The experiences of midwives involved with the development and implementation of CenteringPregnancy at two hospitals in Australia

Alison J Teate

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The Centre for Midwifery, Child and Family Health
Faculty of Nursing, Midwifery and Health
University of Technology, Sydney

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CERTIFICATE OF AUTHORSHIP / ORIGINALITY

I certify that the work in this thesis had not previously been submitted for a degree nor has it been submitted as part or requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparations of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of Candidate

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

Adj Prof	**Adjunct Professor**
AHS	**Area Health Service**
CERCS	**Centres for Enterprise, Research and/or Community Services at the University of Technology, Sydney**
CHI	**Centering Healthcare Institute**
CMCFH	**The Centre for Midwifery, Child and Family Health**
CP	**CenteringPregnancy**
FNMH	**Faculty of Nursing, Midwifery and Health**
GP	**General Practitioner**
MGP	**Midwifery Group Practice**
NSW	**New South Wales**
SESIAHS	**South East Sydney Illawarra Area Health Service**
SFH	**Symphysis - Abdominal Fundal Height**
STOMP	**St George Hospital Outreach Maternity Programme**
UK	**United Kingdom**
USA	**United States of America**
UTS	**University of Technology, Sydney**
VBAC	**Vaginal Birth after Caesarean**

ABSTRACT

Aims

The aims of the study were to describe the experiences of the midwives who were part of the first Australian CenteringPregnancy Pilot Study and to inform the future development of CenteringPregnancy.

Background

CenteringPregnancy is a model of group antenatal care that has evolved over the past two decades in North America. A pilot study that explored the feasibility of implementing CenteringPregnancy in Australia was undertaken in 2006-2008. I was the research midwife employed to coordinate this study and I explored the experiences of the midwives who were participants as the focus of my Master of Midwifery (Honours) research.

Method

An Action Research approach was undertaken to study the implementation of CenteringPregnancy in Australia. This included a qualitative descriptive study to describe and explore the experiences of the midwives who were participants. The study was set in two hospital antenatal clinics and two outreach community health-care centres in southern Sydney. Eight midwives and three research team members formed the Action Research group. Data collected were primarily from focus groups and surveys and were analysed using simple descriptive statistics and thematic content analysis.

Findings

CenteringPregnancy enabled midwives to develop relationships with the women in their groups and with their peers in the Action Research group. The group antenatal care model enhanced the development of relationships between midwives and women that were necessary for professional fulfilment and the appreciation of relationship-based care. The use of supportive organisational change, enabled by Action Research methods, facilitated midwives to develop new skills that were appropriate for the group care setting and in line with a strengths-based approach. Issues of low staffing rates,

lack of available facilities for groups, time constraints, recruitment difficulties and resistance to change impacted on widespread implementation of CenteringPregnancy.

Conclusions

The experience of the midwives who provided CenteringPregnancy care suggests that it is an appropriate model of care for the Australian midwifery context, particularly if organisational support and recruitment strategies and access to appropriate facilities are addressed. The midwives who undertook CenteringPregnancy engaged in a new way of working that enhanced their appreciation of relationship-based care and was positive to their job satisfaction.

Implications for practice

Effective ways to implement CenteringPregnancy models of care in Australia were identified in this study. These included a system of support for the midwives engaging in facilitating groups for the first time. It is important that organisations also develop other supportive strategies, including the provision of adequate group spaces, effective recruitment plans and positive support systems for change management. In the light of current evidence the development of continuity of care models which enhance the relationship between an individual women and her midwife, it is important to explore the effects of group care on this unique relationship.

PROLOGUE

The Australian CenteringPregnancy Pilot Study was undertaken between November 2005 and December 2008 (Teate, Leap, Rising, & Homer, 2009). Staff from the Centre for Midwifery, Child and Family Health (CMCFH) at the University of Technology, Sydney (UTS) carried out the research, which was funded by the Telstra Foundation. The Centering Healthcare Institute (CHI), the parent organisation for CenteringPregnancy in the United States of America (USA), provided ongoing support. In October 2005 I was successful in my application to be the research midwife for this study and commenced in January 2006. As part of this research role I also undertook my Master of Midwifery (Honours) degree.

Antenatal care has been an integral part of my midwifery clinical practice since 1994, when I commenced working in one of the first Australian models of midwifery continuity of care. I have worked in a variety of midwifery continuity of care models since then, and have developed an interest in improving antenatal care. Throughout my career as a midwife, the majority of my experience has been working with women across the whole continuum of childbirth and not in a system of fragmented maternity care. As a result I have experienced antenatal care as one part of the whole midwifery process of care for many years. On reflection of my career as a birth centre, caseload and homebirth midwife I have recognised the importance of providing effective antenatal care and also the importance of providing an environment where women, their families and midwives can develop supportive relationships.

CenteringPregnancy is a model of antenatal care that is of interest on many levels. As a model of antenatal care it appears to enhance the experience of antenatal care provision for both the women and the midwives (Rising, 1998). The notions of social support, community and network development, empowerment and the importance of story-telling have been described as significant benefits of this model (Massey, Rising, & Ickovics, 2006). Beneficial clinical outcomes for the women and their babies have been demonstrated (Ickovics et al., 2007; Ickovics et al., 2003). For these reasons, I was motivated to be involved in the development of the Australian CenteringPregnancy pilot

study and following my recruitment to be the research midwife I was keen to enrol in a research degree.

Although I was a novice project and research midwife for the CenteringPregnancy study I had a prior working relationship with the midwives at one of the study hospitals, as I had been employed there for four years. My dual roles of project midwife and researcher required me to be closely involved with all the participants of the study from both hospitals. I acknowledge that previous relationships I had with some of the midwife participants may have, to some extent, impacted on the data collected and the interpretation of these data (Burns & Grove, 2005). I am also aware that my roles of researcher, project midwife and participant overlapped and that this had the potential to create bias. To deal with this, I situated myself as *'participant as observer'* as described by Field and Morse (1985) and regularly made the midwife participants aware of my overlapping roles throughout the study. To account for this situation as an 'insider', I have maintained openness to the perceptions and experiences of the participants and attempted to avoid attaching my own meaning to the experience of the study. This is described in more depth through the dissertation.

The research methods chosen for this study required me to *'invest and divulge'* (Webb, 1992, p. 749) much of myself in the research process as I worked closely with the participants. I have therefore chosen to write a significant part of this work in the first person to accommodate the close working relationships I had with the participants. This was a study informed by Action Research principles and as such is reliant on the successful relationship between the researcher and the participants (Bradbury & Reason, 2003). As a participant in an Action Research project it was essential for me as the researcher to openly explore contributory factors associated with my role and relationships and to avoid domination: writing of these factors in the first person is therefore appropriate and in keeping with the critical social theory paradigm (Webb, 1992).

This thesis therefore, is both a story about the midwives' journey as they developed and implemented the first CenteringPregnancy model of group antenatal care in Australia as

well as an account of the journey I undertook as a novice project midwife and researcher.

ACKNOWLEDGEMENTS

Firstly, I wish to thank the Telstra Foundation who funded the CenteringPregnancy Pilot Study. These funds enabled me to take a leave of absence from my clinical work and undertake this study as a salaried project officer. Secondly, the encouragement, knowledge and expertise from Sharon Schindler Rising and the Centering Healthcare Institute were significant factors in the successful undertaking of the CenteringPregnancy Pilot Study and the Midwives' Study. Sharon's support enabled me to gain an in-depth understanding of the CenteringPregnancy model that lead to the development of my enthusiasm for group health-care.

I wish to acknowledge all the people who I came in contact with while undertaking the CenteringPregnancy study and all those I dragged 'kicking and screaming' along with me. This journey that I undertook was not unaccompanied or completed in isolation. My role in the study was a privilege, as it enabled me to work alongside many individuals who taught me a variety of lifelong lessons. These lessons facilitated the successful completion of my first CenteringPregnancy journey. As a result, I have developed research and project management skills and engaged in the previously unknown territory of academic writing. I have also been enriched as a midwife and gained confidence in my personal life.

The first people who I wish to acknowledge as a group are the pregnant women who engaged in this research project with such enthusiasm and confidence. Their trust in the unknown concept of CenteringPregnancy gave me confidence and directed me through the whole journey. Then there are the wonderful midwives and the social worker who I worked alongside and who allowed me into their working lives to create chaos, extra work and disruption to their working world. Their faith in me as the project midwife and 'expert' in CenteringPregnancy gave me enthusiasm and conviction about the benefits of this new way of working. This enabled me to engage with activities that I had never envisaged I could do. For example: public speaking; workshop development and management; teaching and, of course, research. These wonderful women are Kay Anderson, Angela Brown, Lyn Hayes, Christina Huber, Robyn Doherty, Louise Everitt, Beverley Rhodes and Elizabeth Roberts.

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Finally I wish to dedicate this work to my father who passed away during the first year of the study. He was a man of passion and conviction and was always giving advice, even when you did not want to hear it! One piece of his advice kept me focused on this journey of engagement, development and change: *'You catch more flies with honey than vinegar'*.

INTRODUCTION

The title for this thesis is 'The experiences of midwives involved with the development and implementation of CenteringPregnancy at two hospitals in Australia'. The thesis is an essential, but smaller part, of the overall CenteringPregnancy Pilot Study undertaken between November 2005 and December 2008 (Teate et al., 2009). I was the project midwife for this feasibility study. As part of this role, I undertook a Master of Midwifery (Honours) degree, which is the study to be presented in this thesis. For ease of understanding, this Master of Midwifery (Honours) study is referred to as the 'Midwives' Study'.

The Midwives' Study is imbedded within the broader CenteringPregnancy Pilot Study and the two studies share a similar study design and intention. As such, it is difficult to describe the studies separately in isolation from each other. As a result, a brief description of the CenteringPregnancy model and the broader CenteringPregnancy Pilot Study will precede the description of the Midwives' Study.

Organisation of this thesis

Chapter One provides a background to the Midwives' Study, including a description of the CenteringPregnancy model of group antenatal care and the Australian CenteringPregnancy Pilot Study. An overview of the Midwives' study is also included.

Chapter Two reviews the literature that was used to gain and understanding of the context of traditional (standard) antenatal care worldwide and in Australia, the experience of this for women and the role of the midwife in traditional antenatal care. The chapter also reviews the literature on CenteringPregnancy and the relatively new concept of group health-care and a review of organisational change.

Chapter Three describes the methods of research used for the Midwives' Study, which relied on Action Research for the implementation processes. Qualitative Description was the specific method of choice for the Midwives' Study. A description of the data collection and analysis, the participants involved, the setting, and the ethical and

funding considerations are included. The position that I held as an 'insider' researcher is also discussed in this chapter.

