Wise women's web:

Rural midwives' communities of practice.

A qualitative descriptive study

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Abstract

The focus of this study is informing rural midwifery practice in the South Island of New Zealand. Using a qualitative descriptive methodology four focus groups of rural midwives discussed how they currently inform their practice, identified issues with midwives obtaining and evaluating information and identified what might help in the future. Rural midwives share the issues of lack of locum relief, lack of continuing professional education, excessive on-call work and a shortage of rural midwives with other health professionals providing services to women and families in rural and remote New Zealand (Health Workforce Advisory Committee, 2001; Hendry, 2003; Goodyear-Smith & Janes, 2006). Rural midwives need support to continue to provide midwifery services to women in rural New Zealand. To provide support to rural midwives it is essential to understand the issues and aspirations from the perspective of rural midwives in the field. This study adds another dimension to the recent surveys that have been conducted on rural midwifery practice (Hendry, 2003; Goodyear-Smith and Janes, 2006) and builds on previous studies of New Zealand rural midwifery (Hendry, 2003; Patterson, 2003).

Rural midwives have mechanisms which they use to inform their practice. Amongst these are, accessing continuing professional development opportunities, journals and clinical practice guidelines. However the midwives in this study preferred sharing and acquiring information with their own practice group, networking with other midwives at workshops and sharing and acquiring information with other colleagues. The midwives were mostly familiar with the use of communication technology both for accessing evidence and for keeping in touch with each other and other health professionals.

Barriers were lack of time, difficulty in accessing cover for practice, and problems with accessing relevant information. Their principal concern was lack of financial aid to support with access to study or evidence. This has recently been addressed to some degree by extra funding for rural midwives from the Ministry of Health. Lack of consistency in practice guidelines and relevance to the context of practice was also a problem. The midwives generally have good relationships with other health

professionals. For a few these relationships did not work well leaving the midwives feeling unsupported.

The midwives wanted more local continuing professional development opportunities. Possibilities exist for utilising the midwives local practice groups to disseminate evidence and to deliver continuing professional development. The midwives also spoke of the perceived value in a network of rural midwives throughout New Zealand. For geographically isolated rural midwives, there are communication tools that could be utilised, to provide opportunities to expand their midwifery networks and develop diversified 'Communities of Practice'. Both midwives in this study and the existing evidence identify this as a useful mechanism, for disseminating evidence and creating opportunities to develop practice information. These possibilities are worthy of further investigation. An action research project may be an appropriate way to evaluate the possibilities of some or all of these initiatives in the future.

Wise women's web: Rural midwifery communities of practice.

Chapter one: Introduction

Information and knowledge in rural midwifery in New Zealand

As a rural midwife, I am interested in how midwives in rural practice, acquire information and knowledge to support decisions, as I have faced challenges from time to time in this regard. I have had to deal with issues, such as how to keep up to date with latest trends, and how to access and interpret evidence, not only for myself, but also for the women with whom I worked. It was these issues that brought me to participate in postgraduate study. I was interested to find out what other rural midwives experiences were in relation to informing their practice, and what ideas they might have about this topic. From this interest arose three questions, how do rural midwives acquire and interpret information for practice, what issues do rural midwives have with informing their practice, and what do rural midwives think may help with informing their practice in the future.

These questions led me to develop the following aims: to identify how particular groups of rural midwives from around the South Island of New Zealand informed their practice, to discover if they had any issues with informing practice and what ideas they had for initiatives to improve this in the future.

Midwives in rural and remote New Zealand may be employed, usually through the local community health trust, or be self employed and contract directly with the Ministry of Health through Section 88 of the Health and Disability Act (Ministry of Health, 2002) (MOH). These differences in employment situation were highlighted by the scan of rural maternity services in the South Island of New Zealand undertaken by Hendry (2001). These differences may also lead to disparity in the accessibility and availability of information on which to base practice decisions.

The plethora of research information that is now available both online and in hard copy can be overwhelming for practitioners (McColl, Smith, White & Field, 1998). Health practitioners identify barriers to use of evidence in practice as lack of time,

unfamiliarity with information technology and poor access to computers and the internet (Davies, 2000; McColl, et al., 1998; McKenna, et al., 2004; Parsons, Merlin, Taylor, Wilkinson & Hiller, 2003; Kildea, Barclay & Brodie, 2006; Fahey & Monaghan, 2005). I therefore decided to investigate how midwives experience acquiring and interpreting information for clinical practice from the perspective of rural midwives in the South Island of New Zealand.

Methodology

My questions were suited to a qualitative methodology as I was interested in the experience of the participants within their own context (Grbich, 1999; Morse, 2002; Newman, 2003; Rees, 1997; Sandelowski, 2002). I chose a qualitative descriptive methodology as described by Sandelowski (2000). This allowed me to interact with the participants with no requirement to look beyond the participants words for hidden meanings or realities.

Focus groups were an ideal data gathering tool, providing an opportunity for midwives with varied experiences to come together and explore the topic of informing their midwifery practice from a variety of perspectives (Kreuger, 1998). This discussion generated a richness and depth that would not have been possible with single interviews.

Structure of the thesis

This thesis is presented in seven chapters. Each chapter covers different parts of the process and findings of the study. Below is a brief outline of the following chapters.

Chapter two: Background

This chapter explains the structure of rural midwifery services in New Zealand as well as my own experience. I discuss evidence based practice, its application in rural midwifery and the literature surrounding these. I describe barriers that have been identified to the use of evidence in practice. Possible innovations which may support rural midwives to access and apply evidence are identified. The use of technology for dissemination of evidence is considered. I also explore the literature surrounding

communities of practice and their possibilities for the dissemination of evidence and continuing professional development.

Chapter three: Study design;

This chapter describes the research methods and methodology. Qualitative descriptive research is explained also the use and merits of focus groups for data gathering. The process of conducting the research is described in detail including ethical issues. I explain the process for selection of participants and the background to the midwives in this study. I also cover the process of conducting a pilot group to test the data gathering process and explain the process I followed for data analysis. The themes that arose from the data are then introduced.

Chapter four: Connections

In this chapter I present the principle theme identified during data analysis. This is the theme of 'connections'. This explains how the rural midwives in this study currently inform their practice through the connection that they have with other midwives, other health professionals, individuals and groups. I also explain how midwife participants connect with evidence and information from journals, books and online sources.

Chapter five: Barriers to informing practice

This chapter outlines the barriers the midwives identified to informing their practice. Issues around accessing information and continuing professional development are presented. These include issues of lack of context, access and time. The midwives also described problems with conflicting evidence. Some midwives also indicated problems with lack of support from management or other health professionals. All but two of the midwives were strong users of computers and the internet. The principle issue for all midwives was lack of funding to support accessing information or continuing professional development.

Chapter six: Local access and future aspiration

The midwives expressed a desire for more local access to continuing professional development and information. This is discussed in addition to the midwives' desire for connections with other rural midwives through a national network. The midwives other wish, for more funding, has been addressed by the government since completion of data gathering.

Chapter seven: Discussion

This concluding chapter discusses the findings of the study in association with evidence from other literature regarding accessing information, continuing professional development and evidence. The nature of the rural midwives' communities of practice and their value for disseminating and sharing information across practice groups is discussed. I explore the use of communication technology to support midwives to connect with each other and with information. The limitations of this study are identified and recommendations for further study highlighted.

Chapter two: Background

Introduction

Midwives access or acquire information on which to base practice decisions in a variety of ways. These range from, the casual sharing of information that occurs through networks that midwives have, to more formal dissemination of information through organised workshops and lectures, locally, regionally or nationally. Information may also be acquired through periodicals, journals and books. Increased opportunities for the dissemination of information are possible through continuing advances in information technology.

The New Zealand maternity system

In New Zealand women choose a Lead Maternity Carer (LMC) who is responsible, in partnership with the woman, for assessing her needs, planning her care and her baby's care with her and ensuring necessary maternity services are provided (MOH, 2007). An LMC may be a midwife, a General Practitioner (GP) or an obstetrician. All maternity care is free to the woman and her family, and self employed practitioners claim a fee directly from the government for services provided, through Section 88 of the Health and Disability Act 2000 (MOH, 2002). This document has recently been reviewed and updated, with changes to commence in July 2007 (MOH, 2006).

The midwifery service in New Zealand has a unique structure, with autonomous midwives who can be self employed, or employed by District Health Boards[1] or Community Trusts (Barnett & Barnett, 2001; Hendry, 2003). Rural midwives have identified issues regarding accessing information technology and training (Hendry, 2003). The 2005 Rural Health Workforce Survey identified further issues, principally lack of funding and lack of back up support for rural midwives (Goodyear-Smith & Janes, 2006). New Zealand is not alone in having particular concerns for its rural health workforce Canada, the United States of America, Australia and Scotland all

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[1] There are 27 District Health Boards in New Zealand. These are the government appointed structures which manage health services, both community and hospital based, in their regions.

have rural health workforce issues (Dunbabin & Levitt, 2003; Pong & Russell, 2003; Richards, Farmer & Selvaraj, 2005; Ricketts, 2000). Patterson (2003) discussed particular issues around the provision of New Zealand rural maternity services and the need for rural midwives, as a central component of this service, to have logistical support from the community, colleagues and government. As a rural midwife I have some understanding of the issues that these researchers have identified for rural midwifery service provision.

My place in this research

My midwifery background begins with training in my native Scotland however my midwifery practice experience has principally been as a rural midwife in the South Island of New Zealand. I have been both an employed, and a self employed midwife, practicing before, and after the 1990 legislative changes, which allowed the re-emergence of autonomous midwifery (Department of Health, 1990; Donley, 1986; Guilliland & Pairman, 1995). Through my postgraduate studies, I have had access to online data bases of evidence for practice, and have gained some skill in sourcing information. I have also developed some skills in the use of computers, which many other rural midwives have not had the opportunity to do. Recently, I have also become involved in midwifery education, while still maintaining an interest in rural midwifery, and providing casual and locum[2] cover for rural midwives.

With knowledge of the diversity of rural midwifery service provision, I wondered if the issues I had experienced, around accessing and interpreting information for practice, were common to other rural midwives. I also wondered if midwives had found any local solutions which assisted with accessing information for practice, and what ideas rural midwives considered might support this area of practice in the future. As a first step in this process I investigated what evidence had been gathered on the topic of accessing, disseminating and interpreting information for practice. Where possible I identified studies related to rural or remote rural midwifery practice.

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[2] Locum – A deputy, especially one acting for a doctor or clergyman in his absence, from Hawkins, J, M. & Le Roux, S. *Oxford Reference Dictionary,* (1991). Oxford: Clarendon Press.

However I also included related research, such as the development of communication technology, which may impact on the ability of rural midwives to access and interpret information for practice.

Context of knowledge and information in midwifery;

The growth in evidence based practice as a paradigm of health service provision has coincided with the establishment of new communication technologies which facilitate the dissemination of evidence and information through electronic sources (Starr & Chalmers, 2004; Leiner, Cerf, Clark, Kahn, Kleinrock, Lynch, Postel, Roberts & Wolf, 2003, Stewart, 2005). In the last ten years in New Zealand there has been a dramatic rise in the use of electronic communication tools, both personal computers and cell phones (Ministry of Economic Development, 2003). Gosling, Westbrook and Spencer (2004) evaluated nurses' and midwives' use of online clinical evidence available to practitioners wherever they practiced in New South Wales, Australia, and found that just over half of the study group were aware of the resource. Midwives were stronger users than nurses with 62% of midwives utilising the resource as opposed to 46% of registered nurses. Senior nurses were also more likely to use the resource. Kildea, Barclay, and Brodie (2006) also found that senior nurses and midwives were more likely to access online evidence which they then shared and disseminated amongst colleagues who were unable to access the information themselves. Bawden and Robinson (1996) found midwives to be knowledgeable about sources of evidence with a desire for convenient local access to a wide variety of information.

Difficulties have been found with accessing and interpreting evidence by midwives. In a study of remote Australian midwives, problems with infrastructure such as access to computers and broadband were a problem (Kildea et al., 2006). These infrastructure issues also arose for rural primary care providers (McKenna, Ashton & Keeney, 2004). Issues with applying evidence to the rural practice situation can also be an issue (Cranney, Warren, Barton, Gardner & Walley, 2001; Davies, 2002; McColl, Smith, White & Field, 1998; McKenna, Ashton & Keeney, 2004; Parsons, Merlin,

Taylor, Wilkinson & Hiller, 2003). Lack of support from management has been identified as a barrier for nurses and midwives to using information technology in the rural and remote setting (McKenna et al., 2004; Olade, 2004; Parsons et al., 2003). These studies are described in more detail in the following sections.

Research informing practice

The strategic direction of the New Zealand health and disability sector (MOH, 2003) identified a need for improvements in the range and consistency of services for rural New Zealand. Amongst other aspects identified was a need for ongoing continuing education and training for rural health care practitioners. Glazebrook and Harrison (2006) found rural practitioners had particular information requirements to assist in maintaining their emergency procedure skills. Little is known about this topic from the New Zealand midwifery perspective.

In her scan of rural maternity services in the South Island of New Zealand Hendry (2003) identified that rural midwives had similar concerns to those faced by other rural professionals. She identified problems in accessing continuing professional development, due to a lack of funding as well as a lack of locum cover for time away from practice. Rural GPs and nurses have since formed a national network however no such network exists for rural midwives (New Zealand Rural General Practice Network, 2007).

Midwives, as with other health professionals, are encouraged to base their practice on care which has been demonstrated to be effective (Enkin, Kierse, Neilson, Crowther, Duley, Hodnett & Hofmeyr, 2000). In order to do this practitioners need access to research relevant to their area of practice. However the sheer volume of research can overwhelm clinical practitioners (McColl et al., 1998). Several studies have considered the topic of how to inform practitioners about current research trends (Bero et al., 1998; McColl et al., 1998; McKenna et al., 2004; Cranney, Warren, Barton & Walley, 2001; Parsons et al., 2003; Tucker, Farmer & Stimpson, 2003). Various ways to achieve this have been researched, including clinical practice guidelines, continuing professional development and communities of practice.

Clinical practice guidelines

There is an international movement to promote the use of recognised best practice initiatives and facilitate the dissemination of information to health practitioners in the field (Enkin et al., 2000; McColl et al., 1998; Parsons et al., 2003; Veeramah, 2004). The use of evidence based guidelines is promoted as a route to introduce research evidence into practice. In the United Kingdom, the National Institute of Clinical Excellence (NICE) was established in 1999, and makes recommendations around referral and treatment options. The New Zealand Guidelines group was formed in 1996 and has produced evidence based guidelines on care during vaginal birth, after caesarean section and breech birth (NZGG, 2007). This multidisciplinary group includes representatives from all professions involved in childbirth care.

Other guidelines which may be used by midwives are the Referral Guidelines included in the sections 88 document and also the consensus statements developed by the New Zealand College of Midwives[3]. Maternity services, under Section 88 of the Health and Disabilities Act, include guidelines for consultation with obstetric and specialist services. These guidelines are based on expert opinion as well as available evidence (Ministry of Health, 2002). In addition the New Zealand College of Midwives (NZCOM) have produced consensus statements. These are statements of midwifery best practice for the New Zealand context, which have been debated and agreed by the profession and are available on the NZCOM web site (NZCOM, 2006). District Health Boards (DHBs) also produce local guidelines which are disseminated throughout the DHB area. Some, or all of these guidelines, may influence rural midwifery practice.

