

Midwifery RESEARCH REVIEW™

Making Education Easy

Issue 22 – 2020

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Abbreviations used in this issue

SGA = small for gestation age
MHRA = Medicines and Healthcare Products Regulatory Agency
VRMM = Vigilance and Risk Management of Medicines



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Welcome to the latest issue of Midwifery Research Review.

This issue discusses the use of video calls during early labour to allow women and midwives to connect with each other, the need to encourage pelvic floor exercises during pregnancy to prevent incontinence following labour and birth, how women learn to express breast milk, their mode of birth preferences, and the impact that a second degree perineal tear during childbirth has on daily life. We also report that maternal iodine insufficiency may lead to lower birthweight and SGA, maternal cannabis use in pregnancy has deleterious effects on neonatal outcomes, and a well-conducted observational study raises safety concerns about the use of macrolide antibiotics during pregnancy. Finally, we report the mental health 'rollercoaster' experienced by student midwives.

We hope you find the selected papers of interest, and look forward to hearing your comments, feedback and suggestions.

Kind regards,

Nimisha Waller

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Women's perceptions on the use of video technology in early labor

Authors: Faucher MA & Kennedy HP

Summary: This US study examined women's perspectives on the potential use of video technology for early labour support. Focus groups and individual interviews were conducted with 23 women who experienced spontaneous labour within the last year. The women identified potential advantages of video technology in early labour, including where it could enable closer human connections and a better assessment of labour. Concerns focused on privacy issues and the need to practise ahead of time.

Comment: This study highlights the benefits for women to remain in their own environment in early labour (when the plan for the majority of women is to birth in a hospital), as well as the cost savings of delaying the hospital admission and avoiding unnecessary caesarean section in the US. A prior study undertaken with midwives highlighted improved assessment during early labour through video calls instead of triaging with phone calls. This is supported by the women in this study. The ability to see (main theme from women) and connect with the midwife through a video call enabled women to remain confident and feel supported, and helped to foster empathy. Privacy was only a concern if the women did not know the midwife and there was a lack of autonomy to use the technology. The women strongly felt that there needed to be an opportunity to practise video calls before labour started. The need for improved security and reliability of video calls, including a plan of 'who calls who' has to be considered. Would women who have an option to birth at home or in primary birthing units need the same level of contact/support offered by video calls so they feel supported, remain confident and foster empathy? This study provides an opportunity for NZ midwives to reflect and share their experiences of using such technology during COVID-19 lockdown. What are the experiences of women and midwives with using video calls when one is unable to provide such support during labour and birth?

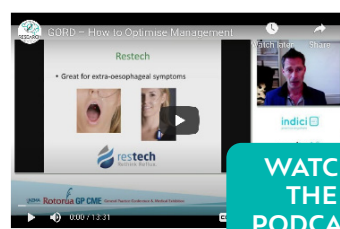
Reference: *J Midwifery Womens Health* 2020;65(3):342-8

[Abstract](#)

Gastro-oesophageal reflux disease (GORD) – How to Optimise Management

In the Gastroenterology Session at GPCME 2020 (Virtual), Gastroenterologist Alasdair Patrick discusses how to optimise GORD management and shares a practical primary care treatment algorithm.

There is also a recent Educational Series on GORD with expert commentary by Alasdair.



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“Are you doing your pelvic floor?” An ethnographic exploration of the interaction between women and midwives about pelvic floor muscle exercises (PFME) during pregnancy

Authors: Terry R et al.

Summary: This study explored the challenges, opportunities and concerns for women and health care professionals related to the implementation of pelvic floor muscle exercises (PFME) for women in antenatal care. 17 interactions between midwives and women were observed in antenatal clinics. In addition, 23 midwives, 15 pregnant women, 4 physiotherapists, a link worker/translator and 2 consultant obstetricians were interviewed. Although the health care professionals and some of the women knew that PFME were important, the exercises were not prioritised. The midwives indicated a lack of confidence to teach PFME and manage urinary incontinence within the antenatal care pathway, and the women expressed a lack of confidence to ask about it. Assumptions made by both women and midwives about PFME and urinary incontinence may have exacerbated the situation.

