

Evidence based health care: Raising issues from a midwifery perspective

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Abstract

This paper explores the evidence based health care movement and its implications for midwifery practice. While it is acknowledged that understanding and utilising research evidence is an important skill for midwives, this is not without its difficulties or issues. Further, the woman midwife relationship and the role of evidence in informing decision-making is explored. It is suggested that both partners have important responsibilities in the relationship and that evidence is one of many factors that influences decision-making. This paper also explores the availability of useful research evidence for midwifery practice, suggesting that available research evidence does not always answer the sort of questions midwives or women have about care. It is therefore important that midwives become active in contributing to the body of knowledge and evidence in our discipline and that we do this in collaboration with the consumers of our service.

Introduction

Throughout history, health care practices have been based on many factors including; custom, habit, observation, trial and error, ritual and expert authority, to name just a few. It is only in more recent times that the concept of evidence based health care has emerged (Chalmers, 1991).

Not only has the evidence based health care movement (beginning with evidence based medicine), gained momentum in the western world but increasingly, midwives and other health care practitioners are required to demonstrate accountability for their practice. Along with this, consumers are approaching health care in new ways; as consumers rather than patients. The term "patient" implies a passive role in health care whereas "consumer" indicates that health care is perceived as a

service, similar to other services we consume. As consumers, individuals become active participants in decision-making processes and with this comes the demand for knowledge on which to base their decisions for health care.

As the cost of health care technology spirals (Slocum, 2004), those funding and managing health care are also demanding clear evidence as to the value of interventions and technologies. Using evidence to inform decision-making has therefore become important for consumers, those involved in management and policy decisions, and for all health care practitioners.

In New Zealand, the midwife's role in maternity services has changed dramatically since 1990 and this has had a major impact on the ways midwives work with women to make decisions concerning their care in childbirth. Prior to 1990 midwives had predominantly been employees of hospitals, working within a fragmented system of care where they were involved in a woman's experience during a rostered shift, often in only one area of practice (Donley, 1998). Many hospitals also dictated strict routines and as employees of the hospital, midwives were expected to follow these rather than work with women to make individualised care decisions. The responsibility for the woman's care rested with a medical practitioner as midwives were prevented by law, from taking this responsibility. So, the midwife's role in decision-making was limited in many respects. Midwives were constrained by their fragmented contact with women in childbirth, their status as employees and their inability to take full responsibility for a woman's care.

The 1990 amendment to the Nurses Act (1977) opened the way for midwives in New Zealand to work with women in new ways. Midwives no longer had to be employed by hospitals and were not necessarily bound by practices or routines that were part of the hospital system. However, with autonomy came responsibility and accountability. In this new climate, accountability for maternity services rests with the individual midwife who assumes responsibility for the care of women in childbirth. Many provide continuity of care so that they have an opportunity to get to know and work with the women in their care over a period of time. Since 1990, New Zealand has experienced a growing understanding of the role and responsibility of the independent midwife, whether employed or self employed. The profession has set about recreating itself and working with women to de-

velop relationships and ways of working together that are based on respect and equality rather than the power of authority (Guilliland & Pairman, 1995).

This effort to develop new ways of working with consumers of health care is not unique to midwifery as the paternalistic approach to health care has been challenged on many fronts (Charles, Whelan, & Gafni, 1999). Yet, midwives and women are blazing a new trail in many respects and this journey has not been an easy one; nor is it finished by any means. Part of this journey has been exploring what evidence-based health care means in practice and how evidence can inform decision making in maternity care. This article explores some of the critical issues as I see them, from a midwifery perspective.

The ethics of evidence based health care

Over the last eighty years childbirth has become highly medicalised in most western countries and during this medicalisation process women have a history of being "done to". In the name of medical science women have been; exposed, shaved, swabbed, draped, examined, strapped down, silenced, cut and drugged. Many of these interventions have amounted to no more than medical experimentation and some practices have been demonstrated subsequently, to be unnecessary or harmful to women or their babies (Donley, 1998).