Chapter Four presents the findings from the Midwives' Study. Particular emphasis is placed on two sets of data, the surveys and focus groups. Other data sets are briefly discussed, but not included in the overall findings for this study.

Chapter Five discusses the overall findings. This includes a discussion on the impact of change implementation on the midwives and their development of new skills and knowledge in order to work within the CenteringPregnancy model of care. Limitations of the study and implications for practice are included. The chapter concludes with an overview of the *Ten Essential Steps for Effective Implementation* of CenteringPregnancy. These have been developed to guide the successful development and implementation of the CenteringPregnancy model of care in other settings in the future. These steps provide a unique contribution to the literature on CenteringPregnancy.

Chapter One: BACKGROUND TO THE STUDY

The CenteringPregnancy model

CenteringPregnancy®[1], as a model of antenatal care combining assessment, education and support in group settings, has been widely implemented and evaluated in the USA (Ickovics et al., 2003; Klima, 2003; Massey et al., 2006; Novick, 2004; Rising, 1998; Rising, Kennedy, & Klima, 2004). CenteringPregnancy enables more time to be spent with the antenatal health-care provider compared with a one-to-one model (16 hrs in group care versus 3-4 hrs in a one-to-one care model involving eight visits). This additional time provides opportunities for information about pregnancy, labour and birth and parenting to be discussed and for women to learn from, and support, one another (Massey et al., 2006). The model is based on the capacity to develop relationships and the provision of social support. It has been suggested that, by taking health-care out of an examination room and into a group setting, barriers between care providers and women are decreased, leading to improved communication (Massey et al., 2006).

The premise of CenteringPregnancy is that antenatal care is provided more effectively and efficiently to women in groups compared with one-to-one situations (Rising et al., 2004). Learning and support are enhanced by drawing on group resources, in particular the knowledge, experiences and ideas of individual group participants, that is, other women. The potential for empowerment is increased when women are actively involved in monitoring and documenting their health throughout pregnancy (Rising et al., 2004). The format of the model is founded on a set of core concepts known as the 'Essential Elements of CenteringPregnancy' (see Figure 1) (Rising, 1998). These elements provide a framework for the groups and are necessary requirements for each site to fulfil in order to be 'registered' as a CenteringPregnancy site, thereby ensuring model fidelity and the potential to contribute to research in this area.

[1] CenteringPregnancy ® is a registered trademark. For the sake of parsimony the trademark will not be included in this document – CenteringPregnancy.

Figure 1: Essential elements of CenteringPregnancy

- Health assessment occurs within the group space
- Women are involved in self-care activities
- There is stability of group leadership
- A facilitative leadership style is used
- Each session has an overall plan
- Attention is given to core content; emphasis may vary
- The group conduct honours the contribution of each member
- The group is conducted in a circle and group size is optimal to promote the process
- The composition of the group is stable, but not rigid
- Involvement of family support people is optional
- Group members are offered time to socialise
- There is on-going evaluation of outcomes

All the health-care providers who facilitate CenteringPregnancy groups are provided with formal training in the 'Essential Elements' through facilitated workshops (Rising et al., 2004). The Centering Healthcare Institute (CHI), previously registered as the Centering Pregnancy and Parenting Association, is a non-profit organisation which provides basic and advanced training for health-care providers (Carlson & Lowe, 2006) in the USA. CHI also tracks implementation sites, evaluates the outcomes from these sites, and provides support and guidance for the health-care providers involved (Novick, 2004). Formal training and ongoing evaluation are important components of CenteringPregnancy to ensure fidelity of the model.

The Australian CenteringPregnancy Pilot Study

The Australian CenteringPregnancy Pilot Study was developed in 2005 and commenced later that year. The initial stage of the study occurred when international communications between researchers and clinicians in Australia and the USA brought the attention of CenteringPregnancy to Professor Nicky Leap. As a midwife and researcher, Nicky Leap, understood the concepts of group health-care, as she had been involved in the development of antenatal group models in the United Kingdom (UK) and here in Australia. Professor Nicky Leap and Professor Caroline Homer applied for a grant from the Telstra Foundation in 2005 to study the feasibility of introducing and

implementing CenteringPregnancy in Australia. This application was successful and involved the development of a joint agreement to implement and research CenteringPregnancy between University of Technology, Sydney (UTS), South East Sydney and Illawarra Area Health Service (SESIAHS), the Telstra Foundation and CenteringPregnancy (Centering Health Care Institute, USA).

The aim of the CenteringPregnancy Pilot Study was to develop, implement and test the CenteringPregnancy programme in an Australian setting (Teate et al., 2009).
The research questions were:

1. What are the challenges of developing and implementing this innovative model of pregnancy care in Australia?
2. What is the impact of the programme on the women, their babies and their families, the midwives and the organisation?
3. Does the outcome of this pilot study support the development of a large, multi-centred randomised controlled trial?

The study was undertaken in four stages. These were Development, Information, Education, and Implementation. Data collection and analysis were carried out as joint approaches for each of the stages. The Midwives' Study evolved as one part of the Pilot Study and explored the experiences of the midwives involved in the Pilot Study.

This chapter will now outline the research undertaken for the Midwives' Study, including the aims and justification of the study.

The Midwives' Study

The Midwives' Study explored the experiences of the midwives involved with the development and implementation of CenteringPregnancy at two southern Sydney hospitals in Australia.

Aims of the Midwives' Study

The aims of the Midwives' Study were:

1. To describe the experiences of the midwives who were part of the first Australian CenteringPregnancy Pilot Study

2. To inform the future development of CenteringPregnancy in Australia

Justification for the research

This study aimed to explore and describe the actions, experiences and views of the midwives involved in the implementation of the first CenteringPregnancy groups in Australia. The rationale for undertaking this study was to understand the inherently complex challenges associated with the introduction of change (Rogers, Medina, Rivera, & Wiley, 2003), in this case, the introduction of CenteringPregnancy in an Australian setting. It was anticipated that the midwives would require new skills and knowledge as they moved from traditional antenatal consultation with individual women to group leadership and facilitation of these new antenatal care groups.

The data from the Midwives' Study has, in part, addressed the first two research questions of the broader Pilot Study. The analysis of the data from The Midwives' Study informed the future development of CenteringPregnancy in Australia by providing an understanding of the processes involved with the implementation and development of such a model. To a certain extent, the outcomes from this study will also partially inform the third research question of the broader Pilot Study, that is, to assist other organisations with the introduction of this new model of antenatal care and support the development of a multi-centred RCT.

The following chapter reviews the literature on traditional antenatal care worldwide and in Australia, the experience of this for women and the role of the midwife in this traditional model of care. It will also review the literature on group health-care and CenteringPregnancy.

Chapter Two: LITERATURE REVIEW

In this chapter, I review the main literature that supported the design and analysis of the Midwives' Study. In the first part of the chapter I provide a brief review of the strategies used to find relevant literature. The chapter is then divided into sections where I discuss the specific issues of antenatal care that were relevant to this study and the issues of organisational change.

I commenced the literature review in 2006 and continued to mid 2009. In the initial review, I used keywords including: antenatal/prenatal care, pregnancy, childbirth, group health-care and CenteringPregnancy. The search engines I used were CINAHL, OVID, Medline, MIDIRS, Pubmed, EBSCO, Proquest, Informit, Academic Search Elite, Wiley Interscience Collections Search and the Cochrane Collaboration database. I also used Government databases to access relevant reviews and reports.

I analysed and critiqued the literature to provide a basis for this research, accessing and reviewing new topics as they arose during the course of the study. Many of these additional topics related to the reflexive nature of the Action Research design of the Midwives' Study; they included issues relating to the implementation of innovation and organisational change management and the importance of the midwife-mother relationship.

This review informed the initial development of this study; supported the Action Research[2] method as it unfolded; and established the importance of this new area of research. It includes a current review of literature on traditional and existing models of antenatal care, group health-care, antenatal group care and, more specifically, CenteringPregnancy. It also addressed the significance of understanding organisational change prior to engaging with it.

[2] The literature relating to Action Research is included in Chapter Three.

Antenatal Care: Background

In this first section I provide a review of the literature related to antenatal care and the research undertaken in this area.

Formalised antenatal care has been provided to pregnant women since the early twentieth century. It is one of the most common health-care activities in today's world (Alexander & Kotelchuck, 2001; Enkin et al., 2000; Strong, 2002). Antenatal care includes a scheduled course of visits that are provided at regular intervals during a woman's pregnancy (NICE, 2008). Appropriately educated and qualified doctors or midwives usually provide this care although this varies in different countries and settings (Enkin et al., 2000). The aims of antenatal care are to promote the health of the mother and that of her unborn child and to detect and treat any problems (Enkin et al., 2000). It is a process of health-care provision that incorporates screening, prevention and treatment interventions (Tucker & Hall, 1999).

Antenatal care in Australia was developed from the British system of assessment, screening and monitoring of pregnant women that was implemented in the early 1900s (Hall, 2001; Villar, Garcia, & Walker, 1993). Antenatal care was implemented widely during this time to improve rates of maternal and neonatal morbidity and mortality (Wagner, 1994). The early model of antenatal care included simple screening tools designed to detect deviations in the normal pregnancy, and enable access to appropriate medical treatment and, if needed, the ongoing management of physical complications of pregnancy and childbirth (Enkin et al., 2000; Rooney, 1992; Wagner, 1994).

The provision of antenatal care in Australia today remains relatively unchanged from the initial British model (Hunt & Lumley, 2002; The Three Centres Project, 2001; Villar, Carroli, Khan-Neelofur, Piaggio, & Gulmezoglu, 2007). For example, the schedule of antenatal visits in the two settings for the Midwives Study was similar to the current recommended schedule in the UK that recommends around ten visits for first time mothers and seven visits for women who have had at least one baby and have uncomplicated pregnancies (NICE, 2008).

The two hospitals where the study was undertaken offer women with uncomplicated pregnancies a standard schedule of antenatal visits. The first visit is at approximately 14 weeks gestation. Women then attend every four to six weeks until they reach 28 weeks gestation and then they attend every three weeks until 36 weeks gestation. Between 36 weeks gestation and the birth, women who are having their first baby attend weekly. Women who are pregnant with a subsequent pregnancy attend fortnightly. The schedule of visits in the hospitals in this study still closely resembles the schedule recommended in 1929 of monthly visits until 30 weeks and fortnightly until 36 weeks and weekly until the birth (Hall, 2001).