Evidence of the effectiveness of clinical guidelines in improving practice is mixed. Shekelle, Rhodes, Morton, Eccles & Grimshaw, (2001) found that half of the clinical guidelines they investigated were out of date, needing a major update every three

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[3] New Zealand College of Midwives Inc. is the professional organisation of midwives in New Zealand. It is a body owned and managed by the midwifery profession and shares the partnership model, with consumers involved at all levels of the organisation. It produces consensus documents on aspects of midwifery care and advises government agencies on matters pertaining to midwifery.

years. Once practitioners are familiar with guidelines they do not often refer to them again (Gabbay & Le May, 2004). In a systematic review of interventions which promote the implementation of research findings into practice Bero, Grilli, Grimshaw, Harvey, Oxman and Thomson (1998) found that passive dissemination of evidence through lectures, mail out of information and mail out of clinical guidelines was ineffective in changing practice Multifaceted approaches using additional methods of disseminating evidence such as locally developed guidelines and outreach education were found to be most effective in ensuring the uptake of research evidence into practice (Bero et al., Parsons et al., 2003).

Practitioners in primary care have commented that guidelines are often not applicable to the context of practice (Parsons et al., 2003; McKenna et al., 2004; Cranney et al., 2001; Tucker et al., 2003). Cranney et al., conducted a qualitative descriptive study of nine UK GP practices. Although the GPs were willing to incorporate evidence into practice, they believed that guidelines were often developed by enthusiasts outlining ideal practice, and were not always applicable to real practice with real patients who may have differing health needs. Cullen (1997), in a study of 34 GPs in Wellington NZ, found a preference by this group for accessing evidence through medical specialists rather than through practice guidelines.

Tucker et al. (2003) found that both GPs and midwives in rural and remote Scotland over diagnosed hypertensive disorders in pregnancy, resulting in over referral and transfer of care despite the availability of practice guidelines which outline referral criteria. They commented on the cautious risk assessment by these practitioners and advised further research on *"the extent to which knowledge, beliefs and risk perception in remote settings influence decision making"* (p 290).

The concept of risk for women in childbirth can impact on rural midwifery as women considered to be at high risk of complications require referral to secondary services (Skinner, 2002; MOH, 2002). This may mean that women need to birth in a main centre away from the local area. Informing women about risk is a role of the midwife. She is also required to advise women about the need for consultation should a risk be

identified (MOH). Midwives need to discuss the risks and benefits of different options for care with women, with reference to referral criteria in the national referral guidelines (MOH). The midwife therefore requires a good level of understanding about actual and potential risk and the ability to share this with women in an appropriate way (Skinner). To do this the midwife requires relevant and current information.

Continuing professional development

In an Australian focus group study of 52 rural midwives Fahey and Monaghan (2005) described a wide range of effective continuing professional development activities, which rural midwives utilised, for informing their practice. Midwives attending formal study, such as workshops, particularly valued the opportunity to network with colleagues. However the midwives did not recognise this informal learning as a component of their continuing professional development. Fahey and Monaghan suggested that recognising this and providing opportunities to utilise networking opportunities, through activities such as case debriefing and journal clubs, would provide valuable, cost effective and accessible learning activities for rural midwives in Australia. Providing local opportunities for continuing professional development opportunities may also be possible through the use of online sources.

Online information and continuing professional development

In the United States (USA) nurses and midwives can earn continuing education points through the Medscape[4] website. Reading, reflecting and completing an online test contributes points to meet professional requirements for continuing professional development (Medscape, 2007). Stewart (2005) challenged midwives to make use of e-health[5] and the potential it has for clinical support of the midwife, while facilitating access to evidence and information, not only for midwives, but also for the women who are their clients. However New Zealand does not provide rural midwives, as a whole, with access to online professional journals or data bases of evidence.

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[4] Medscape is an internet site, with free registration, where practitioners can register for updates in their particular area of interest. <http://www.medscape.com/home>
[5] E health – Wikipedia defines this as healthcare practice which is supported by electronic processes and communication < http://en.wikipedia.org/wiki/E-health>.

An internet-based resource library in Australia, for rural and remote area maternity service providers, was developed and assessed through an action research project (Kildea, Barclay & Brodie, 2006). Eighteen participants commenced the study and eight did not complete. Once the developed site went live on the internet it attracted 100-200 hits per month. They found that the online discussion board was not well used by the participants who had a preference for email contact. There were issues with hardware and network access as well as lack of support from facility management. In some cases equipment was never unpacked as no one was willing to take responsibility for setting it up and making it operational. Some participants also lacked skill in information technology. It is worth noting however that the structure of rural and remote services in Australia is quite different to those in New Zealand and the results are not directly transferable. The authors acknowledge the rapid change in the evolution of internet technology which changed even during the course of their study. Some of the issues identified in this study could also be issues for rural midwives in New Zealand, should a similar resource be considered.

Evidence based practice

Providing a quality maternity service to rural communities is a priority in New Zealand and overseas (Dunbabin & Levitt, 2003; Pong & Russell, 2003; Primary health care strategy, MOH, 2001; Richards, Farmer & Selvaraj, 2005; Ricketts, 2000; Tucker, Hundley, Kiger, Bryers, Caldow, Farmer, Harris, Ireland, van Teijlingen, 2005)). It has been suggested that the advent of databases of evidence and the move to best practice based on evidence is of considerable importance in ensuring quality of service delivery (Carr & Schott, 2002; Lesley & Pope, 1999; Page, 2000; Tracy, 2006; Tolson et al., 2005).

Midwives weave best available evidence with their clinical experience and the experience of the woman to inform their practice and clinical decision making (Clarke, 1999; Guilliland & Pairman, 1995; Lane, 2006; Page, 2000; Pape, 2003). Where evidence highlights practices which are effective in improving care, it is a necessary and desirable role of the midwife, to incorporate these into her clinical practice and decision-making, while taking account of the context and situation of the

individual woman, her family and circumstances (Enkin et al., 2000; Parsons, Merlin, Taylor, Wilkinson & Hiller, 2003; Rees, 1997; Tucker, Farmer, Stimpson, 2003; Tucker et al., 2005). To do this, midwives need to overcome barriers which they face, to accessing and using evidence in practice.

Barriers to using evidence in practice

Midwives inform their practice in part through access to research evidence. Researchers across the health professions have identified barriers to using evidence in practice (Davies, 2000; McColl,, Smith, White & Field, 1998; McKenna, et al., 2004; Parsons, Merlin, Taylor, Wilkinson & Hiller, 2003). Lack of time has been identified as a significant issue in most studies, this was a principle barrier identified for social workers (Blackburn, 2001), for GPs (Cranney et al., 2001; McColl et al., 1998) for rural nurses (Olade, 2004) and for midwives (Veeramah, 2004). Lack of knowledge about sources of evidence or inapplicability of evidence to the local situation has also been identified as an issue particularly for rural practitioners (McKenna et al., 2004; Parsons et al., 2003; Tucker et al., 2003).

Evidence of the barriers to utilising evidence in practice in the rural and remote setting were highlighted by Parsons et al. (2003), in a systematic review of the literature on this topic. Rural communities were described as disadvantaged by, distance from main centres, time and availability of transport as well as a shortage of health care providers. They emphasised the need for practitioners to implement practices which have been shown to be effective in improving patient care particularly as choice of care provider is limited in rural areas. Two studies pertaining to rural practice were reviewed, one from South Australia and one from the Western Isles of Scotland. The Australian study surveyed 89 GPs and the Scottish study surveyed 63 health visitors. GPs expressed difficulty in accessing and using information in a "timely manner". Isolation from colleagues also created problems for implementation. Other barriers were lack of time, access to computers and difficulty in meeting patient expectations. Implementing new practices and lack of relevance to rural practice were also identified as problems. For health visitors, the main problem was lack of knowledge about, and ability to access searchable databases, such as Medline. Isolation from

libraries or information resources, and difficulties with information technology were also barriers for this group.

In New Zealand, Hendry (2003) found that rural facility midwives in the South Island participated in annual updates of core skills but only a few participated in formal postgraduate study. Difficulties with travel, accommodation and loss of earnings while away from practice were identified as inhibiting factors to formal study. The midwives indicated they were interested in education opportunities which encouraged networking, knowledge sharing and opportunities to develop their services.

Health practitioners may also lack knowledge of systematic reviews or inability to access these (Cranney et al., 2001; Cullen, 1997; McColl et al., 1998; McKenna et al., 2004 Tucker et al., 2003). In rural practice these issues are compounded by rural isolation, particularly from libraries and other knowledge sources (Bawden, 1996; Blackburn, 2001; Cranney, 2001 Fahey et al., 2005; Kildea et al., 2006). Resistance from peers and co-workers has also been identified as a barrier to the implementation of research in practice (Tolson, et al., 2005). Midwives have been found to be a particularly information-conscious group, however midwives who are not undertaking formal study have reported difficulty in accessing information at convenient times (Bawden & Robinson, 1997). In a study of 160 midwives, Bawden and Robinson found that the most common reason for seeking information was personal interest and keeping up to date, although 75% of respondents sometimes or often sought information to underpin a change in clinical practice. Midwives used a wide variety of information sources and services, the most common being journals. Midwives expressed a need for access to recent research and desired convenient local access to research, while a small group wanted more training in the use of computerised information systems.

Veeramah (2004) researched new graduates use of research evidence in practice. She surveyed nurses and midwives, who graduated from 1997 to 2001 from a southern England university, using a postal questionnaire. There were 184 respondents from a sample of 340 graduates. The findings were compatible with other similar studies with

respondents reporting lack of time to read research and limited access to relevant research as the principle barriers to implementing research into practice. The midwives identified barriers to evidence based practice as lack of support from colleagues and managers. They wanted more education in research critique as well as better access to the internet and databases in the work place. They also wanted access to research papers in the work place.

Using a survey, Ross (2000) identified how New Zealand rural nurses participated in ongoing education. Eighty eight percent read nursing or medical journals 82% accessed other nurse colleagues, while 74% of the nurses stated they were self-taught, Ross believes that this may be due to the nurses' belief in the value of experience as a teacher. Over half of the nurses attended professional education through weekend and evening workshops while 36% were enrolled in tertiary study. Nurses also used their GP colleagues with 62% stating that this was an information source. The least used resource was information technology, with only 28% stating that this was a method they used. Ross suggests "that nurses prefer to use their own professional networks" and utilize educational opportunities at a local level. Once nurses and midwives have accessed information they still need to identify how this may be applied to practice using professional networks may be one way that midwives can do this.

Diffusion of innovation

Another theory around the uptake of evidence into practice is the diffusion of innovations described by Rogers (1983). Sanson-Fisher (2004) discusses this in relation to the adoption of new clinical behaviour. Sanson-Fisher suggests that there are a number of aspects associated with health professionals' incentive to implement change. These include "relative advantage" that is the professionals perception of what may be gained by implementing research. Sanson-Fisher suggests that research is more likely to be implemented if it is seen to be addressing an identified or perceived area of need. The simpler the procedure or action the more likely it is to be adopted, conversely more complex innovations are less likely to be implemented. Being able to trial a new procedure before implementing fully is likely to increase its

uptake. Face-to-face exchange with a respected colleague who is familiar with the new procedure also has a positive impact on implementation.

These factors also influence midwives participation in research (Albers and Sedler, 2004). Albers and Sedler reviewed the literature and found that midwives need to have a personal interest in the research topic. Midwives also need logistical support to undertake research. A relationship with the lead researcher is important, and it was felt to be particularly beneficial if this person was someone held in high regard. Support and training, minimal impact on clinical practice and some modest financial compensation were found to be important determinants of participation. As Ross and Sanson-Fisher describe local networks are important aspects of research generation and utilisation in clinical practice however face-to-face networks may be limited for isolated rural practitioners. They may need to use other ways to interface with colleagues.

Networking with communication technology

Modern communication technology offers new ways for health practitioners to network and communicate with one another. CHAIN (contact, help, advice and information network) was established in the UK by the National Health Service (NHS) research and development programme. Russell, Greenhalgh, Boynton and Rigby (2004) undertook a study of the benefits experienced by members. This group maintain contact by email and share information and experience. Staff and members of CHAIN were interviewed in three email focus groups of members and by telephoning the two staff. The group was found to be a rich resource of relevant, useful information and provided access to people with "know-how". Accessibility and availability were valued aspects of the group as was the diversity of members' backgrounds, expertise and experience. This group would seem to be similar to the New Zealand Midwives email list (nzmidwives@yahoogroups.com) which provides members with the opportunity to share narratives and discuss topics of interest. The group also provides an opportunity for participants to share information and evidence for practice decisions. This group is a casual unmoderated discussion group with

restricted access and has not been evaluated as a networking tool. Other technology also may provide an opportunity for isolated midwives to interact with one another.

Rettie (2003) is a market researcher with a special interest in communication through technology. In this conference presentation she discusses the concept of connectedness, social presence and awareness of the presence of others in relation to mobile phone technology. Lee (2006) is interested in social interactions in problem-based learning. She looked at the use undergraduate nursing students made of cell phone text discussion and analysed 751 messages from 85 discussion threads from 12 participants and two instructors. Students enriched their conceptual understanding through collaboratively exploring information from multiple nursing literature sources and connecting these to experiences in the field. This led to reflection and further exploration. The students also entered into discussions on the relationship between nursing guidelines and clinical implementation. Cell phone text discussion provided an opportunity for these undergraduate students to experience collaborative knowledge building through problem-based learning in a new and innovative way. Using technology may provide a means for practitioners who are geographically isolated to connect and share information, providing increased opportunities for continuing professional development and learning (Tolson et al., 2005).

Rural midwifery practice in New Zealand

In 2005, the New Zealand College of Midwives (NZCOM) posted out 420 forms to midwives residing in a rural area. This was part of the Ministry of Health (MOH) rural workforce survey (Goodyear-Smith & Janes, 2006). Midwives were also invited to self select themselves, if they felt their practice was rural, and they could access the survey form from the NZCOM website. A further 10 forms were submitted from this source. Of the 177 respondents, one third stated they intended to leave rural midwifery practice within two years and a further third indicated an intention to leave within five years. The survey highlighted the huge amount of call cover provided by rural midwives and lack of locum relief for time away from practice. The midwives wanted better support when referring to obstetric services, more remuneration in consideration of the expenses of rural practice, and more support for their local primary maternity

facility as a focus for maternity services. They also wanted better collaboration with other rural health providers, with a clear understanding of roles, and incentives to attract midwives to rural areas (Goodyear-Smith & Janes).

Some of these issues may impact on the ability of midwives to inform their practice, for example lack of locum cover means it is difficult for rural midwives to leave the area to participate in workshops and study days. Of the midwives who participated in this study the majority worked either alone, (17%) or in a small group of 1-3 other midwives (58%). These midwives would therefore have limited contact with others for sharing information and resources. The very nature of rural practice, isolated from main centres, means that access is limited to a wide variety of information available to their urban counterparts. Legislative requirements for midwives to demonstrate continuing professional competence require rural midwives to be informed of current practice issues (Midwifery Council, 2006).

Changes to the structure of the regulatory process of the midwifery profession in New Zealand have occurred through the Health Practitioners' Competency Assurance Act, 2003 (MOH, 2003). Midwives have always been required to maintain competency in knowledge and skills, however they now have annual or triennial requirements to prove that competency is being maintained (Midwifery Council, 2006). How rural midwives inform their practice is therefore an issue of interest to the profession. Understanding this issue from the perspective of rural midwives may highlight opportunities for new initiatives to support rural midwives. Hendry (2003) provided an overview of rural midwifery practice in the South Island of New Zealand and identified some differences in the arrangement of midwifery practices. She found that many rural midwifery practices are located around rural facilities, and midwives often work in organised practice groups.