Comment: The continence.org.nz website suggests that 1 in 3 women are likely to be incontinent following childbirth. This is supported by a [Cochrane Systemic Review](#) that was published in May 2020. The NZ College of Midwives website stresses the importance of staying well in pregnancy and learning to do pelvic floor exercises, and provides a link to the Ministry of Health website about how to do them. This study enables us to reflect on why some women are likely to do PFME and others are not. What are the enablers and barriers for midwives and women to prioritise these exercises, and do midwives require further training/workshops to enhance their confidence? How often do midwives have a conversation about urinary incontinence as part of the childbirth continuum and who raises the topic of conversation – the midwife or the woman? Some women do appear bored when PFME are mentioned, thus suggesting a possible need for innovative ways of teaching these exercises (e.g. including them in regular lifestyle physical activities). The Cochrane Review concludes that early structured pelvic floor muscle training in early pregnancy for women who are continent probably prevents the onset of urinary incontinence in late pregnancy and reduces its risk slightly postnatally. In view of this, who is the most appropriate health professional to deliver this training? Should it be a midwife or another health professional?

Reference: *Midwifery* 2020;83:102647

[Abstract](#)

Midwifery Council of NZ

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“We just kind of had to figure it out”: A qualitative exploration of the information needs of mothers who express human milk

Authors: Leurer MD et al.

Summary: This qualitative study in western Canada explored mothers' information needs and sources related to expression of breast milk. 35 mothers of infants aged from birth to 24 months who had expressed milk at least once were interviewed. Their responses indicated that registered nurses and lactation consultants were their most common sources of information, with other sources being the Internet, friends/family, and other mothers. The women found the inconsistent advice on breast milk expression to be confusing, and many reported that health care providers did not address all their learning needs. Topics of interest included practical advice on how to express, frequency/duration, milk storage guidelines, and the impact of expression on milk supply.

Comment: This article highlights the increasing trend (nearly doubled in some countries within 6–8 years) of mothers in high-income countries expressing breast milk to feed their babies. Expressing by use of breast pumps may commence for a variety of reasons and occur as early as 24 hours after the birth of the baby. The authors suggest that the trend towards increased expressing of breast milk is complex. The women's preference is that they be informed about expressing breast milk. The areas in which women would like information to successfully express while continuing to maintain their lactation have been highlighted in the study. The findings provide an opportunity for all health practitioners involved in supporting women during breastfeeding to reflect on: 1) their ability to remain non-judgmental; 2) provision of consistent and evidenced-based information; 3) whether expressing is equal to breastfeeding as often promoted by manufacturers of breast pumps; and 4) our ability to connect women/whānau with appropriate support groups to ensure the women are supported when the care by health professional ends. From where do women/whānau get the appropriate information on breast pumps available for hire/purchase if they have to or are planning to offer expressed breast milk?

Reference: *J Hum Lact* 2020;36(2):273-82

[Abstract](#)

What are women's mode of birth preferences and why?

Authors: Coates D et al.

Summary: This systematic review evaluated women's mode of birth preferences. A search of PubMed, Maternity and Infant Care, MEDLINE, and Web of Science for the period 2008–2018 identified 65 studies that were suitable for inclusion. Analysis of the data showed that most women preferred a vaginal birth, but 5–20% of women in high-income countries and 1.4–50% of women in low- and middle-income countries preferred a caesarean section. The main reasons for mode of birth preference were perceptions of safety, fear of pain, previous birth experience, encouragement and dissuasion from health professionals, social and cultural influences, and access to information and educational levels.

Comment: The findings highlight women's preferences for the mode of birth in both high- and low-income countries and the 6 main factors associated with mode of birth preference. Health professionals play a significant role in the decision making of women/whānau. Better information about the risks and benefits of caesarean section helps to reduce the rate. In NZ, Right 6 of the Health and Disability Commissioners (HDC) Code of Rights (1996) enables providers to ensure women are fully informed to make informed decisions (shared decision-making) that are in-line with women's beliefs, values and preferences. Working within the HDC Code of Rights ensures provision of high-quality maternity care in NZ and improved satisfaction for women/whānau. If shared decision-making is an appropriate strategy to improve outcomes and reduce interventions, shouldn't ensuring Right 6 (HDC, 1996) help to improve outcomes and reduce interventions in the NZ maternity system? Some perceive that information and knowledge-sharing creates fear in women/whānau, but the review suggests that this may actually help to reduce childbirth fear. Hence women fearful of childbirth are provided with the opportunity to make an informed decision. Their request for a caesarean section being granted is unlikely to improve their birth experience/satisfaction. The suggestion is to review/update clinical guidelines to include more detail for informed choice (shared decision-making) and ensure active engagement of women/whānau in decision making. A must read for all maternity care providers if we are truly committed to reducing intervention rates and ensuring women/whānau engagement in shared decision-making.

