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COLLEGE OF
MIDWIVES (INC)

JOURNAL

Current issues

The midwife in the 'risk' society

Joan Skinner

Evidence and practice

"I'm ready for you, baby,
why won't you come?"
How long is a pregnancy and
how long is too long?

Rhondla Davies

Research

Towards a sustainable model
of midwifery practice in a
continuity of carer setting:
the experience of
New Zealand midwives

Christina Engel

Student corner

A breastfeeding journey revisited

Tracey Rountree

Conference papers

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Welcome to the 28th volume of the New Zealand College of Midwives Journal. We are beginning our third year as the Editorial Board and are continuing to enjoy the challenge of producing a journal that seeks to be relevant, informative and scholarly.

Articles submitted to the journal undergo a peer review process. This plays a critical part in ensuring that the content of the journal is of a high standard. Each article is reviewed by two external reviewers selected for their expert knowledge relevant to the topic. Their review is undertaken without knowledge of the author's name and details. An Editorial Board member collates the feedback and then forwards this to the author along with a recommendation which falls into one of the following categories; accepted, accepted pending minor revision, major revision required before publication can be considered, or not recommended for publication. Often extensive feedback is provided to assist the author to develop their work to a standard required of a peer reviewed journal. Over the last two years the Editorial Board has received 31 journal articles for consideration, of these 14 have been published and several others are currently being reviewed.

Congratulations to Suzanne Miller whose article titled *"How safe is a tired midwife?"* which was published in the last issue of the journal, has been sought by MIDIRs for reprinting this year. This international interest demonstrates that midwives in New Zealand are producing original and innovative work which offers a significant contribution to midwifery knowledge worldwide.

In order to make the journal more accessible to the wider community the Editorial Board is currently negotiating with CINAHL (Cumulative Index of Nursing and Allied Health Literature) for inclusion in the list of journals accessed by the database. This has involved a review of our journal and peer review processes by CINAHL. Incorporation in the database will mean that NZCOM journal articles will be included in any database search results (where relevant) using CINAHL.

This issue contains an interesting mix of topics. Rhondda Davies has tackled the tricky issue of prolonged pregnancy. In the student corner, Tracy Rountree, writes about her personal experience of breastfeeding explored through an analysis of the

literature. Joan Skinner looks at 'risk', suggesting that *"midwives are faced with a significant paradox in attempting to work a 'birth is normal' paradigm within a 'birth is risky' context."* Christina Engel presents some of the findings from a qualitative study of New Zealand midwives' experiences in her article titled *"Towards a sustainable model of midwifery practice in a continuity of carer setting"*. Finally, from the 2002 national conference presentations, Jane Stojanovic tells the story of the Otaki Birth Centre, while Chris Hendry offers a report, which looks at the provision of maternity services offered by midwives in rural localities of the South Island of New Zealand. Our regular contributor, Sarah Stewart, returns with her Internet surfboard in search of practice related sites for you to explore. This is also an opportunity to draw your attention to our new column titled *"Midwifery Practice Wisdom"*, see page 2 October 2002 issue. Rhondda Davies is keen to receive your stories, anecdotes or case studies and her email address is rhondda.d@clear.net.nz.

We wish you enjoyable reading and our best wishes to you all for a happy and productive 2003...

C U R R E N T I S S U E S

The midwife in the 'risk' society

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Introduction

Midwifery practice in the current New Zealand context is beset with both challenges and possibilities. As midwives we have achieved our aim of autonomous practice. The new challenges that are faced relate now to managing care in an environment which, to a large extent, remains dominated by a techno-rational model of birth. The vision of providing care which would enhance and protect the normal process has been constrained by societal attitudes still dominated by the notions of modernity: control, technology and individual choice (Beck, 1999). The key concept which reflects this state of being, certainly in the Western

world, is that of 'risk'. Risk plays a dominant role in Western society and impacts on the lives of midwives both in the assessment of risk in the women we care for, and in the management of our own risk within the current medico-legal context. This risk paradigm directly challenges the model of birth as a normal part of human existence and presents challenges for midwives as we attempt to enact in practice this model of normality. Midwives are faced with a significant paradox in attempting to work a 'birth is normal' paradigm within a 'birth is risky' context. I propose that risk and how it is currently constructed contribute significantly to increasing intervention and escalating medico-legal action. It is a core issue for maternity care in general and midwifery in particular.

This article explores the 'risk' environment in an attempt to understand its origins and manifestations, particularly as a social and cultural construct. It briefly presents the ideas of two key risk theorists, Ulrich Beck and Mary Douglas, and then looks at the implications of this risk discourse for

maternity care and for midwifery, particularly as it relates to the idea of normality and risk screening. It presents several alternative approaches and challenges midwives to work towards a greater depth of analysis and sophistication in understanding and managing its impact on practice and policy.

Risk and society

Beck (1999) traces society's anxieties about risk back to the beginnings of modernity. Modern life, he asserts, has been constructed around the ideas of progress and controllability. Essentially this means that nature exists to be exploited and technology is expected to solve all our (and I talk about society in general now) problems. Science therefore is seen as the perfect rational project. Beck says that these ideas have been undermined in recent times by globalisation, individualisation, underemployment, and global catastrophes, both environmental and financial. These factors have led to generalised insecurity and anxiety and a collapse of the belief in controllability and safety. Along with this goes a loss of faith in professionals and in technology. Modernity itself is being

challenged yet there are not yet societal and cultural structures to replace it. We are, according to Beck, not yet post-modern but are living in what he calls late modern society where we live with the paradox of loss of faith in experts yet at the same time expect that work produced by experts should be free of any negative outcome. The levels of anxiety that are produced become counter-productive, as Beck (1999, p.4) states.

To the extent that risks become the all-embracing background for perceiving the world, the alarm they provoke creates an atmosphere of powerlessness and paralysis. Doing nothing and demanding too much both transform the world into a series of indomitable risks. This could be called the risk trap. One thing is clear: how one acts in this situation is no longer something that can be decided by experts. Risks pointed out (or obscured) by experts at the same time disarm these experts, because they force everyone to decide for themselves: what is still tolerable and what no longer?

In terms of maternity care this reflexive culture means that maternity practitioners can be constantly questioned and challenged. The accountability that results causes fear and stress not only in the practitioners but also in the consumers of maternity care as they are required to make choices with risks attached which are difficult or impossible to quantify at an individual level. Ironically this intent to avoid or control risk in itself creates its own problems. As Annandale (1996, p.417) says, *Herein lies the irony, for the panic culture that emerges, and the negative backlash that it effects, is itself a product of the consumerism and new managerialism that seeks, in fact to achieve the opposite; that is, to enhance rather than undermine the quality of care that is provided.*

It is this combination of managerialism in the form of protocols and guidelines, and consumerism in the form of informed choice and consent which provides the current background for midwifery practice. The dilemma then for the midwife is to work in an increasingly constrained environment while at the same time providing care that is flexible and truly woman centred. And all this in an environment focused on risk aversion.

A further complication of working in this environment is that choices about which risks to take or to avoid, are in essence culturally and socially defined rather than by rationality or science (Douglas, 1994). Values and uncertainties are an integral part of these choices and Douglas proposes that the choice between risky alternatives is not value-free. Choice in the end therefore, is essentially based on social rather than scientific knowledge (Fischhoff & Lichtenstein, 1981). This

decision-making process can also be seen as political as there is a distinct message about who should make decisions, who and what should matter, and whose knowledge is regarded as authoritative. The perception of risk is therefore a cultural and social process very much related to how fear is felt and expressed and how power is manifest (Giddens, 1999). We see this clearly in the decision-making processes around birth. Take

for example a woman's decision to deliver her breech baby without intervention as compared to an obstetrician's decision to deliver her baby by caesarean section. Or a woman's choice to have an epidural anaesthetic as compared to the midwife's commitment to normal birth. Whose knowledge is authoritative here? How is fear being expressed? And of course, who is at risk?

As a society we live in an environment therefore that one might say is in transition from modernity to something that we might call post-modernity for lack of a better word. We have lost faith in the modern project yet we cling to it still in the vain hope that all risk can be managed, that we can still colonise our future, that technology will save us. On the one hand we have an understanding of risk as being part of being alive, on the other hand we have the transformation of all risk as being avoidable (Castel, 1991). We have lost faith in the ability of professionals to know all, yet expect that with better risk management professionals will produce the perfect result. At the same time we understand that risk and its management are heavily value and culturally laden.

It is interesting to look at the possibilities for the role of the midwife within this context. One of midwifery's strengths is our ability to be with the childbearing woman within her social and cultural milieu where attitudes to risk can be assessed. We can juxtapose this knowledge with our own knowledge and risk perspective and go on to place this within medicine and within the larger social and cultural context. In a sense then we must deal with multiple ways of knowing and understanding, which is also placed in a political environment. It is a complex task, one might say a post-modern one. Where risk is concerned our task is to assist the childbearing woman through her decision making process. The focus on being 'with' the childbearing woman and her family in what we assert is essentially a normal experience can give us the edge in dealing with risk in its widest

interpretation. Risk then as expressed from a midwifery stance can be incorporated into what is considered normal childbirth and it is this idea that runs counter to current risk discourse, which seeks to isolate risk, manage it and avoid it.

Risk and normality

Understanding of what is risky and what is normal both dominate and delineate midwifery practice and yet are often seen as juxtaposed positions.

The dilemma then for the midwife is to work in an increasingly constrained environment while at the same time providing care that is flexible and truly woman centred. And all this in an environment focused on risk aversion.

Midwives claim expertise in the normal, medicine in the at risk. Midwives in New Zealand I would suggest claim that birth is a normal experience even within complex physical or social circumstances. Medicine claims that all

birth is risky and that birth is normal only in retrospect (Wagner, 1994). It would seem, using Beck's analysis that medicine's claim on this issue more accurately reflects current risk discourse. It is worth examining the idea of normality to see how it has been interpreted and it is here we see the link between normality and risk. Normality is, as is the concept of risk, bound to the development of modernity and science. At the beginning of the 19th century how long one lived was essentially a subjective matter. Fate played the key role. By the end of that century longevity became based on the laws of chance. We had begun to count populations and their characteristics. The notion of probability had a strong relationship with the concept of normal and abnormal (Murphy-Lawless, 1998). The normal curve was developed which plays a fundamental role in epidemiology and statistics. Normality in essence changed from being a social to a scientific concept as we came to accept the idea that one can't know something unless it can be measured (Hacking, 1990). This search for regularity and normality was an approach that resulted in the production of rules in areas where there had been a lack of depth of analysis. An example of this is the decision about what constitutes a normal labour. It needed to be measurable in some sense, so statistical data was superimposed over an individual woman's progress. As with risk, deviations from the measurable, statistically assessed norm are now seen as needing management.

In essence, science, in the guise of medicine has recreated and redefined normal. Normal became defined in a purely physical sense and was compared with the pathological. Increasingly in medicine it has come to be associated with risk, lead-

continued over...

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ing to the idea in obstetrics that normality can be defined only in retrospect. This is a paradoxical process as Wagner (1994, p.99) states.

Logically, the abnormal cannot be identified without a clear scientific definition of the variations of the normal. Obstetrics lacks this because the risk concept implies that all pregnancy and birth is risky and therefore no pregnancy or birth can be considered normal until it is over. In other words, one cannot claim both the ability to separate normal from abnormal during pregnancy and the inability to determine normality until after birth.

It is within this dominant medical discourse that we as midwives stay firm in our claim to be practitioners in normal childbearing. It is a precarious position to take given who is defining normality and who is defining risk. The challenge for midwifery is to look beyond medicine's definitions of normal and to claim our own. In the New Zealand context I would propose that midwifery sees birth as a normal process, not only physiologically, but also socially, culturally and spiritually. This is reflected in the commitment that midwifery has to partnership, to woman-centred care, to continuing lead maternity carer (LMC) midwifery in secondary maternity care contexts and to having registered midwives as core hospital staff. One of the dangers of this practice is that there is a real possibility of decreased emphasis on the physical aspects of what we currently call normal birth, i.e. birth without intervention. It is this issue that is of current concern.

Midwives are in a unique position to understand the depth and complexity of human existence and to treat the notion of normality very carefully. The normal can be found and protected in the most complex of situations. When birth is defined as 'at risk' and thus no longer normal in a physical sense it still can retain a core of normality as a social, cultural and spiritual phenomenon. We need to continue to develop our understanding of what normality is, especially if we continue to claim expertise in this area. We also need to understand the implications and difficulties of risk and how it impacts on the normality of childbirth.

Risk screening

Some of the difficulties with the risk discourse become apparent when one focuses more on the minutiae of practice. The key maternity practice which impacts most profoundly on normal childbirth is the practice of risk screening. Although it is widely accepted now that individual risk factors are poor predictors of actual risk (Rohde, 1995; Rooney, 1992) and that risk screening suffers from low sensitivity as well as low specificity

(Schettler, Solomon, Valenti, & Huddle, 1999; Yuster, 1995), it continues to be used (Mohamed, Martin, & Haloob, 2002). Alexander and Keirse (1989) propose that risk screening for the individual woman is nothing more than tautology. *When you include a diagnosis such as previous caesarian section for example and give it a risk score you may give it unwarranted emphasis. Risk screening performs poorly because risk factors are not causative of the predicted outcome. The other confounding problem with risk scoring is that they mix up potential and existing problems. The best and most precise risk prediction is made at a time when there is no further need for it, whereas the much more necessary early identification is notoriously imprecise.* (p.352)

What effect does risk screening have on women? For the individual woman labelled as being at increased risk, both the threat of poor outcome and the inability to change its course may cause feelings of guilt and inadequacy. This is unlikely to improve maternity outcome (Alexander & Keirse, 1989). Risk screening does aim to identify the few individuals who are likely to experience an adverse outcome. What it does not do however is identify those whose chances of a good outcome are so good that they are unlikely to be improved by whatever obstetrics can offer. It also fails to identify any risk factors other than physical. Social and cultural factors are usually ignored. Those scores which do try to look at other issues such as socio-economic factors face significant ethical dilemmas.

Within the New Zealand context risk screening is undertaken in the use of the referral guidelines (Ministry of Health, 2002). The degree of risk is reflected in the numbering from 1 to 3, lower risk to highest risk. Each number has recommendations about the level of need for obstetric referral and transfer of clinical responsibility. Within it, potential and existing clinical conditions are included together. No research has been undertaken on the effectiveness of these guidelines but there does seem to be reasonably widespread acceptance of their use. Certainly in medico-legal terms they are used as a marker of appropriate midwifery practice. Whether their existence is political or clinical, what effect they have on the women and whether they are useful remains to be evaluated. Given all previous research on risk screening so far, I believe it is unlikely that the guidelines will show a positive predictive value.

Wagner (1994) poses four further limitations arising from the notion of risk screening.