Communities of practice.
The concept of communities of practice has appeared in literature since the late 1990s. Originally established to assist information sharing in information technology and business, the theory has been moving into the fields of education and health service

provision. (Norris, Mason, Robson, Lefrere & Collier, 2003; Gabbay & Le May, 2004; Tolson et al., 2005). Principally established as networking and support groups communities of practice also share information on which practice decisions may be made, or provide information to be shared with clients (Tolson et al.).

Communities of practice are groups of people who share a common interest in an area of practice. They connect with each other with the intention of learning through this interaction. This purposeful connection is what differentiates communities of practice from other forms of social interaction and networking (Wenger, 2006). Communities of practice may be used for problem solving, sharing information, sharing resources, discussing developments as well as establishing where there is existing knowledge or gaps in knowledge plus highlighting areas requiring further investigation (Gabbay & Le May, 2004; Tolson McAloon, Hotchkiss & Schofield, 2005; Wenger).

Communities of practice provide an opportunity to share narratives of practice and generate new ideas through reflection within a group. The purpose is to bring people with a common knowledge base together to explore ideas, share experiences and provide opportunities to develop research questions contributing new evidence to the group (Wenger, McDermott & Snyder, 2002). McHugh (2004) discussed the difference between dominant western knowledge forms and narrative knowledge forms. McHugh described narrative knowledge as weaving experience and context together to create a knowledge base which is valid in its context. McHugh suggested as a social group, midwives have evolved a unique knowledge base and identity. Midwives share knowledge through story telling, which McHugh described as a valuable way of passing on fading midwifery skills and reclaiming past knowledge.

Gabbay and Le May (2004) studied two groups of primary care practices and found that the participants did not often refer directly to sources of evidence or guidelines for information. They preferred free magazines, professional networks, trusted experts and their own community of practice to discuss and share acquired information or evidence. Gabbay and Le May assert that practitioners who use this form of knowledge in their practice have an obligation to ensure that it is based on the best

available evidence. They also suggest that the importance of communities of practice be recognised by those providing continuing education and utilised, as part of continuing professional development.

A group of geographically dispersed gerontology nurses in Scotland formed an online community of practice who met principally through discussion groups. Participation in this group raised professional confidence, strengthened professional identity, synthesised knowledge and developed best practice guidelines specifically for this area of practice. Difficulties for the nurses arose from lack of access to a computer at work, lack of time to participate in this activity and some doubts as to the legitimacy of internet-based learning. The nurses felt the development of this online community of practice was a valuable experience, providing links that would not otherwise have been possible (Tolson et al., 2005).

Communities of practice and other networks provide midwives with an opportunity to get together and share practice stories and knowledge, old and new. This is an opportunity for reflection and information sharing (Davis-Floyd, 2004; Taylor, 2000; McHugh, 2004). In the course of their daily work midwives often have the opportunity to connect with colleagues and are also meeting with the women for whom they are caring, sharing information in these forums is also an opportunity for reflection which may lead to further investigation and can add to practice wisdom (Davis-Floyd).

Background Summary

There is increasing emphasis on basing practice on the best available evidence. Many researchers have identified difficulties that health practitioners and more particularly rural practitioners have in accessing and applying evidence to practice. Rural practitioners also feel that research and practice guidelines often do not consider the local context of practice. Midwives have been found to be a group who are very interested in accessing information from journals and other library or educational sources. Communities of practice provide a useful opportunity for sharing information whether through physically getting together with colleagues or through online sources.

I required a strategy to investigate how rural lead maternity carer midwives in the South Island of New Zealand acquire and interpret information to support their practice decisions. This process is outlined in the following chapter.

Chapter three: Study Design

Introduction

The qualitative descriptive methodology chosen for this study has particular characteristics which are described in this chapter. Focus groups are a commonly used method to conduct this type of research. The discussion generated in focus groups is a useful method for exploring a specific set of issues. However, if useful data is to be generated careful planning and attention to detail are required throughout the research process from planning, through facilitating the focus groups to completion of data analysis and reporting the findings.

Methodology

Qualitative descriptive research

It was clear from an early stage that this should be a qualitative research study enabling me to gain an insight into the experience of a small group of rural midwives. Denzin and Lincoln (1994) describe this type of research as "naturalistic" (p 14), where the research is bound to the particular circumstances and context of the participants and the research setting. It is important that the researcher acknowledges her background and experiences where this relates to the research project. However it is not possible with this type of research to generalise findings (Denzin & Lincoln). Comparisons can only be made to similar situations with consideration for the context of the research (Denzin & Lincoln).

I chose a qualitative descriptive methodology as described by Sandelowski (2000). I wanted to describe the experience of the participating midwives without having to look behind and beyond the words for hidden meanings and attitudes. Using a qualitative descriptive methodology allowed me to do this. I do acknowledge my own feminist beliefs in that I have a firm belief in equality and social justice. I see midwifery as a feminist profession which has had to struggle at times against the many inequalities inherent in a patriarchal society and within the hierarchical structure of health service provision. For the purpose of this study I felt feminist research would

require another level of interpretation which was beyond the scope of this particular piece of research.

I cannot separate myself from the midwives in this study. As a rural midwife, I am a part of them as they are a part of me. However identifying with the participants is a feature of this type of qualitative research (Denzin & Lincoln, 1994; Sandelowski, 2000; Sim, 1998; Thorne, Reimer, Kirkham & O'Flynn-Magee, 2004). Sandelowski acknowledges that no research is without some interpretation. This begins at the start of the study with the selection and honing of the research question, and continues through the selection of participants and the analysis and presentation of findings. The general meaning of the comments made by the participants should be kept in mind and incorporated throughout interpretation of the data. Findings are presented in a summary form, organised either chronologically or in major categories. Sandelowski states that further interpretation is not possible with this type of research however she adds that the summary may highlight working concepts with early versions of hypotheses which could form the basis of further study. Findings are specific to the context of the research. Inferring applicability to any other situation should be done with caution considering any similarities or differences in the circumstances of the situation. Focus groups are an ideal method for data gathering for this type of research and also allow the researcher to identify with the participants (Sim, 1998). The challenge with this is not to get too involved and to let the participants lead the discussion with gentle guidance from the facilitator (Sim).

Analysis of Qualitative descriptive research

Qualitative descriptive research can be analysed using content analysis (Sandelowski, 2000). Miller and Crabtree (1994) present three core steps when undertaking content analysis. These are developing an organising system, segmenting the data, and making connections within the data. Within a naturalistic framework, the researcher as the interpreter also acts as the editor and organises the data (Denzin & Lincoln, 1994; Miller & Crabtree, 1994). In order to do this effectively it is necessary to immerse oneself in the text (Miller & Crabtree, 1994; Krueger, 1998). While analysing the

data, the researcher chooses what aspects of the data to describe, presenting these descriptions within themes identified during data analysis. The findings relate to the participants and the setting of the research and any attempt to generalise the findings should consider the context of the research (Thorne, Reimer, Kirkham & O'Flynn-Magee, 1994).

Focus groups are a useful data gathering method for this type of study. Although the words of the participants are described within the particular setting it cannot be presumed that the conversations would have occurred outside the research. The interviews are constructed to answer the questions the researcher is asking and are therefore situated within the inquiry (Greene, 1994).

Focus groups

Focus group research has particular requirements around the selection of participants, facilitating the group discussion and analysing the data obtained from the groups. The validity of the focus group research involves following a clear and transparent process.

Focus group process

Focus groups provide the opportunity for those with shared experience to come together and explore a topic from a variety of perspectives, generating a richness that would not be possible in a single interview (Bender& Ewebank, 1994; Kitzinger, 1995; Krueger, 1994; Kreuger, 1998; Gribich, 1999; McDougall, 1999). Instead of simply answering a set of questions, participants are encouraged to share stories and comment on each others' experiences. Prior to commencing each of the focus groups, issues of safety and confidentiality are negotiated with the participants (Kitzinger, 1995). Identifying with the participants can be a feature of focus groups with the researcher's interest leading to the development of the questions and selection of participants. It also creates the focus around which the group discussion occurs. It can be a tricky balance between identifying with the participants and encouraging the group to debate the topic for themselves (Sim, 1998). This requires some skill in facilitation of the group process.

Facilitation

Particular attention is given to the group dynamics at each point of the research from selecting the participants and the venue for the interviews through to the seating arrangements and flow of the group discussion (Kitzinger, 1995; Kreuger 1994 & 1998). Potential issues can be minimised by careful seating to enable the facilitator to maintain eye contact with all the participants (Morrison & Peoples, 1999; McDougall, 1999).

Participants

Ideally, groups should be homogenous with no power imbalances as more junior participants may feel unable to contribute, or a more dominant member may control the group. The group discussion provides some verification of the data, due to the checks and balances of a number of viewpoints being expressed (Grbich, 1999). Focus groups may be a naturally occurring group such as people who work together or a group brought together for the purpose of the study (Kitzinger, 1995). Selection of participants for focus groups is usually purposive, as the groups are selected for their expertise in the topic (Morrison & Peoples, 1999).

Number of groups and participants

To generate the necessary data to answer the research question Kreuger (1994 & 1998) suggests a minimum of three with a maximum of twelve focus groups, however he suggests several groups should be carried out with similar participants. Using several focus groups increases the reliability of the data and allows trends to emerge. If one group has a divergent perspective on the topic, the effect of this can be minimised by other groups (Sim, 1998). There is no clear agreement about the ideal group size for a focus group with a range of between four and twelve participants proposed by different authors (Kreuger, 1994; Kreuger, 1998; Kitzinger, 1995). According to Bender and Ewebank (1994) smaller groups may allow greater contribution from each member.

Conducting focus groups

Participants should receive information about the research, explaining the purpose of the focus group at least two weeks before the interviews are scheduled to occur (Kreuger, 1994). Consideration needs to given to the venue, which should be a place where all the members feel comfortable and is free from distractions. The room should not be too small to be cramped allowing the participants to sit in a circle and enabling eye contact to be maintained with the facilitator (Kitzinger, 1995; Kreuger,).

Analysis of focus group data

Analysis of focus group data is continuous throughout the process, beginning during the data gathering phase where themes start to emerge (Kreuger, 1998). Following completion of the groups the data is transcribed and analysis continues as described in the analysis of qualitative data earlier described. Analysis of the focus groups may also consider any field notes taken at the time of the focus groups by the facilitator or an assistant. These notes may consider some of the dynamics of the group or non verbal communication that would not be obvious from the recording or transcript alone (Kreuger).

Validity of focus group data

As indicated above focus group discussion is spontaneous and natural however it is not naturally occurring (Kitzinger, 1995). It cannot be assumed that the discussion generated by focus groups would have occurred outside the groups themselves. Conducting several groups improves validity as common themes can be identified (Kreuger). The validity of the research is improved when the facilitator and the participants share a common experience (McDougall, 1999). Validity is also assured through maintaining a clear audit trail. This involves the retention of all data with a clear method of content analysis. If another researcher takes the same raw data they could identify how the themes emerged and draw similar conclusions (Kreuger, 1998; Grbich, 1999).

My research process

Pilot group

To test my research questions and the process of running a focus group prior to commencing my research properly, I conducted a pilot group with a group of midwifery lecturers who had some previous experience in rural midwifery practice.

The pilot focus group proved to be a useful exercise. Although I had not intended to specify any direction for the participants around what was meant by "informing their practice" it became clear that this was necessary. I also found I needed to consider how to keep the conversation focused on the topic at hand. This proved to be a continuing struggle throughout the data gathering process. I also learned some useful lessons on the set up of equipment. I was using a digital voice recorder, which is a component of my personal digital assistant (PDA). This proved to be an excellent device not only for recording conversation, but also for transcribing data as the play back could be easily paused and moved backwards or forwards.

Recruitment of participants

For this study I used purposive sampling. This allowed me to select an "information rich" sample of experienced rural LMC midwives (Sandelowski, 2000; Mays & Pope, 1995; Kitzinger, 1995). Initial access was through the 0800MUM2BE maternity information service which is run by the Ministry of Health. This service is freely available for women to identify who the lead maternity carers are in their area. I explained my purpose and requested information on midwives in rural areas around the South Island of New Zealand. Contact phone numbers of lead maternity carers in specific areas are all that is provided through this service. I phoned midwives in the areas I had chosen to study and spoke with a midwife asking if they would be interested in finding out more about this study. I then sent information on the study plus consent forms and reply-paid envelopes to individual midwives or to the primary facilities they accessed (See appendix 3 & 4).

My original intention was to conduct two focus groups. However, as stated previously, rural midwifery in New Zealand has evolved in a number of ways to meet the needs of the local area; in particular some midwives are employed, some are self employed, some work alone and some work in practice groups of four or more. On reflection I considered that three groups would be more appropriate to the diversity of experience that these midwives might have. Although five midwives agreed to participate in the first focus group, only three midwives were available on the designated date. With the second focus group I arranged to be in the area on a public holiday. Several midwives agreed to participate but only one midwife was available on the designated day. For the third group all four midwives in the area participated. On consideration I felt that I would like to conduct one more focus group to complete my data gathering. I had been providing some casual midwifery cover for a group of rural midwives and when I discussed my research with them they were keen to learn more about participating in this study. I sent them the information and consent forms and they all agreed to participate and so they became the final group for my study. Of the six midwives in this group five were available and participated in the focus group. I have discussed the issues in organising and facilitating these focus groups in more detail later in this chapter.

Ethical issues

Ethical approval for this study was obtained from Otago Polytechnic ethics committee (see appendices 1 & 2)

Consent

Information about the research was sent to the purposive sample of midwives (see appendices 3 & 4). The midwives were able to choose to participate in this research or not by returning a signed consent form. Some midwives who had agreed to participate by returning a signed consent form did not turn up for the focus groups. There was no penalty or reward for any midwife in choosing to participate or not although I did provide refreshments during the focus groups. I also offered to reimburse any travel and/or childcare expenses the midwives may incur as a result of their participation in the study.

Cultural issues

Cultural safety requires the understanding of ones own values and valuing each individual and their right to their own beliefs and customs (van Wissen, Williams, Siebers & Maling, 1994). Safety in this sense is defined by those who are receiving the service (Nursing Council of New Zealand, 2005).

I am committed to upholding the principles of the Treaty of Waitangi[6] and acknowledge that this may impact in ways of which I was unaware. Although Maori make up a significant proportion of the rural community in the North Island, this is not the case in the South Island with statistics New Zealand 2001 census reporting nine out of ten rural residents of Maori ethnicity live in the North Island (Statistics New Zealand, 2002). None of the midwives in this research chose to identify as Maori. My research may have some influence on maternity services for Maori however I am unable to predict what this influence could be.

Confidentiality

Every effort has been made to maintain the confidentiality of participants. I have used pseudonyms for the midwives throughout and have attempted to obscure the identity of individual midwives and groups. I have also avoided using place names. As the midwifery community in New Zealand is very small and relatively close-knit maintaining confidentiality is difficult, however I have made every effort to do so.

Potential harm

I did not anticipate that any harm would come to the participants through participation in this research project, although I acknowledge that some could feel embarrassment through exposing their views in front of their peers. At the start of the interviews, ground rules for the interviews were discussed including respecting each others' views and allowing others to speak. Midwives also had the opportunity to leave at any time.