Reference: *Women Birth* 2020;33(4):323-33

[Abstract](#)

Postponed to Thursday 02 – Saturday 04 September 2021




NEW ZEALAND COLLEGE OF MIDWIVES 16TH BIENNIAL NATIONAL CONFERENCE

Maternal iodine status, intrauterine growth, birth outcomes and congenital anomalies in a UK birth cohort

Authors: Snart CJP et al.

Summary: This study investigated the impact of maternal iodine status on birth outcomes in a UK birth cohort. Maternal iodine status was estimated from spot urine samples collected at 26–28 weeks' gestation from 6971 mothers in the Born in Bradford birth cohort, and associations with birth outcomes were examined for urinary iodine concentration (UIC) and iodine-to-creatinine ratio (I:Cr). There was a small positive association between I:Cr and birthweight in adjusted analyses. Compared with infants in the 75th percentile of I:Cr, those in the 25th percentile had a lower birthweight and a higher probability of SGA. However, I:Cr was not associated with any other adverse birth outcomes (including stillbirth, preterm birth, ultrasound growth measures or congenital anomalies), and there was no evidence of any associations between UIC and birth outcomes.

Comment: This study highlights that the 1990 pledge at the World Summit in New York for universal salt iodisation and the recommendation by the World Health Organization (WHO) of iodine supplementation during pregnancy and lactation (where iodised salt is not readily available) is still in progress. The primary source of iodine during pregnancy is from milk, some fish, meat and cereals. Hence women who avoid dairy or are vegetarian and are not using supplements may be at a greater risk of iodine deficiency, particularly during pregnancy when iodine demands increase. This can put pregnant women with mild or moderate iodine deficiency at a greater risk of having lower-weight babies (comparable to environmental tobacco smoke exposure). Babies who are of lower birth weight have increased risk of developing diabetes, leukaemia, and all-cause adult mortality. Since September 2009, iodised salt has been added to bread in NZ. Pregnant women are also offered supplementation of 150 mcg elemental potassium iodide daily during pregnancy and while breastfeeding. However, the study provides an opportunity to reflect on women's awareness of what iodine is, why it is essential in pregnancy and during lactation, good dietary sources of iodine and how social determinants may impact on the taking of iodine supplements in NZ. What ongoing conversations do we have during the childbirth continuum to ensure women continue to take iodine supplements during pregnancy and while breastfeeding? For further information see [Cochrane Systemic Review](#), [Cochrane Featured Review](#), and [Ministry of Health](#) websites.

Reference: *BMC Medicine* 2020;18:132

[Abstract](#)

The deleterious effects of cannabis during pregnancy on neonatal outcomes

Authors: Grzeskowiak LE et al.

Summary: This analysis of the prospective SCOPE study evaluated the effects of cannabis use during pregnancy on neonatal outcomes. 5610 pregnant nulliparous women with low-risk pregnancies in Australia, NZ, Ireland, and the UK were assessed for cannabis use during pregnancy. 314 women (5.6%) reported using cannabis in the 3 months before or during their pregnancy. Compared with infants of mothers who had never used cannabis, infants of those who still used it at 15 weeks had lower mean values for birthweight, head circumference, birth length, and gestational age at birth. With the exception of gestational age at birth, the differences were all greater for women who used cannabis more than once a week than for those who used it less frequently.

Comment: Women from all socioeconomic backgrounds may continue to use cannabis socially or to improve conditions that may occur during pregnancy such as nausea, vomiting, depression and anxiety. This multicentre study highlights the number of women who use cannabis at 15 weeks of pregnancy and the poor neonatal outcomes when cannabis was used once a week versus less frequently. However, no information was available regarding how cannabis was taken or the quantity used. The poor neonatal outcomes included birthweight (comparable to women who continued to use tobacco during pregnancy), length, and head circumference, as well as increased frequency of severe neonatal morbidity. The outcomes for infants of women who had stopped using cannabis by 15 weeks of pregnancy did not differ from those of mothers who had never used cannabis, hence the importance of encouraging women to reduce or stop by this gestation. The legalisation of cannabis in NZ may generate an increase in self-reported cannabis use during pregnancy due to increased access to cannabis and reduced stigma associated with recreational cannabis use. Health professionals grapple with the best way to have such sensitive conversations and whether self reporting is accurate. It is suggested that it is best to ask explicitly (as we should do with use of alcohol and tobacco) rather than broadly about use of substances as women may not consider cannabis a drug.

