

# JOURNAL

Women's experiences of changes  
in eating during pregnancy: A  
qualitative study in Dunedin,  
New Zealand

New Zealand's midwifery profession:  
Embracing graduate midwives'  
transition to practice

Providing rural and remote rural  
midwifery care: an 'expensive hobby'

Generosity of spirit sustains  
caseloading Lead Maternity Carer  
midwives in New Zealand



# New Zealand College of Midwives Journal

The New Zealand College of Midwives Journal is a blind peer-reviewed journal and the official publication of the New Zealand College of Midwives. The Journal focuses on midwifery issues and women's health. It is provided as a benefit to all members of the College and has a wide readership, which includes New Zealand and overseas midwives, other health professionals, New Zealand women and others with an interest or involvement in pregnancy and childbearing.

The philosophy of the Journal is:

- To promote women's health issues as they relate to childbearing women and their families
- To promote the view of childbirth as a normal life event for the majority of women, and the midwifery professional's role in effecting this
- To provoke discussion of midwifery issues
- To support the development of New Zealand midwifery scholarship and research
- To support the development and dissemination of New Zealand and international research into midwifery and maternal and child health

## Publication

The Journal uses electronic article based publishing. The editors build each issue as an 'issue in progress' from papers that have been accepted for publication. Once accepted the paper is disseminated directly to College members electronically and is made publicly available on the College website <https://www.midwife.org.nz/resources-events/nzcom-journal>. A full journal issue is printed annually in December.

## Submissions

The Journal welcomes original research, literature reviews, exemplars/practice stories/case studies, audits and research methodology articles that fit with the philosophy of the Journal.

It is important that articles submitted for review have not been published previously in any form and are not under consideration for publication elsewhere.

Articles should be submitted electronically to the Journal via email to co-editor, Lesley Dixon, at [practice@nzcom.org.nz](mailto:practice@nzcom.org.nz).

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## EDITORIAL

### Working together to bring you a world class journal

Lorna Davies  
Sub-editor



In 2016 you will have periodically received the nine research articles that you now find included in Issue 52 of the New Zealand College of Midwives Journal. These articles have been brought to you as a result of ongoing activity on the part of the editorial board throughout the year. I am the most recent addition to the editorial team, having joined the group in the latter half of 2015. In the short period that I have been a sub-editor, I have seen the group work industriously from locations around New Zealand, and in some cases beyond, to produce an impressive and diverse body of maternity related research generated by midwives and those within associated professions in Aotearoa/New Zealand. When I was asked to write the editorial for this collective edition, I thought about what I could contribute and what approach I should take. Should I write a clarion call for action style editorial or draw on reflection on practice. Eventually it occurred to me that in my role as newcomer I was in the privileged position of viewing the editorial team and processes through relatively fresh eyes. As a result, I felt motivated to write a piece that honours the work that the editors, sub-editors and support crew carry out behind the scenes of the Journal.

Our editorial board of two editors and four sub-editors meets online on a monthly basis using Skype, usually before our "day jobs" commence. The minutes and the agenda are distributed in advance so that we all have an idea of what will be discussed. The primary aim of the editorial board is to provide members with a series of robust New Zealand based research articles that contribute to the distinctive body of knowledge produced from those who work within, alongside or as observers of our unique maternity system.

When a paper is submitted to the Journal, it is considered by the board and an editor or sub-editor is appointed to direct the paper through a process that will ensure quality assurance. Support mechanisms that offer good support and constructive feedback for authors are used. This stage involves the arrangement of a double-blind critique of the paper by two of our valued journal reviewers, who have been selected because of their midwifery knowledge and research expertise, which may be methodologically or content based. The paper then commutes back to the editor or sub-editor, who liaises with the author about the feedback, suggestions and recommendations of the peer reviewers, until the paper is accepted in principle. A robust proof-reading process follows, adding the finishing touches with regard to style and grammar etc.

The selection and editing of articles may seem to be an obvious part of the role of the board. However, the work of the group of editors and sub-editors goes far beyond that sphere of activity and I would like to share a number of activities that have been considered, discussed and sometimes implemented by the group recently. In the past twelve months the committee has researched the subject of creative commons, a form of licensing of materials that has an impact on copyright. The members have been working to ensure the Journal meets the Committee on Publication Ethics (COPE)

best practice guidelines for Journal editors. This has involved ensuring transparent processes for authors and maintaining academic integrity. It has included the drawing up a framework so that the Journal can be indexed with other databases (the Journal is currently indexed with Cinahl). Indexing more widely will support the dissemination of the Journal articles. One of our sub-editors has produced a PowerPoint presentation on "Writing for Publication". Others have been working on a journal index and updating the reflection tool. Yet more activity has involved organising the archiving of older versions of the Journal for online access, updating of reviewer guidelines and the task of finding new reviewers for research articles. During the NZCOM Biennial Conference in Auckland in August this year, the editors provided a workshop and made themselves available to discuss writing for publication for those who might be interested in taking the plunge and publishing.

There is a team of people involved in getting an article to publication, which includes Rhondda Davies (proofreading) and Hayley McMurtrie (layout) and I would like to make a special mention of Annie Oliver in the Christchurch Office for her administrative co-ordination of the Journal. I acknowledge that this brief account is just a snap shot but hopefully it will have given an insight and a greater sense of appreciation of the work that goes into bringing you the articles throughout the year and the collective edition of the Journal at the end of the year.

This year there has been a broad scope of articles in the collection, covering a whole range of aspects related to midwifery care and provision. The year commenced with an article on nutrition and healthy weight gain from Paterson et al., where the "teachable moment" was identified as a window of opportunity for health education and promotion. The two articles following were the culmination of findings from a study exploring the experience of new graduates in New Zealand and how best to support them. Susan Crowther throws down the gauntlet in the title of her study on remote rural midwifery care imploring the need for improved remuneration for rural midwives. Jane Currie and Carrie Cornsweet Barber use a qualitative approach to help us to understand the experiences of women with medical conditions in pregnancy and how best to support them. Smoking cessation is explored in an evaluative study by Mentor, Pihema and Kira, who found that intercession at an early stage in pregnancy may make a difference. The article by Debra Betts and her co-researchers offers findings from a retrospective study that explored the benefit of acupuncture for women presenting with back or pelvic pain and found high levels of satisfaction. The team of researchers from AUT publish the third in their series on sustainable midwifery practice, focusing this time on reciprocity and generosity of spirit. The final article for the year by Carla Houkamau and her colleague is an important piece of social commentary that strongly advocates that greater attention must be given to the impact of social and socio-economic factors if SUDI rates are to be reduced in Māori communities. We hope that you have enjoyed the articles brought to you this year and that you will continue to support the Journal by providing us with the articles of high quality that have become the hallmark of this Journal.

## NEW ZEALAND RESEARCH

## Women's experiences of changes in eating during pregnancy: A qualitative study in Dunedin, New Zealand

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### ABSTRACT:

**Background:** The goal of optimal nutrition in pregnancy is to improve health outcomes for both mother and child. Healthy weight gain in pregnancy has therefore become recognised as an important aspect of perinatal care. Intuitive Eating and related 'mindful eating' have been associated with lower gestational weight gain and improved glucose control in pregnancy. Healthy weight gain in pregnancy is a current public health promotion message in New Zealand.

**Objective:** To explore women's experiences of eating in pregnancy, in the context of intuitive eating.

**Method:** This was a qualitative interview-based study of 12 purposively sampled pregnant women referred by their Lead Maternity Carer, in New Zealand. We investigated these women's perceived experiences of how their eating changed in pregnancy, specifically in the context of the phenomenon of intuitive eating. Participants were interviewed incorporating a cognitive 'think-aloud' process, whilst completing the Intuitive Eating Scale Questionnaire, followed by a semi-structured interview to discuss their experiences of eating. Themes were derived using a general inductive approach.

**Findings:** Four themes regarding eating during pregnancy were identified: Theme one - How women feel; Theme two - External influences; Theme three - Changed eating by choice; and Theme four - Motivation to change. Changes in eating were driven by a variety of reasons which differed between women and between pregnancies. Participants described pregnancy as a time of change with regard to their experiences of eating.

**Conclusion:** The findings of this study support Phelan's model of pregnancy as a teachable moment for eating behaviours, which provides a potential opportunity to inform women about healthy eating.

**Key words:** Health behaviour, eating, weight, pregnancy, qualitative study

### INTRODUCTION

Optimal nutrition in pregnancy includes: a focus on improving micronutrients vitamins and minerals; reducing risk by avoiding pathogen-contaminated foods (especially listeria); and optimising appropriate caloric intake. The goal is to improve health outcomes for both mother and child. Women's experiences of changes they may make to their eating in pregnancy are therefore important to understand and could help to provide insight into how to effect positive change (Wennberg, Lundqvist, Hogberg, Sandstrom, & Hamberg, 2013).

Recent efforts to identify the origins of human obesity have focussed on the perinatal environment and epigenetic changes (Gluckman & Hanson, 2008). Nutrition during pregnancy has therefore become an area of increasing interest and importance. Healthy weight gain in pregnancy has become recognised as an important aspect of perinatal care, focused around optimising wellbeing for both the mother and child. Gestational weight gain (GWG) within the 2009 United States Institute of Medicine (IOM) guidelines (Rasmussen & Yaktine, 2009) is associated with

improved outcomes including, but not limited to, lower rates of: small and large for gestation infants, maternal hypertensive disorders and childhood obesity (Kapadia et al., 2015; Oken, Taveras, Kleinman, Rich-Edwards, & Gillman, 2007; Viswanathan et al., 2008). New Zealand has adopted these recommended GWG guidelines and healthy weight gain in pregnancy is a current public health promotion message (Ministry of Health, 2014).

Pregnancy has been recognised as a potential teachable moment with regard to a variety of health behaviours, including eating behaviours (Phelan, 2010). Teachable moments are naturally occurring life or health events that can motivate individuals to adopt risk-reducing behaviours (McBride, Emmons, & Lipkus, 2003). Using the model described by Phelan, pregnancy might be considered an opportunity to provide advice about eating behaviours due to the presence of a number of factors, including increased emotion, increased perceived risk, increased perceived positive outcomes, and a change to social role (Phelan, 2010).

Intuitive eating (IE) is the concept of eating based on hunger and



satiety cues rather than more emotionally based eating (Tylka, 2006). It is a specifically anti-dieting model (Gast & Hawks, 1998). IE and related ‘mindful eating’ have been associated with lower GWG (Lopez-Cepero et al., 2015) and improved glucose control in pregnancy (Youngwanichsetha, Phumdoung, & Ingkathawornwong, 2014). Investigating changes that may occur around women’s eating in pregnancy and the reasons women give for these changes are necessary steps towards the development of ways to enhance behavioural changes that optimise healthy GWG and long-term health outcomes for mother and child. As part of a study of IE in pregnancy, which included the validation of the Intuitive Eating Scale (IES) (Tylka, 2006) in pregnancy (reported separately), we explored the women’s experiences of eating in pregnancy in the context of intuitive eating.

**Intuitive eating and related ‘mindful eating’ have been associated with lower GWG and improved glucose control in pregnancy.**

**METHOD**

This was a qualitative study which used a semi-structured interview, incorporated with a ‘think aloud’ process during the interview, of 12 purposively selected women, designed to explore women’s experiences of change in eating in pregnancy. All participants were recruited in New Zealand by midwife Lead Maternity Carers (LMCs), who are the most common primary maternity care professionals in New Zealand (New Zealand College of Midwives, 2012). The LMCs gave women an information sheet about the study and a form with which the latter could express interest in participation by returning it in a postage-paid envelope to a research assistant. The form also included a request for details of the woman’s parity, gestation, weight, height, ethnicity and details about the presence or absence of nausea or vomiting. Based on responses to these questions using a sampling grid (Table 1) and a maximum variation sampling approach (Marshall, 1996), the primary researcher (HP), who is a senior lecturer and consultant obstetrician, purposively selected 12 participants in order to provide a range of BMI, parity, gestation, presence or absence of morning sickness and nausea, and to ensure representation of women identifying their ethnicity as Māori. The research assistant invited women to join the study; they were offered interview venues within the university and hospital. All the women were interviewed in the hospital. They were reimbursed for their travel and parking costs with a NZ\$50 supermarket voucher.

BMI 20-25	BMI >35
Morning sickness yes	Morning sickness yes
Morning sickness no	Morning sickness no
Age <35	Age <35
Age ≥35	Age ≥35
Trimester 1st	Trimester 1st
Trimester 2nd	Trimester 2nd

Interviews were carried out by HP, who had no relationship with any of the participants at the time of the interview. Written consent was obtained by HP prior to commencing the interview. Partners or support people were allowed to attend solely for the purposes of childcare. Each interview was audio recorded and lasted between

30 and 60 minutes. This period included completion of the IES (Tylka, 2006), which is a 21-item questionnaire (Table 2) on intuitive eating behaviours, using a five-point Likert scale. A cognitive ‘think aloud’ process was used, which involves reading aloud the instructions and questionnaire items and talking through one’s thought processes in coming up with answers (Drennan, 2003). Following completion of the ‘think aloud’ questionnaire, there was a semi-structured interview to discuss the woman’s experiences of eating (see Table 3). The semi-structured questions were collaboratively developed by the research team, which included a rehabilitation and women’s health researcher (EJCHS) and a health psychology researcher (GJT) in addition to the primary researcher (HP). The aim of the interview questions was to investigate pre-pregnancy eating and establish what changes women made to their eating during pregnancy with the goal of understanding the reasons for change.

**Table 2. Intuitive Eating Scale questions**

<b>Unconditional permission to eat subscale</b>	
Q1	I try to avoid certain foods high in fat, carbohydrates, or calories.
Q4	If I am craving a certain food, I allow myself to have it.
Q5	I follow eating rules or dieting plans that dictate what, when, and/or how much to eat.
Q9	I get mad at myself for eating something unhealthy.
Q14	I have forbidden foods that I don't allow myself to eat.
Q18	I feel guilty if I eat a certain food that is high in calories, fat, or carbohydrates.
Q19	I think of a certain food as "good" or "bad" depending on its nutritional content.
Q20	I don't trust myself around fattening foods.
Q21	I don't keep certain foods in my house/apartment because I think that I may lose control and eat them.
<b>Eating for physical rather than emotional reasons subscale</b>	
Q2	I stop eating when I feel full (not overstuffed).
Q3	I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry.
Q6	I find myself eating when I am bored, even when I'm not physically hungry.
Q10	I find myself eating when I am lonely, even when I'm not physically hungry.
Q16	I use food to help me soothe my negative emotions.
Q17	I find myself eating when I am stressed out, even when I'm not physically hungry.
<b>Reliance on internal hunger/satiety cues subscale</b>	
Q7	I can tell when I'm slightly full.
Q8	I can tell when I'm slightly hungry.
Q11	I trust my body to tell me when to eat.
Q12	I trust my body to tell me what to eat.
Q13	I trust my body to tell me how much to eat.
Q15	When I'm eating, I can tell when I am getting full.

**Table 3. Semi-structured questions and prompts**

Question	Prompts	Purpose
Would you please tell me about your eating before you became pregnant?	Things you enjoyed eating Amounts you ate When you ate Who you ate with	To establish eating behaviour prior to pregnancy
Now you are pregnant what has changed?	Things you enjoy eating Amounts you eat When you eat Who you eat with	To identify changes in eating behaviour which the woman associates with pregnancy
Would you please tell me some of the reasons you think these changes have happened?	Is it due to: Nausea Hunger / satiety (fullness) Convenience Advice - health professional or others Other people's opinions Safety - yours or your baby's? "Healthiness"	To identify ideas about why eating habits change in pregnancy
Do you think women would find pregnancy is a time when they would be motivated to change their way of eating?	For example, pregnancy has been identified as a time women are motivated to stop smoking.	To establish if women think pregnancy would be a time when they would be motivated to change lifetime eating habits

**Table 4. Demographics of interviewed women**

BMI	
20-25	5
25-30	2
>30	5
Age	
≥35	2
<35	10
Parity	
Nulliparous	7
Multiparous	5
Nausea	
Yes	10
No	2
Stage of pregnancy	
<14 weeks	4
14-20 weeks	3
>20 weeks	5
Ethnicity	
NZ European	8
Māori	2
Samoan	1
Mexican American	1

The interviews were transcribed by a professional secretary and the transcriptions were checked by an independent researcher, both of whom signed confidentiality agreements. Pauses in participants' speech were noted with ellipses (...). Round brackets were used to note details that were removed to preserve anonymity. Points of clarification were added using square brackets. Thematic analysis was performed using a general inductive approach (Thomas, 2006). Data were managed using word documents. Each interview transcript was read and responses to the 'think aloud' task and semi-structured interview questions were included within the analysis.

A case summary of each participant's interview was written by HP and reviewed with the research team to identify 'meaning units'. Subsequently, sub-themes were developed by HP and reviewed with the research team. These sub-themes were then compared by HP with participant responses to ensure they were representative. A final set of themes which overarched the sub-themes was reviewed with the research team and no disagreements were evident.

This study received ethics approval from the Lower South Health and Disability Ethics Committee. Ref: LRS/10/EXP/031.

## FINDINGS

Using a maximal sampling approach, 13 women were directly invited to participate (to achieve the intended 12 participants) from the 26 women who expressed an interest. There were too few women with a BMI >35 to use this as a primary sampling measure as intended (i.e., BMI <25 and >35). Therefore a range of BMI was selected (see Table 4). One participant's partner attended part of the interview to provide childcare, and did not contribute to the interview. The demographics of the women are shown in Table 4.

Four themes regarding eating during pregnancy were identified. Changes in eating were driven by a variety of reasons which differed between women and between pregnancies.

### Theme one: How women feel

Participants described changes in their eating during pregnancy due to how they felt (Table 5); this included emotional and physical feelings. Women described the effect of nausea on their eating early in pregnancy. This affected multiple facets of eating, namely hunger, choice of food, frequency of eating, and amount of food.

Participants who experienced nausea and vomiting early in pregnancy described the change from feelings of nausea to feelings of fullness as pregnancy progressed. All 12 participants, whether they experienced nausea or not, described their eating as being affected by a greater awareness of feelings of fullness during pregnancy. Other feelings described by participants were more emotional than physical. Some participants felt their eating was less driven by emotional reasons during pregnancy. This change may be because other more physical factors affect their eating

more than emotional ones. However, pregnancy can be a time of emotional change, particularly in situations where the pregnancy was unplanned or where a mother is unsupported. The complexity around making time for cooking/eating appeared to impact on food choices. Participant two described using spare time, when she may otherwise have been bored, to prepare food. In contrast, participant eight didn't cook because she wasn't inclined to clean up.

**Table 5. Theme 1 - How women feel**

Nausea	<p>P7: I didn't eat much and my diet was fairly limited to kind of dry toast or... you know... those sorts of things um... and really had to make myself eat.</p> <p>P10: I don't want to spend too long in your mind thinking about which food.... you feel ill yeah and you won't eat then because you just... I actually feel quite nauseated thinking about, you know, the possibility of food.</p>
Fullness	<p>P3: I get halfway through and think, oh I can't eat any more, I have had enough.</p> <p>P8: I have one mouthful and then... bam I'm full!</p>
Emotions	<p>P10: I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry [reading item 3 on the IES].... Um... prior to pregnancy I would agree. And haven't had the urge – it is definitely nothing to do with emotional eating – when I've been pregnant.</p> <p>P1: But the first pregnancy was kind of hard for me because for my family to accept, because um it was out of wedlock. There was this whole emotional stress thing behind that and kind of made me yep more hungry.</p>
Feeling of a lack of time / inclination	<p>P2: when I have the time now because pregnancy requires so much more effort, with like creating my meals and planning for lunches and things, so I think it's umm with that boredom time. Like if I don't have anything to do, I might spend more time preparing food.</p> <p>P8: Like when I was bored [prior to pregnancy] I was just like yeah... I would just have something to eat, just to eat it... but now [that she is pregnant] I don't know why but like I'm just... I think it's more the fact that I can't be bothered. Like I will be bored, and I will go to the fridge and then I will be like OK I would really quite like to eat that but I would have do this and I would have to do that, and then there would be a pile of dishes at the end of it and I just can't be bothered doing that.</p>

**Theme two: External influences**

Participants described external influences on their eating behaviours (Table 6) sometimes leading to behavioural change and in other situations exacerbating stress and anxiety around food choices. Participants described the impact of advice and social judgement on their eating choices; for example, participant nine was describing that she feels pressured in her food choices and acknowledging that society considers McDonald's as a safe food in contrast to smoked chicken. Women described advice they received around the safety of food choices from a variety of sources, e.g., their mother and midwife.

**Table 6. Theme 2 - External influences**

Cultural/ social pressure	<p>HP: You said the family were affecting what you were eating.</p> <p>P1: Yes. They just... because they knew that I like fatty foods and and they nagged at me so much in the first pregnancy I just couldn't be bothered with the whole nagging during this one, because it annoyed me so much that I didn't enjoy what I ate.</p> <p>P9: Yeah. I'd hate to be like you know huge big belly in 9 months and you know sitting down with a lovely smoked chicken sandwich or... and people going past and going "ugh... look at her... she's pregnant and she's eating smoked chicken!" Whereas if you were rather large in your pregnancy, you'd probably get away with it if you were in McDonald's eating a burger or at the fish and chip shop.</p>
External advice	<p>P4: Oh well just sort of my mum told me as well, to stay away from seafood while you are pregnant.</p> <p>P6: because when I got so freaked out about the whole milk thing, and because it said about yoghurt as well... in the end I was only buying one litre of milk and I was just buying little things of yoghurt, so I knew I could consume them within certain amount of times [to reduce the listeria risk due to open containers in the fridge].</p> <p>P9: Ummmm... I still have like breast chicken, but um... don't really... well the midwife told me off the last time. She said what have you been eating and I said ham and she went "rrr... that's naughty!" So I have kind of cut the ham... I don't even buy ham at the supermarket any more.</p>

**Theme three: Changed eating by choice**

Participants gave clear descriptions of changing their eating because of their knowledge and beliefs (Table 7). Some talked about how pregnancy affected their choices about food and eating, with the intent of staying healthy during pregnancy. In contrast, others described feeling it was acceptable to eat with less restraint during pregnancy. Participants described a personal concern for



effects on the baby from potentially unsafe foods that they thus chose to avoid. Ministry of Health food safety guidelines were noted to be a source of information that were used in participants' decision making.

**Table 7. Theme 3 - Changed eating by choice**

Wanting to stay healthy in pregnancy	<p>P1: Being pregnant and it yeah just makes me aware that I take care of myself more than... when I am pregnant, but when I am not I just let myself go.</p> <p>P2: Yes. But I wouldn't say I would strictly avoid them [calories] but I think I would lean more to the other side in terms of allowing myself, especially now, to eat whatever I want, rather than the you might try and restrict somewhat if you're um... ahh if you're not pregnant, but when you are you have to eat. It's much more important, you are not going to diet.</p>
Choosing to take food safety advice	<p>P5: like the only things that I am cutting out are the things that can cause harm to the baby. If it wasn't going to cause harm to the baby, I would be eating it.</p> <p>P6: those higher risk foods that we are talking about in regards to the listeria and things like that that they talk about that can cause damage to the baby, and I think, yeah... it's just... I'm more... I guess I'm more aware of the fact that the baby's probably more susceptible to those sorts of things I think.</p> <p>P10: You know, I have been told by a few people that "oh the NZ soft cheeses are fine, it's pasteurised". I am not going to take the risk. It's... to me. It's on that Safety Guideline. I just don't want to take the risk.</p>

**Theme four: Motivation to change**

Participants were all specifically asked whether they thought women would find pregnancy was a time when they would be motivated to change their way of eating (Table 8). Two distinct sub-themes emerged in relation to what might motivate change in eating during pregnancy in response to this question and elsewhere in the interviews.

**Participants felt women would be highly motivated to change their eating if the changes would improve outcomes or reduce risk for their baby.**

Participants felt women would be highly motivated to change their eating if the changes would improve outcomes or reduce risk for their baby. The concept of pregnancy as a potential teachable moment was borne out by participants' description of women's perceived motivation to change and the opportunity to influence habits or act as a role model in the family. The timeline of pregnancy was factored into thinking about what would make change successful.

**Table 8. Theme 4 - Motivation to change**

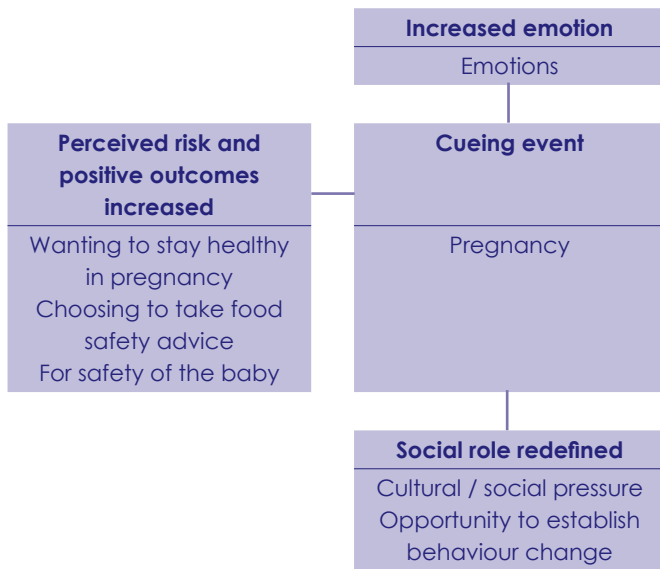
For safety of the baby	<p>P10: like even if somebody said to me that "oh my gosh if you ate you know four pies in pregnancy, then it's probably going to make your baby overweight", you know, I would think "I don't want to do that". I don't want to inflict those choices upon my baby, and that... then that has no chances to change that genetic makeup or whatever, I would just completely steer clear, so... yes.</p> <p>P5: Oh definitely, like the only things that I am cutting out are the things that can cause harm to the baby. If it wasn't going to cause harm to the baby, I would be eating it. Like cakes and things like that. I would definitely be eating them.</p>
The opportunity to establish the behaviour change	<p>P1: and your children are a reminder of what you did when you were looking after yourself.</p> <p>P6: I guess it depends how likely that someone is to continue on [with behaviour change]. Or... it doesn't take long to start to keep those good habits so I mean, I guess nine months should be a long period of time to make a difference.</p> <p>P9: So I think if you got them early enough in their pregnancy, that it would become a way of life after pregnancy, so they can continue eating healthily.</p>

**DISCUSSION**

The focus of this research was exploring how women changed their eating behaviours during pregnancy and whether these changes were compatible with a more intuitive style of eating. All participants described a change to eating behaviours, with the most consistent change being an increased awareness of fullness. Although fullness was a specific question on the IES, most women explored the issue further with descriptions of their degree of awareness, thus fullness was the clearest of all sub-themes identified. This is an interesting finding and suggests that pregnancy may be a useful time to teach women about the sensation of satiety, a component of IE, which could feasibly lead to higher levels of IE postpartum.

**All participants described a change to eating behaviours, with the most consistent change being an increased awareness of fullness.**

The results of our study were considered within the context of the factors described by Phelan as a necessary part of the 'teachable moment' as applied to pregnancy (Phelan, 2010). We identified themes which fit the Phelan model (Figure 1), suggesting that pregnancy is a teachable moment and women are more likely to change to health-supporting behaviour.



**Figure 1. Themes identified within Phelan’s model of a teachable moment**

Women recognised pregnancy and breastfeeding to be a special time when women may be motivated to change eating behaviours, mostly for the wellbeing of their babies, and they acknowledged that this time was long enough to establish a sustainable change. For example, one participant noted: “... it doesn’t take long to start to keep those good habits so I mean, I guess nine months should be a long period of time to make a difference.”