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[6] Treaty of Waitangi, a treaty signed on 1840 by 35 Maori chiefs and the British crown. It is considered the founding document of New Zealand and is recognised through government policies (Shipley, 1996)

As it transpired all who attended participated fully. At the end of the focus groups, I made it clear that, if necessary, I would remove any particular comment, which the midwives did not want to be included in the final analysis. No requests for this were made. I also agreed to include anything else that the midwives might think of over the next two weeks which they could send me, again this did not happen.

The rural midwives' group process

I decided to keep the questions I would ask very broad to allow the midwives to interpret for themselves what is meant by "informing their practice". I did not want to channel the midwives into particular topic areas such as, continuing education, accessing of evidence or interactions with others, but hoped that they would cover all of these things.

I chose three key questions to ask the participants;

- How do you currently inform your practice?
- What are the issues you have with informing your practice?
- What might help you with informing your practice in the future?

These question proved to be conversation starters and the discussion flowed around them.

Background to the midwives in my study.

The midwives differed in the degree of rural isolation experienced by individual midwives or groups of midwives. Defining rural and remote rurality is problematic. For this reason, in the recent rural workforce study, midwives were allowed to select themselves if they felt their practice was rural (Goodyear-Smith & Janes, 2006). Many urban-based midwives in New Zealand have clients in rural and perhaps remote rural areas, while rural and remote rural-based midwives may also care for clients in a base hospital with specialist services on hand. Rural and remote rural areas in New Zealand are categorised in Section 88 of the Health and Disability Notice (MOH, 2002), midwives receive different levels of travel reimbursement for women depending on the category of the woman's residence. Each rural area is named and categorised as either rural or remote rural. Statistics New Zealand also categorises areas as rural and

remote rural by their dependence on urban areas for services and income. They produce a map of New Zealand categorising areas as urban, rural or remote rural, (see appendix number 5).

The areas covered by midwives in this research were all in the South Island of New Zealand. All had a mix from rural to highly remote rural locations within their boundaries. Three of the primary facilities[7] accessed by the midwives are in independent urban communities, which are towns and settlements without significant dependence on main urban centres (Statistics New Zealand, 2002). The fourth facility is in a satellite urban community, which is defined as an urban area where 20% or more of the usual resident populations are employed in a main urban centre (Statistics New Zealand). The midwife participants cover a large geographical area and some can occasionally be two hours away from their primary unit. Some midwives in two of the focus groups continue to care for women within the base hospital[8] in the nearest city, the midwives in the other two groups hand over care on transfer.

In this study the groups have varying characteristics. Midwives are a mix of employed and self-employed midwives. All the midwives in two of the groups are employed by the local rural community trust which also runs the local maternity facility and community hospital. One group is totally self-employed and midwives in the other group are a mix of employed and self-employed. All are Lead Maternity Care midwives who care for a case load of women either alone or in teams of two, possibly within a larger group of up to six midwives. Most have many years of midwifery experience although several were new to rural midwifery. One midwife was a recent graduate from a direct entry degree programme. Midwives had trained in Australia, the United Kingdom (UK) and New Zealand.

The focus groups were all held in the midwives' own rural areas. The employed midwives work in practice groups together and the self employed midwives come

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[7] Primary maternity facility = a facility without specialist medical services on-site. Care is provided by primary care givers, midwives or GPs (MOH, 2002)
[8] Base hospital = the term I have used for the purpose of this study to refer to a hospital with specialist obstetric and paediatric services available.

together for meetings at varying frequencies. After signed consents were received further telephone contact was made to finalise the time and place of the meetings.

Facilitating the first focus group

This group had a scheduled rural midwives meeting and were happy to use this opportunity to run the focus group. Although six midwives had consented to participate, only three midwives were available on the designated day. This is not an unusual occurrence with focus groups and Krueger (1998) recommends overbooking slightly to compensate for this possibility.

The venue was a local midwife's dining room and we had nibbles and drinks to start with general friendly chatter. We gathered round the table and discussed ground rules for the focus groups, allowing one person to speak at a time; however this did not work well and made the conversation very stilted. I found myself joining in, in an attempt to encourage more natural conversation rather just doing the rounds around the group. The group did wander off-topic at times, however I was pleased to see the discussion start to move in a more natural way so did not interfere with the flow of the conversation when this happened. I discussed this with following groups, and mentioned the need to have one person speaking at one time where possible, but also encouraged the midwives to join in the conversation, and try to make this a natural, friendly debate. The three midwives did not work together as a rule and were located in three different rural communities ranging from half an hour to two hours drive from each other. Two of the midwives accessed the same rural facility in a centrally located rural town and the other is employed by a small rural facility in a nearby town. The midwives get together twice a year for information sharing and support.

Facilitating the second focus group

Five midwives consented to participate in this focus group. I had arranged to visit this area on a public holiday and contacted the midwives again on arrival in the area, two days before the focus group was booked to take place. At this time I found that only one midwife was available to participate. I considered missing out this focus group

but the midwife was willing to be interviewed and so I decided to continue. The interview took place in the local maternity facility. This was a good opportunity for me to see where the midwives worked in this area. Although this was an interview with one midwife, the questions I asked were the same as the other focus groups and the discussion flowed in a very similar way to the other groups. In the analysis and reporting I not only describe group issues but also describe the experiences of individual midwives. Therefore including the experience of this midwife can be justified. The midwives in this area were different to other groups however as they were much closer geographically to the base hospital and this midwife had the opportunity to be involved with many different groups of midwives and other health professionals. This was a valuable contrast to the more isolated midwives from other groups and added a dimension to this research that would not have been possible to obtain otherwise.

Facilitating the third focus group

All four midwives in this area consented to participate in the focus group and all attended. I contacted the midwives and arranged to be in the area during the Easter holiday. A couple of days before the interview I contacted the midwives and a decision was made to hold this group meeting in the local maternity facility. We met in a meeting room in the facility and gathered around the table. The group was not as relaxed to begin with, this may have been due to the fact that it was first thing in the morning, the group were keen to get going and we did not have the customary tea and nibbles prior to the group starting. We did discuss ground rules for the focus group however and this seemed to work well. All of these midwives were employed by the local rural facility and they met together on an almost daily basis.

Facilitating the fourth focus group

As stated earlier I decided, because of the diversity of the groups, that I needed to hold one more group to make try to obtain more data and perhaps support the themes I was starting to identify. I had been providing some casual midwifery support for a group of rural midwives and when I explained what I was doing, these midwives were keen

to learn more about my research. I sent the midwives the same information I had distributed to the earlier groups, along with consent forms, and all signed these. The midwives set the date for the focus group themselves, which reassured me of their willingness to participate. Six midwives agreed to participate, and on the scheduled day five were available. The focus group coincided with a regular, weekly, midwives meeting and was interrupted by phone calls and other comings and goings. The venue was the midwives office, and so we were not gathered around a table, but more haphazardly placed. It was not possible to avoid this however, and we managed to complete the interview, following a similar process to the other groups. Although I was unable to make eye contact with all the midwives, they all contributed equally, which was probably due to their familiarity and comfort with each other, and with me.

Data analysis

Following completion of the focus groups, I transcribed the interviews. I completed this process myself as it is an excellent method of immersing oneself in the data and identifying nuance and emerging themes (Kreuger, 1998). Listening to the recordings and transcribing into the written word helped to embed the interviews in my thoughts. I was surprised to find that the written transcription often had a slightly different nuance to the recording of the interviews although the words were the same. I kept this in mind as I analysed the text and tried to stay true to the original inferences by the midwives.

Initially I started to code the data, searching for commonality in the discussions. I pulled out themes and tried to fit the data into these emerging themes however this process was not satisfactory as the data sometimes did not fit exactly and I felt it was being manipulated to fit the themes already identified.

I then took each interview and wrote it in narrative form. I grouped the data to tell a story from the perspective of the midwife participants. During this process I was continually reflecting on these stories and what they were telling me. As I progressed and reflected on this process I started to identify themes emerging in the data.

1.   The principal theme centres on acquiring and sharing information through connections. The midwives need to connect with women, with each other, with other rural midwives and with other professional colleagues. These connections allow the midwives to access and share the information that is required to do the work they do, while also keeping in touch with what is happening in maternity care locally and elsewhere. These connections are also about supporting each other and being supported by others. This theme extends to how the midwives connect with information in other ways to inform their practice. This might be through accessing journals, books, the internet, study, 'Standards Review' or practice guidelines. Connections and sharing also have the potential to highlight areas where evidence is lacking and thereby generate research questions specific to the rural midwives context of practice.

2.   The secondary theme centres on the midwives' desire for local access to information. The midwives wanted more local continuing professional development opportunities and better access to other rural midwives and to information. These midwives suggested that local access would make information more accessible to midwives it would allow the midwives to participate in and reflect on continuing professional development together. Together the midwives can identify how new information may be applied in their own practice setting improving the prospect for the implementation of new evidence.

The findings are presented in chapters 4, 5 and 6 in summary form. Where quotes from individuals are included, pseudonyms are used in place of the individual's name. References are placed in brackets following the quote thus [Name, 1:2]. The first number is the number of the focus group from which the quote is taken, followed by a colon. The second number is the page of the original focus group transcript where the quote appears.

Chapter summary

The procedure of conducting this research used a qualitative descriptive methodology, and the data was gathered using a focus group process. These have been described in this chapter. How the midwife participants in the four focus groups accessed or

acquired and interpreted information was identified through content analysis of the data generated from the focus group discussions. The principle theme that emerged was that these midwives accessed information through the connections that they make with each other and with others who have information to share. The midwives also acquired information for practice from the journals books and online data bases to which they had access.

Chapter four: Connections

Introduction

The midwives described how they accessed information through a variety of connections. This was the major theme identified during data analysis. These connections ranged from their local professional contacts to wider regional, national or international midwifery connections. The midwives also accessed information directly through connecting with journals or databases of information. The variety and number of connections, whether interpersonal or with evidence, were influenced by the degree of the midwife's geographic isolation. The reality of rural practice is that midwives work in small groups, or occasionally alone. Thus the professional contacts and relationships that the midwives have vary and are dependant on the circumstances of the local area.

Connecting with each other

Group meetings

Most of the participating midwives had well-established practice groups, with organised regular meetings and/or support networks of some type. These groups form the basis of the professional interactions that the midwives experience. Through these professional interactions information is exchanged and the midwives inform their practice through shared knowledge and experience. The groups usually meet face-to-face but some also meet through an online source or using other communication tools.

Two of the groups are composed of midwives employed by their local community health trust and these midwives form a local practice group. If they are not meeting in person they are in contact by phone on a regular basis. They also have regular clinical meetings where they debrief with each other and reflect on practice and clinical events.

> *We have clinical meetings ourselves, within the unit. And say 'what are you doing that for', or 'would this be a good idea'* [Sarah, 3:14]

The midwives in group two are all self-employed. The local rural midwives group consists of four midwives, who access the local rural facility. These midwives get together regularly. Chris, who was the only midwife able to attend this focus group, is involved in several other midwifery and inter-professional group activities.

The midwives in group one are a disparate group of two self-employed and one employed midwife who only meet together a couple of times a year. Penny, who had worked previously in the base hospital, has close links with previous colleagues at the base hospital and with another midwife with whom she shares her practice. She commented,

> *I get a lot of my information from talking to staff in the base*
> *hospital. I still feel quite like I belong there.* [Penny, 1:1]

Penny has a midwifery partner, with whom she meets regularly, in her own area. They often communicate with each other by cell phone texting [Penny, 1:5].

Group one is not a practice group and the midwives work either alone or in pairs with other midwives. Anne was the most isolated of this group and had organised regular meetings twice a year in an effort to form a supportive network of rural midwives in the area,

> *It was just for rural midwives to get together just to talk about*
> *situations that they might have been in, in a safe environment, or*
> *‘this is what I did, what would you have done’ or ‘what resources*
> *are there out there’* [Anne, 1:9].

Midwives in group three have a very supportive group, who meet regularly and keep in regular contact with each other, as Tracy said *“we spend a lot of time on the phone if not face-to-face,”* [Tracy, 3:8].

Focus group four midwives have regular weekly meetings but are also in touch with each other through their midwifery work on a daily basis.

I think it is really good the knowledge sharing opportunities that we have here with us, that happens on a mini level with us with our weekly meetings and that is great. [Mary, 4:12]

Information sharing

The midwives commented on the information sharing that occurs whenever they get together with each other.

Even from team to team we often learn different things from each other, which is good, it's all knowledge sharing [Mary, 4:12].

Sometimes information is shared simply through chatting, [1:4; 1:5]. And sometimes it is an opportunity to share an item that has been found on the internet, in a journal or from some other source [3:10; 4:11].

Fran commented

I have to say personally I gain most of my knowledge from my colleagues, from working with more experienced, or highly experienced, other midwives [3:7].

For the midwives in groups three and four this informal method of information sharing is particularly important. Information sharing is more difficult for the midwives in group one as they do not have as many opportunities to do this in a local group. They find other ways to meet these needs, through connections with previous groups that they have worked with, or through online connections [1:2-6]. Jane commented

I source my practice very much through other midwives ... through contacts that I've developed over the period of time that I've been qualified as a midwife [Jane, 1:1]

As she does not have regular access to a local practice group Jane finds other ways to share or acquire information with fellow midwives,

It's analysing the research that you've found and some of that I do within myself and some I would wait to do with other midwifery

colleagues, either here or overseas, and just tapping the resources
that I've got going through email [Jane, 1:10].

Chris, from the second focus group, not only meets regularly with her local rural group, she also meets with a larger group of regional self-employed midwives, who cover both urban and rural areas. She is a member of the DHB access holders group[9] and the regional Standards Review committee[10]. Chris also attends perinatal mortality audit meetings at the DHB. These activities are illustrated in Figure 1 on page 76. Chris has an opportunity to share and acquire information from a wide variety of sources. Some of these groups invite speakers to share information with the group. The access holders group invite participants or invited guests to deliver presentations. Obstetrician, paediatricians, dieticians and midwives have opportunities to present a topic to the group. Chris commented,

A*s an independent group we're asked to present something*
probably twice a year. [The DHB] midwives [also] present
something twice a year. [Chris, 2:6].

Her regional midwives group also invite guest speakers, such as Plunket or immunisation advisors, to present to the group and share information. Information which is acquired through each of these groups is easily disseminated throughout Chris's networks.

Often the information that is shared relates to a particular incident or an issue that has arisen in practice. Many of the exemplars that the midwives presented during the focus groups were around infections in pregnancy. Particular mention was made of the challenging issues of Group B Streptococcus (GBS) and lack of clarity nationally or regionally around the best approach to take in practice [1:12; 2:6; 4:2], Cytomegalovirus had also been a concern for group four [4:15] as had Monilial

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[9] Access holders groups are groups of primary maternity service providers who have an access agreement with the DHB. They meet with representatives of the secondary maternity service and share matters of mutual interest.

[10] Standards Review: This is a peer review process contracted by Midwifery Council from the College of Midwives. It comprises a package of annual statistics, reflection on practice and client evaluation which midwives present to a panel of consumers and peers. It is a component of the midwives recertification process for her annual practicing certificate (NZCOM, 2007)

(Thrush) infections [4:10]. The midwives valued the opportunities to share information with each other on these issues and had a desire to be able to connect with other rural midwives in some way to pass on information they had gathered or benefit from another perspective.