Technological advances with ultrasound, pathology and other screening tools have evolved over the past century, but the aim of standard antenatal visits continue to be the same (Chalmers, Enkin, & Keirse, 1989; Enkin, Glouberman, Groff, Jadad, & Stern, 2006). Developments in antenatal care continue to align with the belief that this is an opportunistic time to screen women for a multitude of health issues, whether they are physical, emotional or psychosocial (Austin, Priest, & Sullivan, 2008; Jones, Bugg, Gribbin, & Raine-Fenning, 2008; Salmon, Murphy, Baird, & Price, 2006; Sangkomkamhang, Lumbiganon, Prasertcharoensook, & Laopaiboon, 2009). Recommendations for current antenatal care continue to include some of the routine procedures that were included in the early models of antenatal care. For example, confirmation of expected date of birth, measurement of blood pressure, assessment of fetal movements in regard to fetal wellbeing and advice on diet and lifestyle have been part of antenatal care for almost a century (Enkin et al., 2000; NICE, 2008).

Much of what is done in an antenatal visit is justified by tradition and routine and not based on sound evidence (Alexander & Kotelchuck, 2001; Jones et al., 2008). For example, dip-stick urinalysis is a regular undertaken procedure, even though evidence has shown that the results of routine testing (glycosuria, proteinuria and haematuria) are not good predictors of pregnancy-related problems when used in isolation from other investigations (Crowther et al., 2005; Gribble, Fee, & Berg, 1995; Murray et al., 2002).

The presence of glycosuria to screen for Gestational Diabetes Mellitus (GDM) is a poor predictor with poor rates of correlation between a positive trace of glucose in the urine

and diagnosis of disease. Many pregnant women have glucose in their urine without having GDM (Watson, Potter, & Donohue, 1999). Watson showed a weak relationship between a positive urine test and a positive diagnosis of GDM using a serum (blood) test in a study of 500 women. Larger retrospective cohort (n=2745) and case series (n=610) studies that analysed urinalysis as a screening tool also showed that the urinalysis test was less effective as a predictor for GDM compared with a 50 gram glucose serum test (Gribble et al., 1995; Hooper, 1996).

Similarly, the regular use of dip-stick urine testing at antenatal visits to detect pre-eclampsia has been discredited. It is recommended that other symptoms, such as headaches, visual disturbances, epigastric pain, raised blood pressure measurements greater than 140/90 and changes in serum blood chemistry, also need to be included for an accurate diagnosis of pre-eclampsia, rather than protienuria alone (Lowe et al., 2008).

Many more challenges regarding antenatal care being a routine health-care activity that is reliant more on tradition than evidence can be found in the literature, but further discussion about this topic is outside the scope of this review. The motivation for this review was to discuss innovative approaches to antenatal care. The CenteringPregnancy model is an example of an innovation that focuses on group interactions and enhances social support, peer networks and relationship development between the women and the midwife (Massey et al., 2006). More about CenteringPregnancy will come later in this chapter.

Current Australian antenatal care

Antenatal care is a common health-care activity in Australia and is provided health-care providers practicing in both public and private health-care settings (NSW Department of Health, 2007). Government reports (Australian Government, 2007; NSW Department of Health, 2007) indicate that a high proportion of women in NSW seek antenatal care. In SESIAHS, where the study was undertaken, there were 15,020 resident women in 2006 who gave birth and of these women only 238 (1.6%) did not have any antenatal care (NSW Department of Health, 2007). Most women will attend the regular schedule of antenatal visits throughout their pregnancy (NSW Department of Health, 2007). A large

proportion of these women are also cared for in the public hospital setting as documented in 2005 (the most recent statistics) with 66.7% of women giving birth in NSW public hospitals (NSW Department of Health, 2007).

Publicly-funded[3] antenatal care in Australia is most commonly provided by either general practitioners (GP) in their own practices or by midwives and doctors in public hospital antenatal clinics (NSW Department of Health, 2007). Many of these hospital clinics and doctor's practices are busy environments where women often wait for long periods of time before being seen. Women are often isolated by this system, unable to meet their peers, or create supportive community based networks (Hunt & Lumley, 2002; NSW Department of Health, 2000). As described earlier, the traditional schedule of antenatal care is monthly visits from the first visit (usually in the first three months or twelve weeks of the pregnancy) until 28 weeks of pregnancy, fortnightly until 36 weeks of pregnancy, and weekly until birth (The Three Centres Project, 2001). The average number of visits is usually between eight to twelve visits (Grigg, 2006). The scheduled time allocated for visits throughout Australia is usually between fifteen and twenty minutes. This short time allows little time for discussion or sharing of concerns and knowledge.

A number of problems have been identified with standard antenatal care in Australia. These include: long waiting times; short ineffectual visits with minimal opportunity for continuity of care or carer (Hunt & Lumley, 2002; NSW Department of Health, 2000); and social isolation from other pregnant women. As highlighted earlier, antenatal care is based more in traditional ritual practices than that of practice based on strong and robust evidence (NSW Department of Health, 2000). It has been well documented that women in Western countries have high expectations from antenatal care: they expect education, information, reassurance and support, and a known caregiver (Enkin et al., 2000). Often these expectations are not fulfilled by the current health-care system. For example, midwifery continuity of care models that offer improved support, reassurance and a

[3] Australian citizens are able to access health-care in two ways. This is either a publicly-funded government approach or through a privately-funded approach that is maintained through a private health insurance scheme. Many doctors and government funded hospitals can provide both public-funded health-care and private-funded health-care. Private hospitals are also available but they only provide health-care to privately insured individuals.

known caregiver are commonly not offered by Australian public hospital antenatal clinics (Homer, 2006; NSW Department of Health, 2007).

Antenatal care innovation

The Midwives' Study was developed to undertake the first model of CenteringPregnancy group antenatal care in Australia, an innovation that focuses on improving antenatal care through improved communication and the development of greater social networking. The majority of the current recommendations for antenatal care are that it includes screening for complications during pregnancy, effective communication and skilful clinical assessment to elicit worthwhile diagnoses (Enkin et al., 2000; NICE, 2008).

The overall aims of the Midwives' Study were to inform the future development of CenteringPregnancy in Australia and to describe the experiences of the midwives involved in the first Australian CenteringPregnancy Pilot Study. The intention of the study was two-fold; firstly, to introduce CenteringPregnancy as a new model of antenatal care; and secondly, to study what effect the implementation of this new model of care had on the midwives.

Antenatal care constitutes a significant part of maternity care. The benefits of individualised and evidenced-based care during this time can be far-reaching for the woman and her family (Hatem, Sandall, Devane, Soltani, & Gates, 2008; Oakley, Hickey, & Rajan, 1996). A great deal of antenatal care, however, seems to fall short due to a lack of understanding about the importance of developing a relationship, based on respect, trust and reciprocity between the mother and the caregiver (Brown & Lumley, 1997; Hunter, Berg, Lundgren, Ólafsdóttir, & Kirkham, 2008).

A review of the antenatal care literature shows that the majority of the research undertaken relates to the frequency and scheduling of visits. Issues related to content of care and the relationships between mother and the care provider (midwife or doctor) have not been explored as thoroughly or to the same level of rigor. Much of the systematic and rigorous research has focussed on the antenatal visit in relation to clinical outcomes and rates of disease diagnosis (Carroli, Villar et al., 2001; Villar, Carroli, Khan-Neelofur, Piaggio, & Gulmezoglu, 2001). Smaller or less robust studies

have engaged in exploring women's expectations of antenatal care, inclusion of social support and the midwife's perceptions of this care (Handler, Raube, Kelley, & Giachello, 1996; Hildingsson, Waldenstrom, & Radestad, 2002).

The focus of much of the research in antenatal care has been on the correlation between the frequency of antenatal visits and clinical outcomes for the woman and the newborn (Carroli, Villar et al., 2001; Jagoe, Magann, Chauhan, & Morrison, 2004; McDuffie, Beck, Bischoff, Cross, & Orleans, 1996; Sikorski, Wilson, Clement, Das, & Smeeton, 1996). Despite this research, there continues to be a lack of evidence on what constitutes effective antenatal care (Carroli, Rooney, & Villar, 2001; Enkin et al., 2000). For example, high level research, including systematic reviews and randomised controlled trials (RCT's), have been used to investigate the capacity of antenatal care to improve rates of serious maternal morbidity and mortality in developing countries (Villar, Carroli et al., 2001). These have shown that the quality or content of the antenatal visit is often more important than the quantity or number of visits (Villar, Carroli et al., 2001). In developed countries research has demonstrated similar results in regards to mortality and morbidity rates (Clement, Sikorski, Wilson, Das, & Smeeton, 1996; Hildingsson et al., 2002; Villar, Carroli et al., 2001). However, comments from women and health-care providers involved in these studies in developed countries continued to associate safe and effective antenatal care with more frequent visits rather than antenatal visits designed to meet specific health-care priorities or health promotion.

The Cochrane Library's systematic review on *Patterns of Routine Antenatal Care for low-risk pregnancy* included 60,000 women from seven countries and ten RCTs. This established that a reduction in visits with, or without, increased emphasis on the content of care could be implemented without an increase in any of the negative maternal and perinatal outcomes measured (Villar, Carroli et al., 2001). This systematic review also noted that women and health-care providers in specific studies from developed countries continued to perceive safe and effective antenatal care as being equated with frequent antenatal visits (Carroli, Villar et al., 2001; Clement et al., 1996; Hildingsson et al., 2002). Women reported less satisfaction with a reduced number of visits, felt greater worry and that their expectations with care were not met (Villar, Carroli et al., 2001). Further analysis also demonstrated that studies from the developing countries

which introduced an intervention with a reduced schedule enhanced with 'goal orientated' antenatal visits were acceptable to the women as they valued the time and information provided (Langer et al., 2002).

The mixed results of this systematic review in relation to maternal satisfaction are difficult to assess, but it does appear that antenatal care is enhanced when more time is spent on information provision. A summary of the results from this Review on *Patterns of Routine Antenatal Care for low-risk pregnancy* is included in a table in Appendix 1.

Women's expectations and experiences of antenatal care

The next part of this chapter explores more specific aspects of antenatal care that are of relevance to the Midwives' Study. These include the expectations and experiences of women and health-care providers. Understanding these topics is essential to the Midwives' Study, as the study aimed to explore the changes that occurred when CenteringPregnancy was implemented.

A focus of the antenatal care visit has become the screening and assessment for pathology (Rooney, 1992). The majority of time in the antenatal visit has also been allocated to questions that seek out risks that may impact on the mother or her unborn child and pathology and ultrasound tests. As a result, little time is often allocated for the development of a supportive or nurturing relationship (Kirkham, 2000; Walsh & Newburn, 2002). This is significant, given the identified importance of women and midwives developing a relationship during the antenatal period based on reciprocity, trust, support, caring and the development of a sense of meaningfulness (Hunter et al., 2008; Lundgren & Berg, 2007; Saultz & Albedaiwi, 2004).