**Women recognised pregnancy and breastfeeding to be a special time when women may be motivated to change eating behaviours, mostly for the wellbeing of their babies, and they acknowledged that this time was long enough to establish a sustainable change.**

The World Health Organization describes a doubling of the prevalence of obesity in the world since the 1980s; to reduce this increase effective interventions are required (World Health Organization, 2011). The evidence that the perinatal environment impacts on obesity in the child means that interventions should be focused pre-conceptually (Gluckman & Hanson, 2008). However, around 40% of pregnancies are unplanned so a large proportion of women are unlikely to have adapted their eating behaviour pre-pregnancy (Morton et al., 2012). Whilst our study found that women changed their eating behaviour during pregnancy, there is still further work necessary to optimise healthy nutrition in the perinatal period. The sub-theme 2.1 - Cultural/social pressure - suggests women change their behaviour due to societal views. Until societal pressures on women are focused on healthier eating rather than some of the negative risk avoidance aspects presently described in Sub-theme 2.2 - External advice - it may be hard for women to choose the moderate risk of listeria in a smoked chicken sandwich over the high fat McDonald’s meal described by one participant.

Diet is presently considered the most effective mechanism for optimising healthy gestational weight gain (Muktabant, Lawrie, Lumbiganon, & Laopaiboon, 2015; Thangaratnam et al., 2012). Studies show high levels of GWG in excess of recommendations (Chung et al., 2013; Dodd et al., 2014). In view of the increasing epidemic of obesity and the potential positive effect of the perinatal environment on long-term risk of obesity, we wonder whether it is time to support a different approach to nutrition; one which promotes healthy choices rather than avoidance of certain foods. Additionally, we have demonstrated that pregnancy is a ‘teachable moment’ and suggest that this is a time when health professionals could be supporting and endorsing changes to eating behaviours.

**STRENGTHS AND LIMITATIONS**

There is the potential for a recruitment bias when recruiting participants to a study related to weight due to the sensitivity of the issue. However, the qualitative nature of the study and the purposive sampling enabled a wide range of participant demographics to be included. Further research is required to generalise these results on a population basis. Participants were New Zealand women under the care of midwifery LMCs. This study adds to the NZ literature on women’s views of dietary changes in pregnancy.

**CONCLUSION**

Participants described pregnancy as a time of change with regards to their experiences of eating; particularly an increase in satiety. The findings of this study support Phelan’s model of pregnancy as a teachable moment for eating behaviours (Phelan, 2010), which provides a potential opportunity to inform women about healthy eating. Changes in eating behaviours identified were consistent with the potential use of IE as a mechanism to improve levels of healthy GWG. However, further investigation of IE in pregnancy is necessary to establish the relationship between IE in pregnancy and GWG.

**ACKNOWLEDGEMENTS**

We would like to thank the participants and the Lead Maternity Carers who recruited them for this research. The authors would also like to acknowledge the contribution of Dr Caroline Horwath and Prof. Peter Herbison to the study design and Gaye Ellis, research assistant, for her support. This study was funded by a University of Otago Research Grant. The authors declare there is no conflict of interest.

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NEW ZEALAND  
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## NEW ZEALAND RESEARCH

## The Midwifery First Year of Practice programme: Supporting New Zealand midwifery graduates in their transition to practice

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### ABSTRACT:

**Background:** The Midwifery First Year of Practice programme (MFYP) is a fully government-funded programme aimed at supporting newly qualified midwives in their first year of practice. This formalised programme provides mentor support, professional continuing education and quality assessment and reflection.

**Aim:** This research was designed to assess and explore the MFYP programme and identify which components New Zealand midwifery graduates considered important and supported them to develop confidence as a midwifery practitioner in their first year of practice.

**Method:** A survey of graduate midwives who participated in the MFYP programme from 2007 to 2010 was undertaken. A survey tool was developed which was designed to explore each element of the programme. Likert scales were provided for the majority of questions with comment boxes also provided so that answers could be contextualised. Quantitative data were analysed using SPSS 21 with descriptive statistics provided to demonstrate responses.

**Findings:** Between the years 2007 and 2010, there were 415 new graduate midwives who participated in the MFYP programme, of which 180 responded to the survey (43.4% response rate). The demographics of the respondents were reflective of the total cohort of MFYP programme participants. In their first year of practice, respondents were almost evenly split between self-employed midwives in case loading practice (47.5%) and midwives employed by a maternity facility (45.5%). Support from the mentor and the financial support for education were considered important contributors to developing professional confidence for these new graduates. The majority of respondents reported feeling supported when attending women during labour and birth (92.2%), and at other times during clinical practice (93.9%). Main sources of support were midwives employed within the facility, midwifery practice partners, and midwife mentors from the MFYP programme.

**Conclusion:** Each element of the programme was considered important by new graduates and this was regardless of their practice setting. The MFYP programme is flexible, meets the needs of New Zealand graduates and helps them to increase confidence in their first year of practice as a registered midwife.

**Key words:** Midwifery, graduate midwives, transition programmes, mentor support, reflective practice, professional education

### INTRODUCTION

The transition from student midwife to registered midwife can be challenging as new midwives come to grips with the realities of professional practice and autonomy. New Zealand's maternity services are unique in that they are designed to be woman-centred and based on a primary health model that integrates seamlessly with secondary and tertiary services when required. Women choose a Lead Maternity Carer (LMC) to coordinate and provide their care throughout their childbirth experience, and they choose their place of birth. Midwives are chosen to be the LMC by 92% of women (Ministry of Health, 2015) and LMC midwives provide care to women across the Midwifery Scope of Practice (Midwifery

Council of New Zealand, 2010) and on their own responsibility. Midwives can choose where and how they work with approximately half employed in maternity facilities (known as core midwives) and half working as LMCs within the community (known as self-employed midwives), providing continuity of care to a caseload of women (Midwifery Council of New Zealand, 2012). Midwives play a central role in maternity services and therefore, as a profession (through the New Zealand College of Midwives (NZCOM) and the Midwifery Council of New Zealand), have established a number of professional frameworks and initiatives to support midwives in their practice.

The Midwifery First Year of Practice (MFYP) programme is one such initiative and was specifically designed to support all newly qualified midwives as they transition from students to registered midwives, regardless of their place of work.

**The Midwifery First Year of Practice (MFYP) programme ... was specifically designed to support all newly qualified midwives as they transition from students to registered midwives, regardless of their place of work.**

The programme aims to promote the transition of new graduate midwives by providing a formal framework of clinical practice support, mentoring reflection, professional education and Midwifery Standards Review to encourage the growth of professional confidence within the first year of practice. The framework was designed by an expert advisory group and utilised principles drawn from studies identifying the challenges of transition, and how these challenges can be mitigated by providing structures that provide support and optimise learning and reflection (Amos, 2001; Solowiej, Upton, Upton, & Stagnitti, 2010; Tingleff, Rossen, & Buus, 2010; Hollywood, 2011; Morley, Smith, & Petty, 2011; Clements, Fenwick, & Davis, 2012; Avis, Mallik, & Fraser, 2013). Each new graduate chooses a mentor who provides support through regular planned reflective discussions. The mentor is available to provide 'hands-on' support if required although, as the findings of this research show, new graduate midwives also receive significant 'hands-on' support from core midwives and other LMC midwives to the extent that subsequent changes to the MFYP programme (after 2010) have reduced this expectation on mentors. New graduates receive funded release time for continuing education to meet their needs. Towards the end of the programme each new graduate undertakes the MFYP Midwifery Standards Review (MSR) for which they are supported to prepare.

This research project was designed to assess and explore the MFYP programme and identify which elements New Zealand midwifery graduates considered important and supported them the most to develop confidence as a midwifery practitioner in their first year of practice. A previous paper has identified that the MFYP programme has supported graduate midwives to be retained within the profession (Dixon et al., 2015). This paper provides the results of a survey of the graduates who participated in the programme between 2007 and 2010.

## **METHOD**

This cohort study collected both quantitative and qualitative data through the use of survey methodology. The survey tool was developed by the research team and tested with eight midwives; it was designed to explore each element of the MFYP programme. Likert scales were provided for the majority of questions with free text boxes also provided so that answers could be contextualised. In 2012, the finalised survey was sent to all graduate midwives who participated in the MFYP programme between the years 2007 to 2010 inclusive.

Programme participants were identified from the NZCOM MFYP programme database of participants. Participants were provided with an information letter and informed consent was deemed to

have been given when the participant completed the questionnaire. Anonymity and confidentiality were maintained throughout the research process. Details for graduate midwives who did not participate in the MFYP programme were not available so this group was not invited to participate.

The survey and information sheet were posted to 407 of the 415 eligible graduate midwives (eight from pilot group excluded). There were 21 surveys returned uncompleted due to invalid postal addresses. Each questionnaire was numbered with a link to a master sheet for follow-up purposes. Follow-up was by an email with an electronic link to the survey sent to the 251 MFYP participants who had a valid email address (six were returned as no longer in use). Email follow-up (for those with an email) was undertaken at two weeks and four weeks following the initial post out, with a final reminder at eight weeks.

**This research project was designed to assess and explore the MFYP programme and identify which elements New Zealand midwifery graduates considered important and supported them the most to develop confidence as a midwifery practitioner in their first year of practice.**

Participants were able to use either the posted survey form or an electronic survey form (sent as a link via email). Those who completed the electronic survey entered their responses directly into the organisational survey-based system. Responses to paper-based questionnaires were entered by the research assistant into the survey-based system. All responses were prepared and entered into SPSS 21 statistical software. Quantitative data were analysed using SPSS 21 with descriptive statistics provided to demonstrate responses. Qualitative data were analysed using an iterative thematic approach and will be presented in another paper. Ethics approval for the study was provided by the Health and Disability Ethics Committees Upper South, A Regional Ethics Committee (Reference: URA/12/EXP/012).

## **FINDINGS**

There were 415 new graduate midwives who completed the MFYP programme between the years 2007 and 2010. A total of 180 surveys were completed and returned giving a survey response rate of 43.4%. Denominators may vary slightly with different questions as multiple options were available for participants.

### **Who Completed the Survey?**

Comparisons between the demographic data of the survey respondents and the demographic data of all MFYP programme participants were made to determine whether the respondent group was representative of the total MFYP participant group (Table 1).

The respondents were asked to state their current age when completing the survey. It was expected that there would be a difference in the ages of the respondents (between 2 and 5 years) between completing the programme and undertaking the survey. Ethnicity was similar between the respondent group and that of

the total MFYP cohort. The proportion of responses for each year was similar.

These factors suggest that the survey sample is representative and generalisable although response bias cannot be completely excluded.

Table 1 - Comparison of survey respondent demographics with those of all MFYP participants				
	MFYP participants		Survey respondents	
Year	n	%	n	%
No response	0	0.0	11	6.1
2007	89	21.4	29	16.1
2008	96	23.1	49	27.2
2009	105	25.3	40	22.2
2010	125	30.1	51	28.3
Total	415	100.0	180	100.0
Ethnicity				
No response	0	0.0	11	6.1
Māori	43	10.4	13	7.2
NZ European	286	68.9	119	66.1
Pacific Islander	9	2.2	3	1.7
Asian	18	4.3	8	4.4
Other	59	14.2	26	14.4
Total	415	100.0	180	100.0
Age				
Age	Age at time of MFYP participation		At time of survey 2012	
No response	0	0.0	11	6.1
20--24	47	11.3	6	3.3
25-29	73	17.6	26	14.4
30-34	93	22.4	32	17.8
35-39	80	19.3	29	16.1
40-44	60	14.5	30	16.7
45-49	46	11.1	27	15.0
50-54	15	3.6	14	7.8
55-60	1	0.2	5	2.8
Total	415	100.0	180	100.0
Currently practising				
Currently practising	According to Midwifery Council database		Survey participants responses	
No response	0	0.0	12	6.7
No	57	13.7	11	6.1
Yes	358	86.3	157	87.2
Total	415	100.0	180	100.0

### Workplace Setting for Midwifery Practice

Graduate midwives chose for themselves where they worked in their first year of practice (Table 2) and, in our survey, there were similar proportions working in employed (n=83, 46.1%) and self-employed (n=86, 47.8%) positions. There were 56 respondents (33%) who identified having a second place of practice (which was either a maternity facility or as a self-employed midwife). Graduate midwives will sometimes work in two settings when work is part-time as they are building to a full LMC caseload.

Table 2 - Main workplace setting first year of practice 2007 to 2010		
Main place of work	n	%
No response	11	6.1
Tertiary Hospital	35	19.4
Secondary Hospital	32	17.8
Primary Unit	4	2.2
DHB Caseload Practice*	12	6.7
Self-employed Midwife	86	47.8
Total	180	100.0

\*Caseload practice midwives are employed by District Health Board (DHB) maternity hospitals to provide continuity of care and work in both the hospital and community.

### What influences the choice of workplace setting?

Graduates were asked what factors had influenced their choice of work setting in their first year of midwifery practice (Figure 1). Options provided in the survey included financial security, family commitments, midwifery practice fitting with personal philosophy and availability of work. The respondents identified that the type of midwifery practice fitting with their personal philosophy was the strongest influence (78.9%). This was followed by family commitments and availability of work. This finding was consistent for each year of programme participation and was the same for both employed and self-employed respondents.

**Graduates were asked what factors had influenced their choice of work setting in their first year of midwifery practice. Options provided in the survey included financial security, family commitments, midwifery practice fitting with personal philosophy and availability of work.**

The free text responses provided more detailed explanation of how family commitments guided the choice of workplace. Those who chose to work as LMCs often did so because of the flexibility:

*Single parent so LMC work gave more flexibility and ability to do most work in school hours (Participant 175).*

For others working in a hospital provided more structure.

*I wanted clear time with my family and to have set hours of work. A smaller secondary hospital that is midwifery-led was perfect for me (Participant 005).*

The ability to have a choice of work setting that suited their individual circumstances was important for the graduate midwives.

### Professional Mentoring

An important element of the programme is that each graduate is able to choose an experienced midwife to be their mentor. The mentoring relationship is a negotiated partnership with the specific purpose of developing confidence (New Zealand College of Midwives, 2000). The majority of mentors (n=108, 60%) were self-employed midwives regardless of the work setting of the graduate (Figure 2). Mentoring takes place through a series of



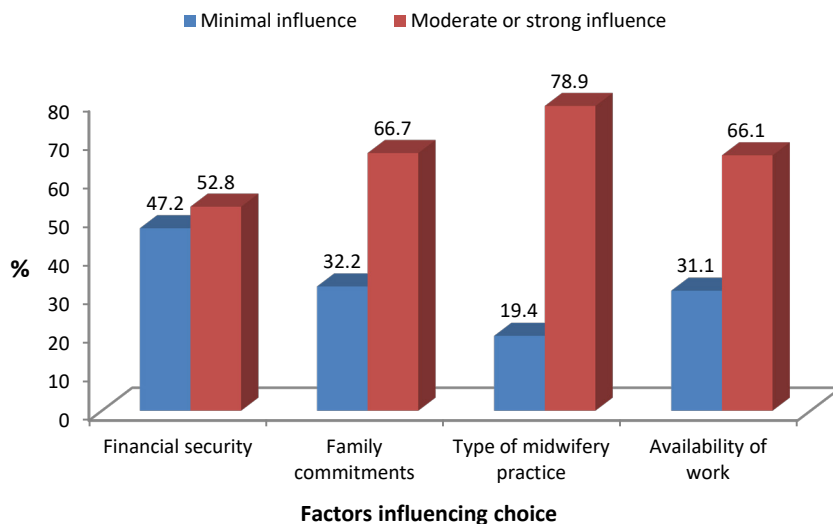


Figure 1 - Factors influencing choice of workplace setting

planned reflective discussions between the mentor and the mentee at times and in modes that suit them both including face-to-face, telephone and via the internet. The MFYP programme includes formal education for mentors to prepare them for the role and ongoing support mechanisms are established.

Almost half of employed graduates, 47.9% (n=45), chose a midwife in self-employed practice as their mentor while the other half chose mentors who were employed and worked in secondary/tertiary/primary units or other employed roles. The majority of self-employed graduates, 75% (n=63), chose a mentor who was also self-employed.

The source of support differed depending on whether the respondent was working as an employed or self-employed midwife (Figure 3). More of the self-employed midwife graduates identified their core colleagues as the main source of support (45.3%, n=82) whereas the employed graduates gained support from a variety of sources. Participants were asked to indicate how helpful the support had been. The majority of respondents reported that the support from colleagues was either very helpful (68.3%, n=123) or quite helpful (23.3%, n=42).

The graduates were asked whether they felt supported at other times during clinical practice in their first year. The majority

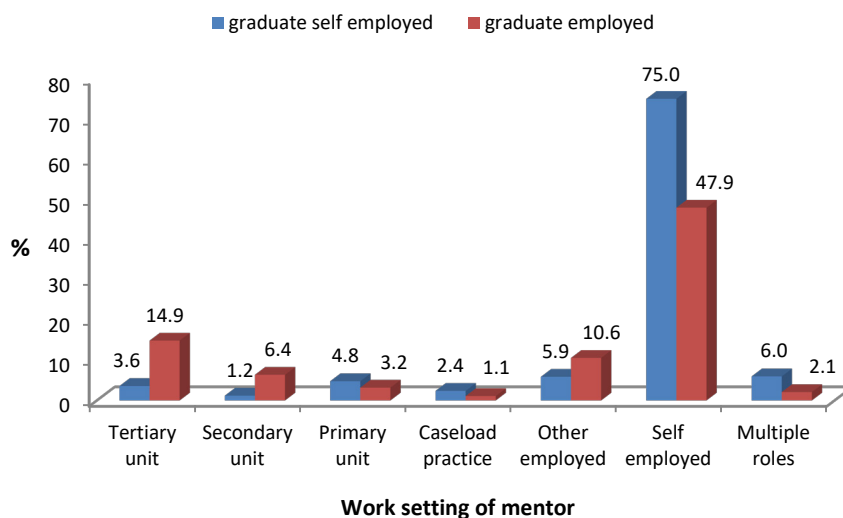


Figure 2 - The main work setting of mentor compared with setting of graduate

### Clinical Practice Support

One of the important components of the Midwifery First Year of Practice programme is the provision of clinical practice support. Participants were asked if they felt supported when they attended women during labour and birth. The majority of respondents, 92.2% (n=166), responded positively with 37.2% (n=67), reporting getting support from their core midwife colleagues, 20.6% (n=37), from their mentor, 18.9% (n=34), from their practice partner and 15.6% (n=28) from multiple sources.

reported that they did (93.9%, n=169) with eight (4.4%) graduates feeling unsupported at this time. A further question asked who had provided the most support in clinical practice excluding labour and birth (Table 3).

In this section the majority reported that the mentor (30.6%) provided the most support in clinical practice, followed by the core midwife (25%) and practice partners (20%). There were 24 midwives who indicated more than one person provided clinical practice support (multiple sources).

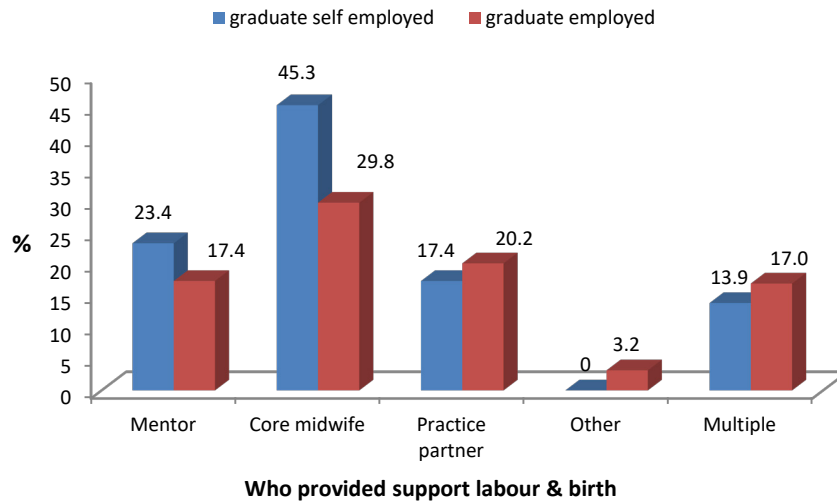


Figure 3 - Support during labour and birth by employment type

	Self-employed		Employed		Total	
	n	%	n	%	n	%
Mentor	26	30.2	29	30.8	55	30.6
Core Midwife	23	26.7	22	23.4	45	25.0
Practice Partner	18	20.9	18	19.1	36	20.0
Other	2	2.3	4	4.3	6	3.3
Multiple sources	11	12.8	13	13.8	24	13.3
No response	6	7.0	8	8.5	14	7.8
Total	86	100	94	100	180	100.0

There were no identifiable differences between employed and self-employed midwives in their responses to this question. The majority (70%, n =126) reported that the clinical practice support was very helpful, with a further 20% (n=37) reporting it to be quite helpful.

### Professional Development

Each graduate is provided with financial assistance for education (both compulsory and elective) to support professional development during the first year. In addition, the mentor’s role is to support the graduate to identify learning goals. These are documented in the graduate’s professional development plan (PDP) at the start of the year, reviewed throughout the programme and discussed in the MFYP Midwifery Standards Review at the conclusion of the programme. All graduates are expected to develop an initial PDP which is linked with learning opportunities. Respondents indicated that the majority of mentors supported them to set learning goals (always or mostly 83%, n=150) with 25 (13.9%) respondents indicating sometimes or not at all.

### Elective Education

The graduates were asked to identify what elective education they had undertaken. The list incorporated a wide variety of education with the majority strongly related to practice skills (Table 4).

Intravenous cannulation	Water birth
Suturing	Epidural
Emergency skills	Family violence
Documentation	Prescribing updates (provided by Pharmac)
Breech birth	Fetal death and loss (provided by SANDS)

The majority (86.7%, n=156) reported that they were able to attend the elective education of their choice, with 10 (5.6%) unable to attend. For those midwives who were unable to attend elective education, reasons were related to lack of staff or back-up, or problems with the timing of, or distance to, the workshops.

The respondents were asked to indicate how useful the elective education sessions were in developing their confidence as a practitioner. The majority (82%, n=148) found the elective education supportive or very supportive.

### Support in preparing for the MFYP Midwifery Standards Review

At the end of the first year of practice the MFYP participant is required to undertake a two-hour MFYP Midwifery Standards Review (MSR). MSR is a quality assurance activity established and managed by the New Zealand College of Midwives for all practising midwives in New Zealand. Each midwife is reviewed by a panel of midwives and maternity consumers (women) – who have been trained for the role. The midwife presents a self-assessment against the midwifery standards and competencies, provides data on the outcomes of her midwifery care, reflects on practice issues and discusses client feedback gathered over the period of the review. It is a confidential process of reflection and support that culminates with an agreed professional development plan for the midwife to undertake over the period until their next review. The MFYP MSR process differs by being a little longer and by the inclusion of the mentor’s feedback to the review process. The graduates were asked whether they had felt supported in their preparations for the MSR. The majority (80%, n=145) reported they had, with 25 (13.9%) negative responses and 10 (5.6%) offering no response.

The respondents were asked whether they found the MFYP MSR helpful to their development. There were 53.9% of respondents

who found the review very helpful/quite helpful and 38.3% finding it slightly helpful/unhelpful (Table 5).

**Table 5 - How helpful to your development did you find your MFYP Midwifery Standards Review?**

	Self-employed		Employed		No response*		Total	
	n	%	n	%	n	%	n	%
	Very helpful	19	22.1	22	26.5	1	9.1	42
Quite helpful	32	37.2	22	26.5	1	9.1	55	30.6
Slightly helpful	23	26.7	24	28.9	5	45.5	52	28.9
Unhelpful	6	7.0	10	12.0	1	9.1	17	9.4
No response	6	7.0	5	6.0	3	27.3	14	7.8
<b>Total</b>	<b>86</b>	<b>100</b>	<b>83</b>	<b>100</b>	<b>11</b>	<b>100</b>	<b>180</b>	<b>100</b>

\*workplace setting

It would appear that some midwives found the MSR to be a valuable mechanism for gaining feedback on the past year and planning development for the coming years. Those that found it unhelpful explained that there was a lack of clarity or support around the purpose of the review, a lack of connection with reviewers, or a mismatch of philosophies.

**Because graduate midwives can choose their mentor and access education and support to meet their individual needs, the MFYP programme provides a flexible holistic framework for each graduate regardless of workplace.**

**The Overall Picture**

The survey participants were asked to provide an individual appraisal of the programme. The majority of the respondents agreed or strongly agreed (88.4%) that participation in the programme had increased their confidence (Table 6) and this was regardless of where the graduate worked (a Chi-Square test for independence indicated no significant association between setting (employed or case loading) and increased confidence  $\chi^2 (1 = 169) = .44, p=0.98, \text{Cramer's } V .04$ ).

Participants were asked which elements of the programme had contributed to their professional confidence (Figure 4). The responses indicated that each element of the programme contributed to the development of professional confidence with 'financial support' and 'support from the mentor' considered to be the main contributors. The responses did not appear to differ between employed and self-employed midwives.

The free text comments were generally very positive and described the programme as providing a safe and supportive structure for development of the graduate in the first year of practice.

**Table 6 – Did participating in the MFYP programme increase confidence as a registered midwife?**

	Self-employed		Employed		No response*		Total	
	n	%	n	%	n	%	n	%
	Strongly agree	40	46.5	40	48.2	4	36.4	84
Agree	37	43.0	34	41.0	4	36.4	75	41.7
Disagree	4	4.7	3	3.6	1	9.1	8	4.4
Strongly disagree	1	1.2	1	1.2	0	0.0	2	1.1
No response	4	4.7	5	6.0	2	18.2	11	6.1
<b>Total</b>	<b>86</b>	<b>100</b>	<b>83</b>	<b>100</b>	<b>11</b>	<b>100</b>	<b>180</b>	<b>100</b>

\*workplace setting

*I think the programme is invaluable in promoting a safe and exciting environment, in which the new midwife can develop and grow in terms of actual knowledge, and also networking and confidence in practice. A mentor can bring out the best in you, whilst acting as a small buffer as you step forward into your life as a Midwife (Participant 031).*

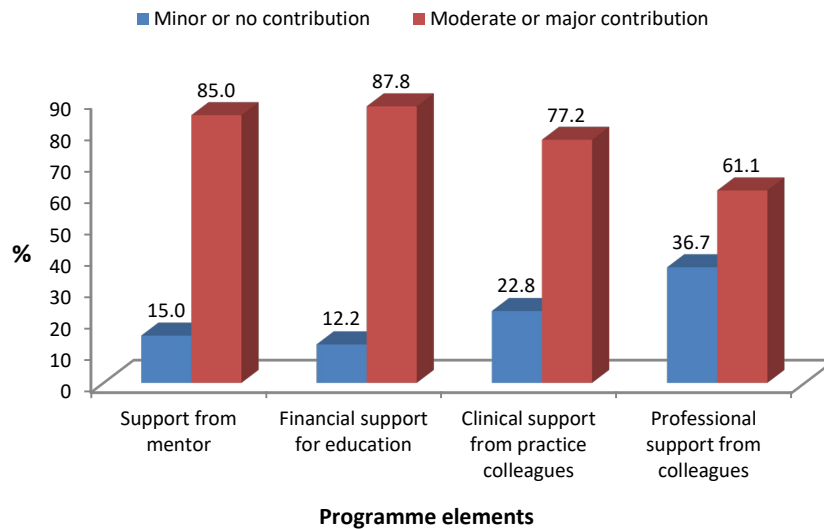
**DISCUSSION**

The aim of this study was to determine whether participation in the programme supported graduate midwives in their first year of practice. It sought to explore which elements were considered important to increase confidence and development as a practitioner. The vast majority of graduates agreed that participation in the programme had increased their confidence as registered midwives. While all elements of the programme were considered important in developing professional confidence, the most important were identified as 'financial support for education', 'support from a mentor', and 'clinical practice support from colleagues'. Support for professional development is inherent within the programme and was valued by the graduate midwives. The programme appears to be well regarded and highly valued by the programme participants.