Formal study

The midwives generally value the opportunity to attend formal study, conferences and technical skills workshops. Although often it is the opportunity to connect with other midwives that is the most valued aspect of these activities. Penny said she would like to attend more study days, *"The study days are good because you're mixing with your colleagues... you're chatting"* [1:4], however this is often hard to do because of the difficulty of getting time off work. The midwives find workshops and continuing professional development provided in their local area particularly valuable. The midwives in group one had previously had technical skills workshops presented locally [1:5] while group four organise many local workshops for midwives and other health professionals.

Group four have organised several local continuing professional development opportunities.

> *We have had an in-service with Lab people on, different types of antenatal screening or the UTI[11] update that kind of thing and we've invited the Maori health people to come. When we've had a lactation consultant down we've invited other people. When the neonatal resuscitation people come, for our in-service, the rest of the hospital is invited to come, the doctors, the MOSSs[12] and the duty nurses.*
>
> [Mary, 4:3]

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[11] UTI – Urinary tract infection

[12] MOSS,- Medical officer special scale. The equivalent of a registrar in the base hospital. These doctors work under a special rural scale with supervision from specialists in the base hospital.

The midwives believe that local continuing professional development would allow the midwives to learn together. As Chris said about having to travel to study,

> "*And so really for myself, it would be nice to go with your colleagues so you can disseminate the information together, but we can't do that because we would leave the place empty*" [Chris, 2:13].

For most of the midwives, the primary source of information is their own local midwifery group. However the midwives also acquire information from others with whom they have professional relationships.

Connecting with others

Connecting with women

The most frequent connection that rural midwives have in practice is with the women who are their clients. It is through these connections that midwives will engage in the majority of their information-gathering and sharing. Some midwives did mention this although only one recognised this as an important area of informing their practice, commenting that this is one of her primary sources for informing her practice [Jane, 1:1]. Information shared from clients may be a stimulus to the midwife to investigate an issue in more depth, or, women may have a deeper knowledge of their own clinical situation than the midwife. Fiona and Rachel found that, where the woman has a pre-existing medical condition, she may be able to share information around this with the midwife [4:10]. An example was a woman who had an issue with a Monilial (Thrush) infection and shared information she had found about this condition with the midwives. As a result the midwives found that the base hospital management guidelines for this condition were out of date and not based on the most recent evidence [4:10].

> *We learnt a lot form Susan's case. She was a woman, who had problems with ongoing thrush, and she looked up thrush and she did a lot of research, and gathered information, and we found out that our base hospital protocol was actually quite outdate. So we learnt lots from her. Yes she brought up a lot of information. Well-*

balanced information but she was very motivated woman. [Rachel, 4:10]

Connecting with other health professional

Chris meets with a variety of other multidisciplinary groups, which have been described earlier. Chris values these learning opportunities however, this may not be an option which is open to other rural midwives, due to distance from the main centres. Chris also commented that her local rural group have support from the local GPs whom they will call if they have an emergency situation requiring extra skilled assistance [2:16-19]. Both Fran in group three and Mary in group four spoke about working hard to keep the lines of communication open between midwives and GPs or obstetricians [3:9; 4:11]. The midwives also spoke of accessing information from paediatricians, lactation consultants, laboratory staff and dieticians [1:1; 1:5; 1:9; 2:4; 2:6; 2:7; 2:8; 3:8; 4:3; 4:8; 4:9].

Penny gets a lot of information through her contacts with other health professionals in the base hospital

> *Talking to medical staff in the base hospital... if I have any questions I just chat to somebody about that or they'll put me onto something that I can read* [Penny, 1:1].

Fiona from group four appreciates information shared from medical staff in the base hospital,

> *Sometimes it is just a simple phone call to a registrar when something comes up. For example recently a woman exposed to cytomegalovirus, so a phone call to them and they will direct you. I think that is always the best first step really to see what base hospital is doing* [Fiona, 4:2].

Specialist clinics are held monthly in Fiona's local facility. Having a particular obstetrician visiting has given the midwives direct access to the obstetric consultant which is something they value highly, Rachel said

> *When we had a permanent person it was a really good system where you could email Deborah Short with your queries and you would get the reply the same day* [Rachel, 4:2]

These midwives find they get good support from other medical staff in the local facility, which is served by a radiologist, nursing staff and medical staff in the form of an on-duty medical officer special scale (MOSS). The midwives also have a relationship with other health professionals within the local facility. Ruth made this comment about the support from this source, *"The first support in a storm for me is always my collegial support."* [Ruth, 4:3].

Fran in group three had recently joined the La Leche[13] group locally as a professional support person. Fran had issues with the availability of practical breast feeding information and finds this is another support mechanism for informing her practice [3:7].

Audio and video conferencing

Some midwives had experience with audio and video conferencing. Penny in group one had participated in a video conference organised by the polytechnic school of midwifery [1:5], Penny enjoyed this opportunity to chat to people. June, from the pilot group, had run a video conference group and had very positive feedback from the midwife participants however, she felt it was an expensive exercise for the polytechnic and was unsure if it would be sustainable to continue [P:14-16]. Midwives in group three, had participated in the past, in base hospital teleconferences of case reviews. [Sarah, 3:6]. Doctors, midwives and obstetricians were able to participate locally and this was a good, accessible, learning opportunity.

> *Whoever was on call that morning could listen to it, while the doctors and midwives and anyone else in the base hospital had a* [case review] *conference about, once a month... And that was fabulous except they took it off because it, apparently was too expensive* [Sarah, 3:6]

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[13] La Leche League – An international organisation which aims to support mothers to breastfeed through mother to mother support as well as sharing information and resources.
http://www.lalecheleague.org.nz/

Connecting with midwives in other areas

Sarah belongs to midwifery groups through internet connections with international midwives, *"I am on various midwifery research lists, in the UK"* [Sarah, 3:9]. When she comes across anything interesting she will pass this on to her colleagues. Nell also accesses the internet,

> *"I would be totally and utterly lost without the internet, plus our*
> *collegial support we give to each other I think is absolutely superb."*
> [Nell, 3:4].

Jane also spoke of overseas midwifery connections which she maintains and which provide support and information [1:1]

Tracy spoke of discussions with midwives from the base hospital. On occasions she has asked these midwives for advice about a particular issue. She has found they often cannot help, as they have the ready availability of practical support from obstetricians or senior facility midwifery colleagues. This option is not available to the rural midwives and so the context of practice is quite different *"they're just coming from a different perspective completely."* [Tracy, 3:8]

Chris spoke of working with student midwives *"If you take student midwives you've got to get up to speed with what you're saying"* [2:11]. Others also spoke of the benefits of working with student midwives, as students brought a fresh perspective and may have up to date resources which they can share with the midwife [Jane, 1:4; Rachel, 4:16].

Connecting with information

Online information.

Nearly all the midwife participants use the internet in some way to inform their practice. Only two commented that they felt uncomfortable with this source of information. Chris does not use computers at all and relies on her family members to help with access to emails, however she said that other midwives in her group are comfortable with its use [2:10]. Penny also said that the internet was not her preferred source of information however she does access emails and also commented on use of the intranet when she is in the base hospital with clients. She therefore has some computer skills [1:1; 1:4].

Anne works alone and gets a lot of information from the internet, however this is not always as easy as she would like. When she comes across an article she is often not allowed to view the whole article without paying out a significant amount of money. This is a frustration as it is hard to tell if the article is actually relevant or not. [1:3]. Meg from the pilot group spoke about the volume of research that can be accessed on the internet *"There is such a wealth of stuff on the internet that people could just be swamped by it"* [P:7]. Even when material can be accessed it is often not relevant to the local midwifery situation, Meg commented *"there aren't always answers to our questions. That's what is frustrating"* [P:7]. Most research is conducted through other disciplines and cannot always be transferred to answer the questions of the midwife in practice, particularly in rural New Zealand [P:8].

The midwives in group three use the internet frequently to access information for practice. Sarah commented that she is a participant in several online research discussion groups, locally and overseas, which are good sources of information which she then shares with her colleagues [3:9]. Nell also has a favourite site for information she can share with women [3:10]. It is interesting that it was the most remote midwives who were the strongest users and expressed most interest in use of the internet for networking and practice information.

DHB Intranet

Midwives in two of the groups mentioned access to the DHB intranet service and availability of libraries of evidence as well as local policies and guidelines through this service. Both these groups were part of the same DHB and this may be a local initiative of this particular DHB as the other two groups, from a different region, did not mention this as a resource. Not all the midwives in these groups knew that access to the intranet was a possibility or were familiar with how to do this [1:7; 4:5]. Anne suggested that a workshop on using this service would be valuable for rural midwives [1:7]

Journals and data bases.

Each group of midwives said that they have access to the New Zealand College of Midwives Journal and Midwifery News. These publications are supplied to all members of NZCOM as part of their membership. Most find this a good source of information which they valued for its local content and its relevance to midwifery practice in New Zealand [P:3; 1:2; 2:10; 3:6; 4:3]. The pilot group mentioned that there is not much clinical content in the NZCOM Journal, none the less this was still the most frequently read journal by this group [P:3]. The only other journal mentioned by most of the midwives was the MIDIRS Midwifery Digest [P:3; 1:6;] although Anne commented that MIDIRS is geared to the UK market and not always applicable to the New Zealand context [1:10]. Groups one and four have access to online journals through the DHB intranet service and group three access articles directly off the internet or through discussion groups [1:4; 1:7; 3:9; 4:5]. There was no mention of specific journals that were accessed in this way, however this question was not asked of the midwives.

The only mention of a data base of systematic reviews was by Carrie in group four when she was pointing out what could be accessed through the DHB intranet [4:5]. Although midwives in other groups spoke of online access to material they did not mention any particular sites they might visit. The midwives were not asked for this information however.

Books

Two of the midwives commented on a preference for books over other sources of information. Chris and Penny, the two who are not confident using the internet, both said they prefer to get information from books. Penny would use the internet to find and buy books rather than to find information [1:1]. Penny obtains books in a number of ways, including books that her clients are reading. Penny said *"I like books, I've got lots of books and I'm often whizzing back to look up something"* [1:5]. Chris commented that she finds Anne Frye's 'Understanding diagnostic tests in the childbearing year' particularly useful having purchased this book 2 years ago. Chris stated *"I feel more comfortable with books than I do with computers, because I am rather technophobic."* [2:10].

Although books may be useful for acquiring information they may not be appropriate in an urgent clinical situation. Fran commented on the difficulty of relying on books for information

> *"If you're sitting at three in the morning, with a baby that you can't get on the breast you don't want to be leafing through this thousand page book, which is telling you all the theory of everything. You want to be able to find something that's really useful."* [3:9]

Hospital protocols and guidelines

Another important source of clinical information for practice comes through the guidelines developed by the local DHB. Particular mention was made of guidelines for management of GBS, this was commented on by Penny [1:12] and by Chris [2:6]. Penny expressed frustration that there is no uniformity for practice recommendations for GBS management across the country. Both of these midwives also mentioned being consulted on the development of these guidelines by the DHB [1:12; 2:6].

> *If there is something that our manager wants us to look at, revise or review, she asks us to make comment on* [it]. *We get an opportunity*

[to do this] *at our monthly meetings of independent practitioners* [Chris, 2:7]

Workshops and study days

Workshops and study days offer midwives an opportunity for networking, as has already been discussed. Formal study has a particular learning focus, for example, technical skill development or dissemination of evidence. Two of the midwives had participated in post graduate study. Sarah had completed a postgraduate qualification and Anne had completed some postgraduate papers. Chris discussed participating in annual updates of skills such as Cardio Pulmonary Resuscitation (CPR) over many years [2:7]. Chris had also attended workshops on perineal repair and breastfeeding amongst other things [2:8]. Midwives from group four had attended the Advanced Life Support in Obstetrics (ALSO)[14] course. This is a course with a 'hands on' practical focus that the midwives value. Rachel said,

> *It was well-organised. It was a safe environment in small groups. It was really good teaching and really good learning... I came back confident...* [4:6].

This practical focus is particularly valued. Mary commented that practicing skills such as suturing that are seldom used but very necessary, are an important component of continuing education [4:7]. It is essential to the midwives that practical continuing professional development is delivered in the context of the midwife's rural practice area. This is best achieved for the midwives if these study days are delivered in the local area.

Standards Review

Penny commented that it would be helpful if midwifery standards review meetings could also be held in the local area [Penny, 1:17]. Chris was the only midwife who was currently involved in the organisational aspect of Standards Review, *"it has evolved in such a way that it is helpful for looking at midwives* [practice]. *Reflecting and thinking 'well yes I do need to research that a bit more"* [2:10] However, the

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[14] ALSO: Advanced life support in obstetrics – 'an educational program designed to assist healthcare professionals in developing and maintaining the knowledge and procedural skills needed to manage emergencies that can arise in obstetrical care'. 17th April. 2007 <http://www.cfpc.ca/English/cfpc/cme/also/default.asp?s=1>

midwives in group three did not find Standards Review particularly helpful for informing their practice. Nell found that it did not really highlight anything that she felt needed to be changed about her practice. She also felt that where knowledge gaps are identified there are no strategies to support rural midwives to get the necessary training or experience to fill those gaps

> "*So many of these structures are set up so you can analyse your own practice, but then we just don't have the support to follow it through.*" [3:5].

Fiona from group four had a different perspective

> "*Definitely I think it is a worthwhile thing. Initially I really didn't want to be a part of it but it has changed our practice. By doing your statistics and seeing what your percentages are, you then acknowledge what actually happens in your practice and why is it happening. And can you change it? Yes you can, and we have.*" [4:18]

Chapter summary

Supportive relationships which midwives have are individual to her situation and her practice group. For these rural midwives supportive relationships with others facilitate information sharing. For some of the groups relationships with other health professionals are maintained reasonably easily, while for others this is problematic. Information sharing with clients and students also stimulates the midwives to reflect and investigate issues in greater depth.

Most midwives were quite at ease using online information however they cannot always reach the information they want as they do not have access to online journals or data bases. Two journals are widely used by all the midwives while some midwives prefer to use books as a source of information. The midwives prefer to inform their practice through their own local midwives group, where this exists. The midwives also identified particular issues that make access to information or interpretation to the local setting difficult.

Chapter five: Barriers to informing practice

Introduction

Because so much information is shared through interactions and professional relationships barriers to accessing information often revolve around the issues midwives have with these relationships. The midwives also identified other problems that make it difficult to access and keep up to date with information for practice.

Relationship issues

Connections between women, midwives and with other associated health professionals are very important to rural midwives. These relationships are the basis from which the midwives inform their practice. For some of the midwives, maintaining good relationships with others seems to happen relatively easily, for others it is more problematic. This is very individual to the circumstances of the individual midwives and the areas in which they practice.

Group four have particularly good relationships with the obstetric staff at the base hospital. However they commented on the lack of support from the local GP practices. The GPs in this area used to provide a maternity service and also some practical medical support to the local facility. However they have now withdrawn from these services and so no longer have a working relationship with the local midwives.

> *We had good rapport with GPs, but once again, because of the way the cycle turns, and the GPs were in obstetrics, you don't have that relationship with them you see.* [Marianne, 4:10].

Because of this lack of contact there is no opportunity for a collegial relationship or information sharing to occur between these groups. However Penny, in group one, commented on her good rapport with the local GPs, as did Chris in group two [Ruth, 4:10; Carrie, 4:10; Penny, 1:19; Chris, 2:16-19].

While most groups found the relationship with the base hospital specialists to be supportive, group three did not.