A large national study of women's expectations and experiences of antenatal care in Sweden (n=3061) using structured, single language questionnaires in the early antenatal period and the postnatal period demonstrated that women expect reassurance, education and information from their antenatal care (Hildingsson et al., 2002). High levels of dissatisfaction with antenatal care (41%) were also revealed in this cohort (Hildingsson & Radestad, 2005). Dissatisfaction was attributed to inappropriate amount of time

allocated to health check-ups, lack of information provision, or an inability of midwives to give support, and pay attention to partners' needs.

Although limitations are noted in the Swedish study, these are balanced against the high response rate (91% of women who were recruited and did not miscarry completed the questionnaires). The limitations included a 25% exclusion rate at the time of participant selection and the use of structured questionnaires. Women who did not speak or read Swedish were excluded, limiting the generalisability of the findings to Swedish nationals (Burns & Grove, 2005). The use of structured questionnaires, although effective with large pools of data, does have an effect on or limit the respondent's interpretations (Burns & Grove, 2005; Hansen, 2006).

The Swedish study also demonstrated that women have higher expectations of their care when they have a perceived greater level of anxiety and subsequent need for reassurance (Hildingsson et al., 2002). In this study, these expectations were linked with their parity (number of babies), social status, and obstetric history. For example, multiparous women (women who had a baby before) who had a previous negative birth experience indicated that the content of antenatal care was important compared with primiparous women (first time mothers). The content of care was expressed by the women as a need for childbirth preparation ($p< 0.001$), information about birth ($p< 0.001$) and time spent for emotional wellbeing ($p<0.01$). Whereas the primiparous women who indicated more visits were important were young ($p< 0.03$), or more likely to be single ($p<0.01$), and more likely to have experienced fertility problems ($p<0.01$), or previous pregnancy loss issues ($p<0.01$).

Other issues rated as 'important' to 'very important' in the Swedish study were having continuity of caregiver (97%) (Hildingsson et al., 2002) and the need for adequate and appropriate information (Hildingsson & Radestad, 2005). Even though specific study limitations are noted with this large national study, the evidence does support the premise that antenatal care needs to focus on more than just the physical aspects of pregnancy. In effect, antenatal care needs to include care that focuses on the psychosocial, emotional and information needs of individual women.

The next section of this chapter reports on the importance of including support and reassurance in antenatal care provision prior to engaging in a discussion about having appropriate information and education, and having a known caregiver during the antenatal period.

Support and reassurance in antenatal care

Women describe social support, information and reassurance as important components of their antenatal care (Biro, Waldenstrom, Brown, & Pannifex, 2003; Brown & Lumley, 1993; Handler et al., 1996; Langer et al., 2002). The next section of this chapter provides evidence about the value of social support to women during their antenatal care. Group antenatal care, such as provided in CenteringPregnancy models, is reported to enhance the social support content of antenatal care (Klima, 2003; Rising, 1998). As a result, this simple action of having care in a group appears to decrease women's need or reliance on additional social support as noted in the following discussion.

Social support in antenatal care has been studied extensively and is the topic of a systematic review. The Cochrane Library's systematic review, *Support during pregnancy for women at increased risk of low birthweight babies* (n= 12,658, from 18 RCTs), confirmed that women who received *additional* social support had a reduced likelihood of a caesarean birth; a greater probability to choose a pregnancy termination; reported less antenatal anxiety and, less worry about their babies; and were less dissatisfied with antenatal care (Hodnett & Fredericks, 2003). The *additional* support in this review was defined as forms of social support (counselling, reassurance or sympathetic listening, advice), either in visits at home at the clinic and may include practical support (transportation or child care).

Additional support did not, however, reduce the premature birth rate (11 trials, n = 10,237, RR 0.96, 95%CI 0.86 to 1.07) or the rate of low birth weight (13 trials, n = 10,235, RR = 0.98, 95% CI 0.89 to 1.08). A table included as Appendix 2 provides a detailed review of this study. In contrast, the evidence from two studies that explored the effects of CenteringPregnancy group antenatal care did demonstrate improvements

in low birth weight and premature birth rates (Ickovics et al., 2007; Ickovics et al., 2003). This will be explored in more depth later in this chapter.

In one longitudinal study included in the Cochrane Review, *Support during pregnancy for women at increased risk of low birthweight babies*, improved family health outcomes with the social support group were demonstrated. These improved family health outcomes were shown at six weeks, one year and then at seven years (Oakley et al., 1996). Although findings such as these are significant, additional long-term follow-up studies need to be undertaken to explore this link in the development of long-term improved health outcomes that are associated with social support interventions. Studies undertaken on CenteringPregnancy care imply that health outcomes for the neonate and the woman are improved by a model of health-care that provides care in a group setting (Ickovics et al., 2007; Ickovics et al., 2003; Klima, 2003). Improved social networks gained from attending CenteringPregnancy care have also been purported by CenteringPregnancy literature. Many of the CenteringPregnancy studies have not examined long term outcomes. However, a key finding from a CenteringPregnancy study undertaken in Sweden (n=130) that compared group antenatal care (n=45) to standard antenatal care (n=85) was that women who attended group care continued to meet their peers more regularly at six months after the birth (Wedin, Molin, Crang, & Elizabeth, 2009).

Although it is difficult to ascertain the long term effects of antenatal care, studies continue to affirm that women have expectations that antenatal care will provide social support, reassurance, respect, and be individualised. For example, a focus group study of 50 ethnically diverse women from the USA revealed these themes (Handler et al., 1996). This study was, once again, limited because the participants were from a specific low socio-economic group, but other studies have also exhibited comparable psychological themes about what women value with their antenatal care. These include a chance to talk; the understanding of individual needs; the provision of information; and education (Mathole, Lindmark, Majoko, & Ahlberg, 2004; Rajan & Oakley, 1990). All of these expectations of antenatal care are aspects of CenteringPregnancy care that are valued by women who have received their care in this way and are fundamental

components of the CenteringPregnancy model (Kennedy et al., 2009; Rising et al., 2004; Teate et al., 2009).

Information and Education

Women report that antenatal care is the best time and place to gain information and education about what to expect with their pregnancy with respect to body changes, procedures, tests and labour and birth. New schedules of antenatal care have been evaluated in trials in the UK, USA and Africa examining women's views, expectations and levels of satisfaction (Clement et al., 1996; Mathole et al., 2004; Rajan & Oakley, 1990). Ideal antenatal care also includes education about what to expect during labour and birth (Handler et al., 1996), breastfeeding and expectations of the postnatal period (Hildingsson et al., 2002). In an analysis of women's experience (n=21) with a 'high risk' antenatal care service (Jackson et al., 2006), it was noted that women in any antenatal care situation want effective and appropriate communication to allay their anxieties and create a sense of knowledge about their own particular health.

Antenatal education

CenteringPregnancy includes a component of antenatal education. Formalised antenatal education programmes have become an expected part of the antenatal experience in many developed countries (Svensson, Barclay, & Cooke, 2007). Historically, these programmes were developed for a variety of reasons. These included: helping individual women to manage pain in labour and building their confidence in their ability to give birth and to parent (Svensson, Barclay, & Cooke, 2006); as well as more general aims of developing social support networks; improving health behaviours; and improving morbidity and mortality (Gagnon & Sandall, 2007; Svensson et al., 2007). In contrast, in most developing countries, antenatal preparation for birth and motherhood is less formalised and relies on women passing their knowledge of childbirth and parenting through family and local community connections (Gagnon & Sandall, 2007).

The development of structured antenatal education has come about as traditional methods of information sharing have declined. Women, historically, sought information about childbirth and parenting from their female family members and peers. Throughout

the last century, many societal and technological changes have occurred in developed countries that have been attributed to the breakdown of traditional community and family structures (Wagner, 1994). In today's world, people tend to look to a professional for advice or engage in an organised education programme instead of relying on their peers or family members for information and knowledge. These factors have lead to an increased reliance on professional health-based education such as antenatal education (Oakley, 1984; Strong, 2002). Much of the research carried out on antenatal education has explored the effect of these education programmes on birth outcomes and patterns of attendance (Svensson et al., 2007), but minimal significance has been placed on the social benefits of antenatal education or on the benefit of peer learning.

Data from nine RCT's (n=2284) that tested structured antenatal educational programmes were analysed in the Cochrane Library's systematic review of *Individual or group antenatal education for childbirth or parenthood* (Gagnon & Sandall, 2007). The results of this review were limited by the lack of available high-quality research and evidence to evaluate. A total of 37 trials were excluded. The broad inclusion criteria for the systematic review were that the studies had to examine the effects of antenatal educational programmes, which included information on pregnancy, birth and parenthood. Interventions, populations and outcomes measured were found to be different in each of the studies included in the review. For example, the structure of the educational programmes varied greatly. These were from an intensive one-day class, to several classes over several weeks to an opportunistic 'waiting room' class that targeted women while they waited for their antenatal visit.

Of the nine studies, eight (n=1009) tested a variety of antenatal education approaches that included additional strategies with a specific intent, such as the improvement of the father's knowledge or maternal role preparation. The data for these eight studies included a variety of outcomes from labour length, knowledge acquisition, and behaviour changes to attachment behaviours between mother and baby. The data did not include outcomes relating to anxiety, breastfeeding or social support. The ninth study (n=1275) was more robust in its design and examined the effect of an educational and social support intervention on vaginal birth after caesarean section (VBAC) (Fraser,

Maunsell, Hodnett, & Moutquin, 1997). The intervention for this large study was a two-session education programme that included information about pain relief, contraception and a personal experience of a VBAC. The control group was provided with a pamphlet that highlighted the benefits of a VBAC rather than a repeat elective caesarean section. Similar rates of VBAC were found in this large study. The systematic review found no consistency of results from the studies included. The authors concluded that the effects of general antenatal educations for childbirth or parenthood remain relatively unknown.

The development of antenatal education programmes have often not been based on the expressed needs of attendees, but rather on the information that the educators believed they needed to impart (Gagnon & Sandall, 2007). The messages promoted may be those of an organisation detailing the routines attached to the childbirth process of the hospital (Wagner, 1994) or that of an individual promoting 'Natural childbirth' (Dick-Read, 1933) or 'Active birth' (Balaskas, 1992). In contrast, CenteringPregnancy includes education characteristics based on the needs of the women in each group and not those of the facilitator (Walker & Worrell, 2008). Results from an Australian RCT demonstrated that antenatal education programmes are of more benefit when they focus on the needs of the participants and not the provider (Svensson et al., 2007).

Svensson et al's RCT compared an enhanced antenatal education programme to the standard antenatal education programme (n=170) (2007). The enhanced programme, known as 'Having a baby', was developed from a needs assessment of expectant and new parents (Svensson et al., 2006). It offered a proactive approach to learning and an emphasis on problem-solving. This proactive approach included 'experimental learning', with educational and parenting activities, new parents who returned to share their parenting experience with the class and a bath demonstration of a newborn baby. Self-reported surveys were collected from the participants before the implementation of the education programmes and eight weeks after birth. Women who attended the enhanced antenatal education group had a significantly higher level of self efficacy at eight weeks postnatal compared with the control group ($p< 0.001$) and their perceived parenting knowledge increased during this postnatal period whereas the control group's knowledge decreased ($p< 0.001$). No other statistical differences were noted between

the two groups in the other outcomes that were measured, such as the parent's perceived worry about their baby and their birth outcomes.