Reference: *Med J Aust* 2020;212(11):519-24

[Abstract](#)

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Research Review publications are intended for New Zealand health professionals.

“Taken by surprise” – Women’s experiences of the first eight weeks after a second degree perineal tear at childbirth

Authors: Lindberg I et al.

Summary: This study investigated the impact of a second degree perineal tear during childbirth on daily life in the first 8 weeks after giving birth. A questionnaire was completed by 1007 women with a second degree perineal tear. Many of them recovered fairly well in the first few months after a second degree perineal tear at childbirth, but a substantial number were unprepared for the pain and discomfort they experienced.

Comment: Midwifery Maternity Provider Organisation (MMPO) data suggest that 40% of primigravida women and 20% of multigravida sustain a second degree tear. The overall rate in 2016 was 29%, i.e. approximately 1 in 3 women had a second degree tear. Hence, perineal lacerations are common. Perineal pain has been reported by women who have had an intact perineum, although it is more likely in women who have sustained a second degree tear or an episiotomy. The findings of the study highlight that some women were ‘taken by surprise’ as they felt unprepared for not just the pain but all aspects of postpartum physical and psychological changes and recovery. Need for improved information about check-ups and reassurances of recovery suggests women are unaware/uninformed of the assessments and discussions that should occur with health practitioners. There appears to be a need to empower women regarding the care they are entitled to during the postpartum period. The authors have defined second degree tear. They suggest a more detailed classification of second degree tear including levator ani injuries is needed to differentiate between smaller and larger second degree tears in the future. This is an opportunity to individually reflect on how second degree tears are documented in practice.

Reference: *Midwifery* 2020;87:102748

[Abstract](#)

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Associations between macrolide antibiotics prescribing during pregnancy and adverse child outcomes in the UK

Authors: Fan H et al.

Summary: This population-based cohort study investigated the effects of macrolide antibiotic administration during pregnancy on adverse child outcomes. The cohort comprised 104,605 children born in the UK in 1990–2016 whose mothers were prescribed a macrolide (erythromycin, clarithromycin, or azithromycin) or a penicillin between the fourth gestational week and delivery. The control cohorts were children whose mothers were prescribed macrolides or penicillins before conception, and siblings of the children in the study cohort. Use of macrolides during the first trimester was associated with an increased risk of any major malformation compared with penicillin (adjusted risk ratio [aRR], 1.55, 95% CI 1.19–2.03) and specifically cardiovascular malformations (aRR, 1.62; 95% CI 1.05–2.51). Macrolide prescribing in any trimester was associated with an increased risk of genital malformations (aRR, 1.58; 95% CI 1.14–2.19). Use of erythromycin in the first trimester was associated with an increased risk of any major malformation (aRR, 1.50; 95% CI 1.13–1.99).

Comment: Erythromycin, clarithromycin, and azithromycin are macrolide antibiotics that are commonly used during pregnancy. The 2019 systematic review and meta-analysis by the lead author found that the use of macrolides during pregnancy showed consistent evidence of an increased risk of miscarriage, but less consistent evidence for congenital malformations, cerebral palsy, and epilepsy. This well-conducted observational study raises safety concerns about macrolides, in particular erythromycin (findings for clarithromycin had wide confidence intervals and analyses for azithromycin were precluded because of few events). As stated in the conclusion, babies of women prescribed macrolides in early pregnancy have a smaller risk of cardiac malformations (about 2%) than women who are prescribed penicillin. The study provides valuable findings in that macrolide use in pregnancy was not associated with any risk of cerebral palsy, autism spectrum disorder, attention-deficit hyperactivity disorder, or epilepsy. The authors call for cautious use of macrolides during pregnancy. The director of VRMM and MHRM has confirmed that they are reviewing the findings of this study in the context of similar studies which have not found this association, and states that macrolides should be used where there is clinical need. The authors' advice is for women to take antibiotics when needed but to avoid macrolides if alternative antibiotics can be used until further data are available. Note: midwives in NZ are likely to only prescribe azithromycin for chlamydia infection. The corrections to the original article can be accessed [here](#).