I would say they are largely unhelpful" [Sarah, 3:16]. *We are unsupported, and there might be something horrendous happening here, and ...you pick up the phone and you just get blasted.* [Nell, 3:16].

There are no specialist clinics held locally and these midwives usually hand over care at a mid-point on the journey to base hospital due to distance and inaccessibility, therefore the midwives in this area do not have a direct professional interface with the hospital specialists. This means that the opportunities to develop a collegial relationship are limited and opportunities for sharing information are minimal.

The types of relationships the midwives rely on for information may be based partly on the collegiality of the professional relationship. Where midwives do not have a working relationship with their colleagues the professional relationships can be more problematic. There is a perception that these colleagues do not have a clear understanding of the context of practice of the rural midwife. So much information is shared through interaction with others this can impact negatively on the midwife's ability to inform her practice. Being able to clarify the applicability of evidence to the local situation, in discussion with colleagues, might reduce apparent conflicts in evidence by identifying an appropriate choice for the local context of practice.

Issues with research and continuing professional development
Conflicting evidence

Differing opinions in evidence cause confusion and uncertainty for the midwives and the women they care for. This is particularly so when accessing guidelines for practice, and finding they are outdated, or that there is conflicting evidence which does not support the local guidelines [1:13; 4:10]. This makes decision making and sharing information with women problematic for the midwives. Regarding GBS Penny said

"There's meant to be some national agreement, because all the hospitals have different policies, different amounts of antibiotic... but in New Zealand they can't actually agree yet. The protocols are

in the process of being changed they are discussing it". [Penny 1:12]

Context

When midwives access information it is important to them that they are able to relate it to their own particular practice situation and this is often not the case for these midwives. *"I find sometimes with MIDIRS that it is very English orientated, and it had some fabulous ideas but a different population."* [Anne, 1:10] This can also be an issue for the midwives with workshops and continuing professional development days. If workshops are delivered in the base hospital they are being delivered to meet the needs of those midwives. This is different to the rural midwives context of practice [1:17; 2:16; 3:3; 3:8]. When practical continuing professional development is available in the City it may not be relevant to rural midwifery practice. Tracy had attended a cannulation course along with rural nurses at the base hospital. She stated that it did not meet her needs,

> *It wasn't geared up for my needs because they didn't know who I was. They didn't know our practice here because they are not in touch with me here. They knew all the nurses... and they were all comparing their practice* [3:3] .

With so many demands on midwives' time it is important that continuing professional development is useful and applicable to their practice situation, making good use of the midwives' time.

Time

The time involved with travel to continuing professional development outside the local area is another issue. A large component of the rural midwives time is already taken up with travel to clients and this too can leave little time over for researching issues and accessing evidence [1:3]. As well as having time for travel, time for study and time for work the midwives also commented on the need to have some time left over for a life outside midwifery. This need, to have a life outside of midwifery, often competes with the midwives desire to attend continuing professional development days or conferences [2:14; 4:9]. *" Its juggling time again getting time off to go to a*

study day means I can't have my weekend off as a weekend off, with my family" [Chris, 2:13]

For those who lack confidence with information technology lack of time to acquire these skills could also be a factor.

Confidence with information technology

Unfamiliarity with information technology was not a problem for most of these midwives, however two did lack confidence with computers. While they were clearly happier not using computers they did not appear to be motivated to gain confidence in their use, one saying she preferred to be *"spoon fed"* [2:16] and both expressing a preference for books [1:1; 2:10].

Finding and understanding new innovations in journals or online does not mean that the midwives will be able to utilise these in practice. Fiona pointed out that sometimes it is necessary to see a new skill being performed, by someone who has expertise, before she would feel confident to try it herself,

> *There are things that we know that would be beneficial in our*
> *practice that we haven't implemented because we haven't the role*
> *models to look to, to progress with certain things* [4:6]

Employers need to support midwives with access to continuing professional development which meets their needs and provides opportunities to raise confidence in using information technology. As so much information is shared through computers and the internet, midwives also need ready access to these resources [3:17].

Understanding and support from employers and others

Group three felt that there is a lack of understanding from their employers and local facility management about the issues for rural midwives. Their immediate manager is a nurse however they largely manage the midwifery services themselves. They feel that they have had to battle for anything that they need.

> *There is this particular midwife who has skills in perineal suturing.*
> *We tried to organise for her to come here and hold a workshop. But*

we had then to put in a submission, to justify why we should have
that, why she should come to us and not us to her. I'm almost
certain that would never happen for nurses, for them it just happens.
We have to put the time in to justify it and then it <u>*may*</u> *happen.* <u>*We*</u>
<u>*are the ones who need to identify what our clinical needs are, not*</u>
someone else. [Sarah, 3:4]

They do not have access to a computer in their work area, and use their own computers at home to access information [3:3; 3:4]. These midwives also have difficulty getting financial backing from their employers to participate in professional development activities.

Funding

The biggest issue is funding for all the different ways in which the midwives may inform their practice. [1:16; 3:4; 3:6; 4:8]. As employed midwives group four are acutely aware of the financial situation for their employers. Marianne summed up the situation best,

The money situation is terrible, isn't it? That would be our biggest
frustration. Not just financial but that we don't have enough cover
for us just to go... and it all does come down to money in the end
[Marianne, 4:8]

Several midwives commented on the expense of continuing professional development and this is compounded for rural midwives by the need to obtain professional cover for practice while the midwife is away. Nell who is in an employed group of midwives said

It's extremely expensive to actually employ us because they have to
pay for all that [continuing professional development]. So we are
aware of that, that it's becoming really expensive now for [the
facility] to employ midwives [3:4].

Chris who is self employed spoke of the difficulty in getting self employed midwives to commit funds towards professional development activities. She commented on the self employed midwives' dilemma of what activities she might commit her hard earned dollars towards.

> *Its looking at where are the dollars are going to be spent and if it's for your own educational responsibility there is enough difficulty getting midwives to be reviewed isn't there?* [Chris, 2:18].

Chris was relating the expense, for rural midwives, of participating in the standards review process, to the added expense of paying for continuing professional development. She is identifying reluctance by some midwives to pay for these necessary activities. There is a sense from all the midwives in this research that, if the funding issues could be fixed, then everything else would be much easier [P:8,13,19; 1:16; 2:16,19; 4:8].

Chapter summary

For these midwives, the principle barrier to informing practice was lack of funding to support them to attend continuing professional development or have enough time to access and understand research. Problems with conflicting evidence could also be a problem with no national consensus identified on issues such as GBS. While most midwives had good working relationships with other health professionals two groups identified problems with these relationships as barriers to informing practice. Time was another barrier to the ability of the midwife to access information. Lack of time meant it was difficult to find time to inform their practice. This also led to a dilemma in the priority of having time off away from practice with family, or engaging in activities to inform their practice. The midwives felt that providing better local access to workshops and to information would result in more efficient use of time and money.

Chapter six: Local access and future aspirations

Introduction

Accessibility to information, and to continuing professional development, would be improved if more workshops were delivered in the midwives' local area and by improved networks with other midwives. The midwives also wanted improved local access to information. This was the second theme I identified in this research. Not only would access to information be easier for the midwives, there was a sense that it would also be more applicable to the context of the midwives practice. Midwives would be able to interact with the information as a group, identifying applicability to the local context.

Local access to continuing professional development

With limited numbers of midwives available to provide cover for the rural midwife it is difficult for her to leave her practice area to attend workshops and continuing professional development days. This was highlighted as an issue initially by the pilot group. These midwifery educators are involved in organising continuing education opportunities for midwives. Molly spoke about a workshop that had been organised and four rural midwives had paid the associated fees but on the day were unable to attend [P:13]. She added,

> *"I think the idea of courses and workshops being offered in rural centres is brilliant because it really is an opportunity for midwives in those areas"* (Molly, P:13).

Anne commented on the difficulties of getting to workshops outside the local area,

> *"To leave your area that you're on call in, and the difficulty in getting a replacement for yourself when you're away from your area, it's a challenge"* [1:3].

In her dreams for the future Chris said that she would like people with expert knowledge to visit the local area and present information through locally-held workshops for a range of rural practitioners,

> *I'd like someone to come: a roaming team of experts, and visit the area and provide a rural services update which would include perhaps the GPs and midwives who were doing primary health care, with a specific section on maternity and paediatrics* [2:16].

She remembered that this had happened many years ago in the form of a local retreat and had been valuable for midwives and GPs. Group three also commented on the value of

> *Having people come here. If it's something worth coming to we will come in, so it's worth people coming to us. Rather than going to the city to find out it is something absolutely irrelevant."* [Sarah, 3:15].

Group four commented on a variety of continuing professional development days that they had organised locally. Other local professionals that they had invited to attend also benefit from these [4:3]. On the same topic Sarah commented

> *But I don't think there is a lot of support for getting a lot of clinical education for rural midwives, other than what we do ourselves.* [3:2].

Local access to information

Easy local access to information is not only valuable for rural midwives. June, one of the midwifery educators, values being able to access a wide variety of journals online

> *I have access to an amazing array of online Journals now but the only reason is that I'm enrolled as a student in a university in Australia* [P:4].

This ease of access to online information was an issue for a couple of the participants. Anne found it very frustrating being able to find information about articles that appeared to be useful but not being able to get to the whole article

> *They just give you the article with the name and the author and you're thinking 'well how do I get that particular article without going to the library'* [1:3].

Midwives in groups one and four can have access, either from their home computers or the local facility computers, to the DHB intranet service [1:8; 4:5]. However not all the midwives were familiar with this service, and some of the midwives in group one

did not have access to it. Anne commented *"That's the study day that LMCs need. They could run a session so that we could get access"* [1:7]. The intranet gives users access to DHB guidelines as well as MIDIRS midwifery digest online and other databases of evidence. Sarah also accesses a lot of information online. Her postgraduate study had taught her how to do this

> *I find it difficult re-doing what has already been done, and it is difficult to get information from elsewhere unless you do it yourself, go online, read heaps, MIDIRS and all that sort of stuff, journals and so on* [3:2]

Improving local access

This desire to have more continuing professional development available locally, for midwives, was high on the 'wish list' for all of the participants. Group one commented that they would like to get a group of midwives together so that they could have their Standards Review session held locally [1:17]. As previously mentioned, group two would like visiting experts to present a workshop locally, for all local health professionals [2:16], and group three wanted more people to come to them to deliver workshops [4:15]. Group four commented that funding is the missing ingredient for attending continuing professional development, or to make running workshops locally viable, as people that deliver these want to be paid

> *"It always seems that we are trying to go to there, but it is very frustrating that sometimes people don't come to us unless we pay them. It would be easier to go to something if they once in a while would come to us."* [Marianne, 4:14].

Rural midwives' network

A common desire from the midwives in this study is to have some sort of rural midwives network, Tracy commented, *"I think it would be good to have contact with other rural practices like this and compare notes"* [3:9]. There was a sense from some that the rural GPs had something like this but they had no clear idea what this might be or what form it might take. Anne commented

> *There's a rural network for the GPs isn't there. I think I've seen*
> *something like that around the hospital I think it's just a bit more*
> *what they do* [1:19].

Anne is referring here to the New Zealand general practice network, an organisation representing the interests of rural general practitioners and rural workforce issues (NZRGPN, 2007)

Mary thought sharing with rural midwives in other areas would be a good idea, particularly being able to share unusual things that midwives have come across in practice and have gone on to investigate. Being able to pass this information on to others, might help those faced with a similar circumstance [4:15]. Sarah thought being able to link up and speak with other rural midwives would be a good idea, perhaps through teleconferencing or video conferencing. If the midwife had a particular midwifery question, she would be able to go online and talk with other rural midwives, about how they might deal with this situation. Nell commented that the facility does not even have a computer for the local midwives and they have to use their home computers to access information. She felt that a computerised rural midwives network would be a wonderful opportunity for sharing information between rural midwives and this could be provided through rural maternity facilities [Nell, 4:19].

The midwives felt that local delivery of continuing professional development would make it more accessible to rural midwives. Allowing the midwives to study together would enable them to debrief together about the context of the local situation. Midwives also wanted information to be more readily available to the rural area and to be able to link up with other rural midwives to share practice experiences. These are some of the ideas that may help to overcome barriers that the rural midwives experience in trying to inform their practice.

Future aspirations

Primarily the midwives want better funding support from the government to enable them to get cover to attend continuing professional development, or access

information in other ways. The next issue for all of these midwives was having access to practical, useful information locally that will help them in their day to day practice, as rural midwives.

> *There is so much time put into evaluating your practice, but then where do go to from there. Where do you turn around to as a rural midwife?* [Nell, 4:15].

Overall the midwives enjoy being able to connect with other rural midwives and enjoy the sharing that occurs when this happens. Everyone said that they would like to expand their network of midwifery support

> *But certainly a rural midwives network would be fantastic, that we could ring other people and say what do you think about this?* [Tracy, 3:9].

Online networks were mentioned as a possible mechanism for this. The midwives would not only value being able to chat with other midwives and ask for information when they have a particular issue but they would have a lot to share, particularly with challenging clinical issues that have arisen for them, which they have investigated,

> *Just share over the internet, a case study from our area, this is what we found and how we managed it.* [Mary, 4:15].

Other ways for expanding these networks mentioned was for rural midwives to get more involved in regional midwifery activities or to have a work exchange, with midwives from the urban centre and rural midwives switching roles for a time,

> *Sometimes you just need that injection of midwifery enthusiasm. So if we don't get out of our space and go to it or invite it here then we are not going to have the benefits of it* [Rachel, 4:12].

As mentioned previously more local access to continuing professional development and information was another wish of the midwives. In her dreams for the future Chris commented,

> *Have a panel of experts who come along with all there knowledge and information and offer us a one day workshop* [Chris, 2:16].

Chapter summary

The midwives want more local delivery of information and continuing professional development opportunities which they feel would better meet their needs. A rural midwives network would allow them to share experiences and problem solve together. Many of the issues raised by these midwives are similar to the findings from other studies. Recognition of the issues that these midwives raise is an important first step to identifying ways in which barriers could be overcome, and dissemination of information could be better achieved for rural midwives.

Chapter seven: Discussion

Introduction

This chapter describes the findings of this study together with the background research in relation to this topic. The participants in this research identified several ways in which they inform their practice at present. The midwives prefer to share information with their practice group, and enjoy the occasional opportunity to get together with other midwives. This is a valued aspect of attending continuing professional development opportunities. All of these are affected by the isolation of the midwife. The more isolated and fewer connections she has with other midwives or sources of evidence the more challenging it becomes to inform her practice. The midwives had some ideas to make this simpler in the future. High on the wish list was better funding to support the midwives to access continuing professional development opportunities and locum support for their practice area. Following release of the health workforce survey (Goodyear-Smith & Janes, 2006) and feedback to government on the new Section 88 document the New Zealand government have announced some additional payments for rural midwives through a rural ranking scale (O'Connor, 2007). A sum of $2M is to be disbursed annually to midwives to support the rural midwifery workforce. This may go some way to address the financial concerns of the midwives participating in this study. The midwives also wanted more locally delivered continuing professional development opportunities. Use of modern communication technology may be able to provide support for the midwives to do this.