Known health-care provider (continuity of care)

Having a caring and supportive relationship with a known caregiver during the antenatal period has been demonstrated in many ways in the literature as a valuable way to improve care during the antenatal period. For example in medical literature the value of the development of a relationship between the doctor and patient has revealed. This relationship was described as 'interpersonal continuity of care' (Saultz & Albedaiwi, 2004). Subsequent research into the development of a relationship between the doctor and patient over time also demonstrated that a continuity of care relationship enhances the recipient's experience and has a preventative effect that can be attributed to reduced hospitalisation (Saultz & Lochner, 2005).

Many studies pertaining to maternity care have investigated the particular benefits of continuity of midwifery care in the antenatal, intrapartum and postnatal periods (Giles, Collins, Ong, & MacDonald, 1992; Page, Beake, Vail, McCourt, & Hewison, 2001; Turnbull et al., 1996; Walker & Koniak-Griffin, 1997). The Cochrane Library's systematic review of *Midwife-led versus other models of care for childbearing women* included results from 11 trials (n=12,276) (Hatem et al., 2008). Women who had midwife-led models of care were shown to be less likely to experience fetal loss before 24 weeks gestation: antenatal hospitalisation and fewer intrapartum interventions, such as analgesia, episiotomy, and instrumental birth. They were more likely to feel in control in labour; know their midwife in labour; have a spontaneous vaginal birth; and initiate breastfeeding. Overall, their babies had a shorter length of stay in hospital. A table showing the results of the outcomes measured in this systematic review is included as Appendix 3.

Although maternal satisfaction was not included in the meta-analysis due to an inconsistency with the measurement of satisfaction, a narrative synthesis of the data was included in the systematic review (Hatem et al., 2008). It showed that women who had received continuity of midwifery care felt satisfied with this care. In particular these women were satisfied with information; advice; explanation; carer's behaviour; waiting

time; venue; and preparation for labour and birth. In the majority of the included studies, satisfaction with various aspects of care appeared to be higher in the midwife-led compared with other models of care. A table that shows the results of women's satisfaction with their antenatal experience of midwife-led care from this Cochrane review is included as Appendix 4.

The ability to have a consistent and 'knowing' relationship with the antenatal care health-care provider, such as a midwife, has also been noted as an important factor to improve clinical outcomes and increase maternal satisfaction (Hodnett, 2006; Hodnett & Fredericks, 2003; Homer, 2006). An Australian RCT (n=1089) included in the Cochrane Review demonstrated the importance of this 'knowing' relationship with the health-care provider in the antenatal period. The experiences of women who received a new model of continuity of midwifery care known as the St George Outreach Midwifery Programme (STOMP) were compared with those who received standard hospital care (Homer, Davis, Cooke, & Barclay, 2002). The STOMP model of care consisted of a small team of six midwives who cared for a group of women during their pregnancy, birth and early postnatal period. STOMP was associated with more positive experiences of childbirth compared with standard care. STOMP women were significantly more likely to have spoken with their caregivers about childbirth preferences ($p = 0.0001$), and more likely to report that they knew enough about labour and birth, particularly induction of labour ($p = 0.001$), pain relief ($p = 0.001$) and caesarean section ($p = 0.009$).

A strong evidence base describing the importance of relationship-based care for the mother and the midwife is developing (Enkin et al., 2000; Kirkham, 2000; Lundgren & Berg, 2007). Currently, the development of a relationship between midwife/doctor and the pregnant woman during pregnancy is not formally acknowledged in policy development or at the organisational level of publicly-funded antenatal care (Hunter et al., 2008). The most recognised guidelines for antenatal care provision, that are relied on in Australia, focus on the screening, assessment and education aspects of the antenatal visit rather than the social needs of the woman (NICE, 2008; The Three Centres Project, 2001).

In Australia, a small number of continuity of midwifery care programmes known as caseload or midwifery group practice are beginning to be implemented (Fereday, Collins, Turnbull, Pincombe, & Oster, 2009). These are often in metropolitan hospitals and are only caring for a small proportion of the women booked at each facility. Three exceptions are the Midwifery Group Practices (MGP) in Adelaide at the Women's and Children's Hospital (Turnbull et al., 2009); the development of caseload models at the Royal Hospital for Women in Sydney (Tracy et al., 2008) and continuity of care in a tertiary hospital in Melbourne (McLachlan et al., 2008). At these hospitals, large scale implementation of MGP is happening. For example, between 2004 and 2005 more than 600 women were cared for by MGP in the Adelaide hospital (Turnbull et al., 2009). At the Royal Hospital for Women, a large RCT is being undertaken to study the effects of a continuity of midwifery care model versus the standard model of maternity care (Tracy et al., 2008). Another Australian RCT study in Melbourne, Victoria is proposing to randomise over 2000 women to compare clinical, psycho-social and economic outcomes of women who receive continuity of midwifery care during pregnancy, birth and the postnatal period and compare them to childbearing women who receive standard care (McLachlan et al., 2008).

Two recent Australian studies have explored the clinical effectiveness and women's satisfaction of MGP (Fereday et al., 2009; Turnbull et al., 2009). These studies have demonstrated the importance of relationship-based care during pregnancy. A study by Fereday focussing on satisfaction (n=120) used a questionnaire that included open ended and semi-structured questions that were analysed with qualitative content analysis (Fereday et al., 2009). Three common themes that came from the analysis were continuity of care, accessibility to care and the attributes of the midwife. These three overarching themes came from both positive and negative comments provided by the women. Overall, a greater proportion of positive comments were provided compared with negative comments (227 vs 77) to the open-ended questions. An important finding from this study was that women felt the continuity of care they had with one or two midwives allowed them the opportunity to build a relationship with the midwives that was based on trust and provided them with a sense of comfort and safety.

Although this study was only undertaken at one site and cannot be generalised, the high response rate (70%) (Sandall, Page, Homer, & Leap, 2008) and similar results to other studies that measure satisfaction of midwifery care (Biro et al., 2003; Clement et al., 1996; Turnbull et al., 1996; Waldenstrom, 1998) suggest a positive relationship between satisfaction and with models of midwifery that provide continuity of care. Positive results were also found with the clinical effectiveness study of the same MGP model (Turnbull et al., 2009). In this comparative cohort study, the clinical outcomes of women who received continuity of midwifery care (n = 618) were compared with women of similar obstetric risk who received standard antenatal care (n = 3548) over a 14 month period. Unlike other models of continuity of midwifery care, MGP at the Adelaide hospital was an option of care for all women regardless of their obstetrical risk factors. Data collection took place following medical coding of the hospital records and identified the risk status for each woman in the study.

The results from this comparative cohort study demonstrated that MGP is a clinically effective model of care in a tertiary-care hospital setting with statistical differences noted during the intrapartum period for women of all obstetric risk status (Turnbull et al., 2009). Women who received MGP care compared to the women who had standard care were more likely to have had a spontaneous onset of labour, an unassisted vaginal birth, and less likely to have suffered perineal trauma or needed epidural anaesthesia. Statistically significant differences were also noted with low and moderate risk groups accessing the antenatal assessment unit during their pregnancy for emergency medical review when they had received MGP care. (MGP vs non-MGP: low risk- 26.6% vs 42.4% and Moderate risk- 43.8% vs 49.2% $p< 0.001$). A table shows the results of the intrapartum results from the comparative cohort study (Turnbull et al., 2009) in Appendix 5.

Overall, the study in Adelaide concluded that women who receive MGP care require fewer interventions and have better outcomes (Turnbull et al., 2009). Even when the study limitations are considered the results reinforce a positive trend in outcomes with the continuity of midwifery carer model. The limitations of this study were a disproportion in numbers between the groups, in particular with the high risk women, and a lack of randomisation.

The development of a known relationship between midwife and woman is now recognised as a significant factor in the improvement of women's experience of care during childbirth and is also becoming recognised by policy makers as having a positive effect of the clinical outcomes for women and their babies.

Recent government reviews of health-care in Australia have also undertaken reviews of maternity care. The reports from these reviews have highlighted the need for women to have access to a known care provider in pregnancy such as continuity of midwifery care programmes (Commonwealth of Australia, 2009; Garling, 2008). A nation-wide federal government led review of maternity service was undertaken in 2008 (Commonwealth of Australia, 2009). This review requested input from consumers and health-care providers. Written submissions and round table discussions resulted in many recommendations that were brought together and released as the Report of the Maternity Service Review in 2009. Another recent report, the Garling Report, was a NSW state-wide review of acute health-care services. The Garling Report also made specific recommendations for the improvement of maternity care.

The Report of the Maternity Service Review and the Garling Report promote the development of changes to practice that recognise the role of the midwife in models of maternity care. These reports also promote changes in maternity care that enhance continuity of care, improve information and other supports available for women during pregnancy, and improve choice and access to range of collaborative models of maternity care. The CenteringPregnancy model is recognised as model of care that promotes continuity of care for the antenatal period, enhances information sharing and access to social support (Massey et al., 2006; Novick, 2004; Rising, 1998).

The next section of this chapter explores the midwives' experience of antenatal care and a brief review of change management literature before reviewing the literature on group health-care that includes group antenatal care, and more specifically, CenteringPregnancy.

Midwives expectations and experiences of providing antenatal care

Even with the growing pool of evidence and literature regarding midwifery continuity of care and antenatal care, little is known about the midwife and her[4] experience of providing antenatal care, whether it is in the traditional maternity care system or in innovative models. Much of the maternity care research, as previously discussed, has involved exploring the provision of antenatal care and the development of continuity of midwifery care models (Hatem et al., 2008; Villar, Carroli et al., 2001). This body of research has explored the benefits of these for the woman both in clinical and psychological outcomes, but rarely for the midwife or other health-care providers (Hunter et al., 2008; Lundgren & Berg, 2007).

A small collection of studies have evaluated the health-care provider's perspectives or expectations of antenatal care provision (Hildingsson & Haggstrom, 1999; Sanders, Somerset, Jewell, & Sharp, 1999; Sikorski, Clement, Wilson, Das, & Smeeton, 1995; Walker & Koniak-Griffin, 1997). Overall these studies have focussed on the model of care, the clinical outcomes, and experiences of the recipients and not that of the providers. For example, a UK based study obtained the health-care provider's views of reduced antenatal schedule using questionnaires (Sikorski et al., 1995). This study showed that although 82% of the health-care providers were in favour of the reduced schedule, 53% believed that the traditional schedule met the non-clinical needs of the first time mothers better than the new reduced schedule. Focus groups of a small number of midwives (n=14) involved with the Bristol Antenatal Care Study also found that the midwives thought that the reduced or more flexible schedules implemented with these British studies did not meet the women's psychosocial or their physical needs (Sanders et al., 1999). This study did not explore the psychological needs of the midwives, but only gained their view on the needs of the women.

