealand midwives work across a range of practice arenas and require a range of professional development activities relevant to their area of practice. Women and the profession benefit when midwives have access to professional development pertinent to their practice, and because there is a diversity of practice, mandated processes for ongoing competence need to be flexible.

Comment (KB): Commitment to engagement in continuing professional development is a key requirement of continuing registration to practice for most health professionals. What differs widely across professions and context of practice is how much freedom the professional has to determine their own professional needs, and how closely the regulator informs or monitors that process. This is an interesting paper for Australian midwives to read to see the regulatory requirements midwives in New Zealand must meet to maintain their competence and registration to practice. The paper reports on how midwives in New Zealand prepare for and meet those requirements maintaining their “readiness to practice”. Australian midwives will perhaps be surprised to see that all New Zealand midwives, regardless of role, must demonstrate readiness to practice within the clinical context. This explains why most midwifery educators carry a clinical load, which is perhaps something we should consider more closely within Australia. Midwives in Australia will identify with the finding that busy professional lives and distance from static education provider facilities are common reasons why midwives are seeking high-quality accessible education opportunities within an online environment where the opportunity for real-time peer discussion (so valued by the midwives in this study) can be accommodated. Education providers in both countries should respond to this need and consider developing resources that enable international engagement and sharing of best practice enabling midwives to meet the woman’s needs where possible.

Reference: Midwifery 2017;50:9-15
Abstract

Propess versus prostin: There is an alternative way to induce labour

Author: Lennon R

Summary: A retrospective audit, conducted using NICE Clinical Guideline no. 70 (2008) as the audit standard, was conducted to evaluate the effectiveness and safety of the Propess™ pessary as an alternative method of inducing labour compared with Prostin gel. Oxytocin was required to artificially initiate contractions in 28.5% of Propess™ recipients versus 43% of Prostin recipients. Prostin recipients took slightly longer from the start of induction to birth, but there were similar neonatal clinical outcomes and vaginal birth rates in both groups.

Comment (KB): It would appear that induction of labour has become a relatively common occurrence with one in five women experiencing an induction of labour. This study using a retrospective analysis of 70 sets of pregnancy records evaluated the effectiveness and safety of Propess™ as a method of induction when compared with Prostin. The results of the study demonstrated that 70% of the Propess™ group required to have their labour augmented with an artificial rupture of membranes and 28.5% required augmentation with oxytocin. Of the women who had Prostin gel administered, 60% required artificial rupture of membranes rate with 43% needing an oxytocin infusion. In the Propess™ group, 71% had a spontaneous vaginal birth, 17.5% had an instrumental birth and there was an 11.5% caesarean section rate. The Prostin group experienced a 68% spontaneous vaginal birth rate, 22% instrumental and a 10% caesarean section rate. In both groups approximately 10% of the group had a caesarean section. The outcomes from this study conclude that the Prostin group had a higher requirement for an oxytocin infusion, 43% versus 28.5%. It is well evidenced that the use of oxytocin brings with it additional interventions and risks, e.g. continuous monitoring, increased mobility for women, intense contractions with an increased risk of hyper stimulation leading to fetal hypoxia and distress.

Reference: British Journal of Midwifery 2017;April 7 [Epub ahead of print]
Abstract
Midwives’ management during the second stage of labor in relation to second-degree tears—An experimental study

Authors: Edqvist M et al.
Summary: This cohort study evaluated a multifaceted midwifery intervention (spontaneous pushing, all birth positions with flexibility in the sacroiliac joints, 2-step head-to-body delivery) versus standard care on the incidence of 2°-degree perineal tears in 597 primiparous women. Despite the high use of epidural analgesia (61.1%), midwives in the intervention group were able to use the intervention more compared to the control group. A multifaceted intervention versus standard care. The prevalence of episiotomy was low in both groups (1.7% vs 3.0%).

Comment (KB): The main purpose of this study was to evaluate a multifaceted intervention created to reduce 2°-degree tears among primiparous women, using an experimental cohort study where a multifaceted intervention consisting of 1) spontaneous pushing, 2) all birth positions with flexibility in the sacroiliac joints and 3) a 2-step head-to-body birth were compared with standard care. Midwives in the intervention group were asked to use the MMA model of care which stands for Midwives’ Management during the second stage of labour and consists of all the three parts of the intervention as mentioned above. This is a very interesting study, because current practice favours a managed and controlled birth of the baby’s head. This management has always been considered of the utmost importance to avoid or minimise perineal trauma. Yet to date, there has never been a study that has compared directed versus spontaneous pushing during the second stage of labour and its relationship with perineal trauma. Results from this particular study conclude that the second stage of labour was significantly shorter for the women in the intervention group. 70.2% of women in this group experienced a 2°-degree tear, compared to 78.3% of women in the standard care group. The episiotomy rate was low in both groups (1.7% and 3.0%) and the rate of 3° and 4° degree tears was significantly better in the two groups (3.7% and 4.7%).