Rural midwives connecting

The midwives discussed several ways in which they currently inform their practice, ranging from investigating topics of interest through the internet, to sharing information within a group, or participating in continuing professional development days. They identified the importance of information-sharing and learning through practice groups. These midwives practiced in varying degrees of isolation. The degree of isolation influenced the opportunities that the midwife had to connect with information in a variety of ways. The key to informing practice for these midwives is

the ability to connect with each other, or to connect with information online, or in hard copy, through journals and practice guidelines. The midwives preferred to share information through their own practice group, and saw this as an opportunity for sharing and learning.

Local practice group

The midwives spoke of the value they placed on their own local network of midwives and the information sharing that occurred when they got together. Tracy in the third group said

> *I have to say personally, I have gained most of my knowledge from my colleagues, from working with other highly experienced, midwives. And with different midwives, because your gaining from every single one and your in a situation where you can watch a lot people or help a lot of people working, you know you pick so much out of it. That would be probably the way that I've gained an awful lot of knowledge* [Tracy, 3:7].

Blackburn (2001) also found that social workers prefer information sharing with colleagues. Social workers, like midwives, are often geographically isolated from one another and from sources of evidence. Cullen (1997) had a similar finding with New Zealand GPs whose preferred source of information for practice was trusted colleagues or medical specialists. Ross (2000) also found rural nurses preferred to access practice information through their local networks. One midwife in my study who worked alone was motivated to try to find other ways to network with colleagues. Speaking of attending continuing professional development she said

> *The greatest benefit of it for me was sharing things with, other midwives, midwives in a room, partly through not having that, was one of the inspirations for starting to convene these meetings here, I was not really meeting many other midwives otherwise, which is the best way of getting information* [Anne, 1:2].

The preferred source of information for these midwives is to be able to share information with other midwives who have a similar area of practice.

Information sharing

Information can be shared either face-to-face or using communication tools such as telephone, email or online discussion groups (Blackburn, 2001; Cullen, 1997; Fahey, 2005; Russell et al.). Sarah commented that she was associated with a variety of groups through the internet and acquires a lot of new information through this source [Sarah, 3:9]. Penny commented that she and her midwifery partner keep in touch and share information through texting on their cell phones [Penny, 1:5]. Rettie (2003) commented on the sense of connection to others, which individuals can experience through the use of cell phones. Cell phones could be a useful tool for midwives to discuss and reflect on practice within a group as was the case in a study of undergraduate midwives use of a cell phone discussion group (Lee, 2006).

All the midwives in this study shared emails with others and received information in this way, only one midwife was unsure of this technology and relied on her family to access emails for her. Nonetheless all of these communication technologies have potential to allow midwives to keep in touch with other midwives and with the wider midwifery and medical community. Email discussion groups have proved successful for informing practice and providing a mechanism for geographically isolated practitioners to connect with one another and form a group identity (Kildea et al., 2006; Tolson et al., 2005; Russel et al., 2004). Although face-to-face interaction is always the preferred method of communication for these midwives [Anne, 1:2] this is not always possible for geographically isolated rural practitioners.

The midwives in my study also spoke of information sharing with others, outside their practice group. Some spoke of information that clients shared as an opportunity to inform their practice. One client who had a monilial infection had obtained evidence on this issue which she shared with her midwife. The midwives investigated further and identified that the guidelines from the base hospital were out of date [Rachel, 4:10]. Women who have pre-existing conditions also may have a good understanding which they can share with the midwife [Fiona, 4:9]. Midwives might be involved in helping women to interpret the information they are finding Rachel commented,

> *Without training, in critiquing an article, whether it is good research or not, you can get carried away on a wave [Rachel, 4:20]*

One midwife spoke of informing practice through connections with voluntary organisations

> *We meet once a month, usually at one of the midwives homes, and various topics come up. We try and make it very supportive for each other. We've obviously got political bits of ins and outs coming to us, but we also try to ensure that we are being well informed with people in other organizations such as the Plunket organisation and the immunisation advisory group [Chris, 2:4].*

Midwifery in New Zealand has embraced a partnership model where midwives and their clients share information with each other (Guilliland & Pairman, 1995). Ready access to online clinical information (Stewart, 2005) provides the opportunity for women to investigate issues of importance to them. When women share this information with the midwife it may highlight issues for the midwife to investigate the further. This contributes to practice information for the midwife and may highlight issues with practice guidelines.

Issues with informing practice

Some midwives felt that practice guidelines may not always suit the context of rural midwifery practice

> *We certainly have them but we don't have to follow them* [guidelines]. *We aren't base hospital* [Marianne, 4:17].

Although these guidelines may well be applicable when secondary care is necessary the midwives did not mention any guidelines on which they could base their daily rural practice decisions. Research suggests that guidelines are most useful when they are developed for the local situation (Bero et al., 1998; Craney et al., 2001; Farquhar et al., 2002; Tucker et al., 2003). The New Zealand College of Midwives have produced consensus statements on many aspects of midwifery care and although the midwives did not mention these neither were they asked directly about them. It is important that midwives are aware of new evidence or new guidelines which may

affect their practice decisions. Geographic isolation might reduce the opportunities for some rural midwives to be made aware of new evidence.

Isolation

The more geographically isolated the midwife was, the fewer connections with others or with information she was able to make on a regular basis. Sarah in group three had recently completed a Masters degree and commented

> *I know how to get hold of information, but the problem I think in rural areas is, we are not sort of shoulder to shoulder with it* [Sarah, 3:2].

When midwives had limited opportunities to connect with other midwives, the opportunities to share practice information, pertinent to the midwives, was also limited. Others also have described the extra challenge practitioners have with informing their practice when they are isolated or work alone (Cranney et al., 2001; Fahey & Monaghan, 2005; Kildea et al., 2006; Olade, 2004; Parsons et al., 2003).

Figure 1, (next page) illustrates the midwife in my study who was geographically closest to the main centre which is half an hour's drive from the primary rural maternity centre. Her proximity to the main centre allows her to participate in an array of groups that may not be possible for more distant or isolated rural midwives. The midwife in this model met with all the groups or individuals illustrated on a regular basis and had opportunities to share and acquire information whenever these meetings occurred either formally or informally. Information acquired in one group is then easily disseminated to other groups. Although this is not the only way this midwife informed practice, it was her primary source. Other methods she incorporated to inform her practice included, using books and working with midwifery students, as well as formal continuing professional development, through technical skills work shops and other study days, which occurred from time to time.

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FIGURE 1: MIDWIFE WITH MOST PROFESSIONAL INTERACTIONS.

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Figure 2, (Previous page) illustrates a midwife who was geographically isolated from secondary services and other midwives. This midwife had no other midwives with whom she could meet regularly. Her professional connections locally were with the single local GP or with the facility nursing staff. Others have also identified solo practice as a barrier to informing practice. A solo GP in the study by Cranney et al., (2001) commented that working alone was a major barrier to accessing and implementing evidence based practice. This midwife made good use of the internet as a source of information. Opportunities to attend continuing professional development were also limited by isolation for this midwife. Potentially there is also difficulty in obtaining local cover for time away from practice, as she has no immediate midwifery colleagues to assume her caseload when she is away.

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Communities of practice

The midwife with the most professional interactions (see figure 1) has the opportunity to be involved in multiple communities of practice. All of the groups that she is involved with share a common interest in pregnancy, childbirth and the newborn, coming from different aspects. They all come together with a specific purpose. There is an opportunity through this interaction, for new evidence and information to be shared amongst the groups, and for the groups to discuss and debate how this evidence may be applied to practice, in the local situation. These groups are overlapping sources of information for this midwife, around her scope of practice. These characteristics are the characteristics which have been identified as those of communities of practice (Boud et al, 2003; Gabbay & Le May, 2004; Tolson et al., Wenger, 2006).

Contrast this with the midwife described in figure 2. She has very little opportunity to meet with other midwives in any forum. The opportunity to identify midwifery specific information is much more challenging for this midwife. The opportunity to discuss how evidence may be applied in her local area is also very limited.

When considering the midwife described in figure one, I realised that she was one of two midwives in this study who was less comfortable with the use of computers and the internet. The other midwife, who had similar feelings, had strong links with the main centre. She had many contacts in the base hospital, having worked there in the recent past. She still travelled there frequently, with women who lived rurally and birthed in the main centre. Perhaps these two midwives have less need to access online information, or to use internet communication, because their information needs are met through their array of communities of practice.

The two focus groups, of employed midwives, also differed in their opportunities to connect with others in a purposeful way. For the midwives in group four opportunities existed to connect with visiting specialist and other health professionals who came to the local rural facility. They described many continuing professional development days that had been held in their local area. They also described the interaction they had with a variety of other health professionals and groups. The midwives in group three however had no such opportunities, there were no specialist clinics held locally and no one visited the local area to share information or knowledge. Therefore their only opportunity to acquire new information was to attend continuing professional development outside the local area, or to access information online or through books or journals. The midwives in group three appeared to be stronger users of online sources than those in group four.

For midwives who have ready access to others Communities of Practice occurred in face-to-face groups that met together for a particular purpose. There seemed to be value in belonging to a variety of groups, as the opportunities to share information across these groups, might increase the opportunities to inform their practice. The midwives who were geographically isolated did not have the opportunity to participate in a variety of groups, other avenues for acquiring and sharing information were necessary. These midwives made greater use of communication technology to assist them in informing their practice.

Future possibilities

Midwifery Communities of practice

Communities of practice may be used for problem solving, sharing information, sharing resources, discussing developments and establishing where there is existing knowledge, or gaps in knowledge requiring further investigation (Gabbay & Le May, 2004; Tolson et al., 2005; Wenger, 2006). All of the midwives had a preference for informing practice through getting together with each other, with the women they care for, or with other midwives. This was also a key finding for Ross (2000) in her survey of New Zealand rural nurses.

Boud and Solomon (2003) explored adult education and the life long learning that occurs through the workplace. They discuss the difficulties that some workers find in acknowledging that they are also learners. The difficulty is principally around the politics of naming themselves as learners as opposed to maintaining a position of some power within a particular context in the workplace. Boud expanded on this with Middleton (2003) and looked at how learning in the workplace occurs through informal learning opportunities and communities of practice. Boud found that not all groups met the learning characteristics of communities of practice. However such communities could not be created but had to develop independently. For example the tertiary educators he studied might belong to several overlapping communities of practice, in their technical field, as well as the educational institution. All of these added differing dimensions to the learning and knowledge of the individual and group. Where Midwives are less isolated they too have opportunities to interact with a variety of different groups, overlapping and sharing information across these different areas. This is illustrated in figure 1. More isolated rural midwives have fewer opportunities to be involved in communities of practice as illustrated in figure 2.

Tolson et al., (2005) described the successful development of an online community of practice for gerontology nurses in the UK. If New Zealand rural midwives had the opportunity to expand their communities of practice they could not only share

evidence with one another, they may also be able to develop guidelines specific to rural midwifery practice.

Fahey and Monaghan (2005) suggested rural midwifery communities of practice could be utilised for continuing professional development, through case debriefing and journal clubs. This is already a reality of practice for some or all of these midwives. As Chris stated,

> *With our group, we often will share those articles, if one of us has had a particular case that we are concerned about and we have done some research we would then inform each other about what we have found* [2:10].

Local access to continuing professional development

When considering future initiatives that may facilitate informing practice, the midwives spoke of better local access to information, and to continuing professional development. From having regular continuing professional development days delivered locally, [Mary, 4:12] to having a travelling team of experts touring the country to bring practitioners up to date on new evidence [Chris, 2:15]. The more isolated midwives seemed to be most familiar with accessing information online. Sarah from group three commented

> *'I am so entrenched in computers and things ... Anything that I think is sort of interesting I flick over to Nell, or Tracy. Because I am on various midwifery research lists, in the UK ... anything that comes through that I think might be of interest, I just flick it through, even if it's just a snippet. So we keep up to date, I try to keep up to date with the currency of research, as best I can. So I'm doing that every day, one way and another because I check my email 14, 15 times a day, if not more."* [Sarah, 3:9].

There have been some overseas initiatives to provide health practitioners with "point of care access" to systematic reviews, databases of evidence and online journals.

Evaluations of these have found that midwives have been strong users of these resources, for example the Clinical Information Access Programme (CIAP) provided in New South Wales (Gosling et al., 2004) and the bush internet library project in Northern territory Australia (Kildea et al., 2006). The Northern Territory project also included an online discussion group for remote rural midwives (Kildea et al.). Given the familiarity of most of the participants in this study with communication technology there is potential for a similar project for New Zealand midwives to succeed in providing access to information to a large percentage of midwives.

Recommendation from this study

The special needs of rural midwives have been recognised by the government in recent months, through the introduction of a remote rural support scheme and a rural midwifery ranking scheme (O'Connor, 2007). Each of these provides financial support to rural midwives. Although this funding will be a welcome bonus to rural midwives, and funding was high on the priority list for the midwives in this study, funding in itself will not remove the problems of rural isolation and difficulties in accessing information for rural midwives. There is a need to further investigate ways to support rural midwives with informing practice.

Communities of practice

The midwives who participated in this study wanted more local access to information and to continuing professional development. Utilising local communities of practice as vehicles for the dissemination of evidence could provide opportunities for local delivery of continuing professional development. Utilising local communities of practice may give the midwives the opportunity to participate in continuing professional development together, and to reflect, and consider how evidence can be utilised in the local setting. The role of communities of practice in informing midwifery practice is an issue which is worthy of more investigation. How this may be adapted to support the information needs of more isolated rural and remote rural midwives, is an issue requiring further investigation.

Cell phone communication

Cell phones may be useful for midwives to discuss and reflect on practice within a group although this has only been evaluated with undergraduate midwifery students (Lee, 2006). Use of this technology may present some possibilities and may be worthy of further investigation. Perhaps cell phones could be used as a way for midwives to connect to information and to each other from their own local area, this is a topic which may be worthy of further investigation. Cell phones provide an opportunity for individuals in a group to have a sense of connection with one another (Rettie, 2003). Cell phone texts have the potential to highlight topics which may be of interest to midwives, and to direct midwives to further sources of evidence (Lee). An action research project to investigate the use of cell phones and texting may be of benefit to rural midwives.

Internet communication

The midwives in this study were strong users of computers and the internet to access information and to keep in touch with others. Overseas experience has seen the use of online sources to develop midwives skills in accessing and critiquing evidence, giving midwives the opportunity to gain points towards continuing professional development online at no cost (Medscape, 2007). Developing online networks, through online discussion or email groups, may also be worth exploring as these too have been useful in reducing the effects of isolation and improving access to information (Russel et al., 2004; Tolson, 2005).

National rural midwives network

If information sharing and dissemination of evidence are promoted through communities of practice (Blackburn, 2001; Cranney et al., 2001; Cullen, 1997; Fahey & Monaghan, 2005; Parsons et al., 2003; Russel et al., 2004), then utilising electronic communication tools may provide opportunities for this to happen for geographically isolated midwives to develop communities of practice. Online discussion groups, email groups or cell phone groups may provide midwives with the opportunity to connect with one another in innovative ways. This could provide a mechanism for a

national network of rural midwives. This was another of the future aspirations of the midwives in this study. I believe initiatives such as these warrant further study.

Locum midwifery service

The midwives commented on the difficulties of accessing locum cover to allow them to attend continuing professional development. NZCOM have been trying to fill this gap, by compiling a list of midwives prepared to provide locum cover, and putting them in touch with midwives requiring this service (Eddy, A., personal communication, April 17, 2007). Evaluation of ways to improve and provide this service in the future would be useful.

Final reflections and the limitations of this study

This study I believe adds another layer to the growing body of evidence of New Zealand rural midwifery practice and also introduces the concept of rural midwifery communities of practice to the New Zealand rural midwifery setting.