As Bunkle (1998, p. 240) states,

Scientific medicine was promoted as a source of unquestionable authority and used to justify sexist put-downs of women who sought information about themselves or control of their own choices.

The inquiry into allegations concerning the treatment of cervical cancer at National Women's Hospital (Cartwright, 1988), highlighted issues arising from the authority of the medical profession, relating to issues such as informed choice and consent in health care treatment, or participation in medical experiments. The ensuing inquiry into the treatment of women by Dr Green at Auckland Women's Hospital, the Cartwright Inquiry (1988), resulted in a number of recommendations aimed at addressing some of these issues and included; the establishment of a Health and Disability Commissioner and the introduction of the Code of Health and Disability Consumer's Rights. In 1996 the Code of Health and Disability Consumer's Rights became law in New Zealand providing consumers of health care with rights to; respect and privacy, fair treatment, dignity and independence,

proper standards of care, effective communication, information on which to base choices, the ability to make their own decisions, the right to support, to decide whether to participate in teaching or research, plus the right to complain (Health & Disability Commissioner, n.d.). Not only do we now have a legislative framework for the protection of consumer rights in health care but also for many, health care has come to be seen as a service or product like any other. This is something they will make choices about and have control over rather than something to which they should gratefully submit.

We are working in an environment where law protects consumer rights and many are choosing to become actively involved in decision-making concerning their care. As practitioners, accountability for practice is foremost in our minds. To address these issues it is important that we become skilled in locating and appraising evidence and use this knowledge to inform decision making in practice. This is not without difficulty and the following paragraphs explore some of the issues which can arise when we set out to use an evidence based approach in practice.

The politics of practice and evidence

In the area of maternity care it was Archie Cochrane who asserted that the field of obstetrics should be awarded the "wooden spoon" for failing to take the opportunity to evaluate one of the most significant of maternity interventions in the history of maternity care, this being the movement of women from home to hospital for the event of childbirth (Cochrane, 1979 cited in Enkin, 1996). Like many interventions since, this practice gained momentum without ever demonstrating that it was an effective, safe, useful or importantly, harmless thing to do. Sadly, there are too many interventions in maternity care that have been enthusiastically supported only to discover later that they have been devastatingly harmful to women or their babies.

In 1991 Smith estimated that as little as twelve percent of medical interventions were based on evidence of their effectiveness. It is interesting to ponder the powerful forces, both social and political, that have allowed those practices (whose effectiveness or safety has never been established), to become commonplace in maternity care. So commonplace in fact, that some seem to have become a firmly established cornerstone of maternity care; routine ultrasound for normal pregnancy being a case in point. The routine use of continuous electronic fetal monitoring in labour is another example of a technology that has gained widespread support in practice without ever es-

tablishing its effectiveness. In fact, research points to negative consequences as it has been associated with increased rates of caesarean section without any increase in improved outcome for the baby (Kaczorowski, Levitt, Hanvey, Avar, & Chance, 1998). In an article drawing out the lessons to be learned from the example of the increasingly widespread use of electronic fetal monitoring in labour, Thacker (1997, p. 58) comments, *"Adequate assessments with randomised controlled clinical trials rarely precede the widespread diffusion of a technology."*

Clearly, the availability of evidence is not the only factor influencing practice. So what are these other forces that help shape practice in any discipline? In describing some of the factors that influence a practitioner's decision to intervene in a pregnancy or childbirth for example, Chalmers (1991) includes such things as tradition, fashion, the need to use equipment, fear of litigation and commercial interests. Very often, availability of clear evidence for the effectiveness of an intervention is lacking.