Because graduate midwives can choose their mentor and access education and support to meet their individual needs, the MFYP programme provides a flexible holistic framework for each graduate regardless of workplace. The structural components enable an individualised programme to be developed with each element of equal importance for the graduate's professional growth. The programme structure of midwifery practice support, mentor support, financial support for education, critical reflection on practice and the Midwifery Standards Review (MFYP MSR) at the end of the first year of practice are all equally important and necessary for the graduate to develop confidence.

An important finding of this research is that new graduates experience midwifery support during clinical practice from the whole midwifery and maternity community. Hospital midwives provide high levels of support during labour and birth regardless of whether the graduate midwife is employed or self-employed. Mentor support extends across the whole midwifery scope of practice; some mentors provide hands-on support during labour and birth and some do not because it is not necessary when graduates are well supported by core midwives. The majority of participants had been able to attend the elective education of their choice and these elective education sessions were considered





**Figure 4 - Contribution of programme elements to professional confidence**

important sources of support and a means of consolidating their knowledge and development.

**An important finding of this research is that new graduates experience midwifery support during clinical practice from the whole midwifery and maternity community.**

The MFYP MSR is the quality assurance aspect of the MFYP programme designed to support safety for the graduates, the women and the profession. Our study has found that the majority of participants felt supported to prepare for their MSR and found it a useful process. However, some did not and they reported that there were still some issues around the process. Since 2010, it has been a requirement of the MFYP programme that the mentor attend the review in a supportive role and this may resolve some of those issues identified where graduates felt unsupported, unclear of the purpose, or misunderstood by the reviewers. Additionally, the New Zealand College of Midwives has made changes to the MSR process since the period of this study, including increasing the training of reviewers and reducing the size of panels from four to two in order to increase consistency of approaches between panels. Because MSR is a compulsory component of the Midwifery Council of New Zealand’s recertification programme, midwives are gaining more experience with the process with consequent greater understanding of it across the profession. Further research would be necessary to gauge the experience of graduates in the current MFYP programme.

It would appear that each component of the MFYP programme is important and complementary to the whole programme. The programme is individualised to each midwife yet the inclusion of each component builds support and confidence. This study shows that the nationally consistent MFYP programme is also individualised to each midwife’s needs and is an important contributor to the increasing confidence of graduate midwives.

The new graduates’ ability to choose their setting, their mentor and their further education in the first year, as part of the programme, allows them to structure their development in line with the realities of their lives and their professional needs.

**This study shows that the nationally consistent MFYP programme is also individualised to each midwife’s needs and is an important contributor to the increasing confidence of graduate midwives.**

**The programme continues to evolve**

Since the inception of the programme there has been a number of changes made in response to feedback from graduates or mentors and the wider midwifery profession. The findings of this study support these changes. Administrative changes to reduce paperwork and streamline reporting requirements to the Ministry of Health have been implemented. Expectations of graduates have been clarified and autonomy within the mentor relationship strengthened with the provision of more structured advice and guidance. Graduate participants are now advised to choose mentors outside of their immediate practice context in order to prevent possible negative consequences of unequal power relationships. For example, graduate LMC midwives should not choose their practice partners as mentors. Graduate core midwives should not choose senior midwives within their workplace. The midwife mentors themselves are also limited to mentoring for three consecutive years, after which time they are required to have at least a year off from mentoring. This promotes innovation and enthusiasm for the mentor role and also supports the individual to reflect on their own professional role. The importance of finding the right mentor is now strongly stressed within the programme as it is considered key to a successful mentor/graduate relationship and supportive of a positive transition. It is not necessary for the mentor to be in the same work setting. The MFYP programme will continue to evolve to ensure that the transition needs of new

graduate midwives are being met within their first year of practice. In 2015 the MFYP programme became a mandatory requirement for all graduate midwives.

### Strengths and Weaknesses

This research has explored the views of graduate midwives who have participated in the MFYP programme. We were not able to explore the views of those who did not participate to gauge the reasons for non-participation. Additionally, as with any survey, there is the possibility of response bias in that those with stronger opinions were more likely to respond. The response rate from the participants was reasonable and the demographics of the survey respondents were reflective of the full cohort, which suggests that the responses are valid and can be generalised.

**The new graduates' ability to choose their setting, their mentor and their further education in the first year, as part of the programme, allows them to structure their development in line with the realities of their lives and their professional needs.**

### Implications for Practice and Further Research

The findings have demonstrated that the MFYP programme is working well as a transition programme for new graduate midwives in New Zealand. Further research is needed to explore the perspective and experiences of the mentor within the MFYP programme and explore which skills contribute to a successful relationship. Exploring the perspectives and experiences of the wider maternity community with this programme could provide insight into its broader impact.

### CONCLUSION

This survey has identified the importance of the MFYP programme for graduate midwives in New Zealand. The responses to the survey were overwhelmingly positive and demonstrate that the graduates highly value the programme. Each element of the programme was considered important regardless of the graduate's practice setting. This research has provided an overview and furthered understanding of how each of the key elements of the MFYP programme contributes to increased confidence of graduate midwives. The MFYP programme is flexible, meets the needs of New Zealand graduates and helps them to increase confidence in their first year of practice as a registered midwife.

### ACKNOWLEDGEMENTS & CONFLICT OF INTEREST DISCLOSURE

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### ERRATUM

**A midwifery critical analysis of: A retrospective cohort study of the association between midwifery experience and perinatal mortality (Lawton et al., 2015) Guilliland, K., Dixon, L. & MacDonald, C.**

An error was made in our original article where the P value of 0.329 was attributed to the single category of midwives with < 1 year of experience, suggesting that no association was found. Instead, this P value related to the global test of differences by category, and was not statistically significant.

The hypothesis test for trend according to years of experience resulted in a P value of P=0.031, a statistically significant finding of an association. This infers a need for more exploration. Future research is warranted and must address issues of bias, confounding and be relevant to the current context in order to gain a clearer understanding of the issue in question. The importance of involving New Zealand research midwives during this process cannot be overstated.

## NEW ZEALAND RESEARCH

## New Zealand's midwifery profession: Embracing graduate midwives' transition to practice

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### ABSTRACT:

**Background:** The first year following registration is considered a stressful time for new health professionals as they transition from student to health practitioner, acclimatise to a new job and work environment, and become confident in their clinical skills. The Midwifery First Year of Practice (MFYP) programme was designed to provide support to graduate midwives during this transition.

**Aim:** This research explored the midwifery graduate's perspective of the MFYP programme to identify which elements were important and supported them in their transition to confident practitioner.

**Method:** Survey methodology was used to explore the views of the MFYP programme participants for the years 2007 to 2010. This paper provides the qualitative analysis of the open text responses in the survey and explores the support needs of graduate midwives during their first year of practice.

**Findings:** A total of 180 midwives responded to the survey, with the majority also providing text responses to enable more in-depth understanding of their views. Graduate midwife participants were supported to consolidate practice skills and decision making, and to develop networks within the midwifery and wider health communities. An unexpected finding was that this support was provided by the whole midwifery community for all graduates, whether they were employed or self-employed. The mentoring relationship was also considered an important source of support.

**Conclusion:** Graduate midwives are gaining wrap-around support from the whole midwifery community. This research, unlike any previous international or national research, demonstrates that midwives in New Zealand have taken on collective responsibility for supporting graduates. This suggests that this national programme has successfully fostered a culture of nurturing midwife graduates into their professional role.

**Keywords:** Graduate midwife, mentor, transition, support, nurture, collective responsibility

### INTRODUCTION

The realities of everyday practice can often be challenging for new health professionals as they transition from student to health practitioner. Newly registered health professionals need to adapt to the requirements of their new role and develop confidence. Confidence is a key theme identified by newly qualified midwives, who report that they often experienced a lack of confidence in their own abilities to make decisions based on their clinical assessments (Hobbs & Green, 2003; Skirton et al., 2012). This lack of confidence more frequently stems from a lack of experience rather than a lack of competence or knowledge. In an Irish study of newly qualified midwives, Van der Putten (2008) found that the midwives often struggled to adapt to their new role. These midwives explained that the increased responsibility and awareness of accountability, often led to feelings of fear and insecurity. Similarly, an Australian study of newly qualified midwives, (Davis, Foureur, Clements, Brodie, & Herbison, 2011) found that self-reported confidence to be able to practise, within the International Confederation of Midwives' definition and scope of practice of a midwife, was low for Australian graduates. The study reports

this confidence increased only modestly within the first year of practice (Davis et al., 2011).

There is a statutory expectation that newly qualified midwives are able to provide midwifery care competently as soon as they have graduated. However, working on their own responsibility as a registered midwife requires additional support (Hobbs, 2012), and positive reinforcement for most practitioners (Skirton et al., 2012). The introduction of transition programmes has been an international response to the heightened anxiety and stress experienced by many newly registered health professionals. Transition programmes are structured to bridge the gap between being a student and being a practitioner. The programmes are designed to increase levels of confidence, consolidate knowledge and experience, and support critical reflection.

International research into various health professions has identified several essential elements of transition programmes (Altier & Krsek, 2006; Banks et al., 2011; Bolden, Cuevas, Raia, Meredith, & Prince, 2011; Cubit & Ryan, 2011; Goode, Lynn, Krsek, &



Bednash, 2009; Herdrich & Lindsay, 2006; Hillman & Foster, 2011; Hobbs, 2012; Newhouse, Hoffman, Suflita, & Hairston, 2007; O'Malley Floyd, Kretschmann, & Young, 2005; Solowiej, Upton, Upton, & Stagnitti, 2010). These include: orientation to the environment, fostering a supportive working environment by providing a mentor or preceptor, continued clinical knowledge building and education, financial support, reflection and acknowledgement of learning at the end of the programme. Many transition programmes are industry-based and in health they are generally attached to the hospital. New Zealand has a unique model of maternity care and the midwife may be community or hospital based. Therefore, the New Zealand programme is uniquely designed to accommodate the midwife's choice of work place and the model of maternity care.

Midwives in New Zealand have a choice of work setting and can work within the community providing continuity of care to a caseload of women (Lead Maternity Carer (LMC) midwives) or within a maternity hospital setting (where they are known as core midwives). The challenge for the midwifery profession has been to develop and provide a transition programme that meets the individual needs of graduate midwives within the context of maternity care in New Zealand. The MFYP programme was developed for the New Zealand context by an expert advisory group as a strategy to provide support and enhance recruitment and retention for graduate midwives. Previously an informal ad hoc mentoring arrangement was in place, based around the New Zealand College of Midwives' consensus statement on mentoring (New Zealand College of Midwives, 2000).

**The challenge for the  
midwifery profession has  
been to develop and provide  
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the context of maternity care  
in New Zealand.**

The New Zealand College of Midwives commenced the MFYP programme in 2007, the components of which include: facilitated support and orientation in clinical practice whatever the practice setting, one-to-one formal mentoring from a mentor chosen by the graduate midwife, funding to support the midwife to attend continuing professional development education, and supported participation in the profession's quality assurance process (Midwifery Standards Review). Each element of the programme is flexible and meets the needs of the graduate, wherever they work. There was a need to explore whether the programme contributed to both retention of graduates (Dixon et al., 2015) and which elements contributed to the development of professional confidence. The aim of this research was to explore the graduate midwife's perspective on participation in the MFYP programme and to identify which elements were important and supported them most in their transition to become a confident practitioner. Previous papers have provided evidence that the MFYP programme supports the retention of graduates in practice and is highly valued as a transition programme by participants (Dixon et al., 2015; Dixon et al., 2014; Pairman et al., 2015).

This paper has qualitatively analysed the survey's open text responses and explored the support needs of the graduate midwives

and how these were met in practice during participation in the MFYP programme.

## METHOD

Survey methodology was used to explore the views of the 415 participants of the MFYP programme between the years 2007 to 2010 inclusive. All participants were invited to complete a self-administered survey which involved a range of questions about each aspect of the programme and provided open text comment boxes so that responses could be contextualised and explained more fully. A full description of the research methods has been previously published (Pairman et al., 2015).

An iterative thematic approach was used, whereby the qualitative survey data in the form of free text were explored for recurrent themes. The text responses were read closely by three members of the team (NC, MK, and SL) and themes were identified. Final themes were discussed and agreed. All the participants' survey responses were numbered to maintain anonymity throughout the analysis. All the quotes have been attributed to this number to maintain the participants' confidentiality. Ethics approval was provided by the Health and Disability Ethics Committees Upper South A Regional Ethics Committee. Ethics Reference: URA/12/EXP/012.

## FINDINGS

A total of 180 MFYP programme participants responded to the questionnaire and provided feedback on the programme. This gives a survey response rate of 43.4% of the 415 new graduates who completed the programme between 2007 and 2010. There was a large volume of text comments to each question providing context to the question response. The graduate midwives were asked where they worked in their first year of practice. The practice setting was either core/hospital or community/LMC work, with equal proportions of graduates practising in hospital as were practising in the community. They explained their choice of work setting was often determined by a need to consolidate practice (Pairman et al., 2015).

*I wanted hospital setting to ground me and increase my knowledge and confidence of abnormal childbirth/pregnancy. So I had a sound foundation for all practice and settings. (Participant 047)*

*It was important to me to be able to develop and consolidate my practice as a LMC midwife and I felt strongly that this could only be done in the community. (Participant 034)*

Graduates from both settings identified the importance of their choice of setting as a means of consolidating and building their skills.

### Who provided practice support?

Regardless of where a midwife works she will have specific support needs. The text data were analysed to determine how support was provided to meet the needs of the graduate midwives. Three themes were identified in regard to involvement of the midwifery community. These were:

- Support from midwifery colleagues
- Reassurance and encouragement
- The whole midwifery profession as a resource

Overall, graduates identified widespread support from their whole midwifery community. This included support in decision making, assessment and planning of care in practice.

## Support from Midwifery Colleagues

The graduates received support from a variety of midwifery colleagues within their midwifery community. This included the midwives they worked alongside, whether they were hospital midwives, LMC midwives, their mentors or the hospital midwifery managers.

*The staff midwives who I worked with provided most of the clinical support I needed as they were there every day. My mentor was great if I need to talk about any issues. (Participant 077)*

*I had an amazing supportive group. We backed each other up at births until we didn't feel we needed it any more. We also had great support from core staff and management. My mentor was also available to talk when I needed her too. (Participant 160)*

*I worked with a variety of midwives and for the first year these were almost always very experienced. I was able to ask questions and discuss events with them as soon as this was appropriate. They were always available if I was unsure of something or wanted to find out why things were done a certain way (as I came to realise that all hospitals practised quite differently in terms of protocols, etc.). (Participant 031)*

Clinical practice support was consistent, whether they were practising as an LMC midwife or as a hospital midwife.

## Reassurance and Encouragement

Graduates described the reassurance, encouragement and support they gained from their collegial network within the profession and their practice environment. Feedback to the graduate was generally provided in a positive way with reassurance that they were meeting expectations for skills and knowledge.

*Support involved reassurance I knew more than I gave myself credit for. Praising me when I had achieved things above the level that was expected or volunteered for what was more than expected for a graduate. Giving me chance to do something and help me plan, clarify why I would do something. (Participant 047)*

*I can't prioritise any one of these over another - they all provided the support that I needed according to the situation. Core midwives - experienced view of complex situations, available immediately at birthing units. Practice colleagues - support at home births or when I wanted a view from someone whose practice is philosophically aligned with my own. Practice partner - another new graduate. We attended births together in the first half of the year. (Participant 083)*

The graduates indicated that feedback was individualised and dependent on the work setting. These comments emphasised that the whole profession, wherever and however they worked, was taking a role in reassuring and encouraging the graduates.

## The whole profession as a resource

The midwifery profession as a whole appeared to be a valuable resource that was important for the graduate midwife. There were many comments which identified the value and importance of being able to discuss assessments and care planning with midwifery colleagues as well as receive feedback about the assessments/plans for particular situations.

*Help with running ideas of next best step or option in the birthing process. My clinical skills were sound, it was just*

*management of births that were no longer straight forward. I could run what I was thinking by other midwives at the hospital, Core midwives or other LMCs or my mentor, most were willing to help. (Participant 035)*

It would appear that the graduates were able to gain support and discuss the care they provided, with a wide range of midwifery colleagues. There was overt willingness within the midwifery profession to help and support the graduate midwives. The graduates were also open to using this wide network of experience and readily available support as a resource for any issues, concerns or problems that occurred.

Another theme identified in the text data related to different types of support the graduate received from her mentor and this theme is analysed through the graduate/mentor relationship, mentor support and the mentor meetings.

## Graduate and mentor relationship

The graduates described the difference between the clinical practice support they received from other colleagues and the support of their mentor. The mentor was most commonly seen as the person who helped the new graduate to consider and review her practice across the whole scope.

*Core midwife for clinical support - mentor for emotional support and strategy to improve practice. (Participant 051)*

*I received support from my mentor in several ways. 1. On the ground physical presence when needed. 2. Encouragement and confidence boosts. 3. Practical advice in clinical situations. 4. Advice with referrals, results, paperwork etc. (Participant 097)*

Mentors supported graduates in many ways but it was evident their key role was particularly to enable reflection for the graduates on the wider clinical picture. Mentors also played a significant role in assisting the graduate in setting goals, debriefing and identifying areas for further learning.

## Trust and having a shared philosophy of practice appeared to be important elements which underpinned a positive mentoring relationship.

The mentoring relationship was considered important, with the majority of graduate midwives (n=148, 82%) indicating that it was very important or important that they were able to choose their mentor.

*She had to be someone that I completely trusted to maintain confidentiality; someone to whom I could reveal all my doubts and insecurities safely, and also someone who's clinical philosophies aligned with my own, and carried a demographically similar caseload. (Participant 014)*

*The ability to communicate well and relate to each other played a helpful role in my early mentorship - you may not get this with an assigned mentor. Also TRUST was a key factor as new grads are so vulnerable. (Participant 128)*

*There are times when we have to sit in a vulnerable position, it helped that I knew my mentor well during the most vulnerable times - the beginning weeks/months of practice. (Participant 080)*

Trust and having a shared philosophy of practice appeared to be important elements which underpinned a positive mentoring relationship. Graduates recognised their vulnerability and wanted to choose a mentor with whom they could safely reveal their insecurities and uncertainties.

There was a small proportion of graduate midwives (13.4%) who responded that choosing a mentor was only somewhat important for them (Dixon et al., 2014). These midwives reflected on their decision in their text responses and suggested that perhaps their choice of mentor had not been optimal.

*On reflection having known what I know now I would have chosen a mentor a little more carefully. The mentor I would have liked was already mentoring someone else and my mentor offered to mentor me. As I didn't have any other ideas I accepted. (Participant 122)*

*A list of questions would be good to ask prospective mentors, so it is a good fit for the new grad midwife, so she is not just choosing someone she has worked with or gets on with on that basis only. (Participant 043)*

These comments illustrate that while freedom to choose their own mentor is important, knowing how to choose a mentor is also important.

### Mentor support

The respondents were asked how supportive they found the mentoring relationship to be. The majority (n=156, 86%) reported that they found the relationship very supportive or supportive with 18 (10%) midwives reporting they felt unsupported or only somewhat supported.

*She was very straight up and told me what I needed to hear. There was no making things look rosy if they weren't. (Participant 023)*

*My mentor was always available, positive, empathetic, practical in her advice, and knowledgeable on practice issues. (Participant 143)*

The mentor was seen as a trusted person chosen by the graduate and with whom she regularly met and developed a relationship. The mentor's role was seen as helping the individual graduate to consider and review her practice across the whole scope.

*I felt supported by my mentor and was able to de-brief with her over the clinical side of things in a way that didn't always get to caught up in the actual doing of specific things...it was more of a 'helicopter' view, which allowed me to have a better understanding. (Participant 094)*

### Mentoring Meetings

Within the MFYP programme the mentor and the graduate are required to meet regularly or as identified by the graduate midwife. These meetings were outside of the clinical environment, at a convenient time and place, as negotiated between the two parties. The majority of graduates (n=155, 86.1%) found these meetings very helpful or quite helpful and explained that regular reviewing with a trusted colleague helped develop their reflective skills and deepened their understanding of practice.

*Developed my skills in reflection and was a safe environment to discuss care planning. (Participant 067)*

*I have never been good with critical reflection, however my mentor was very good at challenging me to do this. (Participant 122)*

However, a small number of midwives (n=11, 6.1%) reported that they did not find the meetings helpful or only slightly helpful. Further analysis revealed that when the relationship was problematic the meetings were also problematic.

*I tried hard to please my mentor rather than honestly meeting my own needs. (Participant 081)*

It appears that the mentor relationship is instrumental in ensuring the graduate midwives feel supported and have their needs met.

For the majority of graduate midwives there was great satisfaction with the MFYP programme but there were a few who felt unsupported and who identified some dissatisfaction. This dissatisfaction appeared to be due to either culture or systems issues in their regions.

### Lack of support

Where lack of support was a feature for 31 of the participants' first year experience, the reasons given were contextual such as: hospital staff shortages, negative attitudes of individuals or a hostile hospital culture. Of the 31 graduates, there were nine who commented they did not feel supported and a further 22 who suggested that there were some issues with support.

**The only times I felt unsupported were when it was so busy there was no one to ask. (Participant 101)**

### Staff shortages

Lack of support was identified when the maternity facility was either understaffed or exceptionally busy.

*Sometimes the unit was understaffed and therefore the clinical support was stretched and unable to provide me with the support I needed - but this is the nature of the workplace setting. (Participant 80)*

*The only times I felt unsupported were when it was so busy there was no one to ask. (Participant 101)*

It seemed that this lack of support was mostly transitory and short lived, although frequency was not measured by the survey.

### Negative maternity culture

Eight graduates reported that they did not feel supported because of a culture within the maternity unit that did not consider new graduates should be working as LMC midwives.

*I felt initially the core staff had an attitude of (and actually said this to me) 'if you think you're good enough to go straight out into independent practice you're good enough to not have any assistance'. (Participant 113)*

Although this occurred for only a small number of the graduate respondents, the impact for them appeared to be significant.

### Summary of Findings

This thematic analysis has identified that the graduates found each element of the programme important and contributed to building confidence. One of the key findings was the importance of support from the mentor and the wider midwifery community. This consistent support from their midwifery colleagues was identified by the graduates as pivotal in their transition experience. Each element of the programme was valued and made a significant contribution to the success of the transition to practice for these graduates in their first year.



It is clear from these findings that it is the whole midwifery community who are providing support to New Zealand graduates. This professional network includes hospital midwives, LMC midwives, practice colleagues, mentors, midwifery managers, educators and others.

Midwifery relationships with women are a key element of professional practice for all midwives. For the graduate midwives, building relationships with colleagues and peers is also a vital part of their professional practice and necessary for successful transition to confident practitioner (Fenwick et al., 2012; Lennox, Jutel, & Foureur, 2012; Sullivan, Lock, & Homer, 2011). A mixed methods study involving four New Zealand graduates found that there were few difficulties communicating with women; however, communicating with other health care professionals was found to be challenging. These challenges involved knowing how to ask for help appropriately, what information to give, and to whom and how to be assertive when necessary (Lennox, Jutel, & Foureur, 2012). The midwives in our study identified that they received support, reassurance and encouragement from the midwives around them.

**It is clear from these findings that it is the whole midwifery community who are providing support to New Zealand graduates. This professional network includes hospital midwives, LMC midwives, practice colleagues, mentors, midwifery managers, educators and others.**

Additionally, their midwifery colleagues were identified by the graduates as a resource with whom they could consult about practice decisions. This network of support and collegiality is a significant finding of this study and one we consider demonstrates that the midwifery partnership model, that is the basis for midwifery practice in New Zealand, is being reflected in the wider relationships that the graduates build within their midwifery community. The principles of the partnership model, which include: individual negotiation, informed choice and consent, equality, shared responsibility and empowerment, are identifiable in the comments and feedback from these graduate midwives (Guilliland & Pairman, 2010).

Supportive relationships are an important means of socialisation into the culture of the group and can aid learning and skill acquisition (Mason & Davies, 2013; Sullivan et al., 2011). The graduate midwives accessed support from their colleagues and the whole maternity community which was provided in a cooperative and collaborative way. Interaction with colleagues and a sense of belonging are associated with improved job satisfaction and are an important motivation to continuing to work as a midwife (Sullivan et al., 2011).

This sense of collective responsibility for supporting new graduates is evidence of a whole culture change within midwifery, which appears to have occurred within the past decade. This was not a theme seen in previous New Zealand research (Kensington, 2006; Lennox & Foureur, 2012); neither is it found in other international studies of graduate midwives. Kensington (2006) in her study exploring the experiences of graduate midwives found that the graduates felt they were being 'tested' and 'on trial' in the

hospital environment and often the mentor took on a 'protective role' at this time. This shift in culture within our profession is a new and exciting finding, demonstrating a positive change from the culture of 'eating our young' (Calvert, 2001; Hastie, 1995; Holland, 2001) to one that predominantly supports and nurtures graduate midwives as they take up their professional role.

**This sense of collective responsibility for supporting new graduates is evidence of a whole culture change within midwifery, which appears to have occurred within the past decade.**

The increasing acceptance and support of graduates is an unanticipated positive consequence of the MFYP programme. It may have occurred due to the nationwide existence and consistency of the programme, along with the inbuilt education that supports the programme. Annual workshops are held that focus on the mentoring role, and have resulted in high attendance with more midwives attending than the number of those who have agreed to be mentors. This may have contributed to improved understanding of mentoring and increased knowledge of the mentoring role. Another potential explanation is that the very existence of the MFYP programme has given midwives the confidence to provide support to graduates knowing that there was a formal structure in process running alongside their input.

The mentoring relationship continues to be an important source of support for graduate midwives. The New Zealand College of Midwives' mentoring consensus statement describes the mentoring relationship as one of a negotiated partnership with the purpose of enabling and developing professional confidence (New Zealand College of Midwives, 2000). An important factor in building a positive relationship between the mentor and graduate is the freedom for graduates to choose their own midwife mentor. This appears to foster a relationship built on trust and respect. If the relationship is less than optimal then it can lead to less satisfaction with the overall programme. In a study of newly graduated United Kingdom midwives, Mason and Davies (2013) found that, despite evidence of bullying, good relationships between the newly qualified midwife and her preceptors were important and provided reciprocal benefits. The unique feature of the MFYP programme is its flexibility for the individual graduate whilst also providing a formal framework.

New Zealand graduate midwives are autonomous practitioners and this programme supports and enhances professional autonomy. It does this by enabling choice, with the graduates able to choose their mentor, work setting, learning goals and to identify the education workshops and professional development that best meet their individual needs. The programme also appears to support the development of supportive partnership relationships with their colleagues and mentors.

## **STRENGTHS AND WEAKNESSES**

This study has provided insight into the perspectives of the graduate midwives who participated in the programme between 2007 and 2010. The qualitative themes provide more depth and context to previously reported data; however, they only represent the views of those who were invited and agreed to participate in the survey. There is the potential for response bias.



## CONCLUSION

The graduate midwives have identified that they receive support from the whole midwifery community which includes hospital midwives, LMC midwives, practice colleagues, mentors, midwifery managers, educators and others. The midwifery community was seen as a resource and provided reassurance and encouragement in a collegial and collaborative way. The MFYP programme supports autonomy with graduates enabled to have a range of choices. These choices include where the graduate works, the mentor and the funded education they can access to support their individual professional development. Graduate midwives are encouraged to develop strong relationships with their colleagues that sit alongside the partnership relationship being established between the graduate midwife and the women she cares for. There appears to be a sense of collective responsibility taken by New Zealand midwives for supporting graduate midwives. This theme has not been uncovered in previous research nor is it seen in the international literature. It suggests the midwifery profession in New Zealand has moved to largely embrace a culture of providing professional support for its graduate midwives.

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## NEW ZEALAND RESEARCH

## Providing rural and remote rural midwifery care: an 'expensive hobby'

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### ABSTRACT:

**Background:** Providing midwifery care in rural and remote rural regions can be challenging in many ways. This includes financial arrangements for midwives in New Zealand. This paper draws from a larger study exploring the lived experience of rural and remote rural families, midwives, general practitioners (GPs) and ambulance crews.