The objective of the majority of the research that surrounds midwifery care does not aim to explore the role of the midwife or her experience. Little importance has been placed on the caregiver's views within a health environment and as a result little is known about their experiences or expectations (Chalmers et al., 1989). The same applies to the

[4] As 99% of midwives are women, the pejorative 'she' will be used throughout this thesis. This is not to deny that there are male midwives, it is merely for simplicity.

paucity of studies on the midwife's experiences of antenatal care, with little empirical information collected about this aspect of midwifery care (Hunter, 2001). The evidence, however, has focussed on the effectiveness midwifery care as a whole or at new innovations such as continuity of midwifery care models (Hatem et al., 2008).

Issues that relate to a midwife's job satisfaction

Studies exploring continuity of midwifery care models have demonstrated that midwives' job satisfaction was enhanced when they were able to develop relationships with the women and families they cared for. Higher levels of job satisfaction were also demonstrated when the midwives worked in a model of care that enabled them to gain both occupational autonomy and provider development. The midwives also stated that being able to gain social support from their peers and family was an important factor to their level of job satisfaction (Sandall, 1997; Stevens & McCourt, 2002b). Both these studies explored midwives experiences of caseload practice as part of larger studies undertaken in the UK. Qualitative analysis was undertaken on data collected from interviews (N=48) in the earlier study (Sandall, 1997) and interviews, questionnaires and focus groups in the later study (Stevens & McCourt, 2002b).

Two other UK studies that explored why midwives stay or leave their work also highlighted the significance of these themes in regards to job satisfaction and desire to continue working in midwifery (Ball, Curtis, & Kirkham, 2002; Kirkham, Morgan, & Davies, 2006). These studies surveyed large numbers of midwives by post about their work and explored retention issues for midwives who worked within the UK National Health System. The questionnaires were posted out to randomly selected midwives who had notified their professional council, the Nursing and Midwifery Council, of their intent to practise. The first study was completed in 2001 (n=2075) and surveyed midwives who had left midwifery. The recipients of these questionnaires were midwives who had stated their intention to practise in 1999, but had not reinstated that intention to practise in 2000. The results established that the main reason for these midwives leaving midwifery were high levels of frustration and dissatisfaction with midwifery (29.9%). The main contributors to their dissatisfaction with midwifery were the stressors associated with change within the health-care system and frustration with not being able to practise the type of midwifery to which they aspired. The midwives

commented that inspirational work included the ability to develop relationship with women and their peers, work in a supportive environment that enhanced their autonomy, having access to professional development and being able to balance work and family life.

The later study (Kirkham et al., 2006), that was completed in 2005 (n=910) explored why midwives stay in midwifery. This found that the motivations for midwives to leave or stay were similar and that midwives needed to have a sense of autonomy, flexibility and relationship with their work, their colleagues and the women they cared for to maintain satisfaction with their work. Midwives also needed to have adequate resources for staffing and professional development and the capacity to develop a personal niche at work. If these factors were not present then dissatisfaction with their work became apparent. The data from the questionnaires were enriched by interviews that were undertaken with a smaller number of questionnaire recipients. Study limitations in both studies were due to limited selection, response rates and over representation of specific age groups of midwives decreased the ability of these results to be generalised in the UK, let alone worldwide.

The issues raised by these two studies and the two previously discussed studies of continuity of midwifery care (Sandall, 1997; Stevens & McCourt, 2002b) acknowledge the important concepts of relationship, support and occupational autonomy to midwives. These concepts are vital to the CenteringPregnancy model of care, but have not been closely evaluated (Massey et al., 2006; Rising et al., 2004). The Midwives' Study aimed to explore the midwife's experience of this new model of care by describing their experiences of providing care in the first Australian CenteringPregnancy Pilot Study

The importance of relationship-based care and social support to the midwife

Other authors have explored the central themes of relationship and social support between midwives and women (Kirkham, 2000; Oakley, Rajan, & Grant, 1990; Page & McCandish, 2006). They describe that midwifery is fundamentally a profession based on the development of caring relationships between the mother and the midwife and this process enables women to gain empowerment and self-determination. It is acknowledged that midwives need to feel supported by their peers and their workplace

and to have a sense of autonomy in their work to enable such relationships (Sandall, 1997; Stevens & McCourt, 2002a).

Throughout the past two decades, issues of stress and burnout have been documented particularly in relation to the implementation of continuity of midwifery care models (Ball et al., 2002; Kirkham, 2000; Sandall, 1997). Although, it is acknowledged that other pressures, such as organisational change and increasing workloads, have also heightened the level of stress and burnout in midwifery and other health-care professions (O'Brien-Pallas, Duffield, & Hayes, 2006; Vakola & Nikolaou, 2005). This growing body of knowledge about stress and burnout within midwifery has highlighted that the emotional demands of midwifery work requires a great deal of emotional effort when working with women and families on a daily basis (Hunter, 2001; Stevens & McCourt, 2002a). Midwives need nurturing and support to maintain themselves both professionally and personally and to protect themselves from the effects of change, stress and prevent burnout (Kirkham et al., 2006; Sandall, 1997).

The midwife and mother relationship – a partnership model

The midwife and mother relationship has been described as a potential partnership (Guilliland & Pairman, 1994). This notion of partnership is a relationship defined by a concept of sharing that involves trust, shared control and responsibility, and a shared meaning and mutual understanding. The equality of the relationship (Pairman, 1999) and the concept of working alongside women emphasise the capacity of this partnership theory. The capacity of the midwife to share and embrace the woman's uncertainty associated with childbirth is recognised as an important factor in enabling the woman to gain her own empowerment and emancipation (Leap, 2000).

The development of trust, respect, support and control are also seen as central concepts of the midwife – mother relationship that enhance empowerment and emancipation for both mother and midwife (Kirkham, 2000). It is acknowledged that pregnancy and childbirth are life changing events that often cause women to question themselves and their lives and seek to make change (Leap, 2000; Pairman & McAra-Couper, 2006). Working alongside pregnant women, enabling them to grapple with these life changing events requires a midwife to facilitate empowerment, which in a way can be

empowering for the midwife (Leap, 2000). Key facilitation skills needed by the midwife to enable this process of empowerment for the woman are to believe in the woman, inspire confidence and have knowledge of when to intervene and when to withdraw (Leap, 2000). The ability to work closely with women, develop relationships with them and engage in caring and nurturing work are some of the expectations midwives have of their work (Kirkham et al., 2006). Midwives also value these experiences when working in an environment that nurtures the women, the midwife and their unique relationship (Reed, 2002b).

The next section includes a short review on the concept of change to underpin the knowledge required to understand the experiences the midwives would go through as result of being involved in the Midwives' Study.

Understanding the concept of change

The need for change in the current health-care system has been widely documented and integrated into future government health-care policy directives (Commonwealth of Australia, 2009; Garling, 2008). The effect that the implementation of change or an innovation can have on the health-care system and the health-care professional has also been recognised (Greenhalgh, Robert, MacFarlane, & Kyriakidou, 2004; Lindberg, Christensson, & Ohrling, 2005; Rogers, 2003). A systematic literature review that explored research on diffusion or adoption of innovation within health-care service delivery and organisations suggests many themes come into play when implementing change (Greenhalgh et al., 2004). It is important to consider the social influence and networks that operate in any organisation; the complex and contingent nature of the adoption process; the characteristics of the organisation that encourages or inhibits innovation; and the complicated process of assimilation and routinisation.

The Midwives' Study aimed to describe the experiences of the midwives involved with the implementation of first CenteringPregnancy groups in Australia. As a result of their involvement in the study the midwives were required to change the way that they practised antenatal care and to acquire skills in group facilitation. It was expected that this change in practise would affect them (Titchen & Binnie, 1993; Vakola & Nikolaou,

2005). Implementing fundamental change in maternity care, such as continuity of midwifery care models or advancing clinical roles or skills, has required considered implementation strategies and often failed or been hampered by a variety of organisational and professional issues (Choucri, 2005; Curtis, Ball, & Kirkham, 2006a; Curtis, Ball, & Kirkham, 2006b).

The aim of this study was to add to the evidence that surrounds maternity care provision, and in particular antenatal care, by gaining a greater understanding of the midwives experiences of this care and the effect implementation of an innovative model will have on them. Currently, little is known about the midwife's experience of the implementation of change within antenatal care. Midwives' views of contemporary care have been explored in a limited way (Hildingsson & Haggstrom, 1999). It is recognised that ongoing pressures of organisational change and increased work demands on midwifery work leads to stress and burnout (Sandall, 1997). Research that explored the midwives' views and experiences of their support needs in clinical practice established that midwives need support, education and preparation in their workplace particularly during times of change (Deery, 2005).

The next section reviews current group health-care literature to explain the differences between traditional antenatal care and CenteringPregnancy group antenatal care.

Group health-care

The literature review undertaken on group models of health-care revealed a small amount of literature. Group medical visits have been developed in recent times to meet the demands of an increasing number of patients who have chronic health problems, such as diabetes or age-related illnesses (Scott et al., 2004). The increasing demands of chronic illness on work capacity has also impacted on the relationships between the health-care provider and recipient (Barud, Marcy, Armor, Chonlahan, & Beach, 2006) and has lead to the development of innovative models of care.

A RCT that compared a group model of chronic disease management to traditional 'physician-patient dyad'(n = 321) showed improved clinical outcomes; with fewer

emergency visits ($p < 0.01$) , visits to specialist ($p= 0.028$), repeat hospital admission ($p=0.05$); and greater vaccination uptake ($p< 0.001$) and satisfaction for the patients ($p=0.01$) (Beck et al., 1997). Another RCT from the same setting that used a less rigorous randomisation also had similar results with a group of chronically ill older adults over a two-year period (n=295). Patients who attended group visits were less likely to have any emergency visits than the control group (34% versus 52%, $p=0.003$). Increased patient self-efficacy to manage their health condition, increased quality of life and decreased functional decline (Scott et al., 2004) have also been noted in a later RCT involving older adults (n=294). Reduced costs balanced with increased provider productivity and satisfaction have also been noted (Coleman et al., 2001; Scott et al., 2004).