These same factors along with other social and political forces allow certain practices and interventions to continue long after research has clearly demonstrated them to be ineffective. Researchers in Canada for example (Kaczorowski et al., 1998) surveyed all hospitals providing maternity services in that country with the aim of describing the routine use of procedures and technologies in maternity care and determining whether this was consistent with existing evidence. They found a prevalence for practices not supported by evidence and that a hospital's size, geographical location and affiliation with a university led to greater routine use of procedures and technologies that were not supported by current evidence. They concluded that the use of some of these procedures and technologies (including perineal shaving, administration of enemas, episiotomy and use of cardiotocographic [CTG] machines) were based on habit rather than existing evidence which clearly demonstrates them to be ineffective at best and even harmful at times. For example routine use of CTG leading to an increased rate of caesarean section (Kaczorowski et al., 1998). The authors commented that they felt discouraged by their findings because evidence against the routine use of some of the procedures studied had been around for considerable time. For example, evidence against the routine use of perineal shaving had been in existence for at least 75 years (Kaczorowski et al., 1998).

Clearly evidence is not the only factor shaping midwifery and obstetric practice and this raises important issues for understanding how change can be brought about in maternity care.

In search of the question

I was recently working with a group of midwives in a postgraduate programme. The class was attempting to assist a fellow student to develop a

searchable question arising from a clinical situation she had experienced using the evidence based practice framework developed by Sackett, Straus, Richardson, Rosenberg & Haynes (2000). In this situation a woman was having her first baby and

had been in labour for some time. Both mother and baby were well but the woman's cervix had not dilated beyond six centimetres for quite a few hours. Her progress had been charted on a partogram - a tool used in obstetrics to provide a visual representation of progress in labour which includes cervical dilation and fetal descent along a graph of hourly intervals. The partogram was developed by Phillpott and Castle (1972, cited in Walsh, 2000) using the earlier work of Friedman (1954, cited in Walsh, 2000), who determined that a normal rate of progress for someone having their first baby was cervical dilation at the rate of one centimetre per hour (Buchmann, Gulmezoglu & Nikodem, 1999).

Clearly the woman in the above scenario was not progressing normally according to this definition. A definition of normal that has become a firmly established convention in the medical fraternity (Beischer & Mackay, 1986; Llewellyn-Jones, 1990). A common obstetric practice in this sort of situation would be to augment this labour, with an intravenous infusion of Syntocinon. The introduction of this intervention carries certain risks and potential sequelae. These include the potential for fetal distress and uterine hyper-stimulation (Arulkumaran, 1994) requiring continuous monitoring with a CTG monitor. Augmented or induced labours may be more painful than natural labours (Thorpe & Breedlove, 1996) and this increases the likelihood of epidural anaesthesia (introducing another host of risks and potential complications). These interventions may require transfer to a different hospital if this was a rural or primary birthing unit (perhaps disrupting the support network of the woman), and the introduction of new health care providers as obstetricians become involved in the "case". Inevitably, this in-

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intervention radically changes the quality of the experience for the woman as well as her own perceptions of the efficiency and adequacy of her body in birthing this baby. From both quantitative and qualitative perspectives, it is obvious that this clinical situation is multifaceted. We make it complex because we apprehend the situation in its entirety; with all its shades of grey, its potential consequences, its twists and turns, its layers and possibilities and "what ifs".

We make it complex because we apprehend the situation in its entirety; with all its shades of grey, its potential consequences, its twists and turns, its layers and possibilities and "what ifs".

Midwives approach the woman and childbirth in a holistic way. We attempt to get to know the woman not just as a vessel in which a fetus grows or a vehicle through which it will pass in childbirth, but as a human being with unique needs and desires. A woman in childbirth may also be a daughter, a partner, or a mother. She is someone who is embedded in a cultural and social context with values, beliefs and needs relating to childbirth that extend beyond the outcome of a "live birth".

So where do we start in gathering evidence that informs our decision making for situations like this? Do we focus on the value of partograms, the assumption that progress at one centimetre cervical dilatation per hour is normal, the effects of augmentation of labour, the experience of augmentation of labour, the experience of transfer from primary to secondary setting in labour, or the likelihood of further interventions becoming necessary once labour is interfered with? Clearly all these factors will contribute to decision making to some degree. And this is of course the art of what we do. Yet we can usually only set about finding the evidence for one facet of the scenario at a time and to do this we do need to narrow our focus, (hone in on just one aspect) and this can feel very unsatisfactory.