- Based on the medical model that birth is risky and dangerous, the pregnant woman incorporates this into her perception of her pregnancy.

- It focuses on the birth at the expense of all other areas of care and weakens the interest of other professionals involved.
- The pregnant woman becomes a passive patient and the obstetrician a baby advocate.
- The high tech hospital becomes the pinnacle of care, perpetuating the spiral of more risk and more intervention.

Interestingly, the World Health Organisation (WHO), which promoted risk screening in the 1980s as an effective way of combating maternal and perinatal mortality, has now changed its policy. The WHO 1998 document states; *Risk assessment should not be relied on as the basis for matching needs and care in maternity services. It is almost impossible to predict, on an individual basis, who will develop a life-threatening complication. Sensitivity, specificity, and positive predictive value of risk assessments using such characteristics are poor.* WHO now advocates that services be provided as close as possible to where women live, that continuity of care and well integrated reproductive health services are of a high quality and that early identification and appropriate management of obstetric complications are vital.

Oakley and Houd (1990) also propose an alternative framework to the risk approach. They support the call to rename risk as "complex need" and isolate the important ingredients in its management as: effective primary care which is adapted to individual needs, cross disciplinary cooperation and comprehensive care delivery. They propose that maternity care provided in this way may help to solve some of the problems of the risk approach and that it should be evaluated both quantitatively and qualitatively. I believe that complexity in pregnancy has not benefited from the risk approach. The alternative approaches mentioned above are all focused on the quality of relationships both with the consumer and with other health professionals. This may be an improvement but must also be placed within current social and cultural constructions of risk.

Challenging risk

These current social and cultural constructions of risk can be seen as a manifestation of anxiety. It is useful to consider how one might best deal with this reality and try to see a way forward. This anxiety about risk comes at least partly from society's transition from modernity to what might be called post-modernity. This post-modern approach incorporates many ways of knowing and being in the world. It will reintegrate science, ethics and aesthetics (Parker, 1998). This new construction of knowledge is reflected in developments across a variety of theoretical perspectives. Interestingly

the work of both Beck (1999) and Douglas (1994) deals with this. Beck proposes that one of the interesting things about current 'risk' society is that it has begun to combine elements which used to be considered as separate - "society and nature, social sciences and material sciences, the way risk is expressed and the reality of possible negative outcome" (p.4). Risk itself, he says, does not have a preference for any one form of knowing. The implication of this is that risk analysis needs to have a multidisciplinary approach. Douglas (1994) also proposes this approach suggesting that insights from social anthropology, sociology, politics and culture should be incorporated into the study of risk perception and the discussion of responsibility. She says:

A more holistic approach to the subject of risk is required, one which is not compartmentalised. It should be across nations, cultures and across disciplines. Risk should be seen as a joint product of knowledge about the future and as requiring consent about the most desired prospects. This may enable us to put the problems into perspective. (p.57)

Risk and its management could then be seen as a collaborative process, a coming together of different ways of knowing in order to reach a consensus within any given situation.

Midwifery is in a perfect position to participate in both the theoretical and practical ramifications of these new, post-modern approaches. We have a history which was until recent times isolated from modernity's mind/body separation, and current constructs of midwifery point the way to an understanding of birth which is different (Sandall, 2000; Skinner, 2002). Individuals are increasingly asking for a say in their birth experience, they want choice and control, they want a human, not a mechanistic birth (Bourgeault, Declercq, & Sandall, 2001; Thomas, 2002). Midwifery in New Zealand has responded to this by developing partnership as its philosophical base. On an international front the resurgence of midwifery points to a direction that runs counter to the risk approach and reflects a different way of viewing birth- a more holistic, inclusive, permissive and expansive model (Lay, 2000). It has been hoped that midwifery will humanise birth, view women as not only physical but also as social, cultural and spiritual beings. The growing movement for consumer participation and rights, the trend towards evidence based practice, the wide variety of choice that women have about where and how to give birth, and the international resurgence of midwifery, all point to a new way of being in the world and of dealing with risk and its consequences.

New Zealand is a fascinating place to examine this. We are at the forefront of this movement and we have made significant inroads into progressing the place of the midwife. We have autonomous state funded midwifery care, equal pay with doctors, direct entry midwifery education at undergraduate level, and growing postgraduate education, representation at every level of local and national decision making. The majority of New Zealand women now choose a midwife as their LMC. There are concerns however about how midwifery care is progressing. There seems to have been minimal rise in the home birth rate, and intervention rates have continued to rise (Ministry of Health, 2001). This may be a manifestation of the risk trap in which midwifery is still required to function. It is certainly worth exploring.

Looking at risk in maternity care from a variety of theoretical perspectives poses many questions and certainly would benefit from empirical evidence to support or challenge the assertions that are made. Do New Zealand midwives feel part of the 'risk trap' and how is this expressed in practice? To what extent do we incorporate social and cultural understanding of risk into our practice? How do we place the consumer in risk decisions? How useful do we find the referral guidelines and what effect does this have on both the referral for obstetric consultation rates and intervention rates? How do we place our practice within the birth is normal/birth is risky dichotomy? Do we believe that midwifery should concern itself only with care for normal birth and what does this mean?

Conclusion

Midwifery in New Zealand is now a mainstream profession and as such is likely to reflect societal attitudes in practice. However, given our philosophical base and our political position, we do have the potential to lead the way in the development and application of new theoretical approaches to maternity care. We have proved that we can do this in our commitment to partnership. Our strength lies in our ability to incorporate new knowledge while retaining the core of our practice which has stood the test of time- that of simply being 'with' women. Increasing understanding of complexity in care and collaborations will support it to be 'with and beyond risk'.

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"I'm ready for you, baby, why won't you come?" How long is a pregnancy and how long is too long?

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Introduction

"When is my baby due?" "How long do *they* let you go?" These are two questions with which midwives are familiar. Some women focus with understandable intensity on the actual date their baby is due. My intention in this article is to review the literature in relation to two concepts, which are fundamental to an understanding of women's experiences of "going *overdue*." The tale begins by indicating the continuing confusion and controversy over how the estimated due date is calculated and the subsequent implications of this. Then I turn to the second concept, which is the significance of prolonged (*overdue*) pregnancy (PP), including what is, and what is not, reassuring.

Dating a pregnancy - a tale of imprecision

Prior to the advent of ultrasonographic fetometry¹, women and their caregivers relied on calculation of the due date by reference to the first day of the last menstrual period. In 1836 Franz Carl Naegele (1777-1851) published *Lehrbuch der Geburtshilfe für Hebammen* [A Midwife's Midwifery Text] (cited in Gibb, 1984). In this text he reported, from his observations of French women, that a pregnancy lasted ten lunar months or 280 days. He suggested that the date when the baby could be expected to arrive be calculated by adding nine (calendar) months and seven days to the date of the first day of the woman's last menstrual period (LMP). Alternatively, three calendar months could be subtracted from the first day of LMP and then one year and seven days added. The belief then was that ovulation occurred soon after the last day of menstruation. We now know that ovulation, for a woman with a regular 28 day menstrual cycle takes place around about day 14 and conception occurs within 20 to 24 hours of that. Logic and fairness would seem to suggest a further seven days then be added to the calculation. Nevertheless, for practical purposes, midwives and doctors have continued to apply Naegele's Rule. Larger inaccuracies do occur since the occasional implantation bleed can resemble a light period, which if erroneously reported as the LMP can result in the gestation period being over estimated.

The issue of the accuracy of Naegele's Rule came under review by the late 1960's (Guerrero &

Florez, 1969, cited in Gardosi & Geirsson, 1998). More recently various studies, including large studies using routine second trimester ultrasound, sought to prove that a pregnancy was more accurately dated by adding various other numbers of days to the LMP, viz.:

- 281 (Tunon, Eik-Nes & Gioltum, 1996, cited in Gardosi & Geirsson, 1998),
- 283 (Gardosi, Vanner & Francis, 1997; Bergsjö, Denman III, Hoffman, & Merik, 1990) and
- 288 (Mittendorf, Williams, Berkey, & Cotter, 1990).

Cardozo (1993), amongst others, emphasises it is only an *estimated* date of delivery (EDD), that it is in fact uncommon for a baby to arrive on that date. The World Health Organisation (WHO) define 'term' as in 'pregnancy at full term', or 'mature' (cf. pre-mature, post-mature) as anywhere between 37 weeks (259 days) and 42 weeks (294 days) (Saunders & Paterson, 1991). A woman may have passed the estimated date but she is not considered post-term until the 295th day or 15 days after the estimated date. This too applies only if her cycle is 28 days, regularly. Cardozo (1993, p.840) is daring enough to suggest "*Perhaps we should reconsider whether it is necessary to give a precise date on which they should expect their baby to arrive*". Others, in recent texts on maternity care, stress how important it is to educate the woman with a clear explanation of how her due date is calculated, and to underline the approximate nature of the date from the very beginning of her contact with her carer (Chua & Arulkumaran, 1999; Roberts, 1993). Adding to the complexity of raising these issues is the fact that many terms, both specific and general, are used interchangeably to refer to this 'past the EDD' state. There is no space here to explain this in full but Enkin, Keirse, Renfrew and Neilson neatly describe the dilemma in the introduction to their chapter on post-term pregnancy (PTP) in *A Guide to Effective Care in Pregnancy and Childbirth* (Enkin et al., 1995). When I refer to PP this means any day past the EDD; and to PTP this means from the 295th day of gestation.

When obstetricians began to check on women's dates with ultrasound scanning in the first trimester, and to use the date provided by the scan rather than what the woman told them about LMP, they reported being able to reduce the incidence of PP to as low as 1% (Boyd, 1988, cited in Cardozo, 1993; Romero, 1993 cited in Chervenak et al., 1998). Previously when relying on women's reporting of LMP, the incidence of PTP (generally agreed in those days as 42 weeks or more gestation), was between 4 to 14%

(Boisselier & Guettier, 1995). This implies that women were responsible for the underestimation of the length of their pregnancy by providing a guessed LMP, or were unsure and their caregiver underestimated the pregnancy period from clinical signs. This in turn inflated the apparent incidence of PTPs. With the advent of ultrasound scanning, the date could be confirmed or 'corrected' by measuring the baby on ultrasound and working backwards to a more accurate, probable, LMP. Consequently, the so-called 'true' incidence of PTP was hugely reduced. By deduction this would have had a domino effect of decreasing the morbidity that may have resulted from unnecessary induction of labour (IOL) and increasing the rate of spontaneous onset of labour. However, scans in the first trimester (the first three months of the pregnancy) have an 'accuracy' of prediction of the due date with an error margin of +/- five days, second trimester (second three months) +/- seven days, and third trimester (third three months) +/- 10 days (Otto & Platt, 1991). The accuracy of ultrasound dating is dependent on age of gestation when first scanned. Which method to date the pregnancy continues to be hotly debated.

The detail of the debate regarding the implications of relying on scans to date pregnancies, their advantages and disadvantages will not be explored in this article. But I would like briefly to summarise this on-going, high-level controversy. The protagonists line up roughly along country borders: Americans, Swiss, Icelanders and some Britons, against Swedes, Danes and some other Britons. Simply put, the former group argue passionately for the greater accuracy of the *routine* ultrasound scan in the second trimester and the latter group reason with equal passion and greater logic, for not relying on the scan and instead for retention of the calendar method (Mongelli, Wilcox & Gardosi, 1996; Olsen & Clausen, 1997, 1998; Zimmerman & Wisser, 1998; Gardosi & Geirsson, 1998; Hutcheon, 1999). The crux of the debate seems to be whether the calculations used to establish the accuracy of the technological method, the non-technological method or a combination, are made from the actual date of birth in retrospect or by using some inevitably arbitrary number, such as 280, to establish irrefutably the 'certain' LMP. Further trials are on-going, and a systematic, critical literature review is called for. The Danish researchers' concluding words of their 1997 article were: "... *there is a limit to the precision of any method, since length of pregnancy is subject to biological variation and other factors. The current methods, corrected for bias, may well be close to this limit*" (Olsen & Clausen, 1997, p. 1222).

Menstrual, clinical, ultrasonographic

As has been said, midwives understand that a woman's estimated date of birth can be roughly calculated by assuming she will ovulate and conceive mid-cycle. By convention the length of gestation from the date of conception is taken as approximately 266 days. As it is still unusual for a woman to know exactly when she conceived, a gestation length of 280 days is used (to include all possible conception days from day 7 to day 21). This is calculated from the first day of her last menstrual period (FDLMP).

Whichever way the date is decided on, in the clinical setting there are assessments of fundal height against which to compare the calculated gestation for confirmation. Measurements of increases in fundal height are made using finger widths from the landmarks of the mother's xiphisternum, umbilicus, and symphysis pubis; or by tape, measuring in centimetres the distance from pubes to fundus. There is also the timing of feeling the first movement, or 'quickening' of the fetus, which for multiparous women would be around 16 weeks and for primiparous, about 20 weeks. There remains an approximate lining up of LMP, movements and fundal height to confirm the baby is appropriately grown.

There is now a computer software program being used in some maternity units, e.g. Darlington, USA, whereby head circumference, biparietal diameter, abdominal circumference and femur length are used to predict a customised due date without reference to LMP (Hutcheon, 1999). Everywhere else where ultrasound dating happens, these measurements are matched to a gestational age, the 'virtual' LMP calculated and then Naegele's 164 year old rule applied to supply the woman with an EDD (ibid; Weiner & Baschat, 1999).

Irrespective of who is 'winning' the complex debate outlined above, when it comes to allotting significance to a woman's knowledge of her individual cycle, technology appears to be gaining ascendancy over woman's self-knowledge. In reality the power and glamour of the ultrasound scanning tool tends to dominate over most women's unique and exclusive awareness of their body's subtle changes. The issue for a midwife, and for women centred practice, is – what is the price paid for such complete reliance upon high technology as being superior to a woman's self-knowledge?

The issue of safety

A separate, but closely related topic is the physiology of the onset of labour. This is the subject of another article entirely, as there is no room here to set down in necessary detail the latest theory as to why labour starts, and what can already be established. I would like to summarise the most re-

cent theory we have, by saying the baby is the trigger (Hamilton, 1998). A hunger stress in the baby is believed to set off a series of complex physiological steps that begin labour. The baby literally signals a need to move on from the sustenance of the placenta to the next growth and development climb that demands breast milk. Midwifery lore suggests that for some women this is regularly at 36 weeks for every pregnancy, and for some, as long as 43 weeks every time. It seems agreed that nature has a mechanism. Mostly the mechanism can be trusted. Also spontaneous labours up to 41 weeks are known to have better outcomes and reduced risks for mother and baby than provoked labours. (Crowley, 1999). However many labours these days are induced and one major rationale is PP (note: **not** PTP). So, why not just wait until the labour begins by itself? I am using this question to conclude this article on the dating of a pregnancy and the significance of the so-called prolonged pregnancy, since both topics lead naturally to this issue. The female body is designed to experience labour; the baby is mature; what is the twist in this tail?