**Aim:** The focus of this paper is on the financial lived experiences of the rural midwife participants in this study.

**Method:** A qualitative study using hermeneutic phenomenology was used to explore the experiences of six rural midwives. Participants were from two regions in the South Island and two regions in the North Island and interviewed following ethical approval. Interviews were interpretively analysed.

**Findings:** Several tensions surfaced in the study. Across these tensions it was evident that the current funding for rural and remote rural midwifery is not working well. The participants revealed the challenges and financial hardships which they as rural midwives experience in maintaining a local midwifery service and how these challenges adversely affect their wellbeing and safety. The themes, 'cost of distance', 'spirit of generosity exploited', 'being treated unfairly' and 'working rurally can be an expensive hobby', are uncovered through stories of rural and remote rural midwives.

**Conclusion:** The current financial system does not serve these midwifery practitioners working in rural and remote areas. Without more financial support reflecting local needs, midwifery services in some of these rural regions are not sustainable and recruitment and retention will continue to be a challenge. There are Lead Maternity Carer (LMC) midwives working in rural, and in particular, remote rural regions who are concerned about the inequality and unfairness of remuneration. This may result in increasing the vulnerability of the maternity service for these regions. Rural and remote rural midwives' need for improved financial support is urgent and requires immediate attention at national level.

**Keywords:** Remote rural, midwifery, inequity, experience, sustainability, finances

### INTRODUCTION

The current financial reimbursement arrangements for LMC midwives in New Zealand are being challenged ("The Claim" NZCOM, August 31st 2015). The issues of LMC midwives working in rural, and in particular, remote rural regions are of particular concern in terms of inequality and unfairness of remuneration. There is emergent research exploring the sustainability of New Zealand midwifery practice in general (Gilkison et al., 2015; McAra-Couper et al., 2014), yet much remains unclear about the experience of rural midwives' financial sustainability, in particular.

It is apparent that rural and remote rural communities in New Zealand have specific needs and concerns that often remain unheard at macro or national strategic level. This paper draws from the findings of a larger study which asked 'What are the lived experiences of maternity in rural and remote rural New Zealand?' (Crowther, 2015). These included the experiences of rural midwives providing services in these regions. The focus of this paper is on the significant financial concerns which were uncovered for some rural and remote rural LMC midwives across two regions in the South Island and two regions in the

North Island. The themes, 'cost of distance', 'spirit of generosity exploited', 'being treated unfairly' and 'working rurally can be an expensive hobby', emerged from the stories of these rural and remote rural LMC midwives.

### BACKGROUND

Out of New Zealand's total population of 4.6 million, approximately 576,000 people live in rural areas, generating two-thirds of New Zealand's export wealth (Kletchko & Scott-Jones, 2012). Approximately 55,000 women give birth annually in New Zealand; nearly a third of whom live in rural areas (Simmers, 2006). Rural communities are diverse with small populations living over large geographical areas (National Health Committee, 2010). The issue of defining what is rural is complex. The definition of rural is far from universal and there continues to be no general agreement (Williams, Andrews, Zanni, & Fahs, 2012).

The nature of New Zealand's rural and remote rural maternity services is related to proximity to obstetric and paediatric hospital care. For example, rural is defined as 30 minutes or more travel from a base hospital and remote rural 60 minutes or more (Hendry, 2009; Kyle & Aileone, 2013). Yet, the taxonomies of

urban, semi-rural, rural, remote rural simply do not reflect the contextual reality of these regions. The experience of rurality is subjective and includes knowledge of local geography that limits access, feelings of social and cultural isolation as a result of infrastructure, environmental and weather conditions, distances from urban areas, communication and resource issues (Malone & Cliffe, 2013). Hart, Larson and Lishner (2005) contend that defining what is, and is not, rural for research purposes requires researchers to name which aspects of rurality are most pertinent to the topic being researched and then to formulate an appropriate definition. The definition of remote rural used for this current study is:

*A locality in which experiences of maternity (mothers, families and health care professionals) occur 60 minutes or more by road (in optimal weather conditions) from secondary hospital services as determined by those who live and/or work (families and midwives) in these regions who have local knowledge of actual lived travel times.*

This definition serves as baseline. It is acknowledged that one may live and work only 30 minutes from secondary services yet, due to local staffing and transport issues, this may extend to and beyond 60 minutes. It is also important to acknowledge that some LMC midwives in rural areas domicile in urban areas and travel to rural regions to provide care.

### Midwifery in rural regions

The New Zealand Ministry of Health directly funds LMCs, who are either midwives or doctors with obstetric qualifications. The delivery of maternity services in New Zealand is underpinned by

the requirements of the national Section 88 Maternity Notice regulated by the Ministry of Health (Department of Internal Affairs, 2007). This institution oversees the service and payments for primary maternity care provision. Rural and remote regions have unique funding concerns beyond the requirements of Section 88, leading to initiatives focussing on these issues in recent years (Table 1).

### Rural and remote regions have unique funding concerns beyond the requirements of Section 88.

Continuity of care underpins New Zealand maternity care in all regions and is mainly provided by LMC midwives and a few General Practitioners Obstetrics (GPOs). Continuity of midwifery care studies demonstrate good outcomes and it is the model of care desired by women and families (Sandall, Soltani, Gates, Shennan, & Devane, 2015). Maternity care in remote areas is often provided by midwives working in isolation (Adair, Coster, & Adair, 2012). These rural LMC midwives provide 24/7 on-call services. All rural primary maternity facilities are required to have a midwife available on site or on-call. If a woman is in labour and her LMC midwife is providing care, the core/facility midwife is expected to provide back-up and support in the facility and on-call services to women when they stay postnatally. Not all rural health facilities are the same. Some LMC midwives also provide the core midwifery service to maternity facilities under a separate contract. In some primary rural units, nursing staff are employed to ensure the service remains viable when there are insufficient midwives.

**Table 1: Additional payment and resources available to New Zealand rural LMC midwives**

Establishment grant	<p>Available for two or more midwives to establish a LMC midwifery practice in a rural locality in which there are no LMC midwife practices currently established.</p> <p>May involve midwives moving to the rural locality to commence LMC practice, or it may involve midwives already living within the locality changing practice type.</p> <p>The establishment grant is a one-off grant to support setting up rural practice. However, exceptions can be considered on a case by case basis for further establishment funding.</p> <p>Payments are made in 3 separate instalments over a 12-month period (subject to meeting contract requirements) and paid to the midwives as a collective, into a bank account nominated by the practice.</p>
Placement grant	<p>Available for an experienced individual midwife who is re-locating to a rural locality to join an existing midwifery practice or an individual LMC midwife who is currently practising within the area.</p> <p>This is a one-off grant. Ideally, no Placement Grant will have been previously provided to any midwives practising within the same locality, but case by case exceptions can be considered.</p> <p>Payments are made in 3 separate instalments over a 12-month period (subject to meeting contract requirements).</p>
Locum support for annual leave and emergencies	<p>Since 2009 rural LMC midwives are entitled to 9 days locum cover per year. In addition there is provision to fund 5 days emergency locum cover. Rural midwives do not lose earnings from missed maternity episodes while on leave from their caseload practice.</p>
Mentorship programme/ support	<p>Mentoring service designed to provide up to 22 hours of mentorship within a 12-month period to a rural LMC midwife from an experienced midwife mentor who is on the National Rural Midwifery Recruitment and Retention Service register. Provides an opportunity to explore sustainability within rural settings and the midwife's own professional development, especially in geographically isolated areas of New Zealand. Mentor is paid for this service.</p>
Recruitment	<p>RMRRS works closely with key stakeholders (including midwives, district health boards (DHBs) and other local service providers) in these localities to identify recruitment needs. This is supported by the Establishment and Placement Grants.</p>



Recruiting and sustaining an adequate rural maternity professional presence in these sparsely populated areas are ongoing challenges (Adair et al., 2012; Engel, 2000; Steed, 2008), despite an array of recent initiatives (see Table 1). The numbers of midwives in rural localities have remained stable since 2012 and numbers of midwives in remote regions remain low (Kyle & Aileone, 2013). Kyle and Aileone found that the smaller the population, the less likely there would be an available local midwife and recommended a focus on succession planning for rural LMC midwives. Despite various incentive packages and allocated rural funding, many remote areas continue to have insufficient maternity care provider availability.

**Despite various incentive packages and allocated rural funding, many remote areas continue to have insufficient maternity care provider availability.**

The Rural Midwifery Recruitment and Retention Service (RMRRS) has been established as a joint venture between the Midwifery Maternity Provider Organisation (MMPO) and the New Zealand College of Midwives (NZCOM), funded by the Ministry of Health. It is recognised as a landmark organisation that continues to work for, and highlight the needs of, rural midwives. RMRRS provides various forms of funded support for rural midwives in the hope that this will help sustain safe available midwifery services for rural communities. Current payment and resources available to New Zealand rural LMC midwives through RMRRS are wide-ranging (Table 1).

### Travel costs

The need to travel to provide midwifery care and the challenges and costs of that travel have not previously been explored in detail. The travel costs and other financial concerns of rural and remote LMC midwives cannot be underestimated. This paper focuses on the potential financial impact of distance on the experience of rural and remote rural LMC midwives. The complex nature of rural maternity care provision has been examined in New Zealand (Barnett & Barnett, 2003; Patterson, 2007; Patterson, Foureur, & Skinner, 2011; Patterson, Skinner & Foureur, 2015). What needs to be further understood is how these financial realities are experienced.

### METHOD

A qualitative methodology was used, based on the need to gather data that provided in-depth and rich stories of the lived experience of rural maternity, including the working experiences of midwives in these regions. Listening to the everyday lived experiences of rural and remote rural midwives provided opportunity to review and reflect upon the practice realities of midwives in the field. This also offers an opportunity to learn lessons that will help ensure sustainable, safe and effective rural and remote rural services into the future. The theoretical framework of interpretive hermeneutic phenomenology, guided by the writings of Heidegger, Gadamer and van Manen, informed the approach to data collection and analysis (Gadamer, 1976; Heidegger, 1927/1962; van Manen, 2014).

Following ethical approval from Auckland University of Technology Ethics Committee (AUTEK) (No. 15/18), thirteen unstructured, in-depth interviews with women, midwives, ambulance crews and

doctors were conducted across four regions in New Zealand; two in the South Island and two in the North Island. This paper focusses on the six rural and remote rural midwives from this participant group. Recruitment was by purposeful sampling to hear the voices of those 'living the reality' of rural and remote rural midwifery. Professional and social networks were used. Through a process of snowballing, participants were continually recruited. A direct approach to participants was not used unless prior interest had been indicated. Participants were able to withdraw themselves, or any information they had provided for this research, at any time prior to the completion of data collection. Due to the complexity and sensitive nature of data gathered in small population regions, constant efforts were made to ensure anonymity. For example, all participants were given pseudonyms and place names were deleted from their transcripts.

The interviews, conducted locally, lasted one to two hours. The midwife participants were asked to share their experiences of rural midwifery. Interviews were transcribed by a professional transcriber who signed a confidentiality agreement. Interviews were then analysed for themes and patterns that highlight areas of concern, in an iterative process. The focus of the analysis was on surfacing meaning from lived experience descriptions. When I moved between the parts and the whole of each individual interview, and all the interviews together, new horizons of understanding emerged, as clusters of stories revealed commonalities and resonant qualities. What is reported here focusses particularly on one area of concern that emerged from the midwife stories: the financial costs incurred in providing rural midwifery services.

I came to the study with pre-understandings about rural and remote midwifery. I have worked in various rural midwifery roles in several countries, including LMC practice in Northland, and continued to provide rural locum support during this study. I was interviewed by a colleague at the start of this study so that I was able to identify my own assumptions and pre-reflections. This ensured my own pre-understandings would not be discounted and ensured transparency in my interpretive analysis of the data. Therefore within the findings my own voice is made explicit.

## FINDINGS

### Cost of distances

The cost of distances when living and working as LMC rural/remote rural midwives can be considerable. Sally's (midwife) story illustrates:

*I had a lady with really awful vomiting and diarrhoea at 40 weeks. I went to see her at home. She was dehydrated and unwell all night. I sent her to the GP to get some IV fluids. The medical practice refused to give her fluids. So we went to the hospital where we all stayed overnight. I had to transfer at that point otherwise I would have been criticised. When we got to the hospital four hours later they gave her a bag of fluids. I stayed the night in town and came home the next day. She went home and we returned a week later for an induction. I went all the way down to the hospital just to have a litre of fluids! (LMC Midwife, Sally)*

Sally travelled the eight hours round trip to secondary services on two occasions for her client; once for IV fluids and then returned a week later to provide intrapartum care. She transferred her client due to local pressure and fear of being criticised. Sally's assessment and the need for her client to have treatment was confirmed on admission to the secondary services. Sally had to stay nearby overnight in case of labour onset and a week later returned to



provide intrapartum care. The financial cost to Sally included 16 hours of travel and an overnight stay near the secondary facility. The costs extend beyond money to a personal disruption for Sally and presumably for her family. In addition, her own practice is left potentially vulnerable because she is out of the area.

Transfers and the amount of travelling to maintain continuity of care can have financial implications that impact on a local sustainable midwifery service. At times other local midwives are unable to provide cover or live far away. This was certainly the reality in my own rural practice on occasions. This is an excerpt from my transcribed pre-understandings interview prior to the study:

*I was busy attending to the paper work after a helicopter transfer for a sudden birth at 32 weeks from a remote location when my phone rang; another mother was in early labour! I dreaded this situation. My husband was organising to come and get me once I had handed over care but that would take time. I was stranded due to the type of transfer. I knew my practice partner was busy with another mother in labour. It is really stressful when this happens.*

The tyranny of distance is a lived reality for rural midwives (a theme more fully explored in the larger study (Crowther, 2015)). Appropriate, prompt transfers from rural regions can reduce adverse perinatal outcomes (Grzybowski, Stoll, & Kornelsen, 2011; Patterson et al., 2015). Yet there are a myriad of costs which need to be covered and which include accommodation, food expenses, car maintenance and petrol, cost of extended time away from home and disruptions to family life. Enabling continuity of care and ensuring safety and equity of access to services in rural regions come at a personal financial cost and with potential risk for midwives like Sally.

Participants in this study reported that they provided intrapartum care in facilities many hours from their homes, so that they could claim the intrapartum fee through Section 88 and receive an adequate salary. Petrol costs are high and not sufficiently reimbursed. This is particularly an issue for non-emergency intrapartum care when the midwife travels to a hospital out of her region in order to provide non-emergency intrapartum care.

The potential for anxiety, disruption and stress related to some transfers to secondary units may not be preventable, yet the financial burden could be alleviated. There were local systems in place in some regions within this study, such as taxi payments for LMC midwives so that they could return to their rural homes after facilitating an ambulance transfer, but these did not apply everywhere.

### **Spirit of generosity exploited**

The personal cost to providing rural and remote services often remains invisible. The spirit of generosity that is often inherent within midwifery, and in rural life, was thought to be exploited at times. Sally (midwife) gave an example:

*I do get stranded quite a bit. I had a primip, she ruptured membranes at 34 weeks, and the ambulance driver took me back as far as they could, they're not supposed to bring us back, and my car was over in a remote area. I had to call my husband out about 4 o'clock in the morning saying, 'can you come and get me?' Another time I was transferring a tourist to the area who had ruptured her membranes and was contracting at 30 weeks. I took her down to the neighbouring town, an hour from here, where a helicopter came to pick her up. The ambulance driver was told he had*

*to leave me there and go to another emergency. Effectively it was on the way so he stopped on the side of the road and I got out of the truck. Again my husband had to come out and pick me up and take me back to my car. I get stranded and need picking up quite a bit when I think about it. Also getting back to my car in the middle of the night and it is cold and it's dark, I'm tired but still have to drive home. (LMC midwife, Sally)*

The disruption and financial strain for Sally and her husband in this story are reflected numerous times through the participants' stories; these also resonate closely with my own rural experience. Remote rural midwives can struggle to get home following an emergency transfer and are often left stranded without return transport; this issue often remains unseen. LMC rural midwives, like Sally, often work beyond the call of their roles, resulting in considerable personal sacrifice. Rural midwives may transfer in an ambulance leaving their car behind (or by air transfer such as my own example above) and need a way to get home; sometimes they follow a woman in their own car but may be too tired to drive home after providing care. Provision of continuity of midwifery care comes at a personal cost to remote rural midwives which may at times lead to unsustainable working practices.

### **Remote rural midwives can struggle to get home following an emergency transfer and are often left stranded without return transport; this issue often remains unseen.**

Ensuring continuity of care can lead to taking unsafe personal risks that are not acceptable. Caroline and Sally (midwives from different regions) describe sleeping rough.

*I always have everything in my car all the time – just in case. I sleep anywhere and everywhere. Even a sleeping bag and overnight bag, a little goody bag of nuts and muesli bars. I'm a good power napper, I have a power nap app on the phone and so I pull over anywhere and power nap. Luckily I have learnt to be really good at power napping. (LMC midwife, Caroline)*

*So if I am really exhausted I'll pull off the road and have a sleep in the car. Once you've had your birth you're all kind of hyped up and busy and you've got so much to do and then you get in the car and drive; then tiredness hits. I've got a sleeping bag in the car for when this happens. I am set up for this. I've woken up with all sorts of people staring into the car at me. There was a dustbin man at one small town. I had obviously parked my car in front of someone's drive. I was in a pub carpark at one point, I had no idea, but I was so tired I didn't care. (LMC midwife, Sally)*

The time, inconvenience, disruption to personal lives, effects on health and extent of travel expenses are revealed in these midwives' stories. Sleep deprivation affected all midwives at times, but added to this were the vast distances they often needed to cover to return home after extensive hours of providing midwifery care far from home. The subsequent need to sleep 'rough' is unacceptable and the consequences are unsustainable. Physically and emotionally this takes its toll and raises several serious concerns and questions about the midwives' safety and wellbeing:

- Do Caroline and Sally feel valued, and acknowledged as they sleep on the back seat of their car away from family and home?
- Are Caroline and Sally safe?
- Are their clients left back in the rural community kept safe in their absence? Are Caroline and Sally still accountable for their care?
- Do policy makers, professional organisations and regulators of the service 'see' Caroline's and Sally's costs?
- Do their clients fully appreciate their midwives' commitment?
- What about Caroline's and Sally's families left wondering about their safety and wellbeing?
- The challenges to wellbeing, professional dignity and safety for these midwives need addressing.

### Being treated unfairly

Some remote rural midwives spoke of being treated unfairly by a system that did not understand local context. Paula (LMC midwife) came back from holiday to find she was expected to take on the sole responsibility for providing caseloading care as a self-employed service provider in her remote region:

*I had to get my own equipment, get a car and do all my business stuff. The Trust just went boom off you go. It was horrible. I actually took out a personal grievance against them just because it was hideously stressful. (LMC midwife, Paula).*

Paula explained that the local trust, her former employer, which had been set up to maintain a birthing service, came to the decision that the service was financially unsustainable. It was unclear if this decision was a governmental funding issue or about promotion of continuity of care. Paula explained in the interview that she was not consulted about these changes. Paula had to set up business systems, buy her own means of transport and her own equipment - all at considerable personal expense. Prior to this she was on a regular salary, and had a car and equipment provided. She had had the support of the Trust Board who had arranged cover for annual leave or sickness, had funded her study leave and offered her moral support. The potential income from the current caseload in Paula's community did not cover such costs. The service was thus deemed unsustainable.

There was no thought as to the unsustainability of such a practice for Paula who was 'forced' to take on the financial burden if she wished to remain working as a midwife in her rural community. Paula's story draws attention to the current fiscal challenges that some remote rural LMC midwives working in isolation encounter. These fiscal challenges appear discriminatory compared to the costs and remuneration urban LMC midwives experience.

### Working rurally can be an expensive hobby

There are invisible costs in time, money and wellbeing in provision of remote midwifery services, as Caroline's story illustrates:

*It is not just the caseload it's the expense of being a rural midwife. I don't get any extra for going to hospital for my study days. I don't get any extra for going to the maternity homes for their meetings or for their education sessions, meeting up with colleagues who live far away. I don't get anything. There is no extra if somebody needed weekly CTGs. In the city they'd go to the secondary care facility and have weekly CTGs. There is nothing up here*

*that pays me to do weekly CTGs. Sometimes they request twice weekly CTGs. I had a really compromised baby and I needed to do twice weekly CTGs on behalf of the obstetricians. There is nothing that pays me any extra to go out and do that. There is a lot more expenses up here; constant maintenance on the car! The only extra is that remote rural payment for postnatal. You can get an initial set up payment which is great but there are ongoing costs - there is no payment for them. The one off transfer fee which doesn't really cover your petrol or time. Not at all. I would give up midwifery because of the finances; it is an expensive hobby! - it really does cost me to be a remote midwife LMC. (LMC midwife, Caroline)*

Running a small business is a relentless struggle for Caroline. Part of the essential equipment is a functioning car, yet car maintenance can be high when mileage is high and the terrain challenging. Maintaining and purchasing equipment are expensive.

All LMC midwives, whatever the caseload number and location of work, are required to demonstrate ongoing professional development and updating. Caroline is happy to do her professional updates but she encounters several barriers: geographic location, on-call demands, travel, accommodation, course costs, lack of or poor local resources (libraries, broadband access) and lack of provision of locum cover for mandatory and elective educational days. These difficulties are unsurprising and have been previously identified (Ireland et al., 2007). Yet this self-responsibility for maintaining continuing professional development adds an extra burden to the rural practitioner (MacKinnon, 2010).

**The need to maintain financial stability can oblige a rural midwife to travel long distances to provide intrapartum care if the woman chooses (or is required) to birth at a secondary facility. This is pertinent when caseloads are significantly small due to the size of rural communities and with the ongoing popularity of hospital births amongst low risk women.**

There are travel and time costs in providing safe antenatal care. For Caroline and the mother the nearest primary unit with a cardiotocograph machine (CTG) is a two-hour round trip plus the time required at the unit. CTG machines are found in some primary units across New Zealand but not all. The financial burden can be considerable when twice weekly CTGs are ordered by an obstetrician who may not appreciate the local logistical difficulties involved. Sometimes the costs are met by the LMC to keep a quality local service. Michelle (rural LMC) describes 'I just bought a CTG machine to ensure local women got what they needed here', however this cost was never reimbursed and came from her limited income.

Rural midwives, such as Caroline, cannot afford to forego a mother's intrapartum care payment. The need to maintain financial stability can oblige a rural midwife to travel long distances to provide intrapartum care if the woman chooses (or is required) to birth at a secondary facility. This is pertinent when caseloads are

significantly small due to the size of rural communities and with the ongoing popularity of hospital births amongst low risk women. Some of the midwifery participants felt criticised for providing secondary intrapartum care by those who do not understand rural circumstances and needs.

Yet, despite the many challenges, rural dwellers and their health care providers protect and enjoy the uniqueness of their region, as Michelle (LMC) explains:

*I do enjoy being a rural midwife otherwise I wouldn't do it. The advantage is that you are your own boss and I'm out of all that political hullabaloo that goes on in big cities. I mean you've got to be a bit mad to do this but I do enjoy working in this small community.*  
(LMC midwife, Michelle)

During the interviews it became apparent that the rural midwives enjoyed their work despite the challenges they described. The midwives in this study, for the most part, enjoy what they do and provide a service that prevents poor outcomes to the best of their abilities.

Internationally, it is recognised that when skilled midwives provide the majority of maternity care they can reduce mortality and morbidity if the infrastructure is also supportive (Day-Stirk, Laski, & Mason, 2014). My interpretation of what constitutes such 'supportive infrastructure', arising from my analysis of the midwives' stories, is that it should include fair remuneration for midwifery services provided in rural and remote rural regions in New Zealand. It appears that the national maternity payment arrangement for rural (particularly remote rural) midwives is largely supplemented by the midwives' generosity of spirit. As Caroline states, "it is an expensive hobby to be a remote rural midwife". The payment schedule for rural midwives appears incongruent with local realities, leaving midwives like Caroline feeling exploited and vulnerable.

**Internationally, it is recognised that when skilled midwives provide the majority of maternity care they can reduce mortality and morbidity if the infrastructure is also supportive.**

## DISCUSSION

Some of the financial remuneration inadequacies and personal costs of some rural and remote rural midwives have been revealed in this paper. The toll taken by this being invisible but the midwives 'doing it anyway' speaks of fortitude – a strength and bravery to just keep going no matter what. The feeling of accountability and responsibility to their local regions, as well as the need to adhere to their professional ethos, speak loudly of the midwives' daily, unseen, personal commitment. There is a host of challenges ranging from professional tensions, climatic conditions, and a constant potential need to travel distances at all times of night and day and be continuously on-call. Yet often many of these experiences remain unseen and unappreciated by those stakeholders within macro level organisations who do not live the daily realities of rurality.

The continuation of rural midwifery services is seemingly dependent upon midwives' spirit of generosity. This spirit of generosity is in constant tension with the feelings of being

undervalued and invisible. Exploiting rural LMCs' spirit of generosity is unjust and can be construed as abusive. Midwives in this study feel that the current generic payment for maternity care across New Zealand is inadequate for rural midwives' ongoing needs. Addressing the optimal model of care and optimal payment processes in sparsely populated regions is essential. It would seem, from this small study, that the greater the remoteness the greater the costs and the lower the income.

**Reducing the provision of maternity care to a matter of economics and commerce has consequences for the rural midwives in this study. They are forced to maintain a self-employed business in often sparsely populated regions with few clients to ensure a stable income.**

Reducing the provision of maternity care to a matter of economics and commerce has consequences for the rural midwives in this study. They are forced to maintain a self-employed business in often sparsely populated regions with few clients to ensure a stable income. Participants explained in the interviews that competition for business between midwives in small communities can be harsh; this was also my own experience working in a sparsely populated region. The balance is constantly being sought between caseload numbers and ensuring adequate available rural midwives. Childbirth is unpredictable and numbers of clients can fluctuate over time, thus making guarantees for regular income challenging. Whether the midwife is paid by regional trusts, district health boards (DHBs) or directly from the Ministry of Health (MOH) makes no difference to local families. The important thing for them is that there is a locally based midwifery service that is safe, accessible, acceptable and of good quality (Day-Stirk et al., 2014).

On-call commitments are part of LMC midwifery care across New Zealand, yet these on-call responsibilities can be more complex for rural practitioners. Rural midwives (like all LMCs) remain on-call 24/7 and get paid to provide episodes of care. This may work well in urban areas and some rural regions where there is capacity to have larger caseloads, but in remote regions with small caseloads this system can prove financially unsustainable. A rural or remote rural midwife may only have one woman per month and be unable to earn for much of the time.

Arguably, the rural and remote rural midwives could take other employment, yet they must be available at all times to attend women in their caseload as required. Being on-call restricts mobility and inhibits a rural LMC from supplementing her income when caseloads are small. Obtaining other paid employment that is local and flexible at short notice may also prove difficult in many regions. Costs related to maintenance and replacement of equipment and recertification requirements continue regardless of the income generated by the midwife. Her income from her client base has to cover these expenses yet in rural regions there is little ability to supplement costs when caseload numbers are low. This is not to imply that rural and remote caseload midwifery is not feasible but that the present set-up in some regions is not working well.

Keeping all midwifery services philosophically congruent with the continuity of care model appears difficult to realise for rural regions



in the longer term, unless the payment and support processes are better aligned with midwifery practitioners' needs locally. It is not the intention of this study to undermine universal coverage of continuity of midwifery care. However, the stories presented in this paper clearly show that one size does not fit all. Concern regarding how the present system is financially unsustainable in some rural regions has been raised and needs to be acknowledged. The LMC continuity of care model of care has been shown to be sustainable (McAra-Couper et al., 2014) yet the stories in this paper show that the personal financial sustainability for some rural midwives requires urgent re-evaluation of how funding is organised and distributed.