We need to focus our attention on one aspect of the scenario and develop a focused, searchable question. From there, we set about finding the available research evidence on that clinical issue. In narrowing our focus we lose some of the richness and complexity of the real life situation (that gave rise to the question in the first place) but in finding a focus we create an opportunity for locating evidence and informing our practice. As I discuss later in this paper, the evidence informed practice process (Sackett, Rosenberg, Muir Gray, Haynes, & Richardson, 1996) does not end with the identification of the evidence on any particular issue. We do return to a real woman with a real, complex and unique clinical situation and

use that evidence to inform (not dictate) joint decision making.

This is not to imply that we must gather evidence on every aspect of our discipline one by one. It would be impossible as a practitioner to remain up to date with every published research report on every topic relating to maternity care. The re-

sponsibility to ascertain and appraise the evidence on maternity care cannot fall to each individual in practice alone but must be a collective effort. This raises issues with reliance on the interpretation and appraisal of evidence by others, even when protocols for this are clearly articulated as in the Cochrane Collaboration (The Cochrane Collaboration, 2004). Nevertheless, with a critical eye open we must take every opportunity to network and share knowledge and information through such media as journals, discussion groups, and collaborations such as the Cochrane Collaboration and the New Zealand Guidelines Group. Both the Cochrane Collaboration and the New Zealand Guidelines Group encourage collaboration between consumers and various health and research professionals. The latter aiming to educate consumers and health professionals in the development of evidence based, best practice guidelines (The New Zealand Guidelines Group, 2004).

In search of the evidence

So, having narrowed our focus to just a fragment of the whole in order to develop a searchable question using the evidence based practice framework, we set out to find the evidence. However what I commonly find as a midwife is that the research that has been conducted is not answering the type of questions that I am asking. The following scenario will illustrate my point.

At a seminar I attended on the clinical use of epidural anaesthesia in obstetrics, an anaesthetist conducting the presentation described the procedure, its uses and some of the associated problems. These included the fact that the drugs injected into the epidural space affected not only pain but also motor impulses. For women in labour this meant that not only was the reception of pain interfered with but also the ability to use muscles was lost from the waist down. This meant of course, that women couldn't mobilise during labour and had to lie on a bed. The upright position and mobility that aided progress in labour was absent and the muscles that help facilitate the physiological processes of birth were rendered in-

ert. If having an epidural meant exposing women to certain risks and potential problems with the processes of birth then the sort of questions I was formulating as I sat in the audience, were along the lines of; "in what ways can we support women in childbirth so that they don't choose to have an epidural in the first place and expose themselves to the risks and problems associated with them?" This wasn't the sort of question that the anaesthetist was asking. He went on to describe a research proposal for a new type of drug that could be used in epidurals that would minimise the effect of the motor blockade. This is not to say that this wouldn't have been a useful piece of research but illustrates that certain disciplines may approach a subject from quite different perspectives.

This example raises issues concerning the politics and practice of research. Where researchers from within a particular discipline (medicine for example) are conducting the majority of the research in a field, we find that the topics being researched and the kind of questions being answered, are not those that we are necessarily asking. The Term Breech Trial (Hannah, Hannah, Hewson, Hodnett, Saigal, & Willan, 2000) is a prime example. My reading of this research suggests that it was a trial comparing a medically managed vaginal breech birth with caesarean section. As large multi centre trials go, this was a robust piece of research and certainly something that cannot be ignored. As a midwife however, I am still left with the nagging question. If the women in the vaginal birth arm of the research experienced care that facilitated and supported the physiology of birth (in the myriad of ways that midwives believe childbirth can be supported and facilitated), would that have made a difference? Thus the question of the best method of birth for a breech presentation has not been answered entirely to my satisfaction.