Post term, i.e. *longer than 42 weeks (294 days)*, pregnancy is regarded as a concern by obstetricians and paediatricians because it is associated with increased perinatal mortality and morbidity (Crowley, 1999). The increased mortality is partly due to congenital malformations. The other main cause of death is asphyxia. Neonatal seizures are between two and five times higher in infants born after 41 weeks. Meconium-stained fluid is a common feature among the babies who die (Enkin, Keirse, Renfrew & Neilson, 1995).

How common is PTP? The incidence of PTP (see above definition, and compare with PP) when pregnancies are dated by first trimester ultrasound scanning is less than 5%; otherwise incidences are reported from 3 to 10%, or more (Chua & Arulkumaran, 1999). Women who have had one previous PTP have a 30% chance of it recurring, and those who have gone overdue with two pregnancies, have a 40 % chance they will again also have a PTP with their third (ibid). It could be, of course, that the length of a pregnancy is individual to each woman. From discussion with colleagues it seems experienced midwives have observed some women, in each of their pregnancies, always 'carry' for 36 to 38 weeks, some for 42 to 43 weeks.

Hilder, Costeloe and Thilaganathan (1998) retrospectively studied the gestation specific risks of fetal and infant mortality with prolonged pregnancy analysing 71,527 births during 1989-1991.

They concluded: "*There is significant increase in the risk of still birth, neonatal and post neonatal mortality in prolonged pregnancy*" (ibid, p.169). It is relevant to point out that many of these studies use data collected prior to widespread first trimester scanning to regularise the dating. Also it is pertinent to repeat that even first trimester scans have an 'accuracy' of prediction of plus or minus five days (Otto & Platt, 1991). As has been said, this method of dating a pregnancy is widely touted to reduce the true incidence of prolonged pregnancy dramatically (Romero, 1993, cited in

In reality the power and glamour of the ultrasound scanning tool tends to dominate over most women's unique and exclusive awareness of their body's subtle changes.

Chervenak et al., 1998; Usher, Boyd, McLean, & Kramer, 1988; Chua & Arulkumaran, 1999). Unless all pregnancies were dated similarly, there must be a question mark over the inclusion criteria selected and logically over the conclusions formed by the study of the resulting data.

Frye (1996) on the other hand questions the true extent of the problem as it is propagated by the medical profession. She believes: "*congenital anomalies, infection and intrauterine growth retardation account for much of the perinatal mortality generally lumped in to the post mature category*" (ibid, p. 29). Goer (1995), in her review of the research she accessed, with a stated aim of eliminating the myths, rebuts all the rationales put forward for evidence of younger and younger gestations being regarded as PP. She challenges the methodology of randomised controlled trials (RCTs) but does acknowledge there is risk.

Postdates pregnancy is far from cut and dried. Testing in order to induce selectively introduces risks. Routinely inducing creates more problems than it solves. Letting nature take its course is generally best, although that is not risk free either. No course of action (or inaction) guarantees a good outcome. The result is you pay your money and you take your choice (ibid, p.183).

In 1994 the National (United States of America) Institute of Child Health and Human Development Network of Maternal-Fetal Medicine Units (NICHD) reported on their RCT of 440 women who either underwent immediate induction at 41 weeks, or had nonstress testing and amniotic fluid volume assessment twice a week until there was a concern or they laboured spontaneously. They found that from the perspective of perinatal morbidity or mortality that either management approach was acceptable. Despite differences in protocols, their conclusions matched those of the Hannah Trial (3407 PP women) (Hannah, Hannah, Hellmann, Hewson, Milner & Willan, 1992). These results showed that in

continued over...

"I'm ready for you, baby, why won't you come?"

How long is a pregnancy and how long is too long?

post-term pregnancy, the rates of perinatal mortality and neonatal morbidity are similar with the two approaches to management, i.e. induction at 41 weeks, or serial antenatal monitoring and spontaneous labour. Caesarean section rates were higher in the expectant (awaiting spontaneous onset of labour) group of the Canadian (Hannah) study. However these happened because of higher level of diagnosis of fetal distress, and criteria for fetal distress were not controlled. In other words, more fetal distress, seeming to require birth by caesarean section, was decided on, and criteria used to reach this decision, varied.

The findings of the systematic review of the research into management of PP

The systematic review is regarded as the pinnacle in the hierarchy of evidence to inform clinical decision making (Greenhalgh, 1997). The conclusion of The Cochrane Library's systematic review *Interventions for preventing or improving the outcome of delivery at or beyond term*², after careful selection of 26 randomized and quasi-randomized trials of interventions involving the intention to induce labour at a specified gestational age, involving women with apparently certain dates, was: "...routine induction of labour after 41 weeks gestation appears to reduce perinatal mortality" (Crowley, 1999, p.1). In addition to the reference to the length in the period of history of the trials (18 out of 26 trials date prior to 1990), Crowley also describes the methodological quality of the trials as variable. Returning to the conclusion of the review, in other words, it may be that fewer babies die if routine IOL takes place between 41 and 42 weeks. Interestingly both the Hannah and the NICHHDU, both of which clearly conclude no advantage to waiting or to inducing, studies were included in this review.

On the basis of the meta analysis carried out within the systematic review, it was calculated that for every 500 (at least this number but possibly as many as 1000, i.e. the number needed to prevent harm) low risk women at, or beyond 41 weeks gestation, induced without (other) need, one baby would be protected, i.e. not die as an unexplained stillbirth (odds ratio: 0.20; 95% confidence interval: 0.06 to 0.70). Crowley cautions that the number (500) of inductions required to prevent one perinatal death may be biased. She explains that the Henry trial, held prior to 1969, reported a high perinatal mortality rate. So: "It may be that the number of inductions of labour required to prevent a single perinatal death may be higher in present day practice" (Crowley, 1999, p.4).

Conclusion

As the earlier discussion indicates, controversies continue about PP. Dating of a pregnancy is imprecise but best evidence recommends offering IOL after one week beyond term. Given that the timing of 'term' is imprecise, so then is term plus 7 days. This is concerning when spontaneous on-

set of labour increases the woman's chances of healthy, possibly more satisfying, spontaneous outcomes and overall less morbidity. Whose price is it to pay? Such information as I have offered, and subsequent reflection, may be useful to help midwives understand, support and inform women whose pregnancies are prolonged and who face the choice of induction of labour or further waiting for spontaneous onset of labour. Anecdotally, from discussion with midwifery and obstetric colleagues throughout the country, the 'evidence' is compelling that otherwise low risk women are being booked to have labour induced, barely having reached term. I read recently a midwife's response to the prompt in the required hospital documentation: "Indication for Induction" She had written: "At term."

My exploration of the issues around dating and going "overdue" with a pregnancy uncovers, I feel, a trail that is mired with imprecision, lack of consensus, uncertainty and incomplete knowledge. Why is it important? The pendulum seems to be swinging right back to the 1970's when IOL rates superseded spontaneous onset of labour in many maternity hospitals in the developed world until consumers and health professionals loudly questioned the practice (Cartwright, 1979, Kitzinger, 1976). Do we watch the pendulum's slow swing, or do we influence it's direction, and steady it, with good, current information and careful explanation to the women?

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- 1 This is the measurement of crown-rump length, femur length, bi-parietal diameters, and abdominal circumference by ultrasound (sound waves) radiation to compare with tables of mean measurements of these lengths and therefore calculate an estimated gestation or age of the fetus.
- 2 The last substantive amendment to the review was made in October, 1996.

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Believe it or not, the summer in Dunedin has been so good that I have been surfing in the sea and not on the Internet. However, I have found some great web sites that are particularly pertinent to clinical issues.

If you are interested in the "Term Breech Trial", visit Maggie Banks' web site that has a critique of the research (www.birthspirit.co.nz). Maggie has also uploaded an article she wrote for 'The Practising Midwife' entitled "But Whose Art Frames the Questions?" In this article she questions the effect of guidelines on midwifery practice.

The Department of Health (UK) has an information leaflet about vitamin K for babies, available for downloading (www.doh.gov.uk/vitamink/index.htm). It is available in various languages such as Hindi, Turkish and Bengali. It is a useful leaflet to give women even though it has a British context.

Sara Wickham is a British midwife who has written the book "Anti-D in Midwifery - Panacea or Paradox?" Sara now has her own web site (www.withwoman.co.uk) and has made various articles available covering topics such as care of the perineum, anti-D, lotus birth, and use of the Pinard. These articles have been previously published in midwifery journals such as 'The Practising Midwife' and 'MIDIRS Digest'. Sara is a challenging and entertaining writer so it is well worth checking out her web site. My especial favourite is "An ode to the oops trial" which is Sara's commentary on the HOOP trial.

Sherryl Wright is a midwifery student and provides a myriad of links to web sites of interest to midwives (www.geocities.com/cyberbirth/links.htm). Several of the links I checked out were EndocrineWeb.com, which has information about thyroid problems and pregnancy (www.endocrineweb.com/pregnancy.html); Everybody.co.nz which

has produced information for women about group strep B (www.everybody.co.nz/docsd_h/groupb_strep.html); and the Mental Health Foundation of New Zealand (www.mentalhealth.org.nz). This web site provides detailed literature in the form of pdf and word documents that can be downloaded, covering topics such as postnatal depressions, bi-polar affective disorder and schizophrenia. It also supplies links to various support groups and sources of further information.

The Cook Children's Medical Center is a children's hospital in Texas, USA (www.cookchildrens.org/CC/Ped/hrpregnant/hrpregnant_home.htm). This web site provides a detailed section on high-risk pregnancy, which is a good resource for midwifery students. It deals with numerous situations such as pre-term rupture of membranes, pregnancy-induced hypertension, post partum hemorrhage and sickle cell disease. I have not carefully perused each section so I cannot say how up to date the information is. It is medicalised and its perspective is American, which is a different context than here in New Zealand. However, it is a good starting point for midwives investigating certain medical conditions.

The Women's Health Information web site is managed by an English obstetrician called Dr Danny Tucker (www.womens-health.co.uk). This web site deals with all sorts of issues such as polycystic ovary syndrome, shoulder dystocia and cardiac disorders in pregnancy. It is worth having a look and certainly the articles appear to be credible work. My only reservation is that the web site hasn't been updated for a couple of years so you need to remember that the information may not be up to date.

The March of Dimes is an American non-profit charity that works to prevent birth defects and increase infant mortality through research and health campaigns (www.marchofdimes.com). The web site is very professional in its appearance and provides areas for both professionals and women. The professional section includes fact sheets on a huge range of topics and issues such as low birth weight, sexually transmitted disease in pregnancy, amniocentesis, and cleft lip and palate. The fact sheets are current and presented in a clear, proficient manner, with credible referencing. They are also available in Spanish. Again, these are written with an American perspective so need to be treated accordingly.

The National Electronic Library of Health (www.nelh.nhs.uk) is an interesting resource for midwives. It has links to the MIDIRS Informed choice leaflets, NICE, Medline/PubMed, and many more. It also links to an online tutorial that is designed for midwives to "teach themselves" how to use the Internet (www.vts.rdn.ac.uk/tutorial/nurse). The tutorial is probably more useful for "newbies" than midwives who are more experienced Internet users.

PubMed (www.ncbi.nlm.nih.gov/entrez/query.fcgi) is an American database of medical and health journals. The database carries references and abstracts of articles in midwifery journals such as 'Maternal and Child Health', 'The Practising Midwife', 'Midwifery', 'Birth' as well as medical journals. There is access to some full text articles but you need to be a paying subscriber to have this access.

I have recently found out that Nga Maia has a web site (www.ngamaia.org.nz). It is a very attractive web site with lovely photos. It gives information about the Nga Maia, trustees, membership and links to various other pertinent organizations. There is also a discussion forum, which really hasn't got off the ground yet. My favourite page is called 'birthing stories' which deals with creation and birthing.

My summer reading this year was not the usual bosom-heaving Mills and Boon, but a New Zealand magazine called NetGuide (www.netguide.co.nz). I would highly recommend it for both established Internet users and "newbies". It is a monthly magazine that deals with hard/software problems, suggests web sites and discusses issues such as safety for children using the Internet. I would especially recommend the summer edition called "Helpdesk Annual", which is a compilation of problems people have contacted the magazine's Help Desk about and their solutions. The magazine's web site is also a great resource, where readers can download software such as games, desktop accessories and Internet tools. You can work through online tutorials and learn things like how to build your own web site, make the most of your email program and keep your PC healthy.

Towards a sustainable model of midwifery practice in a continuity of carer setting: the experience of New Zealand midwives

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Introduction

It is important to understand the influence that legislation and funding structures has had on the way midwives in New Zealand practice and how these changes have impacted on the continuity of care and carer models of midwifery. The 1990 Amendments to the relevant Acts that impacted on midwifery practice in effect gave the midwife the same legal rights as medical practitioners to provide a comprehensive maternity care service for New Zealand women. The legislation changes created a precedent for midwives making them eligible to provide a full range of maternity care services. Previous legislation and funding stipulated medical involvement in the provision of maternity care (New Zealand Statute, 1904, 1925, 1945, 1971, 1977). At the time that this research was carried out, 60% of low risk New Zealand women chose a midwife as their Lead Maternity Carer (Health Benefits Ltd., 1999).

Background

The hospitalisation of women during childbirth from the late 1930s onwards changed the scope of practice of the midwife from that of being independent (Papps & Olssen, 1997), albeit supervised by the medical profession (New Zealand Statute 1904, 1925, 1945), and primarily community based, to having hospital employee status. The exception being the small number of independent midwives who continued to serve the needs of women wishing to have a homebirth (Donley, 1996). The 1971 Nurses Act reclassified the "Midwife" as a "Nurse" thereby further reducing the midwife's scope of practice (New Zealand Statute, 1971).

Research design

This qualitative study used an eclectic approach

to inform the study design, data collection and the data analysis. Ethical principles within this study were considered by the researcher and were adhered to when setting up the study and during the course of the research process. Wilson (1985) describes the four rights of research participants: The Right of Privacy, Anonymity and Confidentiality; The Right not to be Harmed; The Right to Self-determination and The Right to Full Disclosure. Ethical approval was gained from Wellington's Capital and Coast Human Ethics Committee. The method for the data collection was by recorded narrative of the participants' experience of working in a continuity of carer model of midwifery. Narrative offers a way of exploring the knowledge and culture of individuals by retaining their voice and the context of their lives. Narrative has been described as the primary scheme by means of which human existence is rendered meaningful (Polkinghorne, 1988, p.11) and the way in which people organise their experience in, knowledge about, and transactions with, the social world (Bruner, 1990, p.35). The belief that women's stories are a valuable source of learning was instrumental in choosing narrative informed by feminist methodology. The reality that midwifery is predominantly a female occupation, albeit that not all midwives share a feminist philosophy, and that midwives' stories have a rich complexity that should not be excised in the data analysis, make this methodology a natural choice for this research project. Duelli Klein (1983, p.90) explains that research for women is research which tries to take women's needs, interests and experiences into account and aims at being instrumental in improving women's lives in one way or the other. The Framework Approach to thematic analysis was used to analyse the data. As outlined in Pope, Ziebland and Mays (2000) the Framework Approach is a five step analytical process used mainly in policy research and preserves the original accounts and observations of the people studied. It is more suited to structured qualitative data collection but can be usefully adapted to narrative. Five midwives from five separate group practices, four of which had a variation in their funding model, took part in the study.