In conclusion, the MMA model of care reduced the prevalence of 2°-degree perineal tear; however, a causal relationship between the MMA model of care and the prevention of 2°-degree tears cannot be accurately established, as this was an experimental study, which carries a potential risk for bias. Nevertheless, it does demonstrate that supporting a woman’s choice in terms of her birth position and actively encouraging spontaneous pushing during the 2° stage of labour does no harm and in fact may reduce the risk of perineal trauma.


Abstract

First-time fathers experiences of their prenatal preparation in relation to challenges met in the early parenthood period: Implications for early parenthood preparation

Authors: Pålsson P et al.
Summary: This Swedish qualitative study used a phenomenographical approach to describe the experience of 15 first-time fathers during their prenatal preparation in relation to challenges during the early parenthood period. Fathers’ experiences were summarised into three categories: “Acquiring knowledge and forming realistic expectations” was essential for “Developing strategies” and these were enhanced by “Being facilitated and supported”.

Comment (KB): It is considered that parents’ experiences of early parenthood are affected by the information they receive before birth, so this study from Sweden may offer some insights into the effectiveness of the information currently presented to fathers in the antenatal preparation classes. Fifteen fathers aged between 19-37 years were recruited to participate in interviews carried out one month after the birth of their babies. Three main themes emerged from the data, 1) acquiring knowledge and forming realistic expectations, 2) developing strategies and 3) being facilitated and supported. Many of the participants acknowledged that breastfeeding was actually more challenging than they had been expecting and it would have been helpful to have a larger focus on problem solving around breastfeeding challenges. They felt totally unprepared for the amount of focus that there would be on the newborn infant and they would have liked some strategies to help them nurture the relationship, especially in light of some of the relationship changes that occur between a couple following the birth of the baby. They were unprepared for the feelings of irritation and frustration they sometimes felt towards their baby due to sleep deprivation. There was a need to acknowledge that fathers may also experience some emotional fluctuation and sensitivity. Fathers avoided using Google realizing that the results and information obtained from the site could be unreliable. As a consequence, they would have valued information from the midwife about which websites are reliable to access for advice. The men valued the midwife and she was considered to be trustworthy. Importantly, parental preparation should focus more on the time after birth, with a follow up session with practical information during the immediate postnatal period. Overall, the findings from this study suggest that fathers require guidance in remaining resilient and they would support them to develop their identity as a new father and help them prepare for the early postnatal period. The fathers did not appreciate being seen as nothing more than a helper for the mother. However, it is important to acknowledge whilst classes could be modified to meet the needs of new fathers, this approach should not dominate the preparation time that mothers require to help them prepare for parenthood.


Abstract

The effect of acupressure on the initiation of labor: A randomized controlled trial

Authors: Torkzahrani S et al.
Summary: This randomised clinical trial aimed to assess the effect of acupressure on the induction of labour in 150 nulliparous pregnant women admitted to hospital. There were no differences among acupressure, sham acupressure and control groups in the spontaneous initiation of labour within 48 or 49-96 hours after the intervention or from 97 hours to the time of hospitalisation for spontaneous initiation of labour.

Comment (KB): The use of complementary and alternative medicines such as acupressure and acupuncture are becoming more popular as a replacement to previous drug treatments. To evaluate the effect of acupressure on the initiation of labour, a study involving 150 mothers was conducted in Tehran. The pregnant women were divided into three groups, 1) acupressure, 2) sham acupressure, 3) routine care. Overall, the results from the study did not show any significant difference in the interval times from the commencement of the procedure to birth among the three groups. Neither was there any significant difference found among the three groups in regards to the type of birth, however, the vaginal birth rate in all three groups was very low, with the caesarean rate in the sham acupressure group being 52% (n = 26), in the acupressure group 44% (n = 22) and in routine care group 48% (n = 24). Overall the results of this study suggest that in this particular group of women, acupressure was not any more effective in initiating labour than sham acupressure or routine care.


Abstract