**There is a need to explore alternative models and funding improvements for rural maternity services. The midwives in this study have described feeling disempowered, disenfranchised and exploited and have described the ongoing personal costs of providing maternity care in their rural community.**

New Zealand midwives are enabled by government policy to set up small private businesses, to work autonomously and be self-determining in how they work as self-employed practitioners. However, this does not work for all midwives in all regions. At present the funding fails to fairly reimburse all rural midwives for their time, equipment and distances they need to travel to provide maternity care to their remote rural maternity population. Some remote LMC midwives in this study reported being duty-bound to provide care in their regions despite it being 'an expensive hobby'. Alexandra (2013) stated that "One person's resilience may be another's vulnerability, and one would not want the concept to be used as a means of reinforcing unethical practices or hegemonies" (p. 2714). The poor reimbursement and ensuing necessity for a spirit of generosity revealed in this study may help guarantee quality midwifery services continue to be delivered yet could be leading to unhealthy resilient behaviours. The systemic unethical hegemony of the current funding arrangement is unsustainable and could result in the vulnerability of services. Current remuneration fails to account for the additional requirements that are inherent when working within a rural community. Although this is a small study, this needs addressing if the New Zealand rural LMC midwifery workforce is to be sustained and equitable across all regions. There is a need for the Ministry of Health to consider the daily social and cultural situations for rural and remote rural midwives and consider how it can improve financial support through its policies.

**The systemic unethical hegemony of the current funding arrangement is unsustainable and could result in the vulnerability of services.**

Patterson (2002) found that maintaining the New Zealand rural midwifery service was strained by the funding processes. A report on

rural health eight years later recommended that new and innovative models of services to meet the unique challenges of rurality are needed (National Health Committee, 2010). Unfortunately, more than a decade after Patterson's warning and despite several welcome initiatives, this study found that some midwives continue to have concerns related to a lack of financial support for remote rural maternity services. This current study suggests that funding processes for all regions continues to be insufficient, leaving some regions with midwifery services struggling to survive and vulnerable. If these six midwives, and potentially other rural and remote rural midwives in similar circumstances, are to sustain their services innovation to the structure of funding is required.

There is a need to explore alternative models and funding improvements for rural maternity services. The midwives in this study have described feeling disempowered, disenfranchised and exploited and have described the ongoing personal costs of providing maternity care in their rural community. There is now a need for discussion and collaboration between the New Zealand College of Midwives and the Ministry of Health to identify strategies that will support these and other rural midwives in New Zealand.

It is not the purpose of this paper to critically analyse the neoliberal ideals of New Zealand maternity service funding or impose neoliberalism onto rural health and maternity care organisation; these have been described and critiqued elsewhere (Mackinnon, 2012; McIntyre, Francis, & Chapman, 2011). What is proposed here is a refocussing on the responsibilities of the State for the needs of not just the woman but also the individual midwife in such a system:

*...human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework.... The role of the state is to create and preserve an institutional framework appropriate to such practices (Harvey, 2005, p.2).*

The current generic payment schedule for rural and remote rural midwives across New Zealand does not cover long term costs for midwives. This is a small study so it is not possible to generalise, yet the findings are potentially transferable to similar rural situations. Rural midwives, in whatever region they live and work, deserve their expectations and needs to be attended to for the current midwifery model of care to be sustainable. If the systems and remuneration to support the LMC model of care do not work in their region then changes to funding are imperative. Rural maternity health care professionals need to be consulted and involved in any national policy that influences their professional and personal lives.

### Potential Solutions

Inequitable unfair financial structures have been highlighted in this study. The New Zealand College of Midwives (NZCOM) is taking legal action against the Ministry of Health unfair pay based on gender inequalities ("The Claim" NZCOM, August 31st 2015). It is hoped that this legal action will identify and include ways of addressing the serious rural and remote rural funding issues identified in this study. I have suggested several potential solutions that may address some of these financial issues (Table 2). In addition, they could bolster recruitment and retention of midwives in the rural regions, whilst acknowledging that rural and remote rural midwifery are not the same in all New Zealand regions. For example, positive lasting change around transfer costs (emergency and non-emergency) that are easily accessible and traverse all New Zealand rural regions is justified. The above



<b>Table 2: Issues identified by rural midwives and potential solutions</b>	
<b>Rural midwives' issues</b>	<b>Potential solutions</b>
Limited ability to have a full caseload	Rural loading to support a smaller caseload
Current payment for intrapartum care disadvantages remote rural midwives who may not be able to provide this for all their caseload leading to reduced income.	Improve financial support through a rural loading system that recompenses midwives for working in rural and remote rural regions.
A fuller range of equipment, including more emergency equipment is needed.	Financial support for rural equipment.
Transfers from rural area to secondary hospital facilities are time consuming and financially complex.	Increase financial remuneration to cover the costs that arise when transferring a woman to a base hospital some hours' drive away. Current emergency transfer fees do not cover the travel for induction of labour (IOL) and normal labour and birth episodes of care. Remuneration could cover costs including provision to sleep over night when the midwife is sleep deprived and assistance in finding transport home.
Lack of availability and need for alternative midwifery cover for the caseload of women who are 'left behind' while the LMC is in 'town' needs further exploration.	The solution to this situation requires exploration and resolution at a local needs level. Promotion of intra-professional and multi-professional support structures as well as an increase in on-call financial support and locum services. Secondary services need to acknowledge rural midwives' need to get back to their regions as soon as practicable.
Limited locum support	Increase in locum services. For example a 'floating' rural midwife locum employed by the local DHB could provide cover for regular weekends off, time off sick and provide cover for educational needs. In addition the current locum service for taking annual leave (only 9 days) needs re-visiting. The 5-day emergency cover per year is welcomed and should be maintained.
Maintaining professional competence and ensuring compliance with annual practising certification requirements for remote midwives can be challenging in terms of time, distances and finance. It is crucial that professional requirements are met without loss of income.	Provision of paid cover when required to leave their regions for mandatory study days. One solution would be to provide locum cover for one week while the remote midwife sourced and participated in a week-long series of updates. This would be less disruptive to locum services and the community. It could be a planned supportive process connected to local DHBs and NZCOM. The remote practitioner would be able to receive peer support and network beyond her region.

table lays out what I understand to be rural midwives' needs and potential solutions based on this research and that I suggest require immediate review.

**Rural midwives, in whatever  
region they live and work,  
deserve their expectations  
and needs to be attended to  
for the current midwifery model  
of care to be sustainable.**

Table 2 is not an exhaustive list of needs and potential solutions but offered as a beginning. A larger study is required to gather the practice realities of other rural and remote rural midwives, including the island communities. The experiences, in the rural

and remote island communities these midwives serve, also need to be known. Any future research requires a transdisciplinary focus involving multiple stakeholders to ensure all have an equal voice. Any change to services requires audit and research incorporating rural and remote rural midwives who are immersed in local practice realities.

### **STRENGTHS AND LIMITATIONS**

This is a small New Zealand study and is focussed on producing findings that are not generalisable, but are potentially transferable. There are always more voices to be heard, always more perspectives. There are many regions in New Zealand that were not included. There is no final truth, only a pointing to what is happening within the experiences of the midwives in this study. However, the study highlights concerns and vulnerabilities about rural midwifery practice funding arrangements that require further research and thinking.

## CONCLUSION

The rural and the remote rural midwives may be running small businesses which can be construed as an 'expensive hobby'. This paper has shared some amazing stories of skill, resilience, and sheer grit in provision of exemplary rural midwifery care despite personal costs. Although there are stories of midwives enjoying the specialness of rural practice, there are some midwives that are just surviving. The purpose of this paper was to provide a rich uncovering of a phenomenon to provoke further thinking and incite a call to action. The current systems for funding appear to be unfair for some rural and remote rural midwives. This midwifery workforce needs to be understood and be self-directed in how they work. Their commitment and contributions need to be seen and valued. The financial and personal costs made daily by many rural and remote rural midwives need to be addressed urgently if safe and equitable maternity services are to be sustained for all regions across New Zealand.

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## NEW ZEALAND RESEARCH

## Pregnancy gone wrong: Women's experiences of care in relation to coping with a medical complication in pregnancy

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### ABSTRACT:

**Objective:** To understand the experiences of twelve New Zealand women with medical complications in pregnancy.

**Method:** Inductive, semantic, qualitative analysis was employed to obtain an in-depth insight into the experience of having a medical complication during pregnancy. Semi-structured interviews were conducted face-to-face with twelve women. Six had been hospitalised during their pregnancy, while a further six were recruited from outpatient settings.

**Findings:** Five themes were identified: pregnancy distressing and overshadowed by complications; unpredictability and the need for control; importance of the relationship with midwives; disempowerment in hospital; and lessons learnt on the importance of support.

**Key conclusions:** Medical complications during pregnancy can be extremely stressful and women feel particularly vulnerable during this time. Midwives play a key role in supporting women through the process of coping with a pregnancy marked by illness and uncertainty.

**Implications for practice:** Midwives can play a unique role in translating medical jargon and providing emotional guidance and support. A midwife who is engaged and responsive to a woman's needs has the ability to lower distress at this critical juncture in the development of a woman and her family.

**Keywords:** Pregnancy, health perceptions, stress, anxiety, hospitalisation and relationships with midwives.

### INTRODUCTION

There has been increasing recognition of the physical and psychosocial effects of stress, anxiety and depression during pregnancy, both on the fetus and on the mother (Dunkel Schetter & Tanner, 2012; Heaman, Gupton, & Gregory, 2004). When there is a health threat during pregnancy, either to the pregnant woman or to her fetus, a growing body of literature suggests that these pregnant women are at increased risk of experiencing psychological distress during and after pregnancy (Barber & Starkey, 2015; Brandon, Pitts, Robinson, & Stringer, 2007; Brandon et al., 2008; Breitkopf et al., 2006; Da Costa, Larouche, Dritsa, & Brender, 1999; Robinson, Pennell, McLeane, Oddy, & Newnham, 2011). Research suggests that mothers' stress hormones can have a direct effect on the fetus, affecting the development of the nervous system and brain, associated with an increased risk of later childhood problems, such as learning difficulties and disruptions in emotional development (Dunkel Schetter, 2009; Dunkel Schetter & Tanner, 2012). Distress during pregnancy has also been shown to be a significant predictor of labour difficulties and preterm birth (Littleton, Bye, Buck, & Amacker, 2010). Anxiety and stress in pregnancy have been shown to increase risk of postnatal depression and postnatal anxiety, which in turn can influence maternal-child attachment (Brandon et al., 2008).

Primary maternity care in New Zealand is provided by Lead Maternity Carers (LMCs), who are selected by women to provide

their lead maternity care. LMCs can be midwives, general practitioners (GPs), or obstetricians. LMCs are responsible for the care provided to women throughout their pregnancy and up to six weeks following the birth. New Zealand maternity services are integrated, with LMCs being able to access any necessary additional services such as obstetric or paediatric care for their clients. LMCs remain responsible for overall coordination of the care, even if clinical responsibility of that care transfers from one practitioner to another for a time. If there is a need for secondary or tertiary care during the pregnancy or labour and birth, it is provided, but the woman would return to the care of her LMC for the duration of the pregnancy and/or postnatal care (New Zealand College of Midwives Inc., 2016).

A recent New Zealand study found that approximately 37% of pregnant women were referred by midwives to other health professionals for medical issues arising during pregnancy (Skinner, 2011). In an international study, it was estimated that nearly 20% of all pregnant women are hospitalised during pregnancy (Gray, 2006). Some of the most common fears associated with pregnancy are those to do with the health of the baby (Melender & Lauri, 1999). Medically complicated and/or high-risk pregnancies have been shown to be anxiety provoking and increase the likelihood of depression as well as causing stress and distress (Barber & Starkey, 2015; Dunkel Schetter & Tanner, 2012; King et al., 2010; Leeners et al., 2008; Leichtentritt, Blumenthal, Elyassi, & Rotmensch,



2005; Perlen, Woolhouse, Gartland, & Brown, 2013; Stainton, Lohan, & Woodhart, 2005).

Research has identified anxiety and stress around medical complications as an important clinical issue. However, the literature has not fully explored the experience of women with medical complications, and the factors that they identify as important to their wellbeing. The present study sought to understand the experience of pregnancy complications among New Zealand women and to explore how they perceive their illness and cope with its challenges and treatment.

## METHOD

The research used semi-structured interviews with pregnant women who had been diagnosed with a medical complication. Twelve women with a wide range of experiences were interviewed. Six women volunteered in response to an invitation sent out as a part of a follow-up of women who had participated in a study almost two years previously, during a prenatal hospital stay. Six additional women were recruited via midwives and media sites; these women were pregnant and had been diagnosed with a medical problem at the time of the interview.

The study was reviewed and approved by the University of Waikato School of Psychology Research and Ethics Committee. Written consent to participate was attained prior to each interview and questions were also introduced in such a way so that the women could decide to decline to answer. Eight of the women were New Zealand European (NZE), two were Indian, one was English and one was Māori/NZE. Ages ranged from 23 to 40. For four of the participants, this was the first pregnancy; five of the participants had experienced miscarriages before the current pregnancy, and three had delivered a premature baby previously. Medical complications included gestational diabetes (3), high blood pressure (2), maternal heart condition (1), slow fetal growth (2), incompetent cervix (2), carpal tunnel syndrome (1), low blood pressure (1), placental abruption (1), potential preterm delivery (3), pre-eclampsia (1) and hyperemesis (2). Eight of the women had more than one complication.

**The words women used included 'fear', 'painful', 'a bit traumatic' and 'a shock'. This suggested that the normal experience of pregnancy was interrupted by the complication and the medical care and monitoring associated with it.**

The audio-recorded interviews were transcribed and a pseudonym was allocated to each woman. Thematic analysis was applied which was inductive (no theoretical underpinnings) and semantic (explicit) to discover underlying themes. Semantic, inductive, thematic analysis was used because it reduces the risk that the researchers' preconceived ideas about the topic would influence the findings (Braun & Clarke, 2006). It does this by taking the words used by the interviewees at face value enabling researchers to generate unanticipated insights. It also enables researchers to usefully summarise a large amount of data, such as is obtained during hour-long verbal interviews (Braun & Clarke, 2006).

## FINDINGS

Through thematic analysis, five themes were identified which identified the key points and summarised the interviews with the twelve women. These included:

### 1) Pregnancy distressing and overshadowed by complications

Ten of the twelve women described their overall pregnancy using words that depict high levels of distress. The words women used included "fear", "painful", "a bit traumatic" and "a shock". This suggested that the normal experience of pregnancy was interrupted by the complication and the medical care and monitoring associated with it.

*Before this pregnancy with the twins, I had three miscarriages, so you know when women are pregnant they are just so over the moon. It was just full of fear, that was what it was, to get to the eight-week mark and bleeding. So I think it was fear (Mary, potential preterm delivery).*

*I basically live in fear every day of losing this baby even so far everything is going really well. It is, I know, on the back of my mind; it is things can go wrong overnight (Trish, incompetent cervix).*

**This intense emotional distress, feeling the need to contain and restrict emotions, and pervasive fear appear to be responses to emotional trauma, and clearly affected women for months and years afterward and is ongoing.**

The emotional impact of these experiences was evident; each of the women who had been hospitalised and was reflecting back on her past pregnancy, cried during the interview. Those who were currently pregnant described their distress, but were more controlled in their emotional expression, and none shed tears during the interview. All of the women looking back on their distress described controlling their emotional expression at the time, holding it together for the sake of others:

*I suppressed my feeling when I saw my husband's face. I didn't cry I just held my emotions in (Cherie, placental abruption).*

This intense emotional distress, feeling the need to contain and restrict emotions, and pervasive fear appear to be responses to emotional trauma, and clearly affected women for months and years afterward and are ongoing.

### 2) Loss of control and unpredictability

When participants were diagnosed with a serious complication and/or hospitalised, all twelve women described feeling out of control, helpless, and out of their depth.

*Oh so out of control. I have never seen my husband so white. I was so overwhelmed. Completely overwhelmed (Mary, potential preterm delivery).*

*Oh so out of control. I was so overwhelmed. The moment of feeling completely out of your depth hit a thousand fold (Ana, high blood pressure).*

This feeling of helplessness is important; feeling disempowered and out of control magnifies the impact of stress, and leaves

women vulnerable to depression (Barber, 2012). It is striking that all of the participants expressed these feelings, triggered by the unexpected and unwanted plunge into the world of medical management and the discourse of risk.

Unpredictability was described by all participants, but women who had a complication with a lack of observable symptoms, such as high blood pressure, described how this unpredictability created additional distress:

*Having no symptoms made it worse—I felt more at risk as I didn't know what I was reacting to (Jennifer, high blood pressure/potential preterm delivery).*

*Felt like a fraud—I did not know how to react as I did not feel as if I was having a complication (Ana, high blood pressure).*

The experience of not knowing whether you are well or not, and having to rely on unfamiliar medical procedures and monitors to tell you how your body is functioning seemed to be a particularly difficult dilemma, carrying with it even more anxiety and distress. This combines with the suddenness and strangeness of being thrust into a medicalised experience of care, and came as a universal shock to these women.

### 3) Importance of relationship with midwives

Women discussed their experiences with their Lead Maternity Caregiver (LMC) in terms of how they felt cared for, listened to and engaged with. While many midwives were described in a positive light, several of the women described some disappointing experiences. Each of the women who had been hospitalised had previously dealt with LMC midwives who they felt had not engaged with them.

*I had a really bad time with my son before this pregnancy and the midwife was quite indifferent at a vulnerable time. It was really, really awful because I had a terrible time with him. I had had a great pregnancy and a great midwife but then she retired and then I had to find another one. I did find another one, but we never really connected and in the end it was terrible. It was a personality conflict I suppose—she was not very caring. She was a bit impatient. I was in hospital and had to have an assisted delivery. I had three degree tears and I was in shock after the birth after being in labour for three days and they needed to break his collarbone to get him out—she said I could have pushed him out if I wanted to. As soon as the baby was out she just left, see ya later kind of thing—she was gone. So I was exhausted and in shock that this information from her was just awful. Was really terrible for me to hear that. It has taken years for me to get over that birth (Katie, twins, high blood pressure).*

The same woman had a very different experience during her next pregnancy.

*Having lovely midwives made a massive difference—they were compassionate right from the outset. Very caring. When I was in hospital their contact withdrew a bit, but I was being looked after by hospital staff, but after I came out of hospital they piled on the support again and that was enormous. It was what I needed. I think they went a bit beyond (Katie, twins, high blood pressure).*

Women in the study described engaged midwives as partners who showed themselves to be trustworthy, supportive, and confidence building. Midwives who were accommodating and built strong

supportive relationships with the women were appreciated. These midwives were also described as getting help when it was needed, having good listening skills, preparing the women for hospital and providing parenting advice after the child was born.

On the other hand, women felt disengaged from their midwives when the midwife was difficult to get hold of, didn't seem to care or seemed judgmental. At times they described personality clashes and arguments with the midwife. In these scenarios, women did not see their midwife as an advocate and felt unprepared for hospital and medical care.

### The women who had been in hospital described their contact with hospital doctors as distressing and anxiety provoking.

#### 4) Interacting with hospital staff

The women who had been in hospital described their contact with hospital doctors as distressing and anxiety provoking. The women were often provided with what could be termed rational/technical care (Benner, Tanner, & Chelsea, 2009), and this was often recalled as adding to the women's stress levels.

*The dramatisation of the hospital—they are very factual, not very personable. It stresses you out even more (Annamarie, high blood pressure).*

*Explaining worst-case scenarios with technical information that you don't really understand—you feel anxious about everything. Doctors seem to be there to do a job—that's it (Julie, heart condition).*

*That was the hardest part about it. If you are doing all these tests, why don't you talk to me, ask me how I am feeling? They don't ask you how you are feeling. They just look at baby and it's their domain and oh yeah baby's got this, baby's got that, they didn't call it the baby—they called it the fetus most of the time and I said 'oh it's a boy' and they didn't care it was a boy or anything like that. It was an 'it' to them (Claire, pre-eclampsia/gestational diabetes).*

*The anxiety is enormous, life and death is hanging in the balance—they do care, but they have such limited time tugging at them, they have to make a decision and move on. They have no time to dwell on your case (Alison, potential preterm delivery).*

Two of the women were told that their babies were at high risk of death when they were admitted to hospital.

*I had a severe kidney infection. I could hardly walk. I felt as if I had been kicked. I got scared when the staff at the hospital told me I might lose my baby. Being told I might lose the baby made me lose it (Susan, potential preterm delivery).*

*I was positive for listeria. I was told that is fatal for the kid so they wanted to induce immediately. I was 31 weeks—Oh that is too early! I was scared for the kids (Katie, twins, potential preterm delivery).*

Further stress was described when women felt uninformed regarding the medical and hospital procedures they were expected to undertake, or were unable to understand medical terminology.

*They seem to do things and then explain if you ask. You don't feel you can say no (Pare, gestational diabetes).*

Women also found it hard to advocate for themselves in the hospital setting and felt particularly vulnerable. Husbands and midwives often became their advocates.

*My husband advocated for me—in fact he insisted certain things got done (Mary, potential preterm delivery).*

*My midwife was on the case—she would say she needs a scan or she needs this done or that done. She took charge. Like I remember she sat in the room there was a point when the babies were going to be born and they said we will have to send her to [a distant city] and she sat there with the doctors and said she is not going from [home city]. You are going to have to find space in NICU whether you like it or not and she is going to have them and they made space (Anyia, twins).*

On the other hand, when technocratic, impersonal care was supplemented by humane care, which incorporated advocacy and support, women described a more engaged and positive experience. Hospital midwives were described in glowing terms by all six women—it was the midwives who gave reassurance and showed compassion.

*They are there for the love of people—they feel for you and care for you and they will speak up for you (Trish, incompetent cervix).*

*It felt really good to know someone was going to take away all that anxiousness (Freda, potential preterm delivery).*

### 5) Lessons learnt: Importance of support

After discussing their experiences, women were asked "what advice would you give to pregnant women?" The question was frequently answered in terms of the support networks the women required and requested. While family was important, the crucial role of the midwife who was engaged and who demonstrated humane caring and understanding was also highlighted.

*My husband was fantastic, but make sure you click with your midwife, it can make all the difference (Annemarie, hyperemesis).*

*My midwife told me I can do this. That confidence was all I needed—look for a midwife that can instil that confidence (Jennifer, potential preterm delivery/high blood pressure).*

Many women said they had underestimated the importance of their midwife when first choosing one, but now, with experience of a pregnancy complication, saw this as a crucial role in their pregnancy, birth and beyond. Women also emphasised the need for the midwife to provide essential parenting advice and care attuned to their unique psychosocial needs.

## DISCUSSION

The goal of this research was to understand the experiences of a group of women diagnosed with pregnancy complications and how they experienced their care. This research revealed the women we interviewed had high levels of distress in this situation, feeling out of control and overwhelmed, but contained and suppressed expression of their distress during the pregnancy in order to care for others and maintain a sense of control. As one participant put it, "I held it in and put on a brave face for my husband".

### Stress, disruption, and distress

It was striking that all the women in this study, despite a wide variety of different medical conditions and experiences of care,

spoke of how the unexpected, overwhelming experience of having a medical complication coloured and disrupted their experience of pregnancy. The expectation of a natural and healthy gestation was interrupted with fear, uncertainty, and helplessness. This mirrors the experiences described in a study of the mood of birthing by Crowther, Smythe and Spence (2014)—when a medical intervention is required, everything suddenly changes, and the sacred space of allowing nature to take its course is violated. For the pregnant women in our study, it was the sense of safety and confidence in the process of pregnancy that was shaken, leaving them emotionally stunned.

### Distancing

Disconnection from emotions in a time of stress has been called "distancing" and has been described as an adaptive method of coping that can arise when the person feels helpless in the face of a stressful experience (Folkman & Lazarus, 1988). Distancing may be adaptive in comparison to over-engagement with feelings or rumination (Kross & Ayduk, 2011). Emotional distancing may reduce distress in the immediate crisis situation. When they were looking back, however, the real distance in time and place seemed to allow the women in this study to acknowledge and experience the feelings they needed to suppress at the time. This emotional distancing represents a challenge, though, to midwives caring for women during a medical illness. Though feeling terribly afraid and out of control, some women present a façade that functions both to protect others and to protect themselves from the intensity of the distress. It is not necessarily helpful to tear down this façade—but it also may be important to give permission to feel afraid, and to ask questions that allow the woman to open the door to her feelings if she wants to.

### Reassurance and support

Women need reassurance that others understand their fears and worries (Kent, Yazbek, Heyns, & Coetzee, 2015; Stainton, 1992). Stainton (1992) noted that mothers tend to be focused on possible good outcomes, while health professionals focus on possible problems. This can create a mismatch in expectations, with mothers perceived as denying the risks and health professionals as being irritating and catastrophising. This is consistent with our findings that some mothers in this study felt the emphasis of hospital doctors was on "life and death" and "dramatisation", and this increased their distress, while midwives were able to make them feel cared for and reassured by taking a more personal approach.

The midwife's knowledge, of her client and the supports and strengths available to her, is particularly important in deciding how to support and when to explain, and re-explain, complex medical information. Stainton (1992) suggested changing the language to reflect possibilities in situations of medical risk rather than focusing on worst-case scenarios, and this study supports the continued relevance of this advice. Optimism is a good predictor of adaptive functioning and outcomes (Barber & Starkey, 2015), and should be supported as long as the women are doing what needs to be done to take care of themselves and their baby (McDonald, Kingston, Bayrampour, Dolan, & Tough, 2014).

Women in this study emphasised the need to be prepared for dealing with the medical system and possible hospitalisation. Suggestions have been made that midwives, who recognise the early development of complications, can in turn assist women in preparing for the experience of dealing with the medical system (Berg & Dahlberg, 2001).



## Two ways of caring

The women in this study discussed two very different types of care that they received from their health care professionals. Technocratic, impersonal care was distressing and disempowering. On the other hand, care which was technically sound, but also included humane attention to the women's feelings and provided advocacy and support was valued and remembered with gratitude. "Technique and narrow rational-technicality alone cannot address interpersonal and relational responsibilities, discernment, and situated possibilities required by caring for persons made vulnerable by illness and injury" (Benner, Tanner, & Chelsea, 2009, p. xvi). This study supports the position that while technically expert care is necessary, it is not sufficient, and that humane care, advocacy and support can reduce anxiety and stress for women in high-risk situations.

Another important issue to recognise and acknowledge is the lack of control many women feel in these circumstances. Putting this into words can be helpful to regain some sense of control, and the midwife can work with the woman to identify where she can, and does, retain control of her self-care and other aspects of her life.

The inclusion and acknowledgment of the importance of partners, family, and other support people at this time may be key to combatting the feeling of being alone and helpless. Midwives may have knowledge of a woman's personal situation that other health professionals do not, and so they may be in the best position to facilitate involvement of family, clergy, and whatever other supports may be appropriate.

## Assessing psychological wellbeing

Research has shown that it can be difficult for health care providers to accurately identify mental health issues in physical health settings (Dawes, Faust, & Meehl, 2002). The midwifery literature has also described the dilemma of midwives who must appear calm and reassuring, while also juggling the need for risk monitoring (Scamell, 2011; Skinner, 2011). The task of assessing and supporting women's psychological well-being during a time of crisis is clearly a complex and demanding one, and requires a sensitive understanding of the woman and her family, and her style of dealing with distress. Since women may be hesitant to express their emotions at this time, it may be important to use mental health screening tools such as the Edinburgh Postnatal Depression Scale (Cox, Holden, & Sagovsky, 1987), which can be utilised during pregnancy (Barber & Starkey, 2015; Currie, 2012; Gibson, McKenzie-McHarg, Shakespeare, Price, & Gray, 2009). Of course, this is not a panacea, and the foundation of sensitive assessment of a woman's emotional state is the relationship that has been built over time, in a safe and collaborative space, into which the midwife can bring her knowledge, wisdom, and support.