The findings of the research were presented in contextual exemplars. Italicised text represents the participants' words. Pseudonyms have been given to the participants to protect their identity as outlined in the research recruitment letter. The research was undertaken in fulfilment for the degree of Master of Arts in Midwifery and further details are available in Engel (2000).

Findings of the research

Following categorisation of key themes and significant concepts one major conceptually meaningful theme and three supporting themes emerged from the data analysis. The three supporting themes were:

- a) *keeping the balance*
- b) *job satisfaction*
- c) *setting boundaries on practice.*

The major theme was that *the balance depended on the funding model.*

A sample of contextual exemplars from the data analysis

Ciara was the first participant in the study and has been in independent practice for four years. She is a salaried employee with a Union Health Service and provides midwife led care for all of her clients. She takes on a maximum of forty-five clients per year. She would like to stay in the continuity of carer model of midwifery for another three to five years, beyond that she is not sure what direction she will go. The lifestyle is the reason that she does not see herself staying in this model of midwifery any longer. *It is the job satisfaction because the lifestyle is awful, I think... unless you get extremely high job satisfaction it is not worth doing, because in too many other ways it is too hard on your life. People who look at our group practice, because we have structured time off and very good coverage from each other think we are working in quite a luxurious way but having one week-end in three off is the only time we are not on call... when most people work forty hours a week and the rest of the time they are off. We could choose to take more time off if we wanted to but we don't actually want to miss the birth. The relationship with the women does mean you are going to be on call for them and very accessible. So every time you go out or do anything personal at all you are likely to be interrupted. I think for many of us it is very easy to get sucked in to working day and night and it needs to be checked and the need to formally pull back sometimes.*

The meaningful relationship with the woman seems to be at the heart of job satisfaction for the midwife and yet the most difficult to pull back from. Ciara has said that it is quite difficult to 'let go' when so much energy has gone into developing the relationship. *I think for many of us we are trying to pull back a bit from that, but it is hard because it is a trade-off between satisfaction in the job and becoming really aloof from it all and that would change the whole relationship... we try and keep the balance by bringing in a second midwife more, maybe at the second visit and for other visits so that there is more contact with the second midwife.*

The absolute intensity of the relationship may need to be diluted a little to help the midwife keep a sense of balance when it comes to 'letting go' for regular time off. Ciara goes on to say *I think the job can be quite idealised. There is something romantic about people becoming everything to other people, becoming an important part of their lives. Initially it is very easy to actually lose all of your own life and balance and just give everything to the job and doing that is immensely satisfying but I do not think that is sustainable.*

Germaine was the second participant in the study. The practice that she works in has a direct contract with the Health Funding Authority where the antenatal, labour and birth and postnatal modules are reasonably evenly split. Germaine takes on approximately forty five clients per year and provides midwife led care. She has been in independent practice for seven years and plans on working in the continuity of carer model until she retires. She loves the work, the lifestyle, being her own boss and professionally finds the job very satisfying. The clients' needs are very important to her but she tries to find a balance so that her own needs are met. Germaine finds it important to set boundaries with the women she cares for but she believes it is much more important to have trust in the woman's ability to make decisions on when to call the midwife. *I trust the client to make the decision and I do not think they will ring me unless they need me. I might have stayed awake initially but I think it is just experience. I am not an uptight person. The guideline is that they can call us any time. We have given them permission to labour with their support person and that they will call us when they need the midwife... the bottom line is that we will be there for them on the day or when they need us. In reality we visit the woman early in labour, do all the necessary checks, we talk about what is going on and if everything is well we may say 'right, I will see you in a couple of hours' or may be called back sooner than that. If the woman wants to go to the hospital then we do have to stay in attendance with her.*

Germaine believes that manageable caseloads will avoid the problem of midwives reaching exhaustion level. She states *I am a little sad to see the frequency with which some midwives are in delivery suite with women and just to bear their comments away from the client 'I'm so tired' and I just feel for the woman as some of that type of energy must come through to the client and you see how we survive because our caseload is not too high.*

Valuing the needs of the midwife alongside that of the woman seems to be a difficult thing for many midwives who have developed a meaningful relationship with the woman. The funding al-

location of the labour module in most of the contracts for maternity care may contribute to the reluctance by some midwives, who have put so much into the woman's care, to hand over the labour care to a back-up midwife. Germaine explains in our group *the midwife who catches the baby or does most of the care during labour and birth gets the money. There is no problem in asking your partner to come in as we look at it as swings and roundabouts. We have met the women at least once and if they come to the coffee mornings we will have met them a number of times... I have a responsibility to the woman and also to my partner. I know that I can ring her and I do and she knows she can ring me and she does. She knows she will get paid and I know that I will get paid.*

Germaine believes that the continuity of carer model of practice is sustainable for her. *Yes, I plan on continuing in this model of midwifery care until I retire. I am strict about having structured time off. I could not sustain my practice otherwise. I do not intend to burn out. I enjoy my work and the lifestyle of independent practice... experience has given me the courage to have less time as a midwife and more time as me.*

Sonia was the third participant in the study. She is a shareholder with Maternity Project Wellington (Matpro) where the funding package gives the labour and birth module a considerably better allocation of funds than the antenatal and postnatal modules. Sonia provides midwife led care to her clients and takes on at least sixty clients per year. She has been in independent practice for nine years. The job satisfaction is the main reason that Sonia loves working in the continuity of carer model of midwifery practice. *I find it incredibly satisfying. I love my work, being on call can be very difficult and we have to have strategies for that but the actual continuity and satisfaction... and having women coming back baby after baby is lovely.*

Sonia sees it as important to have good collegial relationships and a shared philosophy of midwifery with her colleagues. *My colleague and I are both comfortable with each other's philosophy of care. I like the way she works, so that is extremely important... if you can find someone who is philosophically compatible to work with, to back you and you back them, that is the absolute key to keeping your sanity.*

The financial side of Sonia's midwifery practice is kept strictly business like. She has a clear understanding with her colleague and other midwives who are within her support system on how finances are shared for work done on her behalf. *I think I have to keep it business like otherwise resentments build up. My colleague does much more of my*

visits than I do for her as I have a much bigger caseload. We have a very good friendship... but we keep all the money side of things very business like, so that it does not cause problems between us, because we do not want problems. We reciprocate a lot of the time or we bill each other depending on the individual midwife. We may work it out loosely sometimes but because we work so closely we try and keep everything so that there is no disagreement. We work well together and we do not want to blow it.

Sonia provides midwife led care and works with a modular system of funding that also lends itself to shared care with a medical practitioner. She believes the total funding is inadequate for shared care arrangements. *I know it is swings and roundabouts but when you have to share it... I actually think plumbers can make a lot more money, if you compare the hours that midwives work... if you think of the hours and hours that a midwife spends with a woman in labour, sometimes.*

Sonia's long-term plan is to continue working in the continuity of carer model of midwifery. She sees this model as sustainable for her. *I look around and see midwives burning out in all directions and here I am... it is nine years now since I started and I actually feel just as good about the job as when I started. In some ways I am unique... I think the important thing is not to dwell on the responsibility. It's like when you have children if you think too hard about all the things that could happen to them you would never have children. You would be paranoid. It is like that with midwifery. I think you do the best that you can with the knowledge that you have. If you are in doubt you refer to a specialist or you ring a colleague and talk about it. Have a mentor if you can possibly get one. I didn't have a mentor. I am going to do this job until I retire.*

Libby was the fourth participant in the study. She claims set fees direct from Health Benefits Limited. The labour and birth fees through this government agency allow considerably more for the labour and birth module. Libby had taken in excess of sixty clients per year and provided both shared care and midwife care. Libby stayed in independent practice for eight years. She has now left the practice to take up another position with regular hours. Libby explains how the unstructured nature of the continuity of carer model was for her initially. *A major change. I found it more demanding than anything I had ever done previously, more tiring, hardest part being the long periods of being on call. I developed strategies to cope with this. I think if you want to work on a one to one basis you have to accept an unstructured timetable. If the midwifery group want a team approach it is probably a bit better as you may get week-ends and regular time off... I have no problem with un-*

continued over...

Towards a sustainable model of midwifery practice in a continuity of carer setting: the experience of New Zealand midwives

structured hours as it makes it easier to care for the women, easier to detect if things are beginning to go wrong. You become more aware of the woman as a person, so in that way it is a positive thing. As far as getting called out that was not a problem.

Libby realised that she had to set boundaries with the women she provided care for otherwise she could not have continued in the continuity of carer model of midwifery for so long. *The demands of women changed over the*

years, very much so, whereas at the start continuity of carer was something new to them and something they thought 'I will give it a go'. They enjoyed the experience of continuity, so they came back and started to demand

more, or had higher expectations. An attitude of 'I can clap my hands' and you would come whenever they wanted. I would have to say 'I am sorry but I do that type of care within regular hours'. When I spoke to women initially or when they contacted me I would let them know that a booking visit and regular antenatal visits were done during daytime hours... I would say I am not coming out at 8pm for non-urgent visits. When I first started in practice I would do late evening visits and I soon realised that I had no time for myself... people were very understanding if I had to cancel... the women always had access to me.

Funding of any service ultimately has a major impact on how that service is delivered. Libby believes that the modular system may have negative financial implications for midwives working in shared care arrangements. *It is very difficult with the modular system when you want to take regular time off or emergency calls, as there is no extra payment available. I think the government have opted out of making the decision on things like that because of the general practitioners wanting to stay in obstetrics. I really do, the power the medical profession have has influenced decisions that are affecting midwifery practice. It is the midwife who is called out in the shared care situations... funding definitely directs the way one practices, as in any business. It focuses attention on how much you give regarding your time. Having regular bills to pay such as tax and other expenses certainly focuses one on the amount of work you take on.*

Libby decided that after working in independent practice for eight years it was time for a change of direction. She explains why she came to that decision. *My reason for choosing another career was not motivated by money. I left independent practice because of burnout due to the demands made upon me. Phone ringing all the time, on call twenty-four*

hours a day for long periods of time. I had my own caseload. I had good back-up. Gradually I lost most of my social contacts that I had built up over the years' as I had to keep turning down invitations. When I invited people to my place I sometimes had to leave in the middle of entertaining... I gradually cut back over a period of six months and now after eight years of being self-employed I have given up my practice completely. I am happy with my decision and have another position that gives me regular hours and plenty of stimulation... I feel more in control.

Keeping the balance between job satisfaction and setting boundaries around one's practice was seen as integral to the sustainability of practice by each of the participants in the study.

Angela was the fifth participant in the study. She has been in independent practice for eight years. Angela is a shareholder with Maternity Project

Wellington (Matpro) and does a mixture of shared care and midwife led care. Angela takes on approximately sixty clients per year. She enjoys the level of professional autonomy that being in independent practice brings mainly because I can still use all my knowledge and skills... a midwife needs to be able to use all the knowledge she has gained during her training and experience. *The outcome of your training should be to be a professional educator. That is where I get my job satisfaction. Yes, it is quite good and satisfying professionally.*

Angela sees having regular time off work as a priority. *There should be some ground rules in the group in which you work. We are aware in our practice that we all get time off, that we need time off. Definitely we encourage one day a week and then weekends when we can. If things are quiet we try and share having some of that particular weekend off, other than our planned weekends. The longer that we have been practising the more aware we are, the more aware we have become, of the importance of regular time off. Because we can burnout so quickly, if you have a lot of births in one go and a lot of visits to catch up with you sometimes feel... I think there is an awareness that the job can be draining especially if you have young children, it can be quite stressful. We have a good working relationship. We look after each other. I see this as being very important. I see midwives with poor back-up or no structured group. Not fair on the women. I have regular holidays... I find my back-up midwife very supportive. It makes a huge difference. The women don't mind. I have explained to them beforehand, I make it clear. If two women are in labour at the same time they know my back-up will come.*

Angela believes it is important to set boundaries around one's practice and realises it can be a source of stress for women and the midwife concerned when a guarantee can not be given that you will

be there for the birth. *It is an issue and also you feel the pressure from the woman for you to be there. You will have seen the woman for most of the nine months and just when she needs you most you are not there, so you have all this conflict going on in your head, but that is made easier if she has met your back-up midwife as well. Once you overcome that hurdle of 'letting go' it gets easier. There may be the odd woman where I felt I was better with than my colleague and I would then say to my colleague that if she goes into labour while I am off I will come in, than my colleague would come and do the fourth stage and make it the shortest possible time for me.*

Having a manageable caseload is integral to maintaining a balanced lifestyle for Angela and she is not easily swayed to take on more than five or six women each month. *Yes, I will say 'I'm sorry but I cannot take any more this month'. I might have taken more at the beginning or up to a year or two ago but not now. You do feel for the women when they say 'you are the third or fourth midwife I have phoned' and I say 'have you got any more to ring' and then I will give them some other midwives' phone numbers. The workload, it can be variable on whether they are primips or multips.*

The modular system of funding of maternity care does not pose much of a problem for Angela and her colleagues as they have reciprocal arrangements within the group practice. *I mostly reciprocate time with my back-up midwife... the only time money changes hands is when I have covered for someone who is not associated with my group or when I mentor a midwife. I see it as straightforward, time reciprocation is easiest but we pay each other if appropriate. No, I don't see the funding directing practice, it may do for some midwives, I think midwives would take more holidays and time off if the funding was different.*

Angela plans on working in the continuity of carer model until retirement. *I may take less clients each month. I can see myself doing that. When I look at myself I manage fine.*

Discussion

The central aim of this research was to discover the extent to which a variety of factors contributed or detracted from a sustainable model of midwifery practice in a continuity of carer setting. The influence of the funding model on the sustainability of self-employed midwives practice was incorporated as a central aspect of this research. Personal circumstances may influence how long a midwife continues to work in the continuity of carer model of midwifery but when midwives reach exhaustion and burnout levels it can be said that that particular model of practice is unsustainable for them.