This can be a problem when we set out to find information and evidence on a particular topic. We find that our questions have yet to be answered, have not been asked or are not answered to our satisfaction. The same applies to the questions of consumers. Just as midwives may have a different perspective to our medical colleagues on a practice issue, consumers may have another perspective again. It is important that these perspectives get on the research agenda. To achieve this we need to become more active in research and also foster greater collaboration (partnership and collaboration between midwives, other professions and consumers). This raises important issues, which include the development of midwives' skills in conducting research and the ways in which such research is funded.

The meta analysis and randomised controlled trials (RCT) are regarded as the pinnacle of the evidence hierarchy for questions of treatment (Hamer & Collinson, 1999). This research method was originally designed to measure the effectiveness of certain medicines and has since been applied to measure the effects of many and varied treatments and interventions in childbirth. However, not all clinical practices lend themselves to this type of research. Say for example that I wanted to conduct a randomised controlled trial on the safety of water birth. I would have to randomly allocate women to either the experimental group (water birth) or the control group (birth out of water). Where would I find women willing to participate? Often women have strong opinions on water birth and either do want a water birth or don't. There aren't many women who are so ambivalent that they would be happy to be randomly allocated to one group or another. If this research could be conducted would this ambivalence itself have an effect on the outcome? And how does the desire for something (a strong belief in water birth, the conscious decision to have a water birth), affect the outcome in these situations?

This research could be done¹, it is not impossible, but it does not lend itself readily to a randomised controlled trial. Many of the sorts of questions midwives have about practice do lend themselves to this type of research but equally, many do not. We can of course do other types of research on these clinical issues, which fall below the standard of the randomised controlled trial in terms of levels of evidence, but the findings from these types of research will always be considered a poor cousin of the RCT. Not quite the gold standard, not quite measuring up, not quite convincing enough.

Where does this leave those clinical questions that do not easily fit experimental research designs, or those perspectives that aren't being addressed in current research? Importantly, what clinical questions do consumers have? The current approach to research renders them invisible, it is as if they do not exist. This has serious implications for the development of practice in any area of health care. Practice has the potential to become skewed in the direction to where there are answers, and where there is evidence, leaving other areas (those harder to research, those researched with methods other than the RCT or even qualitative designs) to wallow in the realms of questionable, unproven practices.

It is important that we ensure that our questions and the questions of consumers are on the research agenda; being asked, being answered and being valued. As a profession certainly, we need to make sure that we contribute to developing a body of

evidence that is relevant to the way we practice, at the same time ensuring that the way we practice meets the needs of consumers of maternity services.

Evidence informed decision making

As paternalistic approaches to decision making in health care diminishes (Charles, Whelan & Gafni, 1999), practitioners and consumers need to develop new ways of working together and making decisions. Within this both practitioners and consumers must consider how they work with evidence and use it to inform their decision-making.

Historically the concept of professionalism implied a paternalistic relationship. One where the practitioner held authority, was aloof, objective and in control of their own profession and professional decision-making. The midwifery profession in New Zealand has attempted to redefine professionalism, making consumers central and integral at every level of midwifery; from the professional structure of the New Zealand College of Midwives Organisation, through to the day-to-day practice of midwifery. The partnership model of midwifery (Guilliland & Pairman, 1995); describes the relationship between the woman and midwife as one of partnership, and underpins the midwifery profession in New Zealand. In many ways this move was heretic, challenging the historical notions of professionalism and the paternalistic models of decision making that had been fundamental to the professional/consumer relationship (Tully, Daellenbach & Guilliland, 1998).

But what is it to be a partner in providing or receiving health care? This new way of working with consumers as partners demands that there is equality within the relationship, with each partner respected for what they bring to the partnership. The health care provider is respected for their professional knowledge and practice skills, and the woman receiving care is respected and valued for her knowledge of herself; and of her individual and unique needs and desires (Guilliland & Pairman, 1995).

Richards (1997) reminds us that no health issue is purely a chemical or physiological one. It is always part of the complexity that is the human condition. Health is physical, social, psychological, environmental, spiritual, cultural and political. This complex mix of factors will contribute to a client's decision making; a decision in which evidence will play just one part. For some it may be a major part for others a small part. When we commit to a partnership relationship then we must approach care in a holistic way, value autonomy and respect a client's right to make decisions that are right for them.