Group antenatal care

Prior to the establishment of the CenteringPregnancy model of group antenatal care, the concept of group antenatal care was first described in the literature by Leap (2000). Group antenatal care is described as a model of antenatal care that includes support and the sharing of information and is based on a woman-centred philosophy. Women meet in groups that are held in a community setting or hospital-based antenatal clinic. A midwife facilitates the group. She ensures the group members feel safe whether they wish to talk or remain silent and that no one person dominates. The midwife also ensures that newcomers are looked after and understand how the group operates. It is important that the midwife has skills in managing the group dynamics. This includes having good listening skills, so that she can interrupt group discussions to provide appropriate information, to explain clinical situations that arise and mostly to keep quiet and use non-verbal cues to reassure the group members (Massey et al., 2006; Pollack & Fusoni, 2005).

The Albany Midwifery Practice in the UK provides a model of group antenatal care that includes antenatal education and support (Leap, 2000; Reed, 2002a). The women in this group model set the agenda for the group session compared to many antenatal education sessions where the midwife or hospital set the agenda. It has been suggested that the women gain benefits from setting their learning needs and directing the topics covered by the group (Reed, 2002a, 2002b). A recent Australian RCT that was previously

discussed also recognised the importance of parents setting their learning agendas (Svensson et al., 2007) compared to the midwife or institution. Women and their partners reported higher levels of self efficacy and their perceived parenting knowledge increased in the postnatal period compared to the people in the control education group.

The CenteringPregnancy model of group antenatal care includes both education and support as described within the Albany Midwifery Practice model (Leap, 2000; Reed, 2002a) with the additional component of clinical assessment (Rising, 1998). The next section provides a description of the CenteringPregnancy model of group antenatal care.

The CENTERINGPREGNANCY model

CenteringPregnancy is an innovative model of facilitated group antenatal care that has been successfully operating in the USA for the past decade. Groups of eight to twelve women are facilitated by a midwife or doctor skilled in antenatal care provision (Rising, 1998). These group visits follow the same visit schedule, and include the same components of antenatal care (assessment, screening and education) as traditional antenatal care. Women are able to share their experiences, learn from one another and develop a network of social support that will be invaluable in the early weeks and years of new motherhood (Rising et al., 2004). CenteringPregnancy is reported to enhance the potential of antenatal care and improves the experiences for both women and the health-care providers involved (Massey et al., 2006).

This section will describe CenteringPregnancy model, the way it has been interpreted for the Australian setting and provide the most recent evidence about the model.

Description of the model

CenteringPregnancy was developed in the USA and there are now more than 200 sites across North America offering it as a model of antenatal care (Walker & Worrell, 2008). Sharon Schindler Rising, who has many years of experience with traditional antenatal care, founded the model. She had observed that traditional antenatal care was not fulfilling the demands for greater education, more comprehensive and culturally

appropriate care, and that it did not meet the needs of women and health-care providers (Massey et al., 2006).

The model replaces the majority of individual antenatal visits with small groups (Rising, 1998). Complete antenatal care is provided in the group setting. The model incorporates the usual assessments, education, information, and support that women receive during standard antenatal care (Rising, 1998). Each CenteringPregnancy group is comprised of a group of women who are of similar gestational ages, usually due to give birth within the same month. Women are invited to join the CenteringPregnancy group care model after their initial standard 'booking' visit to the hospital. From this point they then enter into the CenteringPregnancy group model of care.

The first scheduled CenteringPregnancy group antenatal visit is when women are 16-20 weeks pregnant. Eight to twelve women come together at this time and meet for the majority of their antenatal care. The sessions are run with a facilitated approach, and have a structured core content that is flexible. These group structures assist women in the group with exploring issues both at an individual and group level. Group sessions are two hours in length and are facilitated by two health-care providers, of which one of the facilitators is a doctor or midwife who is qualified to provide the antenatal assessment ('check-up'). The co-facilitator can be a midwife, social worker, doctor, allied health-care worker or a student in any of these disciplines. There are two facilitators to enable effective facilitation and continuity of leadership especially when one facilitator may not be available or may need to leave the group to transfer a woman for emergency care (Rising, 1998).

The 'check-up' in CenteringPregnancy is the same as with standard antenatal care and includes measurement and palpation of the pregnant uterus, auscultation of the fetal heart, blood pressure measurement and review of any screening or diagnostic investigations (Rising et al., 2004). It is provided in the group and is completed on a mat on the floor physically situated outside the group circle and away from the groups gaze. It is completed within a specific timeframe to allow time for greater group discussion. Women are encouraged to bring their general questions to the group rather than direct

them to the midwife at this time, recognising that all may benefit from a discussion. Personal issues for individual woman are followed up at a more appropriate time.

Self-care is an important component of CenteringPregnancy. Women are encouraged to take responsibility for their antenatal care in the group and to engage in discussion and problem solving with other women and the health-care providers. As part of this process they review the documentation in their hospital file and document the entries themselves. CenteringPregnancy builds on the belief that antenatal care is more than the 'measuring weight and blood pressure and focus on birth outcomes' (p. 288) as described by Massey (2006). Self-reflection and affiliation are also important processes for pregnant women and the model provides an environment to foster these processes by offering facilitated discussions, educational activities, written material and access to other women's advice and knowledge through the provision of specific time for socialisation through the sharing of food.

The belief is that having antenatal care in a group fosters the development of partnerships between both the women and the health-care provider that are equal and not hierarchical (Rising et al., 2004). These partnerships are relationships that respect the knowledge that each individual brings to the group instead of the dominant knowledge and power relationship of an expert health-care professional – patient model (Massey et al., 2006). Health-care providers and people who use traditional health-care services often are not experienced with the partnership model of care and this transformation of the roles requires trust and respect for all who come to the group (Courtney, Ballard, Fauver, Gariota, & Holland, 1996). This shift in knowledge and power dominance enables women to develop skills to enhance their health and that of their family, and health-care providers to develop both at a professional and a personal level (Rising et al., 2004). The components of antenatal care within the group are therefore no different from the individual model of care, but the process of provision is different.

Socialisation within the group and the development of trust and respect through the creation of a partnership model of care create a process of support within the group. Social support is not an acknowledged component of traditional antenatal care although

it is a recognised factor that is important for the woman, her child and the family (Hodnett & Fredericks, 2003; Oakley et al., 1990). Women state that they seek not only the physical review of the health and development of their fetus/baby but also the reassurance and ability to be listened to (Clement et al., 1996; Hildingsson & Radestad, 2005; Sikorski et al., 1996). CenteringPregnancy has been successful in developing a model of antenatal care that not only provides the traditional components of care, but also incorporates education and support through the facilitated group process.

The premise of CenteringPregnancy is that antenatal care is more effectively and efficiently provided to women in groups than one-to-one (Rising et al., 2004). Learning and support are enhanced by drawing on group resources and the knowledge of the individuals (Rising et al., 2004). Furthermore, this high quality of care can be achieved within the current health-care system (Scott et al., 2004). The format of the model is founded on a set of core concepts known as the 'Essential Elements' of CenteringPregnancy as described in Chapter One (Figure 1) (Rising, 1998). These elements provide a framework for the groups and are necessary requirements for each site to fulfil to be 'registered' as a CenteringPregnancy site.

All the health-care providers enlisted to facilitate CenteringPregnancy groups are taught the Essential Elements and founding principles of CenteringPregnancy through facilitated workshops (Rising et al., 2004). The CenteringPregnancy and Parenting Association (non-profit organisation) provides basic and advanced training for health-care providers (Carlson & Lowe, 2006), tracks implementation sites, evaluates the outcomes from these sites, and provides support and guidance for the health-care providers involved (Novick, 2004). To complete the initial training process, every health-care provider is required to lead at least one entire CenteringPregnancy group. An entire group includes all the sessions from 16-20 weeks to 40 weeks gestation. This education process enhances the knowledge of group-facilitated care and enables the development of effective group dynamics and the maintenance of the group process.

The effectiveness of CenteringPregnancy

A growing body of evidence, mainly from the USA, has so far investigated the impact of CenteringPregnancy on perinatal/clinical outcomes, women's satisfaction and service

provision. Included in this evidence are two recent RCTs (Ickovics et al., 2007; Kennedy et al., 2007). Research of the experiences of the health-care providers and of the organisation involved with the implementation of CenteringPregnancy models have so far not been documented. Gaining the perspective from both the health-care providers and the organisation will greatly enhance the knowledge and understanding of this innovative model of care. This next section reviews the CenteringPregnancy evidence published to date.

It is suggested that the CenteringPregnancy model of antenatal care enhances the social aspects, information sharing and knowledge retention for the women and also improves the midwife's job satisfaction due to enhanced relationships with the women and reduced repetition with their work (Klima, Norr, Vonderheid, & Handler, 2009; Massey et al., 2006; Rising, 1998). This has been explored in a number of studies.

In 1998, a pilot study of 111 women who received CenteringPregnancy care were compared with a convenience sample of women who received traditional antenatal care (Rising, 1998). This study suggested that there was a significant decrease ($p=0.001$) in emergency room visits during the third trimester for women who had enrolled in CenteringPregnancy compared to the convenience sample of women (26% vs 74%), and high patient satisfaction, with 96% of women preferring to receive their care in groups. No difference was exhibited with the perinatal/clinical outcomes that were compared with the control group. The results of this early study are limited by a small convenience sample and a limited comparative description of the control group. However, the benefits of these results have inspired further studies.

CenteringPregnancy has been evaluated in two RCTs (Ickovics et al., 2007; Kennedy et al., 2009). The first study (n=1047), evaluated whether women who received CenteringPregnancy group care would have improved birth, and psychosocial outcomes, and satisfaction of care compared to women who received traditional individual care. The primary outcomes were gestational age at birth, and birthweight. Psychological outcomes included pregnancy knowledge, antenatal distress, readiness for birth and parenting, and satisfaction with care. This study was undertaken at two publicly-funded health-care centres in USA between 2001-2005 (Ickovics et al., 2007).

Pregnant women between 14-25 years of age who were at increased risk of adverse outcomes due to their economic and social status were randomly allocated into three groups of care, traditional individual antenatal care, CenteringPregnancy group care and an enhanced CenteringPregnancy care that incorporated HIV/sexually transmitted infections education and prevention skills.

In this RCT, women assigned to group care were significantly less likely (33%) to have preterm births compared with standard care: 9.8% vs. 13.8% (OR 0.67, 95% CI 0.44-0.98; p= 0.045) (Ickovics et al., 2007). This effect was further strengthened in the African American participants (80% of the participants) who had group care and had a 41% decrease in preterm births compared to their counterparts in individual care, 10% vs. 15.8% (p=0.02). Women assigned to group care also had significantly better psychosocial function and a higher rate of satisfaction with care and breastfeeding, but not an improved birthweight as shown in an earlier comparative cohort study (Ickovics et al., 2003). There were no differences in costs associated with antenatal care or delivery (Ickovics et al., 2007). The reassuring trends from the RCT included an increase in prenatal knowledge and an increase in readiness for labour and birth. Antenatal distress and readiness for parenting also exhibited reassuring benefits but were not statistically significant.