Remuneration did not emerge in the data analysis as the driving force behind the participants' decision to become self-employed initially. However, the findings indicate that the funding model of maternity care became a very important consideration in the size of self-employed participants personal caseloads and in how participants viewed the labour and birth module of funding as central to the overall funding package. Self employed participants indicated that the loss of this module of payment on a number of occasions meant that their projected monthly income was reduced considerably. This had the potential for serious cash flow problems from a business perspective. Loss of clientele could impact on the financial stability of the participant's midwifery practice when all associated costs of being a self-employed midwife were taken into account. It was stated by some participants that there were financial implications where a second midwife was involved in the woman's care. Some of the participants did not view this as a financial loss as back-up was done on a reciprocal basis and was not viewed as a financial loss if the participants had a comparable number of clients.

It was evident in the findings in the theme *job satisfaction* that professional autonomy and personal accomplishment contributed to a sustainable model of midwifery practice. All participants expressed the view that they experienced high levels of job satisfaction and personal accomplishment in providing continuity of midwifery care. Sandall (1996) found that professional autonomy and personal accomplishment were linked to control over work. Self employed midwives in New Zealand have control over work to a large extent but working in a business model of midwifery may encourage large personal caseloads, for example in excess of fifty to sixty clients per annum, where control over work may be difficult to achieve. Flint (1993) and Leap (1996) stress the need to develop strategies for self-care when working in the *continuity* of care models of midwifery. All participants in the research elaborated on the need for good back-up midwifery support in order to sustain practice. Research by Brody (1996), Sandall (1997), and McCourt and Page (1996) shows that collegial support and good back-up facilities are as equally important to the woman as to the midwife concerned.

In the theme *setting boundaries on practice* participants found that it was important to set boundaries around their practice by giving guidelines to their clients on the role of the midwife in the context of continuity of carer. Participants had different strategies on setting boundaries but the general consensus was that it was important to have effective communication and to give the woman

appropriate information on the midwifery service and when to call the midwife. After long exposure to the demanding nature of an unstructured work environment one participant in the study had decided to cease practising midwifery completely.

Keeping the balance between job satisfaction and setting boundaries around one's practice was seen as integral to the sustainability of practice by each of the participants in the study. For the self-employed participants this appeared to be underpinned by the structure of the funding model. 'Letting go' at crucial times such as during the woman's labour and birth was difficult for the majority of participants in the study when so much effort had gone into developing the meaningful relationship with the woman.

The limitations of the study

The limitation of the study was the small number of participants in the research project. The fact that all five participants practised in one large geographical area and were known to me, the researcher, may also have influenced the narratives. At the time of my research I was not working in the same practice as any of the participants and I believe the participants spoke with integrity and clarity on their experience of working in the continuity of midwifery care model. Despite the small number of research participants I believe that the research findings can be generalised to a much larger population of midwives working in this model of midwifery care. Issues such as the demanding nature of the work, being on call for lengthy periods of time, similarity of the maternity care funding models nationally are all common features for midwives working in this model of midwifery. For self-employed midwives the relevant issues discussed in the narratives would be of a similar nature to issues of concern to the majority of midwives who operate financially viable midwifery practices in New Zealand.

Conclusions

The structure of the maternity care funding model did appear to influence the size of participants' personal caseloads. However the participants' personal and midwifery philosophy appeared to be more influential in the organisational aspects of individual midwifery practices.

Recommendations

- A flexible funding model that leans towards easy remuneration of back-up midwifery services and takes into account the on-call nature of the work.
- Capitation funding that would have the potential to create financial stability for independent midwives. This could be adjusted up or down in order that variables were accounted for.

- Inclusion of pre-conception care, family planning and lactation consultancy as additionally funded modules. This would enable midwives to offer a wider range of women's health services and in turn create a more secure financial base for self-employed midwives.

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This article formed an assignment in the Human Lactation and Breastfeeding Module within the BHSc degree at Auckland University of Technology. It was written in 2001 during Tracey's first semester of study. The assignment brief was to relate knowledge and understanding of breastfeeding and lactation, to a woman's experience.

A breastfeeding journey revisited

Tracey Rountree BHSc (Midwifery), NZRM, NZRCpN.

Biography: I became interested in midwifery when I was pregnant with my first son. However it was to be 10 years, three sons and three countries later before I was to commence my formal midwifery training at AUT, in 2001. I am currently working as a staff midwife at National Women's Hospital, Auckland. Future plans include study towards a MHSc. Contact: trountree@xtra.co.nz

Introduction

Breastfeeding has been described as the most intimate form of communication a woman may have with her child (Kitzinger, 1998). It is an expression of love (Kitzinger, 1998), a precious gift (Spangler, 2000), and an act that nurtures the maternal-infant bond (Lauwers & Shinskie, 2000; Rose-Neil, 1984; Spangler, 2000). Kitzinger (1998) places emphasis on the relationship breastfeeding affords the infant, describing this first relationship as the foundation for all other relationships in life. The La Leche League considers breastfeeding as the optimal way to feed a baby. Benefits to the mother and baby are well documented and include nutritional and immune benefits to the baby, and physical and health benefits to the mother (e.g. Beasley & Trlin, 1998). Both mother and baby profit from the emotionally enriching experience (Kitzinger, 1998; Lauwers & Shinskie, 2000; Mohrbacher & Stock, 1991; Spangler, 2000).

This article describes my experience of breastfeeding my first born son, Michael. He was born in 1990, in Bangkok, Thailand. Significant factors such as family, friends, hospital professionals, and the cultural influences that impacted on my breastfeeding experience, are discussed. Factors that contributed to my breastfeeding experience, and to the difficulties I encountered, are identified and explored.

Initial decisions to breastfeed

Even prior to my pregnancy I had already decided that, should I ever have a baby, I would definitely breastfeed. Due to fertility problems my pregnancy was very unexpected, but very much wanted, and our baby was very precious. I saw breastfeeding as the best way to feed my baby. I never questioned my decision to breastfeed; likewise I never really questioned the validity of the information on which I based this decision. Thinking back, I guess I based my decision to breastfeed on information from a variety of sources - the media, my nursing experiences, family, friends and perhaps, most importantly, a very strong gut feeling that it was the right thing to do. My husband was happy to leave feeding decisions to me, though I do wonder what his reaction would have been, had I decided not to breastfeed from the outset.

Up to 65% of women decide on infant feeding intentions before pregnancy, and the majority of all women have decided before birth (Earle, 2000; Huang, Chen & Wang, 2000; Lauwers & Shinskie, 2000; McLeod, Pullon & Basire, 1998). A strong belief in the value of breastfeeding, and a positive attitude, are powerful motivating factors for women choosing to breastfeed (Huang, Chen & Wang, 2000; Lauwers & Shinskie, 2000). The New Zealand College of Midwives (NZCOM) (1992) suggests that a woman's breastfeeding success corresponds to her level of motivation. However, this can be influenced greatly by others. Health professionals, significant others, and the woman's partner, all play crucial roles influencing the breastfeeding decisions made by the woman (Huang, Chen & Wang, 2000; Kessler, Gielen, Diener-West & Paige, 1995; Lauwers & Shinskie, 2000; NZCOM, 1992; Raj & Plichta, 1998). Women who choose to breastfeed often have strong breastfeeding role models within their network of family and friends (Hoddinott & Pill, 1999; Kessler, Gielen, Diener-West & Paige, 1995). Women who receive support from their significant others and from lay support groups, are more likely to breastfeed (Ryan, 1997). Factors that have negative breastfeeding associations for women include; young maternal age, lower socio economic class, low educational levels (Hoddinott & Pill, 1999), lack of social support (Raj & Plichta, 1998), smoking (McInnes, Love & Stone, 2001) and a desire for paternal involvement (Earle, 2000).

Reasons for breastfeeding are both maternal and infant focused, and also reflect a sphere of wider influences. These include pregnancy related issues such as uterine tone, control of bleeding (Spangler, 2000), weight loss and body image. Non preg-

nancy maternal health concerns include beliefs about; breast cancer (McLeod, Pullon & Basire, 1998; Lauwers & Shinskie, 2000; NZCOM, 1992; Spangler, 2000), empowerment, osteoporosis and maternal - infant bonding (Lauwers & Shinskie, 2000; Spangler, 2000). Infant related benefits include optimal nutritive values of breastmilk, immune benefits, increased bonding and health benefits including lower rates of Sudden Infant Death Syndrome (Spangler, 2000).

My decision to breastfeed was reinforced during my pregnancy by the steadfast belief that it was as nature intended, and more importantly, that breastfeeding was better for the baby. No baby of mine would have a bottle!

Antenatal preparation

I had little prior exposure to breastfeeding. As a child and young woman in New Zealand, I had had very little interaction with pregnant mothers, infants, or breastfeeding. It seemed that breastfeeding was something that was done in the privacy of the home and certainly not in front of others. While living overseas, most of my expatriate friends in Indonesia and Thailand, returned to England or Australia to have their babies, again limiting my exposure of early breastfeeding. The antenatal classes I attended in Indonesia and Thailand did address breastfeeding. But, unfortunately, due to moving countries and then the premature arrival of my son, I was unable to attend these particular sessions. Thus, most of my prior breastfeeding learning experience was based on several weeks' clinical experience on a postnatal ward at National Women's Hospital in the early 1980s. My recollection of this experience was of bottles, four hourly feeds, breastfeeding for increasing minutes per day, starting at one minute per side per feed, babies being kept in the nursery and taken to their mothers at feeding time.

Women who associate with breastfeeding women are more likely to breastfeed and are more likely to show confidence in their mothering abilities (Hoddinott & Pill, 1999; Lauwers & Shinskie, 2000). However, Hoddinott and Pill (1999), do caution that exposure to unfamiliar women breastfeeding can be a negative experience. Kitzinger (1998) suggests that a woman, who has had little exposure to breastfeeding, may harbour doubts about her ability to breastfeed and to produce sufficient milk. A society that fails to recognize breastfeeding as the optimal way to feed a baby sends conflicting messages to women and can act as a deterrent to breastfeeding (Lauwers & Shinskie, 2000).

During my pregnancy, my Thai and Indonesian obstetricians were my only health care providers. Unfortunately they had neither the time, nor the inclination, to discuss my feeding plans. I was unaware of any alternative health professionals who could offer care to a pregnant woman. However in Thailand I did join an expatriate organisation, Bangkok Mothers and Babies International. This organization provided antenatal classes and offered support, friendship and companionship to pregnant women and mothers.

The NZCOM (1992, p.17) recommend pregnant women are "counselled" about breastfeeding. This enables the midwife to appreciate the woman's history, breastfeeding knowledge, feeding plans and the level of available support available. The mechanics of breastfeeding and any possible problems can also be discussed. Benn (1998, p.111) writes, "education is the cornerstone supporting the entire framework of lactation and breastfeeding" (p.111). Lauwers and Shinskie (2000) agree, commenting that the earlier a woman receives advice and information on breastfeeding then the more likely she will breastfeed for a substantial period of time. A woman who understands what breastfeeding entails is more likely to persevere through any difficult early patches (Rose-Neil, 1984). Prior knowledge of potential breastfeeding problems enables mothers to cope better and to preserve breastfeeding (McLeod, Pullon & Basire, 1998).

Breastfeeding literature

During my pregnancy I endeavoured to be well read on pregnancy and birth. Not easy in Indonesia where books were censored and every picture or outline of the female form was blacked out in accordance with government policy. Of the four pregnancy books I had, three were published in England.— "Baby and Child", by Penelope Leach (1989), "Pregnancy and Childbirth", by Sheila Kitzinger (1986) and "The Complete Handbook of Pregnancy", edited by Wendy Rose-Neil (1984). "Pregnancy", by Dr Teoh Eng Soon and D.E. Lam (1988), was written and published in Singapore. As I was having my baby in Asia, this last book was significant, especially in regard to practices I would come across in Asian hospitals.

In three books, the authors are somewhat ambivalent towards breastfeeding. Leach (1989, p.51) describes breastmilk as "physically better for babies",

but then adds "but modern baby formula can be very nearly as good". She then goes on to say "breast or bottle, or even both will do... as long as feeding is happiness" (p.131). Kitzinger (1986) devotes just 5 pages of her 350-page book to breastfeeding. She describes the mechanics of breastfeeding well; but ignores the maternal and infant benefits of breastfeeding, the nutritional superiority of breastmilk over artificial formula, and the importance of breastfeeding in the maternal-infant relationship. Soon and Lam (1988) were even more ambivalent towards breastfeeding arguing that "there is actually no harm in giving baby the bottle... formula is as nutritious as milk from the mother's breasts" (p.270). In the fourth book, Rose-Neil (1984) details both infant and maternal benefits of breastfeeding. These included superiority of breastmilk, nutrients, and antibodies for the infant, combined with maternal benefits such as assisting with uterine tone and postnatal recovery, and the shared benefits of maternal-infant bonding.

With literature displaying such ambivalence towards breastfeeding and the lack of professional support, it was a wonder that I decided to breastfeed at all. It was only my steadfast belief that my baby would benefit most from breastfeeding, that kept me determined to breastfeed.

After the birth

My son was born by emergency caesarean section at 34 weeks gestation following a large antepartum bleed as a result of an undiagnosed anterior placenta praevia. After the birth I struggled through the grogginess that a general anaesthetic leaves and the pain inadequate analgesia fails to mask. My son was critically ill for several days. My only concern was whether my baby would live or die. My son was too ill to be fed and, in the ensuing flurry of activity, my breasts were somewhat neglected. It never occurred to me that I should express, and it was never suggested that I should.

When a premature baby is unable to breastfeed, it is imperative that the mother begins expressing as soon as possible in order to initiate, and maintain, a milk supply (Bartle, 2000; Gotsch, 1990; Spangler, 2000). Kitzinger (1998) adds that the breastmilk a mother produces after a preterm delivery has a higher protein content than usual, and offers valuable protection to the infant from

necrotising enterocolitis. However, Soon and Lam (1988) belittle the value of colostrum. Whilst suggesting that a determined mother could begin breastfeeding within the first 24 hours after delivery, the text notes that feeding immediately after birth was "not always advisable nor convenient" (p. 267).

Colostrum is often withheld in Thailand (Lefebvre & Voorhoeve, 1999). In Thailand there is a belief that colostrum is bad for the infant and that infants are incapable of sucking (Kotchabhakdi, 1988). This leads to a delay in breastfeeding, which in turn causes problems in the initiation and maintenance of breastfeeding. According to the United Nations Children's Fund (1996), the exclusive breastfeeding rate in Thailand (1986-1995) at four months of age was only 4 %.

These culturally based beliefs clearly influenced my breastfeeding experience. Especially with regard to non-expression of milk in the first few days, the withholding of colostrum and the lack of any promotion of, or assistance with, breastfeeding.