Women valued the responsiveness and availability of their LMCs, but those who were hospitalised also emphasised the important role of the core (hospital) midwives during a crisis point in their lives. In both roles, the holistic approach and attunement to the whole woman seems to be key.

The first competency of the Midwifery Council of New Zealand (Midwifery Council of New Zealand, 2004) articulates the notion of "being with" women. This concept incorporates partnership, responsiveness, and empowerment of women. The stories of these women, whose pregnancies were marked by medical procedures, worry, and disruptions of care, emphasise the importance of this competency, whether under the care of an LMC midwife or in the care of hospital staff.

## LIMITATIONS AND FUTURE DIRECTIONS

In this small study, women volunteered for in-depth interviews. Perhaps women, who have a pregnancy they experience as traumatic, have a need to talk about it and tell their story, and this may lead them to volunteer, so the women described here may have been more distressed than the "average" woman who has a complicated pregnancy. The size of the sample at twelve also means that the range of pregnancy complications was not covered. The study was conducted in a single New Zealand region, and women who were hospitalised were from a single antenatal unit, so their experiences may not be representative of New Zealand women from different regions and circumstances.

This study outlines some issues that arise from medical complications from the perspectives of the women themselves; we did not speak with the partners of these women, and their experiences and perspectives would provide further insights. Similarly, it would be helpful to ask midwives, particularly those in the role of LMC, about what they see and what they do when their clients are faced with medical complications and with hospitalisation.

Further research might explore more how women with pregnancy complications understand the illness/medical event itself—what they know, where they get that information, and how they perceive their role in relation to the medical and maternity care systems. This might lead to advice, strategies, and interventions to improve communication between women and their health care providers at these often challenging times.

A further area for research that could be worth exploring is the decision-making process that women undertake in obtaining the services of a midwife and how prior experiences with maternity and medical care contribute to this important choice.

## CONCLUSIONS

Midwives are in a unique position to assist women with pregnancy complications by translating medical jargon as well as providing emotional guidance and support. From the interviews in this study, it appears that an engaged midwife who provides humane comprehensive care, which incorporates advocacy and support, makes a difference and has the opportunity to assist in the amelioration of stress and anxiety for these women.

It is important for midwives to be aware that women in a medical crisis are likely to feel out of control, fearful, and confused. Some respond by containing their distress, so they appear to be coping well on the surface, but beneath there is turmoil. This presents a challenge for midwives and other health professionals caring for women. It is important to recognise the magnitude of the event for a woman and her family, and to seek to provide support and information in sensitive ways that can be taken in gradually. It may also be helpful to be aware of opportunities to increase the woman's sense of control over those aspects of her care and self-care that can be controlled. Midwives provide care, information, and reassurance and this study suggests that midwives (both core and LMC) are vital to women's wellbeing in both normal and medically complicated pregnancies.

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## NEW ZEALAND RESEARCH

## Using a breath CO analyser to improve rate of referrals for smoking cessation during pregnancy: An exploratory single-case evaluation

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### ABSTRACT:

**Background:** Smoking in pregnancy negatively impacts pregnancy outcomes and wellbeing in infancy and childhood. While midwives are increasingly offering brief advice, cessation support and referral for smoking cessation, the data collected from a significant number of midwifery practices suggests that an estimated 79% of women decline referral.

**Aim:** The aim of this single-case evaluation was to assess if voluntary use of an exhaled carbon monoxide (CO) test would increase referral rates to smoking cessation services. Because of the high rates of smoking during pregnancy by women who identify as Māori (43%), the focus was the practice of a midwife who works with pregnant Māori women.

**Method:** This was an exploratory single-case evaluation including all women who reported that they smoked when they registered with the midwife. The midwife introduced the breath CO analyser (CO test machine) as a way of measuring mother's and baby's levels of CO and use was voluntary. Data gathered included: use of the breath CO analyser and number of referrals to cessation services. Additionally, an interview was conducted with the midwife on how the breath CO analyser was used. Simple descriptive statistics were produced and proportions reported. The interview was analysed deductively.

**Findings:** Thirteen pregnant women participated in this study. Seven consented to use the analyser and six declined. Of the 13 women who were offered the analyser, 9 (69%) accepted and 4 (31%) declined referral to a smoking cessation service. The midwife perceived that the analyser made it easier for her to discuss smoking with her clients.

**Conclusion:** The breath CO analyser may be a useful tool for supporting midwives, who care for a high number of women who smoke, to initiate discussions about smoking cessation while pregnant, and to increase acceptance of referral to cessation services. Further research is needed to determine the effectiveness of a breath CO analyser as a tool for midwives nationwide, as well as to determine extra time and resources that may be required.

**Keywords:** smoking, pregnancy, indigenous women, carbon monoxide testing, referral

### INTRODUCTION

Smoking in pregnancy negatively impacts pregnancy outcomes and wellbeing in infancy and childhood (Glover et al., 2010). In 2007, smoking prevalence for pregnant Māori women (the indigenous people of New Zealand) was 43.5% at first registration with a midwife and, for postpartum Māori women at discharge, 34% still smoked (Dixon, Aimer, Fletcher, Guilliland, & Hendry, 2009). This had only reduced marginally by 2010 to 42.9% smoking at first registration (Andrews et al., 2014). In Northland, a region in northern New Zealand (NZ), approximately half of all births are to Māori women and 43% of Māori women are smoking at booking. This accounts for the high overall smoking rate of 31% by pregnant women at booking in 2013 (Midwifery and Maternity Providers Organisation, 2013). An audit in 2012 at Northland District Health Board (DHB) showed that admissions to the Special Care Baby Unit (SCBU) for babies of mothers who smoked was 21%, compared with the percentage of all babies born in this region admitted to SCBU, which was 11% (Mentor, 2012). While midwives are increasingly offering brief advice, cessation

support, and referral to a cessation service (as is accepted good public health practice), data collected from a significant number of midwifery practices in Northland allow an estimate of 79% of women decline referral (Midwifery and Maternity Providers Organisation, 2013). Strategies are needed to increase the rate of acceptance of referral.

One of the Ministry of Health's strategies for reducing smoking prevalence, is to trigger more supported quit attempts more often (Jenkins, 2009). It is well established that dedicated behavioural cessation support is likely to increase cessation rates in general populations (Bains, Pickett, Laundry, & Mecredy, 2000; Cahill & Perera, 2011; Croghan et al., 2001; Hughes, Stead, & Lancaster, 2007; Stead, Perera, Bullen, Mant, & Lancaster, 2008), and cessation support for reducing smoking during pregnancy can be effective (Meernik & Goldstein, 2015; Myung et al., 2012). Although midwives can provide brief advice, dedicated cessation services have more time and expertise in providing a combination of pharmacological and behavioural support.



Previous research has identified that there is a need to increase referral to dedicated cessation services for women who smoke while pregnant (McGowan et al., 2010). Although many women receive advice about quitting smoking, not all feel influenced by it (Glover & Kira, 2011). Glover, Kira, Walker and Bauld (2014) found that pregnant women who smoke will accept a referral but a large number do not respond to contact attempts or decline support by the cessation provider. Therefore, methods are needed that engage pregnant women who smoke in the discussions about cessation and thereby increase use of supported quit attempts.

The United Kingdom (UK) smoking cessation guidelines for midwives advise that midwives should use demonstration of the level of exhaled carbon monoxide (CO) as a screening tool to identify and refer pregnant women who smoke to dedicated smoking cessation services (McEwen & Potts, 2013). The breath CO analyser is an instrument which calculates the amount of carbon monoxide in a single exhaled breath, automatically calculates the percentage of carboxyhaemoglobin in the blood of the mother and estimates the carboxyhaemoglobin in the baby's blood. The result is displayed in exact parts per million (ppm) for CO, and as a percentage for carboxyhaemoglobin.

Use of the breath CO analyser is not currently included in NZ guidelines. Although testing all women, as is done in the UK, may lead to a higher referral rate, it may not lead to a higher uptake of dedicated cessation support (Bauld et al., 2012). Furthermore, compulsorily testing all women may interfere with the relationship between midwife and client. The way a midwife communicates with a pregnant woman who smokes, influences the willingness for the woman to consider smoking cessation (Baxter et al., 2010). Preaching or being authoritarian, for example, by imposing a compulsory CO test, can result in women being disinclined to enter into smoking cessation discussions (Anderson, 2002; Arborelius & Nyberg, 1997). In contrast, a friendly and sensitive approach can encourage engagement (Lowry, Hardy, Jordan, & Wayman, 2004).

The aim of our evaluation was to assess if voluntary use of a CO test, by women who stated that they smoke, would increase referral rates to dedicated smoking cessation services. Because indigenous people often have higher smoking prevalence during pregnancy than non-indigenous populations (Heaman & Chalmers, 2005; Kim, England, Dietz, Morrow, & Perham-Hester, 2010; Midwifery and Maternity Providers Organisation, 2013; Morton et al., 2010; Wright & Tam, 2010), this evaluation focused on the practice of a midwife who worked with pregnant Māori women.

## METHOD

This was an exploratory single-case evaluation, carried out in Northland, NZ, over three months (April–June 2014). The evaluation was seeking to determine if the use of a breath CO analyser would increase the uptake of referrals and quit attempts amongst one Māori midwife's client group. A CO test was chosen for pragmatic reasons; it is the least invasive and cheapest biofeedback method for showing a pregnant woman an effect of smoking on her baby.

Participants were all Māori women who smoked and who registered with, or were in the care of, the midwife. Inclusion criteria were current smoker and seeking or having sought care with the midwife. Verbal informed consent was sought from the pregnant women by the midwife. All data collected were anonymous and confidential. Because this was a low risk evaluation, no formal ethical approval was sought from an external body.

At the first booking visit with the midwife, or at a subsequent visit, during a discussion about smoking, the midwife talked about CO and introduced the analyser as a way of measuring mother's and baby's levels. Use of the analyser was voluntary, in fitting with the New Zealand midwifery partnership model of practice (New Zealand College of Midwives, 2015). Referral was by agreement and was not compulsory.

The midwife recorded data on a tick box record sheet. The data gathered included:

1. The number of pregnant women who smoked who consented to use the breath CO analyser.
2. The number of pregnant women who smoked and declined to use the analyser.
3. The number of pregnant women who smoked who accepted referral to a dedicated smoking cessation service.
4. The number of women who smoked and declined referral to a dedicated smoking cessation service.

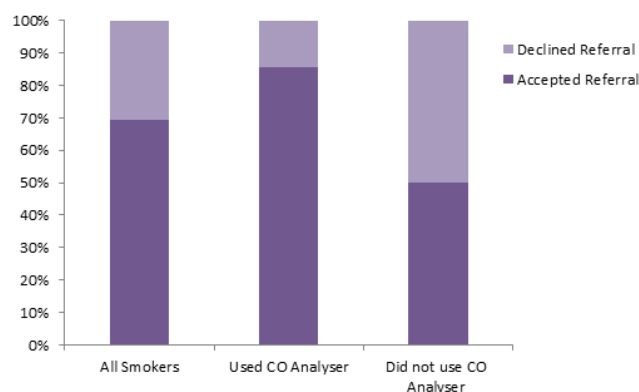
At the completion of the evaluation period, the midwife was interviewed by the lead author. The interview was structured and included the following questions:

1. What was the best time to introduce the analyser?
2. How did you use the analyser?
3. What difference did the analyser make to your practice?
4. Any suggested improvements?

Data were entered and analysed using Microsoft Excel Spreadsheet, and simple descriptive statistics were produced and simple proportions reported. Referral rates for the trial period were compared to the referral rates for the same midwife during the previous year of practice. The interview data were analysed deductively (Thomas, 2006), allowing themes to emerge following the interview schedule.

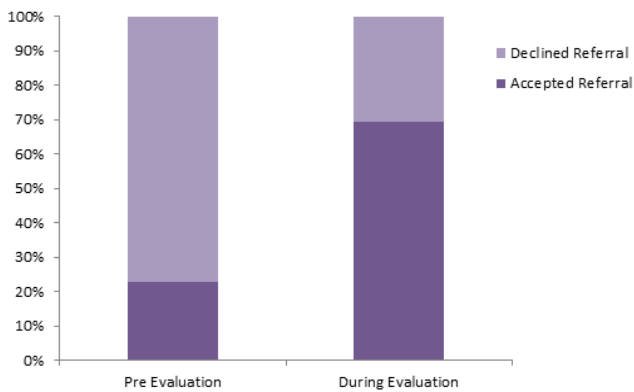
## FINDINGS

Thirteen pregnant women who smoked were invited by the midwife to use the breath CO analyser. Of those, seven (54%) consented to use the analyser and six (46%) declined. Of the 13 women who were invited to use the breath CO analyser, 69% (n = 9) accepted a referral to a dedicated smoking cessation service. Of the seven women who used the breath CO analyser, six (88%) accepted referral compared to three (50%) of those who declined the analyser (Figure 1).



**Figure 1: Percentage of clients who accepted or declined referral to dedicated smoking cessation services**

Figure 2 shows referral rates for women who smoked achieved by the same midwife in the same location, in the previous year from 1 March 2013 – 1 March 2014. 22 pregnant women who smoked were seen, five of them (23%) accepted referral and 17 (77%) declined.



**Figure 2: Percentage of women who declined or accepted referral to a dedicated cessation service in the year prior to the evaluation of the breath CO analyser compared to during the evaluation period.**

### The midwife's perceptions

The midwife stated that the analyser was a useful tool and that it made it easier for her to discuss smoking with her clients. The fetal CO haemoglobin levels showed the client how her smoking was affecting her unborn child, which the midwife thought may help break through the prevailing denial that smoking does not harm the unborn child.

*The analyser has made it a lot easier to discuss smoking risks and advise referral.*

*I have a tool that shows what is happening now.*

*Two women teared up when they realised the adverse result. It broke through the denial. It was an opportunity to turn it into positive action to get off the smoke for baby.*

Asking clients to use the analyser, even after they had declined a referral, appeared to make them more open to future referrals.

*If she declines a referral I suggest just having a puff in the analyser anyhow. I record the result and then by doing it again at the next visit she is more likely to want a referral.*

The midwife thought that the initial appointment was the most opportune time for using the analyser.

*Booking is the best time to use the analyser because there is more time.*

It was easier to discuss smoking at follow up appointments if the analyser had been introduced at the initial appointment.

*During the follow up appointment it is easier to address if discussed earlier and it is harder if it has not already been discussed.*

The only criticism of the analyser was that it was too large.

*A more compact kit would be better. The analyser kit is quite bulky and does not fit conveniently in the midwifery kit.*

### DISCUSSION

In this exploratory single-case evaluation of a midwife's use of an analyser with clients who smoke, we found an increase in the referral rate to dedicated smoking cessation services. Previous research has found that women who smoke while pregnant feel influenced by the discussions about quitting smoking (Glover & Kira, 2011). This evaluation suggests that the analyser was a useful tool for the midwife to engage her clients in discussion about smoking.

Using an analyser may better enable midwives to approach the subject of quitting smoking because they can back up the discussion with practical information (the results) that can be shown to the woman. The analyser as a tool provided women with specific information of the CO levels if they smoked while pregnant. Providing analysers to midwives, who have high numbers of women who smoke in their caseload, may improve their engagement with women who smoke while pregnant, irrespective of experience, training in behaviour change, or any other variable. The analyser does take extra time at booking. However, time will likely be saved longer term by a reduced number of high risk pregnancies in the caseload when women manage to quit.

In contrast to the recommendations in the UK (McEwen & Potts, 2013), the current study relied on a voluntary CO testing. In NZ, midwives' first standard of practice is to work in partnership with women. Trust, from both parties, is an important part of this relationship. Using compulsory CO testing may interfere with the client-midwife relationship, by implying a lack of trust in the clients' honest disclosure of their smoking status. Suggesting voluntary, as opposed to compulsory, CO testing may be a way of engaging women in the discussion about quitting smoking without compromising the relationship between midwife and client. Furthermore, the voluntary use may make the clients more open to accepting a referral after seeing the results of the CO test.

### Both the time resource and the equipment will need to be fully and appropriately funded.

One potential problem is the resourcing for midwives. Both the time resource and the equipment will need to be fully and appropriately funded. At the time of the study, the average cost for Northland DHB to purchase an analyser was NZ\$600. However, the average estimated cost, of caring for one baby in SCBU in Northland in 2014, was NZ\$8568.03 (Stanners, 2014). If midwife use of analysers prompts more women to abstain from smoking while pregnant, this would decrease ill-health effects during pregnancy and for the baby. In addition, it would potentially decrease the midwifery workload associated with high risk pregnancies, decrease the time babies spend in SCBU, and result in both significant cost savings to health services, and financial and social costs to whānau. Thus there may be a positive cost benefit to purchasing, and funding the use of, CO analysers.

### STRENGTHS AND LIMITATIONS

A strength of this evaluation is the focus on a high-need indigenous population. However, this was a small single-case evaluation conducted within one midwife's practice, which cannot be generalised to other practices. It is also not possible to ascertain a causal effect.

### Future work

This evaluation presents a strong case for conducting a larger trial with midwives using analysers in their interaction with indigenous women, who smoke while pregnant, in order to more fully establish their effectiveness. Future research should seek to determine the independent effect of the addition of an analyser test versus standard care.

### CONCLUSION

Provision of breath CO analysers to midwives, caring for high numbers of women who smoke, may enable midwives to increase

referral rates to specialist services that have the time and skills to provide dedicated cessation support. Such a tool has the potential to substantially improve health outcomes for both the mother and her unborn child.

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The authors report no conflict of interest.

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## NEW ZEALAND AUDIT

## The use of maternity acupuncture within a New Zealand public hospital: Integration within an outpatient clinic

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### ABSTRACT:

**Background:** In June 2008, a maternity acupuncture service began operating within a Hutt Valley hospital outpatient department, offering access to free acupuncture care for pregnancy and postnatal related conditions. This was the first and, to date, the only clinic of this type within a New Zealand hospital.

**Objective:** To retrospectively describe and analyse routinely collected data from 2013 and 2014, on treatment delivered in this clinic. Specifically we report on the number of women treated, their presenting condition, referral patterns and patient centred outcomes for those women presenting with back or pelvic/hip pain.

**Methods:** Data on the primary reason for seeking acupuncture and referral pathway were collected on a woman's initial visit. For those women presenting with back or pelvic/hip pain, a Measure Yourself Medical Outcome Profile (MYMOP) form was also completed, with a follow-up form completed on each subsequent visit until discharge.

**Findings:** Two hundred and sixty-one women received treatment. The majority were referred through Lead Maternity Carer (LMC) midwives and were requesting acupuncture treatment for labour preparation, back or pelvic/hip pain. MYMOP reporting demonstrated a high level of patient satisfaction, with 80% of women reporting a change in their pain that was clinically significant.

**Conclusion:** Data from this clinic illustrate a successful partnership between mainstream and complementary medicine, offering integrated healthcare to women in a public health system. Acupuncture offered a non-pharmaceutical treatment option and for those with back or pelvic/hip pain delivered high levels of patient satisfaction. It is hoped that this article will stimulate further interest in the under-researched area of maternity acupuncture.

**Keywords:** Maternity acupuncture, integrated care, complementary medicine

### INTRODUCTION

The use of acupuncture for a wide range of conditions related to pregnancy is detailed in acupuncture text books (Betts, 2006; Maciocia, 1998; West, 2001). There is a growing interest from pregnant women in seeking acupuncture as a treatment (Adams, Sibbritt & Lui, 2011; Steel et al., 2012) and a willingness from Western health practitioners to refer pregnant women (Stewart, Pallivalappila, Shetty, Pande, & Mclay, 2014). In addition to their seeking private treatment, acupuncture is also available to women in selected United Kingdom maternity units (Yelland, 2005). Acupuncture treatment in pregnancy is provided by midwives in hospitals throughout Denmark, Finland, Germany, Norway, Sweden and Switzerland (Mårtensson, Kvist, & Hermansson, 2009; Roemer, 2005). A recent review evaluated acupuncture during pregnancy and labour as safe when administered by a suitably qualified practitioner (Park, Youngjoo, White, & Hyangsook, 2014).

A certificate in midwifery acupuncture has been available in New Zealand since 2007. Midwives successfully completing this qualification receive elective education points and may incorporate acupuncture into their midwifery practice, provided the woman has given informed consent (Calvert & Pairman, 2011). It is also known that New Zealand midwives refer women to acupuncturists

(Harding & Foureur, 2009) and that acupuncturists within New Zealand treat pregnant women for a variety of presenting complaints (Smith, Armour, & Betts, 2014).

There is some evidence that acupuncture is beneficial in pregnancy. This includes beneficial reduction in pregnancy-related pelvic pain (Liddle & Pennick, 2015). The largest randomised controlled trial (RCT) to date to assess the effect of acupuncture for pelvic pain involved 386 women receiving either standard treatment (pelvic belt and home exercises) alone, standard treatment plus acupuncture, or standard treatment plus physiotherapy stabilising exercises. The authors reported acupuncture as the treatment of choice for one-sided sacroiliac pain, one-sided sacroiliac pain combined with symphysis pubis pain and doubled-sided sacroiliac pain (Elden, Ladfors, Fagevik Olsen, Ostaard, & Hagberg, 2005). Acupuncture has also been reported as beneficial for treatment of nausea in pregnancy. The largest RCT to date of 593 women reported a faster response in nausea reduction and improved quality of life for those women receiving individualised acupuncture treatment compared to a single, universally accessed acupuncture point, sham treatment, or no treatment (Smith, Crowther, & Beilby, 2002). Beneficial effects for women diagnosed with depression during pregnancy have also been reported (Manber et al., 2010).

Acupressure and acupuncture may also help relieve labour pain (Smith, Collins, Crowther, & Levett, 2011). There is no quality evidence that acupuncture improves labour outcomes when used as an induction treatment prior to a medical induction of labour (Smith, Crowther, & Grant, 2013). However, the use of acupuncture over several weeks from 36 weeks gestation in one study reduced labour time and medical intervention (Romer, Weigel, Zieger, & Melchart, 2000).

The use of moxibustion (providing heat over acupuncture points through a moxa stick) has been reported as beneficial over usual care for breech presentation at 34 weeks (Cardini & Weixin, 1998) and is listed as a possible treatment in the New Zealand Evidence Based Guidelines for women with breech presentation (New Zealand Guidelines Group, 2003).

In addition, a cost effective analysis found that even if only 16% of women completed the recommended protocol involving self-treatment at home, there would be reduced hospital costs compared to usual care (van den Berg et al., 2010).

In June 2008, a maternity acupuncture service began operating within the Hutt Hospital Outpatients Department. This was initiated by the Clinical Midwifery Manager (JM) as a result of discussions between two of the authors (JM and DB) on the usefulness of acupuncture in pregnancy and the potential of a service hosted by the District Health Board (DHB) and run by the New Zealand School of Acupuncture and Traditional Chinese Medicine (NZSATCM). The partnership was set up to provide free acupuncture for women using the DHB maternity services and a clinical teaching situation for fourth year NZSATCM students. It was not intended that students would provide acupuncture in labour and birth because it is not feasible to run a clinic at the same time as attending to women in labour. Many Hutt DHB midwives, both lead maternity carer (LMC) and core, have attended the "acupuncture for midwives" course and are encouraged to incorporate acupuncture in their practice, including during labour and birth. The treatments by NZSATCM students and midwives follow traditional acupuncture recommendations for treatment. This includes the use of moxibustion when appropriate and avoiding specific acupuncture techniques used to induce labour unless this is the aim of treatment (Betts, 2006). Women access this outpatient department directly by making an appointment through the maternity ward receptionists. Treatment rooms are provided two afternoons a week, with fourth year students from the NZSATCM providing treatment under supervision by acupuncturists registered through a professional acupuncture body and experienced in pregnancy related care. There is no charge for women attending. To the authors' knowledge, this is the first and only acupuncture clinic of this type within a New Zealand hospital.

**METHOD**

In 2013, the Measure Yourself Medical Outcome Profile (MYMOP) data collection was commenced to collect feedback on the women's treatment satisfaction for back or pelvic/hip pain. This was in addition to routine data collection of the number of women attending the clinic and their presenting conditions.

Information concerning the primary reason for women seeking treatment and their referral pathway to the clinic was recorded on their first visit. All women signed a NZSATCM patient consent form for treatment and data collection and an additional treatment consent form as recommended by White, Cummings, Hapwood, and MacPherson (2001).

Ethical opinion was sought from the National Ethics Advisory Committee (2012) who determined that, as the data collection for this article was part of the routine data collection procedures for the NZSATCM, formal ethical approval was not required.

**FINDINGS**

This clinic provides treatment for 30 weeks during the NZSATCM academic year. For 2013 this resulted in 134 women receiving treatment. For 2014 this number was 127 with the total number of treatments delivered ranging from 370 in 2013 to 408 in 2014.

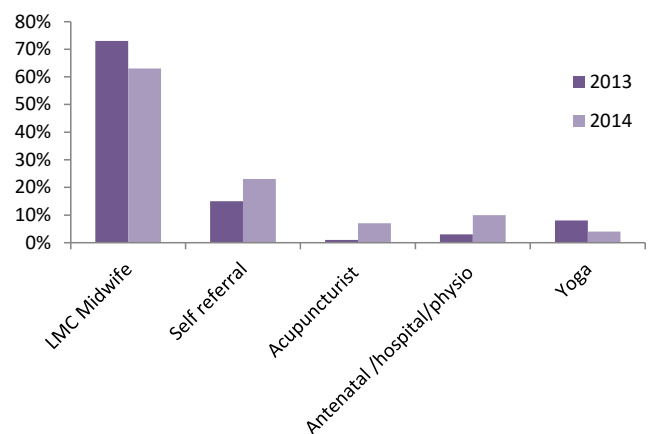
**Referral pathways**

The main source of referral to the clinic for both 2013 and 2014, was through midwives acting as LMCs (Table 1, Figure 1). In New Zealand, midwives who are LMCs are self-employed, autonomous practitioners providing care during pregnancy, childbirth and the postpartum period. In contrast, hospital midwives employed by a DHB are called core midwives and for this data collection are grouped under the heading "Antenatal/physio/hospital".

Referrals from acupuncturists were from private acupuncturists for women who were unable to continue paying for private treatment. Referrals from "Yoga" came from one practitioner who ran pregnancy yoga workshops.

**Table 1. Referral to clinic 2013 and 2014**

	2013 (n=134)		2014 (n=127)	
	n	%	n	%
LMC Midwife	98	73	80	63
Self-referral (previous patient/ friend /hospital website)	20	15	23	18
Acupuncturist	2	1	9	7
Antenatal /physio/hospital	3	2	10	8
Yoga	11	8	5	4



**Figure 1. Referral patterns 2013 and 2014**

**Treatment provided**

A variety of treatments were provided on the woman's initial visit (Table 2). The column labelled as "Primary" represents the presenting condition cited by the woman on her first visit as the main reason she was seeking treatment and the column labelled as "Secondary" represents those conditions also treated on this first visit following assessment.

It can be seen that the majority of women initially presented for treatment involving labour preparation (pre-birth treatment), and back or pelvic/hip pain, with 37 women (28%) initially presenting for pre-birth in 2013 and 22 (17%) in 2014. Thirty-four women (25%) initially sought treatment for back pain in 2013 and 37

women (29%) in 2014. For pelvic/hip pain this was 13 women (10%) in 2013 and 19 women (15%) in 2014. It can also be seen that there was a range of other pregnancy related conditions women received treatment for, after assessment on their first visit. This included treatment for heartburn 23 (17%) in 2013 and 29 (23%) in 2014 and headaches or migraines 10 (7%) in 2013 and 10 (8%) in 2014. The heading for varicosities includes women presenting for treatment of vulval varicosities, varicose veins and haemorrhoids. Only a small number of women presented for treatment relating to induction of labour 2 (1.4%) in 2013 and 3 (2.3%) in 2014.