We do not necessarily have a blueprint for working in this way because it is new for many; both consumers and health providers. The last fourteen years have seen midwives and women grappling with issues arising out of their commitment to work in partnership. These include such questions as; where are the boundaries between personal and professional? What are the rights of each partner within the relationship? What are the responsibilities of each?

In health care we have been at one extreme of the spectrum; where the health professional made the decisions. Inherent in this was a paternalistic approach to decision making. The practitioner made the decisions for the patient and the patient "...*passively acquiesces to professional authority ...*" (Charles, Whelan & Gafni 1999, p. 781). For me, equally untenable is the other extreme of the spectrum, where the demands of the client are met without regard for the professional role and responsibilities of the practitioner. These two models described above represent two ends of a spectrum and in reality most relationships and decision making probably fall somewhere in between.

Within the partnership model of care (Guilliland & Pairman, 1995) decision-making involves negotiation. This model acknowledges that both partners have rights and responsibilities within the relationship, with the ability to negotiate facilitated by the development of a relationship over time. Continuity of care provides the opportunity for the trust and knowledge of the other partner to develop. For midwives this enhances our holistic understanding of each woman's childbirth experience and the factors contributing to her decision-making. The midwife's responsibility within this relationship is to share knowledge of, and have access to, available evidence. It does not mean that women will make choices dictated by evidence or that midwives must act on all women's choices. Both have rights and responsibilities within the partnership and evidence will join the myriad of factors that contribute to that woman's decision making. The evidence based approach to care must be kept in perspective and never be allowed to become a 'recipe based' approach. Page (1996, p.192) summarises this point nicely when she says, "*Like any good health care practice, evidence-based maternity care requires thoughtful attention to the individual woman and her family, keeping their individual concerns, values and clinical needs uppermost.*"

The art of what we do as practitioners is to work with individuals. When we ensure that the individual and their unique needs and desires are fore-

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most, then evidence has an important and rightful place in informing decision-making.

Conclusion

Evidence based health care has gained momentum in many western societies and has the potential to significantly improve the basis for decision-making in health care. As practitioners, it is important that we develop skills in locating and appraising evidence and it is equally important that we understand the limitations of an evidence based approach to care.

In clinical situations we tend toward apprehending complex wholes rather than incomplete fragments and maintain concern for the uniqueness of the individual. This can make it difficult for us to narrow our focus on an aspect of the clinical situation and develop a "searchable question" within the evidence based practice framework. The art of what we do lies in our appreciation of the individual and this is the key to providing holistic care. It is the nature of the relationship with that individual and effective communication that will facilitate decision-making that meets the person's needs. In a partnership relationship decision-making is negotiated as both partners are acknowledged as having rights and responsibilities. It is important that practitioners are able to access and appraise evidence but they must also acknowledge that evidence is only one of many factors that will influence an individual's decision-making. As Sackett, Rosenberg, Muir Gray, Haynes, and Richardson (1996, p. 71) comment, "Evidence based medicine is not 'cookbook' medicine. Because it requires a bottom up approach that integrates the best external evidence with individual clinical expertise and patients' choice, it cannot result in slavish, cookbook approaches to individual patient care."

Not all of our clinical questions can be answered by current evidence. We do need to develop skills in locating and appraising evidence and must also acknowledge those areas where uncertainty remains. It is also important that we become active in contributing to the body of evidence in our discipline. Collaboration with consumers of our service is important to ensure that our discipline remains focused on meeting the needs of our consumers. If we don't ensure that our perspective and our concerns and clinical questions are on the research agenda then it is as if they don't exist.

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- 1 A number of studies have been conducted evaluating immersion in water for first stage of labour. A small study by Nikodem (1999, cited by Cluett, Nikodem, McCandlish & Burns, 2004) is the only one I could locate evaluating birth in water. Women were randomised at full dilatation.