Early feeds

Three days post delivery I woke up to very painful engorged breasts. I can remember very clearly both the pain and the boiling hot compresses applied to my engorged breasts. My milk had "come in", and since Michael now had a naso-gastric tube in situ it was suggested I express. Expressing was fiddly, time consuming, and no substitute for a baby; but it was helping Michael, so I was pleased to do it. I had plenty of milk, far more than Michael would need, so I ended up donating the excess to the hospital's milk bank. Up to this point Michael had been given formula but no colostrum. Michael's condition was stable, but I had yet to hold him in my arms, let alone give him a breastfeed.

The staff were keen for him to feed orally, but insisted that bottle feeding was easier for him. Once he was feeding well from a bottle he would then be able to breastfeed. In order to encourage Michael to suck, he was given a pacifier. Another complication was that Michael was finding it difficult to maintain his body temperature and could not be removed, albeit briefly, from the incubator.

For most babies, breastfeeding is easier and less stressful than bottle-feeding, with sucking, swallowing and breathing more easily coordinated at the breast (Bartle, 2000; Gotsch, 1990; NZCOM, 1992; Spangler, 2000). Introducing bottle feeds

continued over...

A breastfeeding journey revisited

before breastfeeding, is liable to cause problems such as; exacerbation of suck-swallow-breathe co-ordination problems, loss of confidence for the mother, interference with supply and demand of breastmilk, an increase in bottle feeds as opposed to breastfeeds (Bartle, 2000; NZCOM, 1992) and nipple confusion (Gotsch, 1990; NZCOM, 1992).

Feeding via a nasogastric tube during transition to breastfeeding increases the likelihood of successful breastfeeding (Kliethermes, Cross, Lanese, Johnson & Simon, 1999). The use of pacifiers is generally discouraged (Lauwers & Shinskie, 2000; Spangler, 2000; Weatherly, 2000). However Lauwers and Shinskie (2000) do concede benefits for preterm infants using pacifiers, though only during nasogastric feeds.

I was able to hold Michael for the first time when he was seven days old. I'm sure he would have preferred to nestle up to me, skin-to-skin, listening to my reassuring heartbeat and to smell me. Instead he was bundled up in multiple layers of blankets. Michael had his first breastfeed when he was ten days old. It was in Intensive Care, with little privacy or help from the nurses. It was a wonderfully satisfying experience. It meant more to me than just the act of breastfeeding; it was an intimate form of closeness and a real indication that Michael was getting better. I found breastfeeding very easy, despite all the obstacles that prematurity brings and despite the lack of assistance. Breastfeeding times were moments of joy, where everything seemed to be just so right.

Bartle (2000) and Weatherly (2000) suggest infants be afforded the opportunity of kangaroo care, offering the infant the chance to be warmed by the mother's breasts, and have the chance to smell and taste her breasts.

The next week was a juggling of nasogastric feeds, bottle feeds, and breastfeeds complicated by Michael's inability to maintain his temperature. However things did improve and by seventeen days of age he finally had his nasogastric tube out and he was in a cot in my room. At this stage Michael was having alternate breastfeeds. How he must have looked forward to my soft warm breasts!

Breastfeeding at home

My son and I finally went home three weeks after his birth. Michael was breastfeeding on demand. He was a slow feeder, and would take up to an hour to feed, waking just one hour later for another breastfeed.

On the day of discharge Michael had loose stools. Staff dismissed these, but the loose, green stools continued and Michael started to lose weight. Tests were negative for any infectious causes, but positive for reducing substances and a diagnosis of lactose intolerance was made. I was advised Michael would not be able to breastfeed due to the lactose content in breastmilk and soy formula was recommended. The intolerance had probably occurred as a result of antibiotic therapy, and was not unexpected given his circumstances and prematurity. I was devastated! I firmly believed that Michael's health was of the utmost importance and, as a result, somewhat reluctantly I commenced Michael on the recommended soy formula.

However, I was not deterred from breastfeeding at some further point in time. I continued to express and discard at every feed time. It was a very trying and exhausting time, but I wanted to keep my options open and be able to breastfeed Michael when things improved. Every week or so I would give Michael one breastfeed, but the diarrhoea would reappear, and the breastfeeding would cease.

I returned to New Zealand when Michael was 2½ months old. At this stage I was able to breastfeed Michael just once every day, and even though this produced slightly loose stools, Michael was happy and gaining weight. Feeding more frequently would invariably result in profuse diarrhoea.

I consulted a paediatrician, who diagnosed a relative lactase deficiency, but was very hopeful that the situation would improve and that I would be able to breastfeed more frequently. I continued to breastfeed Michael once a day; expressing and discarding the other feeds. Unfortunately things did not improve, and after one further month, I gave up trying to breastfeed. I didn't feel sad, angry or upset. I knew I had tried my hardest, and it just hadn't worked out. My husband and family had all been very supportive of me but were relieved when I decided to stop breastfeeding, as it seemed so futile to continue.

Infants, who have had antibiotic therapy, may experience lactose overload (Hull & Johnston, 1993; Lauwers & Shinskie, 2000). This results in green frothy loose and frequent stools. Lauwers and Shinskie (2000) suggest this may be a temporary problem and can be simply managed by breastfeeding only on one breast per feed, allowing the baby to receive the low lactose and high fat hindmilk. *(I nearly cried when I read this. Perhaps the answer had been this simple all along!)*

Wattie Whittlestone (1967, cited in NZCOM Midwives News, 2000), argues for newborns to

have only colostrum. Colostrum is especially high in the bifidus factor, which is thought to promote the activity of lactase. Therefore a deficiency of colostrum and hence the bifidus factor can result in lactose malabsorption. Whittlestone believed that a baby's ability to digest lactose was dependent on receiving nothing but colostrum from birth.

The breastfeeding culture in Thailand had influenced my breastfeeding, and hence the outcome of my breastfeeding experience. Had Michael been born in New Zealand, he would undoubtedly have been given colostrum, and perhaps his intolerance to lactose would not have occurred.

Cultural influences on breastfeeding

Giving birth in a foreign country did make me feel very vulnerable. My husband and I felt almost overwhelmed by the events, lack of family support, the change in culture and language difficulties. I felt I had little say in our care or in the decisions made. It was difficult to be assertive in the early days after my son was born. I had been in Thailand for only one month, and had met my doctor just once. My Thai doctors had very good command of the English language. However, breastfeeding was very much the domain of the obstetric nurse. The nurses were all Thai, and unfortunately most did not speak English. We did however muddle through, using my Thai, the nurses' limited English and a lot of gesticulation. Unfortunately, I did not receive a lot of breastfeeding support from the staff. However, at the time of Michael's birth most mothers left the hospital with free samples of formula, which is indicative of the value placed on breastfeeding.

Lauwers and Shinskie (2000) suggest that cultural influences and barriers play a very important part in breastfeeding decisions. Language difficulties can serve to increase cultural barriers (Lauwers & Shinskie, 2000) and women who have problems communicating with their caregivers generally have less positive experiences (Small & Rice, 1999).

For the period 1990-1998, the Population Reference Bureau (1999) cites Thailand as only taking "some action", with regard to the implementation of the International Code of Marketing Breastmilk Substitutes. James (1994, cited in Lauwers & Shinskie, 2000) notes a correlation between decreased breastfeeding rates and the availability of free formula samples.

In Thailand I do not ever remember seeing a woman breastfeed. Breastfeeding in public was an absolute

social taboo and something that was actively discouraged in antenatal classes and in hospital.

As Lauwers and Shinskie (2000, p.161) suggest "lack of breastfeeding as the cultural norm can leave new mothers with little confidence in their ability to breastfeed or little understanding of how the process works".

Conclusion

It seems that everything was against me in terms of breastfeeding. I was in a country that had a breastfeeding culture different to that of my own. Antenatally, I had little breastfeeding preparation or counselling. After the birth of a sick preterm baby, I had little encouragement to breastfeed, and no family, friends or specialist professionals to help me. My son did not benefit from colostrum or early skin-to-skin contact, and he had adequate opportunity to refuse the breast in favour of bottle-feeding. Despite all these obstacles, we somehow made it, and I was able to fully breastfeed my son, albeit briefly. For me the one thing that kept me going, especially in those early days, was my belief that breastfeeding was the right thing to do.

Clearly, successful breastfeeding is inextricably linked to a woman's motivation to breastfeed (Hoddinott & Pill, 1999; Huang, Chen & Wang, 2000; Lauwers & Shinskie, 2000; NZCOM, 1992; Papinczak & Turner, 2000). From before a woman is pregnant, factors influence many of her breastfeeding decisions and will continue to impact on her breastfeeding experience (Lauwers & Shinskie, 2000; McLeod, Pullon & Basire, 1998). Cultural beliefs are often more important to a woman than rational and valid practices, and may have a negative impact on the breastfeeding experience for some women and their babies (Mohrbacher & Stock, 1991). Obstacles to successful breastfeeding can be overcome, but this is often dependent on the determination of the woman and the support and encouragement she receives.

Footnote

Michael remained intolerant to lactose until he was eighteen months old. I subsequently went on to breastfeed my next son, born at 32 weeks gestation, for fifteen months. My third son, born at term, was breastfed for eight months when he decided to wean himself.

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Papers presented at the 7th Biennial New Zealand College of Midwives Conference in Dunedin, July 2002.

In the October 2002 issue we printed several papers presented at the conference. In this issue we include a further two papers. We regret that we are unable to print all of the papers but hope that this selection will highlight interesting issues for midwives. The papers have not gone through a peer review process but have been prepared by the presenters in a form for publication in the Journal.

The organisation of maternity services by midwives in rural localities within the South Island of New Zealand

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Background

At the time of this study (September 2001) there were twenty-one rural maternity facilities (meaning hospitals or birthing units) in the South Island of New Zealand, located within rural towns. None of these facilities provide for caesarean sections. Sixteen of the facilities were located more than 60 minutes from a secondary or tertiary maternity facility (HFA, 2000). The nine rural facilities scanned for this study accounted for about a third of the primary facility births and 66.9% of rural facility births in the South Island. See Table One for the types of maternity facilities, excluding homebirth, in New Zealand in 1999.

The scan was carried out as part of a midwifery doctoral study into the organisation of maternity services in rural localities by midwives.

Methodology

In August 2001 midwives providing services around nine rural maternity facilities from three District Health Boards (DHBs) in the South Island of New Zealand, contributed information for a contextual scan of maternity service provision within each of their localities. The contextual scans were based on the concept of environmental scanning (Correia & Wilson, 2001). The findings from these scans were then amalgamated to provide an indication of the issues facing maternity service provision by midwives within the context of the rural South Island. First, a scan questionnaire was sent out, and then the researcher visited each facility to meet the midwives and complete the questionnaire with them.

The four main components of the scan process included:

- the development of a broad description of the maternity services provided within the locality
- a profile of the community in which the facility and service was located
- a profile of the local health services provision issues
- identification of threats and opportunities impacting on the future of the maternity services.

Following the researcher's visit, the individual scan results were returned to the informants who reviewed and corrected the findings and contributed to a set of draft strategies for the further development of their service. The scan profiles of each service locality and its context were then used to collectively identify key issues that seemed to have the potential to influence the survival and enhancement of the rural maternity services.

Ethical approval for the research was obtained from the Ethics Committee of the University of Technology Sydney. A copy of this was then lodged, as requested, with the New Zealand Ministry of Health Ethics Committee.

Scan findings: rural maternity services

Service locations

All of the birthing facilities were located within provincial towns with catchment populations of 5000 - 20000 people. All the facilities were located 1 to 1.5 hours road travelling time from a secondary or tertiary maternity facility. Transfer processes increased the distance by at least 30 minutes. Most were spaced at least 60 minutes from another rural maternity facility.

Maternity facilities

Seven of the maternity services were located within 10-15 bed community hospitals in maternity 'wings' consisting of 3-4 postnatal beds and 1-2 birthing rooms. One of the facilities was identified as a Birthing Unit that was midwifery owned and managed. The other service was located within a rural hospital that had reduced its beds to provide only maternity services. Two of the facilities were owned and managed by a base maternity hospital, while six were owned by a Community Trust and one by a midwife. Three of the trust-owned community hospitals were in need of considerable upgrading. All the facilities employed midwives and nurses to staff their maternity service. Employed midwives in five facilities had well established midwifery Lead Maternity Carer (LMC) services (where the midwife takes total responsibility for the clinical management of the woman's pregnancy, birth and postnatal care).

Table 1 Place of birth in the South Island of New Zealand 1999 (MoH, 2001)

Place of birth in the South Island (SI)	Number of facilities	1999	1999 (% of all South Island Births)
Births in tertiary obstetric units	2	5462	51.31
Births in secondary maternity hospital	7	4246	39.89
Births in primary and rural facilities*	21	937	8.8
Total births	30	10645	100
Births in rural primary facilities**	16	468	50% of SI primary births
Births in the study group facilities	9	313	66.9% of SI rural facility births

* One of the services in the study was omitted in the MoH '1999 Report on Maternity' their 33 births for 1999 have been included in this total.

** Primary facilities 60 minutes or more from a secondary or tertiary obstetric facility.

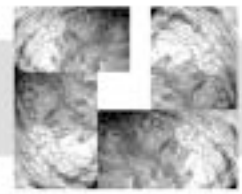


Table 2 Volume of maternity activities and outcomes for the nine rural services in 1999, compared with national volumes. (MoH, 2001)

Facility	Normal Births	Breech	Forceps	Vacuum extraction	Induction	Episiotomy	Still births
1	26	1					
2	30	2	1			2	
3	91			1	5	3	
4	21		3		1	6	
5	55		11		11	13	
6	10						
7	33						
8	13						
9	15			1			
Total	294	4 (1.2%)	15 (4.8%)	2 (0.6%)	17 (5.4%)	24 (7.6%)	0 (0%)
All 55 primary Facilities	5882*	22 (0.3%)	97 (1.6%)	160 (2.6%)	592 (9.6%)	316 (5.1%)	3 (0.04%)
NZ total rates for all facilities	36582	468 (0.9%)	2801 (5.3%)	2559 (4.8%)	13480 (27.7%)	5136 (12.4%)	440 (8.2%)

* This does not include the 261 primary births wrongly coded as caesarean sections (MoH, 2001:32)

Volume of maternity activities

The total births per facility ranged from 13 to 90 per year, with an average annual birth rate of 35 births per facility. The combined total births of the three DHBs¹ within the scan area was estimated at 4697 for the 1999 year (Ministry of Health, 2001). The total births in rural facilities were estimated at 426, indicating that the average rate of rural births for these DHBs was 9%. The births with the facilities scanned (313) represented about 83% of all the rural births in these DHBs. See Table Two for further details.

Midwifery Lead Maternity Carer (LMC) Services

Overall about 60% of all births within these facilities had midwifery LMCs, three facilities had 100% midwifery LMCs. By January 2003 the midwives estimate that all but one facility will have 100% LMC midwife births. Up until July 2001 employed midwives in four facilities did not provide midwifery LMC services but provided midwifery care for General Practitioner (GP) LMCs.