Conditions	2013 n=134				2014 n=127			
	Primary		Secondary		Primary		Secondary	
	n	%	n	%	n	%	n	%
Pre-birth	37	27.6	6	4.4	22	17.3	16	12.5
Back pain	34	25.3	10	7.4	37	29.1	7	5.5
Pelvic/hip pain	13	9.7	13	9.7	19	14.9	4	3.1
Other	19	14.1	11	8.5	11	8.6	0	0
Nausea	13	9.7	2	1.4	11	8.6	0	0
Varicosities	5	3.7	5	3.7	4	3.1	7	5.5
Emotional	5	3.7	4	2.9	4	3.1	10	7.8
Breech	4	2.9	0	0	2	1.5	0	0
Induction	2	1.4	0	0	3	2.3	0	0
Insomnia	2	1.4	6	4.4	4	3.1	0	0
Headache/migraine	0	0	10	7.1	4	3.1	10	7.8
Heartburn	0	0	23	17.1	0	0	29	22.8
Postnatal	0	0	0	0	6	4.7	0	0

The heading of “Other” included a variety of presentations where women mentioned they also were experiencing, or had been diagnosed with a pregnancy related condition such as: rib pain, upper back pain, wrist pain, carpal tunnel syndrome, uterine pain, gestational diabetes, hypertensive disorders, bleeding in early pregnancy, requiring early pregnancy support, oedema, cholecystitis, pregnancy rashes, eczema, thrush, sinus pain, chest infections and diarrhoea.

**Data collection and results for MYMOP**

For women presenting with back or pelvic/hip pain a MYMOP form was completed. MYMOP is a patient centred questionnaire that asks the patient to describe their problem in their own words and then rate it on a scale from 0 to 6. This is a scale with 0 being “as good as it could be” and 6 being “as bad as it could be.” The same scale of 0-6 is used for any associated symptom, an associated activity they find difficult and a general wellbeing scale.

The questionnaire was completed during the first visit and then repeated on all subsequent visits. A mean change was calculated from the initial and final score to obtain a profile score. This represents a score that is clinically significant rather than statistically significant; with a reduced change above one representing a positive change seen as important to the patient receiving the treatment. MYMOP is an outcome measure that can be used to collect clinically significant scores from individuals seeking treatment (Bovery et al., 2005). This problem-specific questionnaire has been shown to be a reliable tool when used in acupuncture studies to measure the quality of changes considered

important for the individuals receiving treatment (Hull, Page, Skinner, Linville, & Coeytaux, 2006; Paterson, 1996; Paterson & Britten, 2003; Paterson, Unwin, & Joire, 2010).

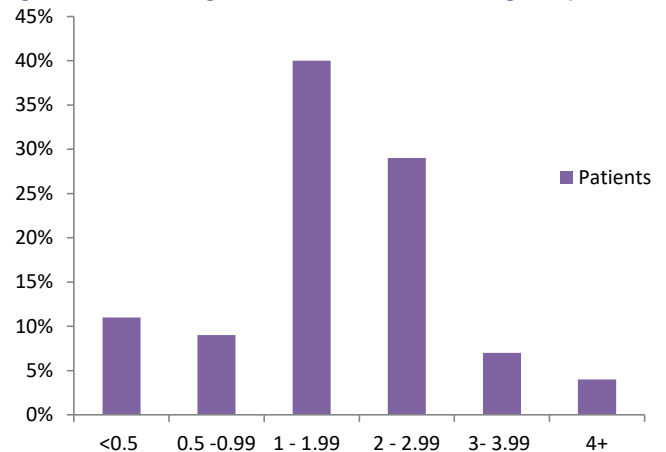
Although a total of 107 women presented with a condition suitable for MYMOP collection, there was a high number of incomplete and incorrect forms. This group included forms that were not initiated or mistakes due to student inexperience with data collection, such as circling two numbers on the scale, or changing symptoms during the treatment weeks. In addition, there were women who only received one treatment and were therefore unable to complete their MYMOP form. Due to the high number of incomplete forms in 2013, students in 2014 received additional training and their data collection was more closely monitored which resulted in improved data collection (Table 3).

	2013		2014	
	n	%	n	%
Total presentations suitable for MYMOP	51		56	
Forms not initiated or incomplete	23	45	8	14
Only one visit – therefore MYMOP could not be completed	12	24	19	34
Forms completed	16	31	29	52

**MYMOP profile scores**

Of the 45 completed MYMOP forms, 36 (80%) had a profile score that reduced by more than one point, which can be seen as clinically significant - that is, representing a change that is of importance to those women. Five women (11%) had a score below 0.5, i.e., an improvement which can be seen as not clinically significant, with four women (9%) showing minimal improvement from the women’s perspective (Figure 2).

**Figure 2. Percentages of women over the range of possible**



**MYMOP profile scores, for 2013 and 2014 (n=45)**

**DISCUSSION**

The majority of women seeking treatment through this maternity acupuncture service were referred by LMCs. The treatments most commonly sought by women at their initial visit were for labour preparation, back pain, or pelvic/hip pain. It was also apparent that, although women initially sought treatment for these specific conditions, following assessment they also received treatment for a wider range of problems such as heartburn, insomnia, emotional considerations, varicosities, headaches and migraines.



The literature on acupuncture use in hospitals focuses on acupuncture or acupressure to induce, or use as pain relief during, labour, although there have also been reports of acupuncture use within an outpatients' department. A small exploratory study, reporting on 37 women receiving acupuncture through an Australian clinic, found that the majority of women became aware of the service through midwives and initially presented for back pain, pelvic pain and hip pain (Hope-Allen, 2004). In addition, an audit of a midwifery acupuncture service in the United Kingdom specifically for women with back or pelvic/hip and rib pain reported on 43 women receiving treatment (de Jonge-Vors, 2011). Although only 35% demonstrated measurable pain reduction on a pain scale, 85% of the 21 women surveyed reported an improvement in their symptoms.

A larger retrospective study did report on 5885 women receiving acupuncture treatment at a German hospital (Romer, Zieger, & Melchert, 2013). However, although the authors reported that 43 women presented with an intrauterine death, there was no further reporting on the number of women receiving treatment for specific pregnancy-related conditions. It therefore remains unknown what conditions the majority of women were being treated for. The authors also claim their findings demonstrate that all acupuncture points, including those used to induce labour, are safe at all times in pregnancy. However, they give no details of specific points used. The majority of points they list as "forbidden" are not used to induce labour and therefore are not regarded as a relevant concern by other practitioners (Betts, 2006; Betts & Budd, 2011). In addition, their list of "forbidden points" contain points now recommended as appropriate for labour preparation (Betts, 2006; Roemer, 2005; Romer et al., 2000). The authors of this article agree there are specific acupuncture points, traditionally considered forbidden due to the potential to induce labour or miscarriage, that now are considered as useful to prepare women for labour from 36 weeks. However, the failure of the authors to report if these labour preparation points were used to treat women before 36 weeks conveys no confidence to their claim that these labour preparation points can be used at any time in pregnancy without caution.

Back and pelvic pain are common conditions in pregnancy where pain usually increases as the pregnancy advances, interfering with a woman's ability to work, her daily activities, and quality of sleep (Mogren, 2006). In randomised controlled trials, the use of acupuncture in the treatment of back and pelvic pain has been demonstrated to be beneficial (Pennick & Liddle, 2013).

Although the use of MYMOP to determine a profile score only reveals the woman's perception of any improvement, it does provide the opportunity to assess how women perceive acupuncture within a clinical care environment. Unlike controlled trials there were no entry criteria with midwives able to refer and women able to self-refer at any time during their pregnancy, and the treatment was provided to women presenting with chronic back pain conditions, as well as acute back and pelvic pain. While in New Zealand there is an accident compensation system intended to provide free and low cost treatment options for any back pain relating to an injury, there were incidences of women presenting with chronic back pain who had not received any medical assessment or treatment at the time of a previous accidental injury. Where possible, referral was initiated to address this; however, the cost for seeking further medical assessment was voiced as a barrier by many women.

Pre-birth acupuncture was also sought by women. This involves using a weekly acupuncture treatment from 36 weeks gestation to prepare a woman for labour. The aim of treatment is to aid cervical ripening, promote a cephalic presentation and anterior

position for the baby, and address any presenting emotional and/or physical pain issues for the women. There is limited research on the use of pre-birth acupuncture. However, a German randomised controlled trial involving 1000 primiparous women demonstrated that the use of specific acupuncture points, delivered once a week from 36 weeks, positively influenced Bishop scores, resulting in a shorter duration of labour and fewer caesarean sections (Romer et al., 2000). In addition, an observation study in Wellington, New Zealand, involving 14 LMC midwives reported that for 169 first-time mothers and multiparas, pre-birth acupuncture resulted in fewer medical inductions and fewer caesarean sections compared to those women receiving usual care (Betts & Lennox, 2006). Although further randomised trials are required to further establish the efficacy of pre-birth treatment, it was evident that in our clinic women sought out acupuncture as an option for their labour preparation.

## STRENGTHS AND LIMITATIONS

To the authors' knowledge, this is the first paper reporting in detail on a large number of women receiving maternity acupuncture through a public hospital outpatient service. Due to the limited nature of these findings, caution with interpretation or generalisation is required. As there was no control group to compare findings for the MYMOP scores, these scores only reflect the women's personal satisfaction and it is possible that these scores were influenced by confounding factors, such as time to rest, attention paid, and desire to please the acupuncturist. It was a limitation that a MYMOP form was not initiated or completed correctly for all women presenting with back or pelvic/hip pain. It was also a limitation that not all women who initiated a MYMOP form returned for further treatment. It was a practical consideration that, due to limited clinic hours available for appointments, women receiving their first treatment did not always receive a follow-up appointment. Changes have now been made to the booking system so that all women receive three appointments on booking to ensure that follow-up appointments are available in a relevant time frame. The preliminary results offered in this paper identify potential issues for future investigation. At the time of writing we can confirm that this clinic continues to operate as a free outpatient service at Hutt Valley Hospital. Data collection continues with demographic data now being collected for future reporting. Changes have also been implemented to improve the completion of MYMOP forms and data collection has commenced for adverse events reporting. We are also currently planning to further explore and report on women's experience of their treatment through this clinic.

## CONCLUSION

The creation of this maternity acupuncture service arose from openness on the part of the Hutt Valley maternity service to explore positive feedback it had received concerning acupuncture, and an acupuncture school seeking clinical placement within a hospital for its students. This clinic illustrates a successful partnership between mainstream and complementary medicine, offering research opportunities and integrated healthcare to a large number of women in a public health system.

The use of acupuncture in this context provides these women with a non-pharmaceutical treatment option. As we have outlined above, further data collection is underway for this clinic. It is the authors' hope that this article will stimulate further interest in this under-researched area of practice.

## ACKNOWLEDGEMENTS AND CONFLICT OF INTEREST STATEMENT

Debra Betts is employed as the clinical supervisor at Hutt Hospital Maternity Acupuncture Clinic by the New Zealand School of Acupuncture and Traditional Chinese Medicine. The other two authors report no conflict of interest.

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## NEW ZEALAND RESEARCH

## Generosity of spirit sustains caseloading Lead Maternity Carer midwives in New Zealand

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### ABSTRACT:

**Background:** This article is the third in a series reporting on original research exploring the sustainability of Lead Maternity Carer (LMC) midwifery. Previous publications have described sustainable practice arrangements and the way that partnership and reciprocity with women sustain LMC midwives. Research about sustainable caseload practice is important because lessons can be learnt that ensure this model of care, with its excellent outcomes and high levels of maternal satisfaction, continues.

**Aim:** The aim of this paper is to provide stand-alone data in relation to what sustains LMC midwives in midwifery practice over time. The final theme to emerge from our original research arose from data which support the strong relationship between the midwives' generosity of spirit alongside professional boundaries that is critical to sustaining caseloading practice.

**Method:** A qualitative descriptive study was conducted in New Zealand. Eleven LMC midwives with between 8-20 years of practice experience were interviewed. Interviews were transcribed and the data thematically analysed. The researchers within the group undertook the analysis together in a reciprocal fashion between the individual interviews and all the data as a whole. Themes were clustered into groups and excerpts from the data used to illustrate the agreed themes. Ethics approval was obtained from Auckland University of Technology Ethics Committee.

**Conclusion:** This paper draws attention to the significance of generosity of spirit in LMC practice and how this acts synergistically with personal and professional boundaries. Reciprocity and partnership work well when generosity of spirit is enabled to flourish, and this, in turn, supports joy of practice. This paper provides further insight into how LMC practice is sustained over time and provides direction for midwives in LMC practice, and those planning to enter LMC practice, in New Zealand and elsewhere.

**Keywords:** Sustainability, generosity of spirit, caseload midwifery, midwife Lead Maternity Carer, midwifery practice

### INTRODUCTION

This article is the third in the series and follows two previously published papers (Gilkison et al., 2015; McAra-Couper et al., 2014). The themes that were identified in the research and explored in those previous papers were: working in partnership, reciprocal supportive relationships, like-minded midwifery partners, realising one is not indispensable, practice arrangements and managing the unpredictability of being on call. In this paper, the final theme "generosity of spirit", describing the relationship between generosity of spirit and professional boundaries that sustain caseloading practice for Lead Maternity Carer (LMC) midwives, is explored.

New Zealand has a midwifery-led, primary maternity service where women choose their own LMC. LMC midwives are self-employed practitioners who are contracted by the Ministry of Health (Ministry of Health, 2007). LMC midwives care for 93.4% of women, with the remainder choosing a general medical practitioner (0.5%) or an obstetrician (6%) (Ministry of Health, 2015). LMC midwives practise on their own responsibility and provide midwifery care for women in their community.

They have legal access to local maternity facilities, and consult and collaborate with professional colleagues if complications develop. LMC midwives provide continuity of midwifery care through pregnancy, labour and birth and up to six weeks postpartum. In this study, having a caseload means providing midwifery care throughout the childbirth continuum. This means that LMC midwives are on call for antenatal and postnatal concerns and for labour and birth care. To sustain this availability, LMC midwives usually belong to a practice group and/or have a practice partner, who provides backup and cover for time off.

Caseload LMC maternity care has been available in New Zealand for 25 years and been shown to be safe and acceptable. The majority of New Zealand women (90%) are satisfied or very satisfied with LMC midwifery care (Ministry of Health, 2015) and perinatal-related death rates continue to decrease. Overall, the perinatal-death rate is the lowest since the Perinatal and Maternal Mortality Review Committee began annual data collection in 2005 (Health Quality and Safety Commission New Zealand, 2007). There has also been a significant reduction in the rate of hypoxic peripartum perinatal-related deaths over recent years from 0.5/1000 births in 2007 to 0.18/1000 births in 2013 (Perinatal Maternal Mortality



Review Committee, 2015). These significant positive outcomes add to the argument for sustaining the community-based, caseload LMC midwifery-led model of maternity care.

Our research found that generosity of spirit is part of the history and culture of New Zealand midwifery and is integral to the sustainability of LMC midwifery practice (Guilliland & Pairman, 1995, 2010). As Leap, Dahlan, Brodie, Tracy, and Thorpe (2011) said, generosity of spirit is a way of being that builds positive relationships not only with women, but between midwives. Generosity of spirit includes trust, feeling connected, goodwill, and the ability to take care of oneself (which leaves room for generosity of spirit). Henry (2015) proposes a difference between generosity and generosity of spirit. Henry asserts that generosity refers to something we do, whereas generosity of spirit refers to something we are. Seeking ways of practice that nurture generosity of spirit requires development of realistic boundaries in practice that both nurture generosity of spirit and vice versa. This is the meaning of generosity of spirit in this study and, we maintain, is at the heart of the culture that sustains LMC midwives in New Zealand.

### Literature review

Midwifery-led, continuity of care models of care have been shown to have significant benefits, including higher rates of spontaneous vaginal birth, less intrapartum analgesia or anaesthesia and women being less likely to experience regional analgesia, episiotomy and instrumental birth (National Health Service, 2014; Sandall, Devane, Soltani, Hatem, & Gates, 2010). Furthermore, a meta-analysis found that the majority of studies reviewed also reported a higher rate of maternal satisfaction in a midwifery-led continuity care model (Sandall, Soltani, Gates, Shennan, & Devane, 2013). This aligns with the experience of most women in New Zealand who express satisfaction with the LMC (continuity of care caseload) model of care (Ministry of Health, 2015).

For midwives, providing continuity of care for women is a satisfying way to work, and contributes to sustainable practice (Collins, Fereday, Pincombe, Oster, & Turnbull, 2010; Edmondson & Walker, 2014; Sandall et al., 2013). Sustainability is defined as enabling "something to continue to exist, whilst maintaining the integrity of mental and physical well-being of the agent" (McAra-Couper et al., 2014, p. 29). In the context of this study, sustainable midwifery is defined as a way of practising which will ensure that the LMC model of care will be maintained, whilst maintaining the integrity of the mental and physical well-being of the midwife.

Relationships with women appear to be one of the most important aspects of sustainability of midwifery practice (Deery & Hunter, 2010; Hunter, 2006; Hunter, Berg, Lundgren, Ólafsdóttir, & Kirkham, 2008; Leap et al., 2011). Hunter (2006) refers to the reciprocal nature of the midwife-woman relationship, and suggests that this reciprocity contributes to the emotional well-being of midwives, thereby sustaining the midwife in practice.

Whilst benefits for caseloading midwifery are clear in terms of benefits for women and midwives, there has been recent research which focused on the challenges that may arise for midwives who are caseloading and providing continuity of care. These difficulties relate to the very real challenges of being on call, maintaining a healthy work-life balance, and burnout (Cox & Smythe, 2011; Donald, Smythe, & McAra-Couper, 2014; Sandall, 1997; Young, Smythe, & McAra-Couper, 2015). These studies offer important insights into the experience and sometimes career-ending challenges for some caseloading midwives. However, other LMC midwives appear to manage the challenges they encounter and sustain LMC practice for many years.

Given the importance of sustaining a model of care with clearly identified benefits, our research investigated what does sustain midwives who have worked in the LMC model of midwifery care for more than eight years within the New Zealand context.

### METHOD

Human inquiry is always within a complex living system (Wadsworth, 2011). LMC practice is such a living system. Therefore, a qualitative research approach was adopted as it affords the opportunity for exploring the complexities that are inherent within this living system. Qualitative descriptive methodology, informed by Sandelowski (2010), was used so that complex detailed descriptions of how and what sustains LMC midwives in practice could be uncovered. A qualitative descriptive approach allows the voices of participants to be central to analysis. Subsequent findings therefore remain near to participant descriptions of practice.

Ethical approval for this study was obtained through the Auckland University of Technology Ethics Committee (AUTECH) in 2011.

The research design consisted of interviews with eleven LMC midwives in 2011 and 2012. They needed to have been in LMC practice for at least eight years, and participants were from a variety of rural and urban regions throughout New Zealand. Recruitment was through purposive sampling and the researchers' professional networks were used initially to ensure participants met the inclusion criteria. They were contacted by email, phone or in person and given information sheets about the study. Midwives self-selected as participants, and other midwives meeting the criteria for the study were additionally recruited through a snowballing technique. None of the participants worked together as practice partners at the time of data collection.

When prospective participants indicated they wished to participate, a convenient time and place for a face-to-face interview was organised. Semi-structured interviews using open-ended questions provided opportunity for descriptions about what sustains, and does not sustain, practice, for example: "What sustains you in midwifery practice? Tell me about how that sustains your practice?" The interviews took approximately 45-90 minutes, were audiotaped and transcribed. Transcripts were returned to participants when requested and for clarification when required. Pseudonyms were assigned and details were changed to ensure participant confidentiality.

A team approach to analysis was employed and provided opportunities to ensure plausibility of themes as they emerged from the data. The research team individually read, analysed and coded all the transcripts which were then returned to the whole group for peer review and comment. The peer review of the ongoing analysis ensured trustworthiness in the process and subsequent findings. As analysis progressed, relationships and patterns, across participant descriptions and between identified themes, surfaced. Themes and sub-themes were constantly refined in team discussions until consensus was achieved. The emergence of coalescing patterns across varying practice descriptions revealed the "what" and "how" of long-term sustainable LMC practice. Processes such as these ensure trustworthiness, which is essential in qualitative methodologies (Rolfe, 2006).

### FINDINGS

#### Generosity of spirit

One of the themes which emerged from the research was termed "generosity of spirit". Generosity of spirit is often described using words that are associated with ways of being, such as: magnanimity, high mindedness, fairness and generousness. As Dreyfus (2011) puts it, generosity of spirit is a kind of open-heartedness. Midwives

in this study spoke of having a spirit of open-heartedness between practice partners and colleagues, which sustained them in LMC practice. Generosity of spirit revealed itself in midwifery practice in myriad ways. Iona gives an example of how generosity of spirit between LMC midwifery partners sustains her in practice:

*It's about generosity towards your midwifery partner... thoughtfulness and consideration for the other person's caseload. I do think the thing that gives you longevity in LMC practice is good will. Good will and generosity, not greed. I think you have to really have a generous spirit. That means in all ways, time, money, energy, the whole lot; generosity to be tolerant of variations and difference. I'd say that's the most critical element; generosity needs to be inherent in your soul otherwise it won't work. (Iona)*

Iona speaks about the generosity of spirit in many ways, both on a practical level as well as an emotional level between midwifery partners, as the single most important ingredient sustaining this relationship, and thereby sustaining LMC practice.

This spirit of generosity can be picked up by others as Carla states:

*One of the stories... amongst midwives who are not part of our practice, is that "those midwives look after each other really well"... That's what enables us to keep going, because we do often arrive in the hospital with food or just kind of say, "look, go lie down for an hour and I'll help out"... so people have a perception of us as a group that look after each other. (Carla)*

Generosity of spirit in Carla's LMC group practice is clearly seen by the wider midwifery community. This reciprocity and mutual support have also been shown elsewhere as key to positive working arrangements (Kirkham, 2011). Midwives positively supporting midwives generates generosity of spirit and reciprocity.

At times this generosity of spirit is shown in both practical and moral support when one midwife is feeling vulnerable, in this case after a significant event:

*And one of the other midwives from the [practice] came as well, and sat outside the door. And every time I freaked out that this young woman was probably going to die, 'cause that's what I thought everyone was going to do for a while, I'd just go outside and talk to her and get back in there and she had a baby and all was well. So that was kind of the beginning of getting my confidence back... To midwife me back into being able to be a midwife. (Andrea)*

Andrea describes how she was "midwifed" back into midwifery practice after a major clinical episode through the generous spirit of her practice partners. Andrea's story describes how generosity of spirit, reciprocity and appreciation of each other's needs bolstered her ability to maintain healthy functional relationships with women, throughout her own period of vulnerability. For this practice, generosity of spirit was not a formal arrangement, yet it was the generosity of philosophically aligned practice partners which supported Andrea to continue in practice.

Generosity of spirit between midwifery partners and colleagues lays the foundation for healthy partnership with women. Carla continues sharing about her practice:

*[Lack of generosity] doesn't grow us as healthy midwives who care for each other... and also that's what we're doing for women, so if you're not doing the model to each other as midwives and forming partnerships and relationships how*

*are you doing it... with women? I don't believe you are. I believe if you can't do it with each other and have that generosity and give each other your time... and that's what gives the generosity back... that's what makes it work. (Carla)*

For Carla, having a generosity of spirit between midwives will keep her and her colleagues healthy. LMC practice cannot be sustained unless LMCs are physically and mentally healthy. Having generous relationships with colleagues is one way to maintain your personal well-being. LMC midwives in this study also talk of the generosity of spirit conveyed by the wider midwifery community. Sheila describes her experience:

*I took a month off [after a major clinical event]. The midwives supported me amazingly. Someone from the practice came with me to every birth for as long as I needed it. The support was amazing. The support from the wider midwifery community was also great. I had midwives that I barely knew...you know...core midwives from the hospital - just come up to me and hug me and just amazing support. Midwives just know - midwives, that have been around a long time anyway - know what it must be like. (Sheila)*

The data in this New Zealand study show the power and influence of generous behaviours and their impact and contribution towards sustainability. Jones (2000) contends that "as long as this circle of empowerment remains unbroken, it is self-perpetuating" (p.167). However, generosity of spirit is something that needs to be worked at, in order to flourish. Generosity of spirit needs to evolve in the culture of sustainable LMC midwifery practice. For some of the study's midwives it was inherent and part of who they are, yet this quality developed with time and experience. Several participants in this study indicated that they "arrived" at an understanding of the meaning of generosity of spirit in a variety of ways. At times this awareness came from a pivotal experience in practice that caused an "epiphany of understanding", or occasionally by maturation of practice, or by joining a like-minded group of midwives who embodied generosity of spirit. What is revealed in these LMCs' stories is how generosity of spirit and sustainable practice are entwined.

### **The data in this New Zealand study show the power and influence of generous behaviours and their impact and contribution towards sustainability.**

Occasionally, being away from work for a substantial amount of time gives LMC midwives an opportunity to reflect on and re-evaluate the way they need work to sustain their health and well-being that in turn sustains their ability to remain generous of spirit. Karen's "epiphany of understanding" came when she returned to work after she had been off sick for several months:

*I was back on deck for the last couple weeks of her postnatal care and when I signed her off I said, "Oh, I'm really sorry I wasn't there for the birth". And she said, "Oh that was fine, the other midwife was really good". And I thought, all these years, I've put my life on hold to be available for these women and actually to them it's possibly not as important as it has been to me. So, that was the turning point for me. I thought really I've got to start thinking that health*

*and family are more important than being on call, no matter what. (Karen)*

Karen states that for many years she had "put her life on hold to be available" for her clients because her perception had been that this was crucial to them. After apologising for not being at the woman's birth, Karen realised that she was not indispensable after all. Being overly generous with time and being always available to her clients can risk putting the midwife's health and family second. Establishing boundaries, which facilitate working in partnership and providing quality of care, needs to incorporate the paramount need to look after one's self.

Holly alludes to a previous way of working and the impact on her family's well-being when she was "giving everything" to her midwifery practice. At times new LMC midwives may over extend themselves in terms of availability to their clients:

*I probably showed them a model that was too balanced towards just giving everything. I mean, that sounds silly really, but not enough work-life balance in terms of time off and healthy activities to diffuse the stress... (I wish I had had) real time off and done more things with the family and showed them that there was life where the phone wasn't always there and the possibility of mum always having to rush away. I think the way I worked just stemmed from when I started. (Holly)*

One of the dangers of "over-generous" behaviours is the harming of self, by overextending. Saying "yes" to every request, which may be seen as being over-generous, can lead to lack of self-care and poor work-life balance. Although midwives are sustained by partnership and reciprocal relationships with women, they also need to negotiate and communicate boundaries and ensure their professional and personal lives are integrated in a balanced way.

## Negotiating Boundaries

For the midwives to remain generous of spirit, certain strategies are required to support and sustain this quality. These strategies appear to be around negotiating and maintaining professional boundaries that support generosity of spirit, and invariably come as an evolution of practice. Diana illustrates this in describing how her practice arrangements have evolved over time:

*After 10 years of feeling guilty for everything that I didn't do and every text that I told off or every phone call that I didn't answer...[then] that guilt actually went away, it did go away, when I made my choices and made my boundaries clearer to me... I had a shift in practice, asking women to ring in business hours versus around the clock. (Diana)*

For Diana the joy of practice was overshadowed by guilt; she expresses guilt for everything she didn't do. When the need for boundaries became clearer she was able to practise in a way that was sustainable. Diana learnt to be generous to herself by letting go of guilt and having clearer boundary setting. Boundaries (both personal and professional) are essential for maintaining a generosity of spirit that sustains midwifery practice. Self-care supports a healthy work-life balance and is essential to sustainability (Donald et al., 2014). Self-care is supported when midwives establish a workable set of expectations in their professional relationships with women as well as in their dealings with their midwifery partners.