My own experience of rural midwifery practice and personal knowledge of many of the participants in this research I see as both a strength and a limitation. Although I tried not to direct the discussion I cannot say for certain that my experience did not in some way influence the participants. The similarity in the findings of this research to other similar studies is however encouraging and suggests that any influence on my part may have been minimal.

This study was centred in the South Island of New Zealand which has a unique population demographic and geographical spread. In addition one of the focus groups had only one participant. Her views represent her own perspective and cannot be said to be representative of all the midwives in her area. The use of focus groups provided a rich source of data, and I believe that the breadth of the discussion could not have been generated in the same way by other methods of data collection Nevertheless this research cannot be taken out of context and cannot be generalised to others without considerable caution (Kreuger, 1998). Thus if others consider the findings relevant to their own situation they should consider the context of this research before drawing

any conclusions. Consideration also needs to given to the unique aspects of rural midwifery practice as it occurs in the New Zealand setting.

Conclusion

This study explored the experience of four groups of rural and remote rural midwives from the South Island of New Zealand, in relation to the research topic of informing their practice. The midwives described informing their practice through information shared within their practice groups and through interaction with others. They also spoke of information acquired through practice guidelines, from journals and through online sources. The financial costs of informing their practice was a principle barrier for the midwives, as was lack of time and difficulty in getting cover for time away from practice. Other issues discussed were isolation and difficulties in attending continuing professional development, or getting together with others. The midwives spoke of the good relationships they have with other health professionals and the usefulness for sharing and acquiring information in these circumstances. For some however these relationships did not work well leaving the midwives feeling unsupported. The midwives also had difficulties with conflicting evidence and lack of agreement on what constitutes best evidence for practice.

These findings are consistent with other research that has been conducted into rural health professionals' experience of accessing evidence and/or continuing professional development. The midwives wanted better financial support to enable them to access continuing professional development and information. They also wanted better local access to information and continuing professional development and the ability to connect with other rural midwives. Use of information technology may present possibilities and may be worthy of further investigation. Local access to information, and to continuing professional development, may be facilitated through the utilisation of existing local practice groups, and this too is highlighted as an area requiring further study. Identification of rural midwives practice groups as 'Communities of Practice' may provide a structure for some or all of these things to happen. Providing opportunities for isolated rural midwives to connect with each other, may provide

additional opportunities to inform their practice which could be investigated through an action research project.

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Appendix 1

19th September 2005

Carolyn McIntosh
School of Midwifery
Otago Polytechnic

Dear Carolyn

Re: Ethics Committee Application 284 – Informing rural midwifery practice: How do rural midwives currently inform their practice and how so they believe this can best be achieved in the future?

Thank you for your revised application which has now reached the approval of the Otago Polytechnic Ethics Committee. Please provide us with a brief report when this research is completed.

We wish you all the very best with your research.

Yours Sincerely

Linda Wilson
Chair Ethics Committee

c.c. Sally Pairman

Appendix 2

Otago Polytechnic Ethics/Research and Development Application Form 2005

Section 1

(to be completed by all applicants for ethics approval and/or funding application)

Name

Carolyn McIntosh

Department

School of Midwifery

Phone (office & mobile):

021 705 809

Email

Carolynm@tekotago.ac.nz

Title of Project

Informing rural midwifery practice: How do rural midwives currently inform their practice and how do they believe this can best be achieved in the future?

Executive Summary / Abstract of Project[15] (please make this simple so it can be understood by someone not from your discipline, include)

Rural midwives in New Zealand have identified difficulties in informing their practice (Hendry, 2003). The aim of my research is to find out how some New Zealand rural midwife Lead Maternity Carers (LMCs) currently inform their practice and what initiatives they believe may improve the way they inform their midwifery practice in the future.

---

[15] Include your aims and objectives, specify original research content, reason for undertaking the work, relevance to R & D plans, details of collaboration, cultural considerations and potential for further work or revenue generation.

I am undertaking this research in partial fulfilment of the degree of Master in Midwifery at Otago Polytechnic.

I will use a qualitative descriptive methodology based on focus group discussions with two groups of rural midwife LMCs from New Zealand. I aim to identify how these rural midwives currently inform their practice and what they believe may facilitate this in the future.

I am committed to upholding the principles of the Treaty of Waitangi and acknowledge that this may impact in ways that I am currently unaware. Through group facilitation I will uphold the rights of all midwives to the principles of partnership, protection and participation.

What benefits will this research bring to Otago Polytechnic?

✓☐ **A research output will be generated from this project?** (Please specify the form and source of publication eg Journal article, exhibition, design object etc)

A Journal article and conference presentation will be produced from the results of this research.

✓☐ **The project will contribute to the overall development of the research environment or research culture** (please specify how?)

This is part of my Master in Midwifery study at Otago Polytechnic. As such it will contribute to the research output of the midwifery school.

✓☐**The project will give other staff and/or students opportunities to gain research skills or experience** (please explain how this will be facilitated?)

As part of my masters research through the school of midwifery.

Is this study related to enrolment at another institution?

No ✓☐

Is this application for – *(x more than one box as applicable)*?

Ethical Approval ✓☐ Funding ✓☐

I have completed sections: 1 ✓☐ 2 ✓☐ 3 ✓☐

To be completed by your Head of Department/ Manager:

Please tick which apply (you may tick more than one):

☐ This research project is consistent with the Research Plan of this Department

☐ This research project is approved to be part of the staff member's workload/duties

☐ I am acting as a supervisor or referee for this research proposal

☐ I am aware of this research project but it is being conducted outside of the School/Department's Research Plan

Name of Head of Department/ Manager

Jean Patterson (acting head of school for Sally Pairman)

Department School of Midwifery

Signature

Go on to complete Section 2 for Ethics approval and/or Section 3 for an application for a grant from the Research and Development Committee:

If you are making application to the Ethics and the Otago Polytechnic Research and Development Committee please ensure that a copy of Section 1 accompanies ALL applications.

Applications must be submitted to :
- o Otago Polytechnic Ethics Committee Secretary: Rachel Henderson (Sections 1 & 2)
- o Otago Polytechnic Research and Development Administrator: Nayan Padiyar (Sections 1 & 3)

For assistance with this filling out this form contact :

Rachel Henderson ext 8409 (Ethics queries), the Research Co-ordinator, Jenny Aimers ext 8407 or a member of the R & D Committee[16] (grant queries).

Section 2

Application for Ethics Approval

Please ensure that you have read the Otago Polytechnic Ethical Guidelines before writing your application.

a) **Please use this format when preparing your application.**

b) **Do not omit any headings or sub-headings.**

PROJECT TITLE

Informing rural midwifery practice.
How do rural midwives currently inform their practice and how do they believe this *can best be achieved in the future?*

1. **DESCRIPTION**

1.1.   Justification

> Rural midwives in New Zealand have identified some difficulties in informing their practice (Hendry, 2003).
>
> There has been a considerable amount of research into evidence based practice and barriers to utilising evidence (McKenna, Ashton & Keeney, 2004; Davies, 2002; McColl, Smith, White & Field, 1998; Parsons, Merlin, Taylor, Wilkinson & Hiller, 2003; Gosling, Westbrook &

---

[16] Each Department has a representative on the R & D Committee, contact the Research Office or your Head of Department for contacts.

Spencer, 2004; Sanson-Fisher, 2004: Wilkinson, 2003) Lack of time, lack of relevance of the research to the specific area of practice lack of availability of access to online information as well as access to hardcopy research evidence have all been found to be major barriers (Davies, 2000; Latchford, 2003; McColl, et al., 1998; McKenna, et al., 2004; Parsons, et al., 2003; Veermah, 2004). Ross (2000) surveyed rural nurses in New Zealand regarding informing practice. Over half of the nurses attended professional education through workshops while 36% were enrolled in tertiary study, 62% used a General Practitioner for information. The least used resource was information technology, with only 28% using this.

1.2.   Aim / Objectives

The aim of this research is to identify how two groups of rural LMC midwives currently inform their practice and how this can be facilitated in the future.

I believe it is important to identify how these rural midwives currently inform their practice and what initiatives may facilitate this for these rural LMC midwives in the future. This study may help to clarify the issues for rural midwives and provide valuable information to government agencies and educational providers for future educational and information sharing initiatives for this group of midwives.

1.3.   Procedures for Recruiting Participants and Obtaining Informed Consent

I will contact the 0800 Mum 2 be information line and request the names and phone numbers of midwives in rural areas one hour or more from a base hospital. This is publicly held and available information. From this list I will select two areas. I will then contact the midwives by phone,

introduce myself as a midwife, Masters candidate and researcher and will ask if they would be happy for me to send information regarding my research to them by mail.

I will then mail the information and consent forms to the midwives and await their response.

1.4.   Procedures in which Research Participants will be involved

After providing consent participants will be asked to take part in focus group discussion which will last for around one hour. Ground rules for each focus group session will be developed prior to the start. We will discuss strategies to keep the discussion focused on the topic and to allow everyone to have the opportunity to express their thoughts this will include allowing each person to speak uninterrupted. The following question will be put to both groups and will form the basis around which the discussion will grow.

- ◎ In what ways do the participants currently inform their practice?
- ◎ What is the participants experience in relation to informing practice?
- ◎ What do the participants believe would facilitate informing practice for rural midwives in the future?
- ◎ Are there initiatives for informing practice that they believe rural midwives could benefit from in the future?

During the focus groups I will take notes, highlighting areas that seem to be of particular interest, or where there is strong agreement or disagreement. These will be discussed at the end of the sessions and participants will have opportunity at that time to clarify these areas further if necessary. Participants may also post or email me other comments that may occur to them within seven days of the completion of

the focus group session for inclusion in the final data analysis.

1.5. Procedures for handling information and material produced in the course of the research including raw data and final research report(s)

The discussions will be taped. I will transcribe the tapes; notes will also be taken at the time of the discussions. All raw data, tapes, notes and any correspondence will be retained in secure storage for five years after which they will be destroyed.

Every effort will be made to maintain confidentiality with no comment being attributed to any individual or group. I will transcribe the tapes into a written verbatim account. The transcriptions will be analysed and used to complete my Midwifery Masters thesis through Otago Polytechnic. I will publish a Journal article from my thesis and will also present my research at a conference or research forum.

1.6. Procedures for sharing information with Research Participants

Information will be shared at the end of the sessions from field notes I have taken.

1.7. Arrangements for storage and security, return, disposal or destruction of data

All raw data, transcribed sessions field notes, audio tapes and correspondence from participants will be kept in my locked filing cabinet

for a period of 5 years. These will then be shredded and destroyed before going to the dump.

2. ETHICAL CONCERNS

2.1.   Access to Participants

I will contact the 0800 Mum 2 be information line and request the names and phone numbers of midwives in rural areas one hour or more from a base hospital. This is publicly held and available information. From this list I will select two areas. I will then contact the midwives by phone, introduce myself as a midwife, Masters candidate and researcher and will ask if they would be happy for me to send information regarding my research to them by mail.

2.2.   Informed Consent

The purposive sample of midwives will be sent information about the research I am undertaking (see appendices 1, 2,3 and 4) and will have the opportunity to agree to participate or decline. I will then, in consultation with the midwives find a suitable time and venue for the focus group meeting. Participants will be given the opportunity to withdraw from participation at any time prior to or during the focus groups. Data gathered during the focus group will not be able to be removed once the focus group session is complete however.

2.3.   Anonymity and Confidentiality

Every effort will be made to maintain confidentiality and no comments will be identified as coming from a particular midwife, or group of midwives. As the midwifery community in New Zealand is very small

and relatively close knit I will alter any identifiable information to maintain the participant's confidentiality.

2.4. Potential Harm to Participants and how this will be managed

It is not anticipated that any harm would come to the participants through participation in this research project, although I acknowledge that some may feel embarrassment through exposing their views in front of their peers. Individuals may withdraw if they wish from the focus group at any time. Data gathered during the focus group session will however not be able to be removed once the session is complete.

2.5. Potential Harm to Researcher(s) and how this will be managed

It is not anticipated that there will be any potential harm to the researcher.

2.6. Potential Harm to the Polytechnic and how this will be managed

It is not anticipated that there will be any potential harm to the polytechnic

2.7. Participant's Right to Decline to Take Part or Withdraw

Participants will indicate their interest by returning the consent form. One reminder will be sent if there is no response to my first approach. Participants will be aware through the consent form (appendix 1) that they can withdraw at any time until analysis has begun. After that time they may choose to have a comment withdrawn if they request this.

2.8. Uses the Information will be put to

> The data gathered will be analysed and will form the basis of my Master in Midwifery thesis through Otago Polytechnic. A Journal article will be written from my finished thesis and a conference presentation prepared.

2.9. Conflict of Interest / Conflict of Roles

> I am also a rural midwife and chair person of the local branch of the New Zealand College of Midwives. Participants will be informed of this. I have no conflict of interest of roles.

2.10. Other Ethical Concerns, eg sources of funding

> I hope to get funding from the Otago Polytechnic research grants.

LEGAL   **CONCERNS**

2.11. Legislation

Indicate where applicable the relevance of any legislation.

> Not applicable

3. CULTURAL CONCERNS

> I am committed to upholding the principles of the Treaty of Waitangi and acknowledge that this may impact in ways that I am currently unaware. Through group facilitation I will uphold the rights of all midwives to the principles of partnership, protection and participation.

4. OTHER ETHICAL BODIES RELEVANT TO THIS RESEARCH

4.1.   Ethics   Committees

Note: List other ethics committees to which you are referring this application.

nil

4.2.   Professional   Codes

Note: List all New Zealand professional codes to which this research is subject.

Nil

5. OTHER   RELEVANT   ISSUES

Note: List any other issues you would like to discuss with the Otago Polytechnic Ethics Committee.

nil

Appendix 3

Appendix 4

Consent form

Informing rural midwifery practice.
>How do rural midwives currently inform their practice and how do they believe this can best be achieved in the future?

I have read the information sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:
- My participation in the project is entirely voluntary.
- I am free to withdraw at any time without giving reasons and without any disadvantage. However it will be impossible my contribution to the discussion to be withdrawn after the focus group discussion is completed.
- The discussions will be taped and then transcribed; notes will also be taken at the time of the discussions. These will be retained in secure storage for five years after which they will be destroyed.
- If it is necessary for you to arrange child care for the time of the focus group I will reimburse this expense. I will also reimburse the cost of travel to the venue for the focus group if this is outside your local area.
- The results of this project may be published or used at a presentation in an academic conference but my anonymity / confidentiality will be preserved.

Additional information given or conditions agreed to

> I will be able to clarify points I have made during the interview when the notes of the discussion are reviewed after the group discussion is complete. Within seven days of the focus group interview I can also post or email further comments if they occur to me for consideration in the final analysis.

I agree to take part in this project under the conditions set out in the Information Sheet.

……………………………………….(signature of participant)

……………………………………….(date)

……………………………………….(signature of researcher)

This project has been reviewed and approved by the Otago Polytechnic Ethics Committee.

Appendix 5

Urban/Rural Profile Categories: South Island

Urban/Rural Profile Categories

- Main urban area
- Satellite urban community
- Independent urban community
- Rural area with high urban influence
- Rural area with moderate urban influence
- Rural area with low urban influence
- Highly rural/remote area
- State highway

Nelson

Christchurch

Dunedin

Invercargill

Source: Statistics New Zealand,
Census of Population and Dwellings, 2001