Home birth services were mainly provided by self-employed midwives within the catchment area of five of the facilities. These midwives also accessed these facilities to birth women. Four facilities were totally reliant on employed midwives to provide all the community midwifery services. Only three facilities had employed midwives who offered

home birth as an option. All the employed midwife informants expressed a conflict between trying to maintain viability of their facility and offering home birth.

Medical LMC Services

Over the 12 months prior to the scan, GP LMCs attended an average of 40% of births in the facilities under study. Midwives reported that GP LMCs were choosing to exit provision of maternity services in the rural facilities by December 2001. Five facilities provided a location for regular obstetric clinics. The obstetricians and 'their midwives' visited up to fortnightly, from two base maternity hospitals and one private obstetric service. Midwives reported that these clinics enlisted 'low risk' women to birth away from the local maternity facility. Most of these obstetricians relied on local GPs to provide some of the antenatal care and local independent midwives to provide the postnatal care.

Pregnancy and parenting programmes

Seven facilities provided these services. Plunket and Parents Centre also offered programmes. There seemed to be little collaboration between the local midwives and these providers.

Postnatal transfer back to the rural facility

An average of 33% (range 14% to 60%) of admissions to the facilities were women needing post-

natal care following birth elsewhere. These women tended to stay about a day longer than women who birthed in the facility.

Midwifery co-ordination of facilities

Three of the facilities had an established midwife co-ordinator or a midwife manager role; two facilities had some hours per week allocated for the functions. Within the six months prior to the scan, three facilities had allocated a midwifery-LMC establishment role to an employed midwife. Two of these roles were 12-month contracts. The remaining three facilities did not have a designated midwife co-ordinator and the service management was informally taken on by one of the midwives. Two of these latter services had hospital managers supporting their employed midwives to establish midwifery LMC services.

Management and monitoring of maternity services

Only one of the facilities had a formalised process in place to monitor the activities of the maternity facility, other than the 'birth book', which recorded each specific admission. No overview summary was developed and few facilities had formalised 'booking' processes that enabled them to forecast their workload. The activity data for the scan was provided after the scan visit on a form created by the researcher specifically for the facilities.

Only two facilities appeared to have systems in place for monitoring midwifery activities, including individual midwives' caseloads. Because some facilities were just establishing their midwifery LMC services with employed midwives there was poor forecasting data on which to estimate the actual number of midwives required. Only one facility had an arranged caseload limit for employed midwives.

There appeared to be 22.5 full time equivalent employed² (FTE) midwives between all the facilities (2 FTE were planning to leave in the following 3 months). The existing FTE level would calculate at 1 FTE employed midwife per 20 births in these facilities. With postnatal women included in the total, each FTE midwife would care for an average of 34 women per year. These employed midwives cared for about 774 inpatient admissions per year, with an average day stay of 3.5 days or 2709 bed days (according to the scan informants). This type of data does not appear to be collected or analysed by the midwives or their managers to project and manage the midwifery and maternity workforce in these settings. The distri-

continued over...

The organisation of maternity services by midwives in rural localities within the South Island of New Zealand

bution rather than the volume of midwives seemed to be more of a problem.

Facility maternity back up services

Karitane nurses, obstetric nurses, enrolled nurses, registered nurses and hospital aids were available 'on call' in seven of the facilities to support the midwives to provide 24-hour cover when a woman was in the facility. Two of the facilities relied on the midwife to carry out routine cleaning and provide meals. The midwives in four of the facilities were transferring from a 'core' facility role to an LMC role, which means they will become more involved in the co-ordination of the whole maternity service than previously. They were aware that they needed to shift their focus from facility to community maternity service provision. This would include managing the logistics of midwifery coverage of the facility for independent midwives (who all require facility midwives as back up), midwifery care for GP LMCs and midwifery back up for each other.

Self employed midwives

The informants indicated that there were in total 10 self-employed midwives providing services within the catchment area of five of the facilities. Four facilities had no self-employed midwives working in the locality. The self-employed midwives provided most of the home birth and some facility births. The FTE status of these midwives could not be calculated, but many appeared to take a heavy caseload because they also provided antenatal and postnatal home based care for women birthing out of the locality. This work was building as GPs were withdrawing, recommending women birth at the base hospital 'just in case'.

Medical services

Three facilities did not have GP LMC services. Most of the GPs providing LMC services in another four facilities had chosen to cease providing this service within the 6-12 months following the scan. This was the key reason that the employed midwives were beginning to offer local women LMC services to birth in their facilities. While obstetricians regularly visited four facilities to carry out their clinics, none would provide services directly to the facility. Over the previous 12 months only one facility had a forceps delivery and none offered epidurals or caesarean sections. Inductions were rarely carried out.

Referral and support services

Five of the facilities are located within 2 hours of an obstetric referral hospital and the other four are within 60 minutes road travelling time. Six facilities had weather dependent road transfer fa-

cilities and needed to rely on air transfer at times in winter. Because of the lack of proximity to an ambulance, some facilities needed to add up to an extra hour to transfer times to the secondary facility. All the facility midwives indicated that they had excellent relationships with obstetricians at the secondary facilities. Strategies they had developed to enhance this included attending study days on-site and visiting the base hospital when in town.

Eight facilities had regular ultrasound and laboratory services. The midwives had a good relationship with the district and Plunket nurses. The relationships with practice nurses and GPs were less well developed. This was mainly due to the historical preference of these practitioners for referring all pregnant women to the secondary maternity service via the visiting obstetric clinics. This enabled the GP to retain the antenatal and postnatal LMC funding. Facilities with the best relationships with GPs were those where the GPs did not practice obstetrics and referred women to the midwives for their initial assessment and birth options.

The communities

Eight of the facilities were located within the lower half of the South Island. The other facility was located in the top part of the Island. All the communities were rural with high tourist populations and associated service industries. All but three had seasonal population fluctuations. All the southern communities were experiencing population growth with the new dairy industry which had led to an increase in maternity service requirements because this industry brought new, young families into the area.

Geographic features

The maternity services provided from most of the facilities covered a radius of 1-1.5 hours. Midwives travelled great distances for home visiting. In winter the roads around seven of the facility catchments were affected by ice and snow. Generally the roads to the base facility, for all but one service, were straight and well maintained. Public transport was infrequent and costly. Women had to find their own transport if they need to travel to the facilities. Therefore, the midwives believed they did more home visiting, unless the woman were regularly coming to town for shopping.

Sociocultural profile

Midwife informants consistently described the population as consisting of two distinct socio-economic groups. There were the service workers and social welfare beneficiaries who lived in transient, low cost accommodation and most had young families. Then there were the farming families and business owners who were older with children away at school or tertiary institutions. Midwives noticed an increase in women with complex social problems particularly associated with drug and alcohol abuse. Many midwives felt ill equipped to support these women. Many new families moving

into the southern facility areas with the dairy industry had no family support.

Consumer support for the services

All informants indicated that word of mouth was the main means women

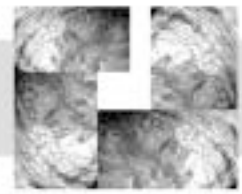
had of learning about the local maternity facility service. All facilities had developed brochures and one also had a website. One facility (the midwifery owned birthing unit) actively involved women in developing and directly promoting the service.

Political environment around maternity service provision

In all but two localities most rural women travelled to the secondary hospital to birth. Midwife informants believed that competition for the LMC role antenatally between doctors and midwives contributed to this. While the doctors were withdrawing from birthing women locally, they appeared to be continuing to provide antenatal and postnatal LMC services whilst referring women to the secondary facility to birth. Women who wanted continuity of midwifery care, had to seek out a midwife themselves. The perception of risk associated with a local birth was believed to be perpetuated by the information given to women on confirmation of their pregnancy test by the practice nurse and/or GP.

Four facilities were at risk of closure if the volume of births had not increased. The two facilities that have a steady volume of births engage in community information and publicity about their service. The midwives had become personally recognisable in their communities. They had established clear relationships with the GPs which identified midwives and their facility as the prime maternity service providers in the locality.

Closure of rural maternity facilities will probably result in midwives leaving the district because the volume of antenatal and postnatal care services they will be left to provide, for women forced to birth in the cities, will be insufficient to provide them with a livelihood.



Rural maternity service development

Facility design

Six of the maternity services were located within new or refurbished facilities. Two of the new facilities had been poorly designed, without recognising the implications of providing a midwifery LMC service from the facility. Four of the facilities had the maternity beds close to other services, which enabled the midwife to access nursing support or cover when a woman was staying postnatally. Two facilities had their maternity beds isolated a distance from the rest of the hospital which necessitated a staff member staying close by when a woman was in over night. Five facilities had altered their postnatal room furniture to encourage the partner and/or family to stay overnight.

All the facilities, other than the birthing unit, had birthing rooms separate from the postnatal rooms. Some of the facilities retained the original obstetric delivery theatres, in which women were expected to birth. Two facilities had water birthing and another offered a labouring pool. The other facilities had conventional baths that women used in labour.

Technology

None of the facilities had a maternity dedicated computer to store data or access the internet. Only two facilities had access to a computer for the midwives' use.

Interprofessional co-operation

All midwives clearly viewed themselves as being part of the community's maternity service even though seven facilities were located within community hospitals that also have aged care and rehabilitation beds. None of the midwives in these facilities were expected to undertake nursing roles, but nurses were expected to back up the maternity service when women were staying over night. The midwives indicated that they had a harmonious relationship with the facility nurses, but experienced tension at times with hospital managers who had little understanding of the complexity of providing midwifery LMC services while providing back up midwifery care in the facility.

Facilities with exclusive midwifery LMC services appeared to have more harmonious relationships with local GPs. The localities where GPs continued to take an LMC role experienced most difficulties in maintaining constructive relationships. Communication difficulties appeared to centre on expectations that GPs had of facility midwives. Poor quality booking information and late contact with the midwife made co-ordination of care

difficult. Relationships between practice nurses and midwives did not appear to be well developed.

While seven facilities formed a network of maternity services that bordered on each other, the midwives had little contact with each other. Most had not visited the other facilities. There was not an effective rural midwifery network other than that developed when midwives attended midwifery updates at either the base facility or the tertiary facility, which seemed to occur on an annual basis.

Midwifery professional development

All of the midwives in the facilities scanned were members of the New Zealand College of Midwives and indicated that they relied heavily upon the College for advice and support. The midwives working in the community trust facilities were most reliant on the College and were increasingly using the Midwifery and Maternity Provider Organisation (an independent provider organisation linked to the College of Midwives) for claiming LMC payments and providing practice management advice.

Continuing education

All facility midwives undertook annual updates in infant resuscitation, cannulation, pharmacology, emergency care and other clinically based topics. Most were run by the secondary facilities or the local polytechnic.

Postgraduate study

Only three facilities had a midwife involved in postgraduate study. Midwives cited cost as the main factor inhibiting pursuit of further education.³ These costs included:

- long distance travel to the venue (few live within daily commuting distance from a polytechnic or a centrally located venue)
 - accommodation during the seminar/course
 - loss of earnings for independent midwives and cost of replacement staffing for employed midwives
 - childcare/family care arrangements while away.
- Midwives indicated an interest in a postgraduate programme that encouraged networking, knowledge sharing and opportunities for rural midwives to develop their services.

Strategies for strengthening maternity services in rural locations

Findings from this scan have led to the development of strategies for enhancing and strengthening maternity services run by midwives located in rural and isolated settings. The maintenance of these rural primary facilities appears to be contin-

gent upon support for the development of the local midwifery LMC services.

The following recommendations have emerged from the scan process and have been agreed to by the midwifery participants of the scan.

1. Encourage and enable women to use their local maternity service

- Develop local support networks for rural maternity services
- Encourage women to actively support their local maternity service
- Provide information on local maternity services
- Inform local medical practitioners and practice nurses of the midwifery LMC role

2. Professional development for rural midwives

- Provide regular midwifery practice updates
- Develop a postgraduate midwifery programme for rural midwives

3. Support the transition to provision of LMC services

- Develop rural maternity facility management systems
- Identify ways to manage maternity facility workforce

4. Development of locum service

- Identify practitioners willing to locum in rural areas, e.g. midwifery lecturers
- Co-ordinate leave to match locum availability

5. Analysis of maternity workforce

- Scan the workforce profile and projected requirements over the next 5 years

6. Development of a rural midwifery network

- Set up a formal process for linking rural midwifery providers in the South Island
- Enable the network to have a tangible influence on the development and maintenance of maternity and midwifery services within the rural setting

Risks of not supporting midwives providing local rural maternity services

The scan indicated that midwives were attempting to strengthen and develop the services they offer to rural women within their localities. Most were hopeful of increasing the birthing volumes once the GPs left maternity services to midwives. However, it would seem likely that without immediate support for these midwives and the service they provide, a number of these rural

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facilities risk closure by the DHBs within the next 12 – 18 months.

Closure of rural maternity facilities will probably result in midwives leaving the district because the volume of antenatal and postnatal care services they will be left to provide, for women forced to birth in the cities, will be insufficient to provide them with a livelihood. Midwifery will again become invisible in rural settings without the small facilities as a focal point for birth. Midwives have indicated a desire to provide continuity of midwifery care for rural women within their own locality, the only way to achieve this is to support the development of midwifery LMC services in these settings.

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1 *The accuracy of the specific birth numbers other than those within the facilities has been difficult to determine. Therefore, they are given to indicate a trend that should be more fully investigated. One of the facilities scanned, which had 33 births in the 1999 year, was omitted from the MOH Report on Maternity 1999 published in 2001. These births have been included in this total.*

2 *The actual FTE status was difficult to determine. Some midwives claimed overtime for excess hours while others saw themselves as full-time when sharing a position with a colleague.*

3 *Following the scan Otago Polytechnic introduced a rural paper in its midwifery masters programme. A number of from these facilities are now enrolled in postgraduate study. A proposal to the Clinical Training Agency to fund this was declined. Other sources of funding continue to be investigated.*



A paper presented at the 7th Biennial New Zealand College of Midwives Conference in Dunedin, July 2002.

Otaki Birthing Centre - He Whare Kohanga Ora

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Midwife at Otaki Birthing Centre -
He Whare Kohanga Ora

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The Otaki Birthing Centre is a very small, midwife owned and operated public primary birthing facility in a small rural town. It is probably the smallest of the three midwife owned and managed birthing facilities in New Zealand. Funded for between 20 – 30 births annually, it provides a facility for labour, birth, assessment of women, antenatal education and midwife 'gatherings'. Birthing families go home when ready after the birth, commonly 2 to 4 hours postpartum. The centre is not funded to provide midwifery care – the contract is purely for the provision and management of the facility.