Reference: *BMJ* 2020;368:m331

[Abstract](#)

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Midwifery Research Review

Health professionals' views of newborn pulse oximetry screening in a midwifery-led maternity setting. "It's a good thing to do, but fund it!"

Authors: Ward K et al., on behalf of the Pulse Oximetry Steering Committee

Summary: This study evaluated enablers and barriers to universal oximetry screening of newborns in NZ. Data were generated from focus groups in 2018 that involved a total of 45 midwives. Overall, the midwives felt that pulse oximetry screening was easy to perform, non-invasive, and worthwhile, and they were reassured by screening that provided evidence of either a healthy baby or a need for urgent review. Barriers to universal screening included midwifery services workload expectations and under-resourcing, and location of the baby at the time of screening.

Comment: At present the pulse oximetry test is routinely offered at Auckland City, Wellington and Dunedin hospitals, and at the 3 community birthing units in Counties Manukau. Everyone agrees that pulse oximetry screening should be performed on newborn infants as morbidity and mortality related to congenital heart disease can be reduced when pulse oximetry screening is offered. The NZ College of Midwives supports the call for the national screening programme. As highlighted in this study, it needs to be resourced and funded appropriately prior to implementation. The funding has to ensure the availability of resources at all regions and services involved with the screening, as well as the subsequent care of newborn infants, so screening can be offered to every baby regardless of where the baby is born. It is felt that the National Screening Unit should govern the screening programme as this will enable quality improvement initiatives, thereby further ensuring equity for all infants in NZ. The national guidelines on pulse oximetry are being developed by the Ministry of Health and the cost of establishing and operating a new national screening programme for newborn pulse oximetry screening will also need to be determined before the screening programme can be offered. Watch this space!

Reference: *Midwifery* 2020;81:102593

[Abstract](#)

'The rollercoaster': A qualitative study of midwifery students' experiences affecting their mental wellbeing

Authors: Oates J et al.

Summary: This study used semi-structured interviews to determine the mental wellbeing of 20 midwifery students at a midwifery undergraduate programme in the South of England. Two themes emerged from the analysis. The theme of 'the rollercoaster' described the students' experiences during the course, characterised by multiple culture shocks, moving from university to clinical placement, and from one clinical placement to the next. The students found the experience to be emotionally taxing. The theme of 'being noticed, feeling connected' described their views on what could help them enjoy their training. They wanted to be seen as individuals, they wanted regular opportunities to connect with their peers, and they wanted consistent support.

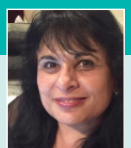
Comment: The programme that includes theoretical and a variety of practical components can be challenging for students. The feeling of not completely belonging or being part of a community has the potential to affect mental wellbeing. It is important to ensure that student midwives don't feel lonely/depressed in these environments. There can be a lot of pressure where emotional resilience is tested, and they either adapt to it without lasting difficulties or they find it challenging. Consistent support and an opportunity to debrief/talk with educators and midwives they work with is often considered helpful. The students highlighted the need to be valued as individuals as they mentioned the importance of being known by name, having their individual educational needs met without having to ask for help, and to share experiences with peers so they feel part of the group. The midwifery education in NZ ensures one-to-one support with an educator (to foster a relationship between the student and the educator) and organises regular meetings with individual students as well as in groups to share experiences and plan progression. Efforts are made to encourage expression in meetings, individuality is accepted and respected, and emotional demands of the programme are often acknowledged. It would be worth exploring how students feel about their experience in a similar study in NZ.

Reference: *Midwifery* 2020;88:102735

[Abstract](#)

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Independent commentary by Nimisha Waller RGON, RM, ADM, Dip. Ed, MM, DHS



Dr Nimisha Waller is a Senior Lecturer in the Department of Midwifery, Faculty of Health and Environmental Science at AUT University. She has practised midwifery in tertiary units and as an LMC. She has been a supervisor and a member of the competency review panel for MCNZ, reviewer for NZCOM Midwifery Standards Review, NZCOM educator for the Midwifery First Year Practice (MYFP), an expert advisor and an Academic member/Deputy Chair on the MOH Compliance panel that monitors the Code in New Zealand (Breastfeeding). Nimisha has a particular interest in maternal wellbeing, diabetes and obesity, newborn, postnatal distress, traumatic birth and PTSD. Her doctoral study is titled 'How are post-birth reflective conversations experienced by those involved?'