Jane explains the need to be very clear about appropriate contact methods in an era of text messaging:

*I think texting is potentially very dangerous for the woman and us as practitioners...so unless it's something*

*like changing appointments...something completely non-urgent...where if the midwife doesn't pick up that text for three days it's not going to matter. But we really highlight and put in bold and then highlight again on top, 'Please Do Not Text - This is not safe care for you or your baby.' And then we state the urgent 24-hour contact reasons such as the usual stuff about bleeding, abdominal cramps, pre-eclampsia signs and symptoms, baby is not moving, signs of labour. Those sorts of 24-hour contact details - we spell them out literally - and then...then each of the midwives is free to let the women know how she can be contacted in a non-urgent way. (Jane)*

Providing clear details of these expectations around what are accepted and safe behaviours ensures boundaries are respected, and generosity of spirit in partnerships is maintained for both midwives and women. Jane and her practice partners explain that texting might not be safe; they give detailed information as to when women need to ring the midwife 24/7, as opposed to non-urgent contact. Ways of working together are built upon generosity of spirit, but strategies need to be employed to sustain the generosity of spirit that, in turn, sustains LMC practice. Another example is provided by Beatrice:

*I also ensure that my clients know that my text sounds are never on, my text sounds are always on silent, because I feel very protective of my space with the women. (Beatrice)*

Guarding "space" would seem crucial if practice is to be sustainable. The protected space is an opportunity to focus on the woman that Beatrice is caring for at the time. Yet this protection of space is also how Beatrice maintains boundaries around her work to ensure she has space for herself. Helen illustrates once again the significance of maintaining boundaries in her practice:

*...and I AM freely available, when I need to be, but not for changing an appointment at 11 o'clock at night and so there was a bit of a conversation about that. (Helen)*

While Helen states she is freely available 24/7 for her clients, she expects "out of hours" contact to be of an urgent nature. Helen will have a conversation with a woman if needed so there is clarity of expectations regarding contacting the midwife for urgent and non-urgent matters. Midwives in this study said it was important to share with women the arrangements for having regular time off. Georgia shares how her practice created boundaries between work life and personal life, through having regular time off:

*Women know when I am available. We write that in our booklet. For non-urgent queries, they can phone 8am-5pm weekdays, so we're quite protective of our free time and they completely respect that and understand that when we talk that through. I think it's all about how we present it to them. Our relationship is very respectful of them and respectful of us, really. And they completely get it. I try to take about one long holiday, have every second weekend off from 5pm Friday to 8am Monday... and that's brilliant. (Georgia)*

Having clarity between the woman and the midwife about time off and when it is appropriate to contact the midwife, creates a mutually agreed boundary and meets the midwife's need for protected time off work. More than that, it creates a respectful relationship between the woman and the midwife which will ensure a functioning partnership. Clear boundaries and facilitating reciprocal generosity of spirit are not mutually exclusive between women and their midwives.



Generosity of spirit is crucial if the joy of practice reported in our previous papers is to be maintained and to sustain midwives working in continuity of care models. As Brenda explains:

*Enjoy it. It can be such fun. It can be such an amazing job. And take time out. Don't be too available. Keep your boundaries. Boundaries, boundaries, boundaries. Boundaries are very important, because it can eat you up really, this job. Can't it? I LOVE my work. I LOVE my practice. I LOVE the women I work with. I think that's hugely sustaining. I love working with a supportive group of midwives... I can't even imagine what it would be like working in isolation... we have a lot of fun. (Brenda)*

Brenda describes her joy of midwifery practice and how she is mindful of her boundaries. She encourages midwives to enjoy LMC practice as it can be fun and an "amazing job". Her advice is to take time out and not be overly available. Brenda also encourages LMCs to enjoy their colleagues and not work in isolation, reiterating the significance of meaningful midwifery relationships in terms of underpinning sound partnerships with women and attuning practice to a generosity of spirit.

## DISCUSSION

For midwives in this study, generosity of spirit between colleagues was one of the things which sustained them in their practice. Nurturing positive collegial relationships through practical and emotional support enabled midwives to continue to build effective partnerships with women. Midwives spoke of the importance of nurturing an ethos of collective caring, and building positive relationships with women and with one another, which sustained them in LMC practice.

The unpredictable nature of LMC midwifery practice calls for a manageable way of maintaining one's professional and personal life. Midwives in our research talked about boundaries in their practice alongside the generosity of spirit as the two things that set the foundation for a working partnership through the journey of childbirth. Whilst midwives are inspired and nurtured by partnership and reciprocal relationships, and give their best to women-centred care (Leap et al., 2011), they also need to ensure their professional and personal lives are integrated in a balanced and sustainable way. Midwives need to be able to care for themselves and each other, in order to care for women.

The findings reveal that being overly generous and without boundaries often results in midwives losing the "joy of practice" and, conversely, when we lack generosity with self, colleagues and clients, the "joy of practice" can also be diminished. As Henry (2015) puts it, cynicism and despair create a "corrosive threat to generosity of spirit" (p.16). When midwives do not have good professional and personal boundaries, the joy of practice is threatened and this can result in an erosion of their generosity of spirit, and potentially lead to burnout. Awareness of the need for boundaries, primarily the need to look after oneself, at the start of a midwife's career is of the utmost importance. Responding to excessive client demand in the belief it is "good care" is a misconstrued interpretation of the partnership model and is unsustainable.

Yet, boundaries are not something that just happen but often need to be put in place formally with clear communication about practice expectations. The balancing of generosity of spirit and boundaries is nowhere more clearly seen than in caseload midwife practice arrangements. Being clear about practice arrangements provides the foundation for well-functioning sustainable relationships (Gilkison et al., 2015), ensuring boundaries are respected and

generosity of spirit in the partnership is maintained. When boundary setting is balanced, and boundaries are meaningfully explained, women are able to accept the need for their LMC midwife to have structured time off and that the backup midwife will provide care at these times.

**Awareness of the need for boundaries, primarily the need to look after oneself, at the start of a midwife's career is of the utmost importance. Responding to excessive client demand in the belief it is "good care" is a misconstrued interpretation of the partnership model and is unsustainable.**

Hunter (2006) believes that this balanced exchange of generosity, or "give and take" between midwives and women, is emotionally rewarding and sustainable for the midwife. Coincidentally and fortuitously, it usually leads to enhanced quality of care being received by the woman. Reciprocity has been described by Berg, Ólafsdóttir, and Lundgren (2012) as an affirmation that encompasses availability and participation by both parties in order to build trust. In the first article in this series, midwives identified that "the primary factor that sustains them is the joy experienced in the reciprocal relationship formed when LMC midwives work in partnership with women and their families/whānau" (McAra-Couper et al., 2014, p. 32). Jones (2000) also suggests that midwives' generosity of spirit, reciprocity and an empowering culture create support for each other.

Generosity of spirit and professional boundaries are different sides of the same coin that is LMC midwifery practice. Brown (2015) claims that generosity cannot exist without boundaries and "boundaried" people can be the most compassionate and empathetic. There is a subtle reframing of generosity of spirit so that it now includes boundaries. This is no longer viewed as limiting or restricting but rather as empowering. These two aspects of practice are complementary, not mutually exclusive. The findings of this research reveal how both aspects must be functioning well for practice to flourish.

## STRENGTHS AND LIMITATIONS

This study has explored aspects of New Zealand LMC practice previously not researched and has revealed elements which can now be further researched. These include more nuanced exploration of generosity of spirit and professional boundaries, practices that successfully sustain LMC case-loading midwifery and external personal and professional networks that sustain each midwife. Although these findings are not generalisable to all midwives in New Zealand or to all regions in the world, the findings might be transferable to other settings and countries seeking to sustain caseload continuity of carer models.

## CONCLUSION

Professional and personal boundaries work in synergy with a generosity of spirit, providing the foundation for sustainable LMC midwifery practice. When midwives approach their work-life association with magnanimity and fairness, generosity of spirit is

enmeshed in their practice. This spirit disseminates to like-minded colleagues and toward clients. The midwives in our research provided insight into the generosity of spirit that underpins their practice and their professional relationships, along with how they establish and negotiate boundaries which are integral to their work-life balance. They described the various strategies they employ to establish and maintain boundaries in relation to sustaining on call, such as: information and expectations of urgent versus non-urgent concerns, time off and guidance as to how to contact the midwife on call. The foundation of sustainable caseload practice is generosity of spirit which permeates all midwifery interactions with others. The strength of this foundation is nourished by a supportive framework that safeguards personal and professional boundaries. This requires midwives to work in partnership with women and colleagues in a way that enhances reciprocal respect and appreciation of each other's roles. This study shows that when generosity of spirit goes hand in hand with boundaries, only then can the health and well-being of the midwife be nurtured and be sustained.

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## DISCUSSION PAPER

## The high price of being labelled “high risk”: Social context as a health determinant for sudden unexpected infant death in Māori communities

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### ABSTRACT:

**Background:** For over 25 years, nationwide efforts to address sudden infant death in New Zealand have focused on advising parents to avoid four risk factors labelled as modifiable. But Māori infants still have sudden unexpected death in infancy (SUDI) at five times the rate of non-Māori.

**Aim:** This paper expands the conceptualisation of SUDI risk factors and suggests a reconsideration of the use of risk factor terminology.

**Discussion:** Working from the assumption that health outcomes are influenced by social determinants, we put forward two key propositions. Firstly, we argue (using maternal smoking as a case in point) that greater attention must be paid to the role of social and socio-economic factors in the prevention of SUDI in Māori communities. Secondly, we propose that the language of risk reduction impedes Māori engagement with health services because the discourse associated with being “at risk” and “vulnerable” casts Māori in a deficit framework affecting how Māori are perceived by health professionals and, more importantly perhaps, how Māori see themselves.

**Keywords:** Sudden unexpected death in infancy, risk reduction, social determinants of health, Māori health, indigenous health, infant mortality

### INTRODUCTION

New Zealand's high mortality rate from sudden infant death syndrome (SIDS), previously known as cot death, prompted the original New Zealand Cot Death Study in 1987 (Department of Health, 1991). At the time, the Māori cot death rate at 8.5/1000 was over twice the non-Māori (mainly European New Zealanders) rate at 3.5/1000. This case-control study obtained data from 485 cases (infants who died from SIDS in the post-neonatal age group), with 1800 controls (infants who were a representative sample of all hospital births in the study region) to identify risk factors. Four risk factors were deemed modifiable, that is, amenable to behavioural change. They were: prone infant sleeping position, maternal smoking, lack of breastfeeding, and bed sharing. Other risk factors that were deemed to be non-modifiable included: lower socio-economic status, unmarried motherhood, young age at first motherhood, poor maternal education, Māori ethnicity, low birth weight, prematurity and admission to infant intensive care unit (Mitchell et al., 1992). Further analysis by Scragg et al. (1993) demonstrated that the risk of bed sharing was largely confined to infants exposed to maternal smoking in pregnancy.

A national cot death prevention programme in the early 1990s highlighted the modifiable SIDS risk factors (Mitchell, Aley, & Eastwood, 1992). These efforts resulted in a rapid decline in SIDS deaths, with a halving of the New Zealand SIDS rate within two years (Mitchell, Brunt, & Everard, 1994); however, a very small decrease in the Māori SIDS rate over that same time, led to a huge increase in SIDS disparity. Tipene-Leach, Everard, and Haretuku (1999) said that this was because the national programme failed

to plan adequately for Māori community engagement, alienated Māori by focusing on preventing bed sharing and failed to consider the role of the non-modifiable risk factors in perpetuating SIDS. Recently published data indicate that the disparity between Māori and non-Māori SIDS remains high. For example, Ministry of Health data on SUDI (defined as sudden unexplained death in infancy and includes both SIDS and accidental suffocation deaths) from 2010 to 2012 show that SUDI among Māori infants was nearly five times as high as that among non-Māori infants. This disparity was greater for females (SUDI was more than 5.5 times as likely in Māori baby girls as it was in non-Māori baby girls) (Ministry of Health, 2015; New Zealand Mortality Review Data Group, 2014).

### DISCUSSION

The focus on modifiable risk factors, along with its associated discourse around “high risk”, has dominated the approach of non-Māori health care providers to sudden infant death prevention over this 25-year period. The Māori SIDS Prevention Programme (Tipene-Leach, Everard, & Haretuku, 2001) and the Whakawhetū/ Māori SUDI Prevention Programme have worked consistently to deliver SIDS and SUDI education that is responsive to Māori needs. Māori and other colleagues have developed effective SUDI interventions that are Māori specific (Abel, Stockdale-Frost, Rolls, & Tipene-Leach, 2015; Cowan, 2010; Tipene-Leach & Abel, 2010) and these interventions have been taken up in various forms by large-scale national providers like District Health Boards (Abel & Tipene-Leach, 2013).



## The social determinants of health

Following Marmor's (2005) hypothesis, in this paper we reconsider the individual/risk factor focus in relation to SUDI and underline the role of socio-economic position as a major determinant of health disparities for Māori. While the risk reduction discourse implies that poor health befalls individuals due to their own behaviour and volition (Rosenberg, 1986), the social determinants of health (SDH) perspective recognises neighbourhood deprivation, income, employment status, housing, education, negative stereotyping and racial discrimination all have a role to play in individual health and behaviour. From this position, social inequality is conceptualised as a "distal" risk factor (i.e., structural and contextual) for events such as SUDI because poverty shapes the contexts in which people live and therefore their behaviour.

To clarify the link between macro-inequalities and behaviour, Sanders-Phillips, Settles-Reaves, Walker, and Brownlow (2009) set out to provide an illustration of the chain of causation. For example, exposure to racism at the macro-system (structural) level via media stereotypes and educational policies that disadvantage specific groups, give rise to childhood experiences of interpersonal discrimination and poorer quality education. These, in turn, compromise educational outcomes and perpetuate poverty and inequality by limiting access to well-paid work and good quality housing. Childhood poverty and neighbourhood deprivation are linked to risk taking during young adulthood (such as drug use, alcohol use and smoking). Young adults living in impoverished homes are also more likely to be exposed to violence and chronic illnesses. Those in poverty are less likely to have stable home environments and reliable, secure accommodation and may have little choice over their living circumstances (e.g., may live in overcrowded homes, exposed to smoking). All of these things that create SUDI risk originate outside an individual's sphere of influence. However, rather than referring to them as modifiable or not, the SDH approach shifts the focus to understanding how "upstream" societal influences (distal factors) shape "downstream" or proximal factors, thereby affecting population health (Krieger, 2008). The SDH approach therefore draws attention away from "counting risk factors" to the importance of the health consequences of environmental, social and economic policies and the need for the government, policy makers and communities to improve the underlying conditions that impact the health of populations (Williams, Costa, Odunlami, & Mohammed, 2008).

## Maternal smoking and its social determinants

Maternal smoking (especially in pregnancy) illustrates the link between distal and proximal risk factors. The SDH approach demonstrates how this poor (and seemingly irrational) health choice is perpetuated by compelling social and economic forces over which the individual pregnant woman or mother has little influence, and of which she has little conscious awareness.

The risk of SIDS increases significantly with maternal smoking in pregnancy and with bed-sharing when the mother smoked in pregnancy (Mitchell & Milerad, 2006; Mitchell, Tuohy, Brunt, & Thompson, 1997). The high Māori SUDI rates have been attributed primarily to bed-sharing where there was smoking in pregnancy (Abel & Tipene-Leach, 2013; Ball & Volpe, 2013). As a population, Māori smoking rates are higher than non-Māori, with 32.7% of Māori (aged 15 or older), compared with 13.9% of non-Māori, smoking (Johnston & Singh, 2014). However, in pregnancy, 39% of Māori women smoke, compared with 13% of non-Māori (Broughton, 1996; Dixon, Aimer, Fletcher, Guilliland, & Hendry, 2009; Glover, 2007). Smoking when pregnant is a

socially disparaged activity (Marsh, Robertson, & Cameron, 2014) and smokers are typically blamed and condemned for their own behaviour.

So why do Māori women smoke while pregnant? Nicotine addiction is the fundamental reason that individuals persist in using tobacco products. Accordingly, smoking is increasingly seen as a disease of physical and psychological dependency which is extremely difficult for individuals to break (Centers for Disease Control & Prevention, 2010). Individuals must be highly motivated and intensely supported in their smoking cessation efforts in order for those efforts to be successful (Ministry of Health, 2011). This requires an understanding of smoking behaviour as it occurs in context.

Smoking is inextricably linked with poverty. The World Health Organization, in an exhaustive and methodologically rigorous systematic review examining the relationship between smoking and poverty internationally, demonstrated a strong inverse relationship between income level and tobacco use (Institute for Clinical Effectiveness and Health Policy, 2011). All over the world, poorer people smoke and are the least likely to quit. Those with a higher income are more likely to have access to educational messages, practical support and material resources to quit, while those living in poverty are less likely to access these resources and live within social contexts that support smoking behaviour (Twyman, Bonevski, Paul, & Bryant, 2014).

In New Zealand, Māori smoking and poverty also go hand in hand. Tellingly, the 2012/13 New Zealand Health Survey found that Māori living in affluent neighbourhoods did not have higher levels of smoking than Europeans living in the same areas (Ministry of Health, 2014). Māori residing in high income North Epsom (in Auckland) had the same likelihood of being a daily smoker as non-Māori living in the same area (8-9%). Yet, approximately 40% of Māori living in lower income Manurewa smoked. These data draw attention to the role of impoverished environments which put Māori at risk for smoking (Carroll, Casswell, Huakau, Howden-Chapman, & Perry, 2011).

What is it about poverty which places Māori at risk of smoking? Psycho-social factors need to be taken into account. Twyman et al. (2014) showed that those with higher incomes are more likely to set longer-term health goals, while those living in poverty are more likely to be living under conditions of chronic stress, without the additional psychological resources to motivate them to engage in preventative health behaviours. For Māori, the chronic stressors of poverty are amplified by social marginalisation. Indeed, a significant body of research has demonstrated that racism towards Māori is commonplace in contemporary New Zealand society and that Māori experience stigma and stereotyping, which diminish their occupational, educational and social opportunities (Kearns, Moewaka-Barnes, & McCreanor, 2009; McCreanor, 1995, 1997; McCreanor et al., 2014; Moewaka Barnes, Taiapa, Borell, & McCreanor, 2013). Institutional and interpersonal discrimination have also been associated with stress, which may also reinforce smoking as a behaviour (Brondolo et al., 2015).

Notably, Māori mothers are over-represented in the solo parent population and are more likely than non-Māori to have children young (i.e., in their late teens and early 20s) (Statistics New Zealand, n.d.). Younger Māori have been found to have particularly poor health literacy and are more likely to have no educational qualifications (Sarfati & Scott, 2001; Statistics New Zealand, 2015). Young, single Māori mothers in lower socio-economic neighbourhoods are likely to experience multiple social and psychological stressors on top of financial concerns

(McManus, Abel, McCreanor, & Tipene-Leach, 2010). Childcare responsibilities coupled with social isolation mean that smoking may become a strategy to cope with the stress of their daily realities.

An historical perspective on the issue has been offered by Turia (2013), who ties higher levels of smoking among Māori to the Pākehā (European New Zealander) colonisation of New Zealand. Early colonialists used tobacco to buy Māori land and this created an intergenerational legacy of smoking addiction which predisposes Māori to having higher rates of smoking than other ethnic groups in New Zealand (Broughton, 1996). Further, Blakely, cited in Johnston and Singh (2014), suggests that smoking has become normative among Māori and is therefore transmitted from one generation to the next – like a disease.

**What these studies tell us is that social, historical, psychological and economic factors confer a powerful distal influence on Māori women and these factors in combination compel and perpetuate smoking behaviour.**

All these factors in combination underpin higher levels of smoking among Māori – including pregnant women. Glover and Kira (2011) demonstrated, in a study of 60 pregnant Māori women aged 17-43 (Glover, 2004), that smoking was a widely accepted and normalised aspect of their social life. For example, 67% of their partners smoked – and 100% of the women lived with at least one other smoker. Importantly, women did not fully understand how damaging their smoking behaviour was for themselves and their babies. They reported feeling healthy and had no negative health symptoms which would trigger concern.

What these studies tell us is that social, historical, psychological and economic factors confer a powerful distal influence on Māori women and these factors in combination compel and perpetuate smoking behaviour (Blakely, Fawcett, Hunt, & Wilson, 2006). Māori mothers who are told to stop smoking by health professionals may feel unmotivated to do so if they are not experiencing any negative side-effects of smoking, use smoking to reduce stress and have close relationships with other people who smoke.

To date, not enough support has been given to Māori women nationwide in the area of smoking cessation. In the study of 60 pregnant Māori women, of mainly lower socio-economic status (Glover, 2004), Glover found any smoking cessation support given to pregnant Māori women was provided "too little – too late" and information was often obscure and unclear. She found some were told to cut down rather than quit; others were told not to quit (as withdrawal symptoms could stress the baby); and many believed they could not use nicotine replacement therapy while pregnant.

The SDH perspective calls for addressing the issue on multiple levels, such as providing Māori women with the means to combat the physical addiction to nicotine as well as accurate information about the dangers of smoking/smoking when pregnant. Efforts should be focused on improving health professionals' ability to offer quit advice to Māori in a way which is appropriate and in keeping with Māori sensibilities (Ministry of Health, 2003). This may mean taking advantage of existing communication networks and leaders in Māori communities and developing age-appropriate messages through communication channels which Māori find

appealing (including social networking sites which young Māori may be more responsive to). Supporting young Māori women to quit before they are pregnant (using school-based interventions), and delivering smoking cessation support to whānau (rather than just individuals) may also be more effective (Glover, 2000). In addition, Māori women may benefit from additional social and practical support over sustained periods, along with stress management techniques to cope with stressors that perpetuate the desire to smoke.

In summary, maternal smoking among Māori is embedded in an entire way of life, making it part of a social system, and smoking needs to be addressed as part of this social system in order to change (Lynch, Kaplan, & Salonen, 1997). Referring to maternal smoking in the Māori community as a "modifiable" risk factor detracts from the social context in which Māori women smoke.

**The high price of being labelled "high risk"**

A second way in which the discourse of "risk" creates a social milieu, in which Māori health is jeopardised, relates to how Māori are perceived by health professionals. References to Māori being "high risk" for poor health, and the implied status of being a "burden" on New Zealand's health system, permeate government policy and research (Ministry of Health and Accident Compensation Corporation, 2013). Once Māori are labelled "at risk", the associated stereotypes of being "hard to change", "hard to reach" and "vulnerable" further compound the problem and add to the view that Māori and Māori health problems are "non-modifiable". The negative labelling of Māori is bolstered by New Zealand's mainstream media in which Māori are often portrayed as overweight, unhealthy (Jackson, 2013), lacking in self-care and "choosing" to not access medical services that would benefit them (Hodgetts, Masters, & Robertson, 2004).

Gregory et al. (2011) have shown that images, words and concepts associated with Māori, which repeatedly emphasise Māori vulnerability, risk and poor health, have a detrimental impact on Pākehā perceptions of Māori and justify racism and discrimination towards Māori. Insights from social psychology endorse the view that risk discourse may augur unfavourably for Māori. For example, research has shown that there is a tendency for confirmation bias to accompany labels – that is, once a person is labelled, they are typically perceived by others in ways which verify that label. It is important therefore to recognise that the people we label "at risk" seem even more "hard to reach" and "vulnerable" simply because we have labelled them so (Darley & Gross, 1983; Eberhardt, Dasgupta, & Banaszynski, 2003; Rosenthal & Jacobson, 1992).

The term "self-fulfilling prophecy" was coined by Merton (1968), who defined it as a statement which alters actions, therefore causing the statement to become true (Merton, 1968; Shapiro, 1999; Steele & Aronson, 1995; Wilkins, 1976). The potential for this concept to apply to Māori was revealed by Jansen, Bacal, and Crengle (2009), who found that financial difficulties were not the only reason Māori did not go to the doctor. Māori reported that a key deterrent was embarrassment and a fear of being patronised. This suggests Māori felt judged by health professionals and would rather go without treatment than subject themselves to this. Health care practitioners may perceive this behaviour in terms of Māori being less proactive, which they (Māori) then mirror themselves. The Māori Asthma Review (Pomare et al., 1991) found similar data and noted that Māori respondents often expressed a sense of apprehension and fear of being intimidated by doctors – an understandable response to negative experiences of being judged for making health choices identified as risky and irresponsible.

The experiences of Māori, which emerged in the Māori Asthma Review, align with international research which demonstrated the powerful role of negative stereotypes on health seeking behaviour. For example, in a study conducted in Glasgow, Richards, Reid, and Watt (2003) compared the relationship between self-blame and ill health among 60 respondents (30 from a socio-economically deprived area and 30 from an affluent area). Data analyses found that a doctor's perceived emphasis on risky and unhealthy behaviours deterred patients from seeking medical care – because the doctor's emphasis on patient's "unhealthy" behaviours caused patients to self-blame for their own ill health. Self-blame and fear of blame and judgement on the part of healthcare workers were most common among respondents who lived in lower socio-economic areas. Respondents from poorer neighbourhoods also reported believing that because they were responsible for their ill health, health professionals would be able to do little to help them. Those from more affluent areas were less likely to self-blame for their poor health and more comfortable seeking health care.

**A holistic approach is required; one which considers the social milieu of the smoking mother and the social determinants of health that predispose younger Māori women to start smoking in the first place.**

Taking into account these data, we believe Māori pay a high cost for being labelled "high risk". Negative health stereotypes attached to Māori, coupled with a focus on unhealthy lifestyle choices (i.e., risky health behaviours), may deter Māori from seeking health care in the first place. In addition, the labelling of Māori as being "high risk" for poor health may encourage health providers to develop a fatalistic attitude toward Māori, thinking that nothing they do will change the behaviour of their Māori clients.

## CONCLUSION

New Zealand researchers have been successful in identifying risk factors for sudden infant death. To date, sudden infant death prevention strategies have focused almost exclusively on trying to change parents' "risky" infant raising practices. This has meant, however, that there has been little appreciation of the intimate connection between social environments and behaviour and its importance in a high SUDI risk context. Māori women who experience SUDI are more likely to live under conditions of serious deprivation and to experience alienation, marginalisation and exclusion in New Zealand society. Continuing to treat these distal risk factors as non-modifiable detracts from focusing on preventative approaches to Māori health that aim to improve the conditions in which Māori mothers live and raise their babies (McManus et al., 2010).

What is it about poverty that means Māori lack the education, the opportunity and the material, social and psychological resources to make optimal health decisions, including decisions about smoking in pregnancy? A holistic approach is required; one which considers the social milieu of the smoking mother and the social determinants of health that predispose younger Māori women to start smoking in the first place. In addition, much more work needs to be done to explore and develop interventions which de-normalise smoking in the environments of Māori women. Glover (2000) suggests that Māori themselves need to control the allocation of resources and the content and focus of education and public health prevention

activities for Māori – as Māori are acutely aware of how to deliver and design healthcare services and interventions that are culturally specific and thus more likely to be effective.

Finally, we propose the language associated with "risk reduction" may impede Māori health service engagement because the discourse of "risk" and "vulnerability" places Māori within a deficit frame and jeopardises how Māori are perceived by health professionals. This position places a very different lens on language – and suggests that risk discourse actually perpetuates Māori disengagement with mainstream health services. How can we recast risk factors so that they are seen as hazards that have been created by external forces which are distal to individuals and determine proximal (behavioural) risk factors? These kinds of questions shift attention from the individual to the distal socio-economic determinants which create lack of housing, education, employment – and the social system which fails to provide these things for Māori people to the same level that non-Māori enjoy. Further consideration is demanded; new questions must be asked and a new language should be developed.

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The authors state that there are no identifiable conflicts of interest.

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### Key Dates - Semester one first application round 2017:

<b>27 January</b>	First Application Round for Semester One grants closes
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<b>3 February</b>	Midwives notified if application meets criteria for funding and intended payment arrangements
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