The woman's lead maternity carer (LMC) provides the midwifery care within the facility and the follow-up at home. As LMCs we also have our own clients who elect to birth in other facilities or at home. In keeping with the principles of informed choice we try very hard not to influence women's decisions regarding birth-place. We acknowledge that there is difficulty in presenting unbiased information when one is committed and enthusiastic about a particular course of action.

To provide some context to the situation of the birthing centre, it is useful to consider the history of the maternity services in this area.

History

Otaki played an important role historically in the Kapiti-Horowhenua region because of the large and important Māori population of Ngati Raukawa and consequently it gained importance as a base for early missionaries. Chinese market gardeners, farmers, flax workers and timbermillers increased Otaki's population in the early years. The population now stands at just under 6,000.

In the early twentieth century midwifery was practised privately by handywomen and possibly trained midwives. We know of at least one house in the town that was known to have been a maternity 'home'. A cottage hospital had been built in 1899 and a tuberculosis sanatorium was established. Later one of the first Children's Health Camps was also established in Otaki. Around the early 1930s the cottage hospital became the first maternity hospital in the area serving the Kapiti Coast and the Horowhenua. Although a mater-

nity hospital was built in Levin (1953) and then in Paraparaumu, the Otaki maternity hospital survived until 1995.

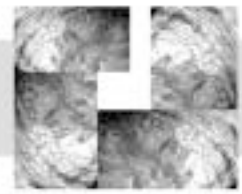
Maternity care in Otaki

The Otaki Maternity Hospital was a sunny 6 bed wooden building on the top of the hill in central Otaki. It is quite isolated, surrounded by trees and lawns. The extensive grounds it was built on were gifted by the local iwi for health purposes. It had a Matron's flat – which now houses the Otaki Women's Health Centre. It also had Nurses' bedrooms where (in the 1990s) the lone midwife on duty slept 'on call'. It was managed by the Matron (Gloria Johnston) and utilised for antenatal checks and births by the local women under the care of general practitioners.

The maternity home staff supported the labouring women using the old deep clawfoot bath, massage and lots of ambulation and whanau support. Pethidine and nitrous oxide were also used but it seemed to us that far less narcotic and inhalational analgesia were necessary than were used in the busy, more impersonal large city hospitals. We felt that this was because the women were more at home in the hospital, more relaxed, freer to move around and enjoyed more privacy. However, women were still expected to follow the institutional ideas of position for birth and active third stage management required by the doctors and the mostly 'medical model' midwifery prevalent at the time.

It was not unusual before 1995 to see a labouring woman quietly walking up and down the hall and out into the gardens or into the kitchen to make some toast or a cup of tea. Her family and friends would be supporting her or playing cards or watching TV, enjoying the relaxed and private environment. Often that woman was the only woman in the hospital but at other times we were sometimes overflowing with patients. It was not unusual to see a woman lying on the benches near the lemon tree sunning her caesarean section wound or nipples in the privacy of the garden. For midwives used to the rush and bustle of large city hospitals it taught us a lot that we had not known about the normality of labour and birth in a relaxed and friendly environment.

We accompanied women who required transfer to Palmerston North Hospital by ambulance; the care was handed over to the base hospital staff. Otaki Maternity hospital was enjoyed and supported by the Otaki community... but... it was



expensive and often empty. Sometimes three weeks would go by with no women being admitted. The place lost its 'soul' when the hospital was altered to try to save money. The old delivery area was turned into a 'birthing unit' and the rest of the hospital adapted to accommodate District Nursing, Public Health and a play centre. The postnatal inpatient care was reduced to 48 hours with some follow-up care from the Crown Health Enterprise (CHE) midwives.

There were drawbacks such as loss of privacy for the women and the unit remained an expense for the CHE because the main cost was the midwives' salaries. The building was one hundred years old and needing upgrading with some expensive roofing and plumbing.

Changes to maternity care in the 1990s

In 1995 the MidCentral CHE decided to close the Otaki Maternity Hospital and provide the Otaki women with services based in Levin 15 to 20 minutes north of Otaki. The Central Regional Health Authority approached Elizabeth Jull and myself to ask if we would contract to them to provide a birthing facility. They wanted us to use the old delivery area as a birthing unit in the old maternity hospital, (now being converted to a 'Health Centre'), but without the postnatal stay which was available in Levin or Paraparaumu. We agreed and a contract was signed. From November 1995 to June 1996 we cared for our clients at the old maternity hospital. We found this to be unsatisfactory, most importantly, because of security issues and lack of privacy for the women in the building, which was now housing other health groups and services.

The concept of a new birthing service for Otaki

We discovered that there was transitional funding available for a limited time. This was for new contracts as the government's political agenda opened up the health arena to competition in the name of efficiency. One of the criteria for funding to set up a new service was that the old service had been withdrawn by the CHE controlling it. We applied for a grant.

Vision - A 'stand-alone' birthing unit to provide maximum privacy and choice of birthing options for Otaki Women.

A 'stand-alone' birthing unit would provide much more privacy, freedom of movement and a homelike atmosphere for the women who use it and their families.

A suitable house was found and set up as 'non-clinically' as possible. This included a nice corner spa bath, deep and roomy enough to accommodate active birth positions comfortably and with a firm double bed in the birthing room. No doctors have practised maternity care in Otaki since 1995. There are no criteria for admission and no barriers to any woman using the facility. There are no other policies; no protocols. As for any publicly funded facility any woman is welcome to use the facility as long as her LMC has an access agreement with us. Every LMC has a duty to consider the safety of the woman and her baby and, as facility managers, it is not our responsibility to dictate in clinical matters.

Experience at the Otaki Birthing Centre - He Whare Kohanga Ora

The babies born at the centre since 1996 have ranged in weight from 2200gm to 4700gm. The 2200gm baby was 37 weeks gestation and small for dates. Her mother arrived fully dilated on the doorstep having been seen only once in pregnancy. Mother and baby were transferred postnatally as the baby needed observation although she was breastfeeding well. Several weeks later the baby was found to have a ventricular septal defect.

The largest baby was born at term in the centre. One of the advantages of the centre environment is the ability of mothers to choose positions that accommodate their needs. This woman, in second stage 'crept' her foot up the wall until her legs were as wide apart as she could make them. It was fascinating to watch and wonder why she was doing that. When the baby arrived we could see why! The baby fed well and needed no intervention, he was just a normal big baby. We are convinced that in a hospital where she may not have been able to use her instincts freely this baby would not have been born without intervention.

We often have quite 'high risk' women who birth with us either 'by choice' or 'by chance'. Women who come 'by choice' make the decision after much discussion and often specialist referral so we are quite sure they understand the risk factors involved in using the birthing centre. Such women may have had previous caesarean sections or even be susceptible to malignant hyperthermia. Women who come 'by chance' often arrive on the doorstep fully dilated. They are usually booked else-

where but by accident, or design, do not have time to travel. One woman who was passing in a house truck went into labour and enjoyed staying to have her baby with us. Some women may have had previous caesarean sections or are giving birth slightly too early. One such woman had a haemoglobin of 83. Some of these women can make us very anxious but we cultivate a carefully confident and relaxed manner because we know that

anxiety, more than any other factor, is likely to cause a labouring woman to have problems.

We have only just begun to keep statistics regarding the management of third stage. Many of the women using the centre seem to choose physiological management of third stage. We

try to give informed choice but maybe it is the way we communicate the options that makes so many choose it, maybe it is because women 'wanting to do things naturally' tend to choose either homebirth or the birthing centre. Maybe being in the birthing centre with its focus on normality reinforces to them that they want to keep the philosophy of normality and non-interference throughout the process.

When practising physiological management we try to help the woman to keep the focus on her baby rather than third stage - not usually difficult! We tend to encourage the woman to sit up so that she is not lying flat, gravity helps us to keep an eye on blood loss and probably helps the placenta to separate and move into the lower uterine segment/vagina more easily. Sometimes the woman kneels or sits cross-legged on the double bed; if she is in the spa then she sits up against the side of the spa. We make a cup of tea, check the baby, and while keeping a quiet and unobtrusive eye on the blood loss, scarcely mention the word "placenta".

We try not to handle the umbilical cord and do not usually clamp the cord at all. If we do need to cut it, usually because it is awkward for the mother, we wait until the cord is empty of blood. We do not normally take the cord blood until after the placenta is delivered. Then we take it from the surface of the placenta near the insertion of the cord. We have never had a problem getting the blood. This way the baby gets the cord blood, rich in stem cells, that nature intended. We do not worry about the mother's position relative to the

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Otaki Birthing Centre - He Whare Kohanga Ora

baby and we have not had a large number of jaundiced babies, despite some paediatricians' concerns.

Often the placenta delivers spontaneously when the mother moves. If it is taking a long time and the mother wants to get on, we may ask the woman to give a push and put very slight pressure on the cord – after checking the fundus for signs of separation. If the placenta is not obviously separated and the baby has been suckling we will offer the woman the opportunity to sit on the toilet with a bowl in the toilet to catch the placenta. This is usually effective. Women, as for second stage, find it easier to 'let go' on the toilet. If there is noticeably heavy bleeding (heavier than the normal separation bleed), after discussion with the woman we will give intramuscular syntocinon and deliver the third stage without waiting.

We also use ergometrine (usually a half dose), if we are worried about ongoing heavy lochia. Particularly if we think there are risk factors for postpartum haemorrhage present, remembering that these women are going home after the birth. A half dose of ergometrine does not give the woman the side effects of a full dose but does help to keep the uterus well contracted. If we have a true haemorrhage we use the full dose. We discuss all this with the woman during birth planning during the pregnancy. Despite probably a 50 - 75% use of physiological third stage we have only had two postpartum haemorrhages, both under 1,000 ml.

Barbara Katz-Rothman (1989, p.178) wrote:

I have come to see that it is not that birth is "managed" the way it is because of what we know about birth. Rather, what we know about birth has been determined by the way it is managed. And the way childbirth has been managed has been based on the underlying assumptions, beliefs and ideologies that inform medicine as a profession.

How can we compare care in a relaxed, comforting environment, such as ours, where there is a known and trusted midwife, with a busy, bustling hospital where the attendants may not be known to the woman and may not be comfortable with physiological third stage? Apples and pears! It follows then that we must be critical of research done in a totally different environment from the way many of us practise. It becomes ever more necessary that we have our own perinatal data-base so that we can truly compare like with like and get some research data which really is relevant to our own situations.

The Otaki Birthing Centre is small and statistically insignificant, but it provides us with a centre

where women can access us each Tuesday morning, when we have an open coffee morning. It helps us to liaise with other midwives, well-child nurses and healthcare workers who often drop in for coffee. It has been used by new mother groups and provides us with a venue for antenatal classes and midwifery workshops.

We are grateful for the chance that we have had to work in this very autonomous way. We see that the centre is useful in providing an option for birthing women in an environment that is conducive to normal birth and family involvement and that allows midwives to develop confidence in their own abilities. We particularly notice the difference in the behaviour of women and the difference in our own practice when we have to work in hospital environments. This has reinforced our belief that environment has a huge effect on the progress of labour. An environment that reinforces the normality of birth and that is relaxed and culturally appropriate makes a huge difference to women's ability to birth well.

Developing and working in the centre has been a remarkable experience. Although running the centre is a responsibility and sometimes even a burden, it has given us great freedom to practise the craft of midwifery. We continue to strive to keep women in control of their birthing. We do not always get it right but the experience of being able to practice with true midwifery autonomy is one we will never regret.

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Stojanovic, J. (2003). *Otaki Birthing Centre - He Whare Kohanga Ora*. *New Zealand College of Midwives Journal*, 28 (1), 24-26.

Kate Spenceley presented this poem at the National Conference in 2002 and we were delighted to print her work in the October 2002 issue. However, in the typesetting process the layout of the poem was altered. As Kate noted, this disrupted the intended meaning and was akin to displaying a photograph in several parts. The Editorial Board apologises for this disruption and has taken the opportunity to reprint the poem for readers to enjoy.

When Kate presented the poem at the conference session she explained her choice of title. Her words were "that the title was partly out of my respect for the Māori people and partly out of my awe for the marvellous organ that grows the babe."

Whenua

At the beginning of your world, I was part of you.

Made of the same luminous fabric, flesh of your flesh, of our father and mother's being.

As we grew, we were separated but united. I fed you, breathed for you, became a pathway for the flushing currents of our mother's blood.

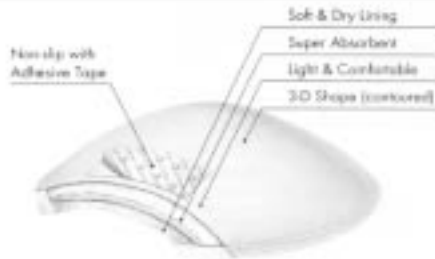
As you slept, I was your cradle and your guard; when you awoke I was your companion.

Together for that last day I leashed you to the very limits of our linking line before releasing you to the touch of others—lovers, yes—but surely none will hold you as nearly, as sweetly or as softly as I did.

As our connection was severed you cried aloud, then were gone.

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Format

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In addition, authors are requested to provide the following details on a separate sheet which is **not** sent to the reviewers. Name, occupation (current area of practice/expertise), qualifications, address for correspondence during the review process including day time phone number, contact details such as email address which can be published if the journal accepts the article. Where the article is co-authored, these details should be provided for all authors. ALL authors of the article should sign an accompanying letter stating that they wish to submit it for publication.

Content

Any article which reports a piece of research needs to note the processes undertaken for ethical approval.

References

Authors are responsible for providing accurate and complete references. The journal uses the American Psycho-

logical Association (APA) format. Some details of this format are available on the APA website at www.apastyle.org. The 5th edition of the APA *Publication Manual* was published in 2001. In the text, authors' names are followed by the date of publication such as "Bain (1999) noted . . ." or "this was an issue in Irish midwifery practice (Mary, 2000)". Where there are three or more authors, all the names should appear in the first citation such as "(Stoddart, Meus, Neill and Finn, 2001)" and then the abbreviation "(Stoddart et al., 2000)" can be used. Where there are more than 6 authors then "et al." can be used throughout. The reference list at the end of the article should contain a complete alphabetical list of all citations in the article. It is the responsibility of the author to ensure that the reference list is complete. A comprehensive range of examples are provided on the APA website. Two examples are included here.

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Pairman, S. (1999). Partnership revisited: Towards a midwifery theory. *New Zealand College of Midwives Journal*, 21 (4), 6-12.

Book

Page, L. (Ed.). (2000). *The new midwifery*. London: Churchill Livingstone.

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Reference: American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: American Psychological Association.

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INFORMATION ABOUT THE FORUM AND THE PROGRAMME WILL BE POSTED ON THE JDMRC PAGE OF THE NZCOM WEBSITE AT www.midwife.org.nz





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