Results from the second trial (n=322), demonstrate that the group model was effective in meeting women's needs in a military setting (Kennedy et al., 2009) although the final report of clinical outcomes is yet to be released. This study randomised women to either CenteringPregnancy group antenatal care or standard individual antenatal care. Qualitative interviews of 234 (73%) women were undertaken in the postnatal period. Interpretative narrative and thematic analysis described women's experience with the group care as positive as they felt they were not alone. Women who received individual care stated they had experienced limited continuity of known carer and found this disappointing. Both groups of women felt their care providers needed to listen, but it was the group who received individual care that stated they had limited access to visit times that suited their individual needs and choice of provider. The ability of CenteringPregnancy group care to enhance social support and improve isolation for women is a significant benefit for women who live and or work in a military setting.

Isolation and access to beneficial social networks are recognised issues worldwide for military personnel and their families.

Other, non-randomised, studies of CenteringPregnancy have also demonstrated improvements in rates of social isolation, prematurity, low birthweight and social and emotional outcomes for women (Grady & Bloom, 2004; Ickovics et al., 2003; Klima, 2003; Klima et al., 2009). CenteringPregnancy group antenatal care was compared to standard individual care at two sites in the USA (n=458) (Ickovics et al., 2003). This study was a prospective, matched cohort study with birth weight and gestational age at birth used as the primary outcomes (Ickovics et al., 2003). Women were matched for clinic, age, race, parity, estimated due date. The study participants were predominantly African American and Hispanic women who were accessing publicly funded health-care. All of the participants were less than 24 weeks pregnant when they were booked or recruited, and received statistically similar number of visits (9.78 vs 9.64, p=0.65).

Although the preterm birth rate did not differ between the groups, the gestational age of the preterm births was two weeks longer on average in the CenteringPregnancy group than the gestations in the control group (34.8 vs 32.6 weeks, $p<0.001$). This lengthened gestation effect also resulted in a higher average birthweight in the preterm babies born to the women in the CenteringPregnancy group (2397gms vs 1989gms, $p< 0.05$). No other statistical differences were noted between the two groups.

The results from this study were reassuring, particularly for African American and Hispanic populations of women who are known to be at a higher risk of adverse outcomes because of their high rates of poverty, ethnicity and low social class (Tucker & McGuire, 2004). A limitation was that the women who participated were from a specific vulnerable demographic population who may have benefited from any extra input into their care. Maybe this explains the notable benefits for the African American population who are recognised to be a severely disadvantaged group who have minimal access to health-care (Ickovics et al., 2003). An important finding with this study and other CenteringPregnancy studies is that women are very satisfied with CenteringPregnancy (Grady & Bloom, 2004; Ickovics et al., 2007; Ickovics et al., 2003; Kennedy et al., 2007; Klima et al., 2009; Rising, 1998).

The information and education aspects of antenatal care that women report as being important are central features of CenteringPregnancy care (Rising, 1998). In the CenteringPregnancy model, the ideal is that women will share their knowledge and individual expertise with their peers and gain insight from other women's experiences in a group environment. As described earlier, the groups are facilitated by a health-care provider who monitors the discussions, as part of their facilitator role, and provides appropriate or supportive information when needed (Rising et al., 2004). At the commencement of each CenteringPregnancy group women are provided with a schedule that informs them of the education topics for each of the sessions. Strict adherence to this schedule is not an *Essential Element* of the CenteringPregnancy model, but it provides an agenda for each session and provides the participants with an understanding of what is going to be discussed at each session (Rising et al., 2004; Wedin et al., 2009).

Specific psychological outcomes of CenteringPregnancy care were studied in a population of 124 women aged 18-32 years of age (Baldwin, 2006). These outcomes included uptake of knowledge about their pregnancy, social support, perception of health locus of control, and perceptions of participation and satisfaction with care. A pre-test post-test design was used with a non-equivalent self selected group of individuals from three sites across the Midwest, Northeast and Southern USA. These included the control group (n = 48) who chose traditional care and, and the intervention group (n=50) who chose CenteringPregnancy care. Four instruments were used to measure the data which were all tested for reliability and validity except for the Rising pregnancy knowledge tool (Baldwin, 2006). The results were that women in the CenteringPregnancy group compared with the traditional care gained greater knowledge about pregnancy when the pre-test and post-test questionnaire were compared ($p=0.03$). There was also a non-statistically significant finding that women in the CenteringPregnancy group did perceive support from their significant other.

The study was limited by, participant self-selection, sample size, and that the post-test data was not collected consistently at the same gestation between the intervention (38-40 weeks) and control groups (32-39 weeks). It was also difficult to exhibit a difference between pre-test and post-test data as all the pre-test scores were high with knowledge,

social support, fetal health locus of control, and satisfaction scores. Finally the measurement of knowledge acquisition during pregnancy was with the Rising pregnancy knowledge tool, that has not been validated by other studies. Although, an important finding with this study was that women in the CenteringPregnancy group did perceive more support from their significant others compared to the women who had traditional antenatal care. This is an important finding, as other studies have found that the perception of antenatal social support from the baby's fathers was independently associated with higher birthweights (Feldman, Dunkel-Schetter, Sandman, & Wadhwa, 2000).

Examples of the benefits of CenteringPregnancy group antenatal care have been described with particular groups of women who have higher levels of anxiety as described by Hildingsson (2002). For example, an evaluation of the CenteringPregnancy model designed for teenage women was undertaken at the Teenage Pregnancy Centre at a St. Louis, Missouri (Grady & Bloom, 2004). It was a comparison study that compared a single cohort of teenage women who received CenteringPregnancy care (n=124) in 2001 with two groups of teenage women who had the traditional individual model of care provided at the local hospital either in 2001 (n=144) or 1998 (n=233). All of the study population were under 17 years of age.

The significant results, from this study, were that babies born to the CenteringPregnancy group had a reduced low birth weight rate (8.87% vs 22.9% $p<0.02$, & 18.3, $p<0.05$) and a lower preterm birth rate (10.5% vs 25.7% $p<0.02$, & 23.2%, $p<0.05$) compared with those born in the 2001 and 1998 groups. CenteringPregnancy women also had significantly higher rates of self-reported breastfeeding at discharge (46% vs 28, $p<0.02$) and had contacted a paediatric provider (79% vs 52%) compared to the 1998 group and a higher self-reported satisfaction. Although this study had limitations, such as selection bias with the CenteringPregnancy group and low success with data collection, the reduction in the low birth weight and preterm births rates is a significant finding for this vulnerable age group of women.

CenteringPregnancy has also been recognised in the USA as a model of antenatal care that enhances care for women and their families. Government funding (Reid, 2007) has

assisted the implementation of CenteringPregnancy in many sites. Promotion of antenatal care in the USA has particularly targeted the improvement of the relationship between the woman and the health-care provider (Moos, 2006). This has been undertaken by developing guidelines by the Institute of Medicine that promotes the experience of antenatal care for the recipient, the involvement of the care recipient in regards to decisions, sharing of knowledge and provision of information (Novick, 2004).

Why study CenteringPregnancy?

It is difficult to ascertain what the mechanism is in CenteringPregnancy care that improves the outcomes for the women. Although, it is believed the concept of having care in a group setting has potential health benefits (Scott et al., 2004). It is theorised that increased content of care and time together improves women's knowledge of their health and the benefits of health-promoting behaviours (Ickovics et al., 2003; Massey et al., 2006). Group care enhances the concepts of sharing, support, and improves organising of social support (Ickovics et al., 2003; Rising et al., 2004). These are that group health-care has the advantages of improved learning and skills development, attitude change and motivation, social support, and enhanced insight through sharing of common life experiences (Ickovics et al., 2003; Rising et al., 2004).

The implications for public health-care costs by reducing low birthweight and preterm birth rates are an important message to take from the Ickovics (2007, 2003) and the Grady and Bloom (2004) studies. Review of the remainder of the current literature also reflects the potential benefits of CenteringPregnancy to the women. Issues of sustainability, effectiveness, cost efficiency and adaptability in regards to the implementation of CenteringPregnancy have recently been explored in the USA within a military setting (Kennedy et al., 2009). Other studies are also underway evaluating further health outcomes and potential cost benefits (personal communication Rising 2009).

The reported benefits of group care in an antenatal setting, as suggested by the CenteringPregnancy literature, require further replication to underpin the establishment and development of CenteringPregnancy. The feasibility of CenteringPregnancy as an

acceptable model of antenatal care for the Australian health-care system also needs to be ensured. Furthermore, the impact of the implementation of CenteringPregnancy on the health-care provider and the organisation needs to be evaluated, as minimal evidence is available in the current literature in regards to this area.

Australian model of CenteringPregnancy

CenteringPregnancy is reputed to be an adaptable and sustainable model of antenatal care (Rising et al., 2004). It is currently provided in many different settings throughout North America. The American model has been promoted and developed in many different formats under the auspices of the 'Essential Elements' (Massey et al., 2006). It has the potential to be either a multidisciplinary model where women have pregnancy complications and need to see an obstetrician or other medical practitioners or a model for women who are being cared for by midwives who only provide care to women considered to be 'low risk' in terms of uncomplicated pregnancies. The model of CenteringPregnancy developed for the Australian pilot study was a 'low risk' model where midwives were the lead facilitators (Figure 2) (Teate et al., 2009). With this model there were two facilitators per group. The majority of the facilitators were midwives, with one group having a midwife and social worker. Further descriptions of the Australian model are included in the published paper, 'Women's experiences of group antenatal care in Australia-the CenteringPregnancy Pilot Study'(Teate et al., 2009) included in Appendix 17.

The following chapter provides a description of the research method undertaken.

Chapter Three: METHOD

This chapter describes the research design and the methods that were used to address the research question and aims of the study. The first section of this chapter includes a description of Qualitative Descriptive research as it was the method used for exploring the experiences of the participants in the Midwives' Study. A review of Action Research is also provided at the beginning of the chapter. It was the methodological approach used in the Pilot Study that also informed the way in which the Midwives' Study was undertaken. The next section includes a discussion about how I positioned myself in the study and the reflexive processes I drew on. Following this is a description of the two settings and participants involved in the study and a description of the CenteringPregnancy groups in the study. The ethical issues and funding processes are then discussed. The next section of this chapter then explains the Action Research cycles that were drawn on during the course of the study. The final section describes the data collection and analysis.

The aims of the Midwives' Study were:

1. To describe the experiences of the midwives who were part of the first Australian CenteringPregnancy Pilot Study

2. To inform the future development of CenteringPregnancy in Australia

Design of the Midwives' Study

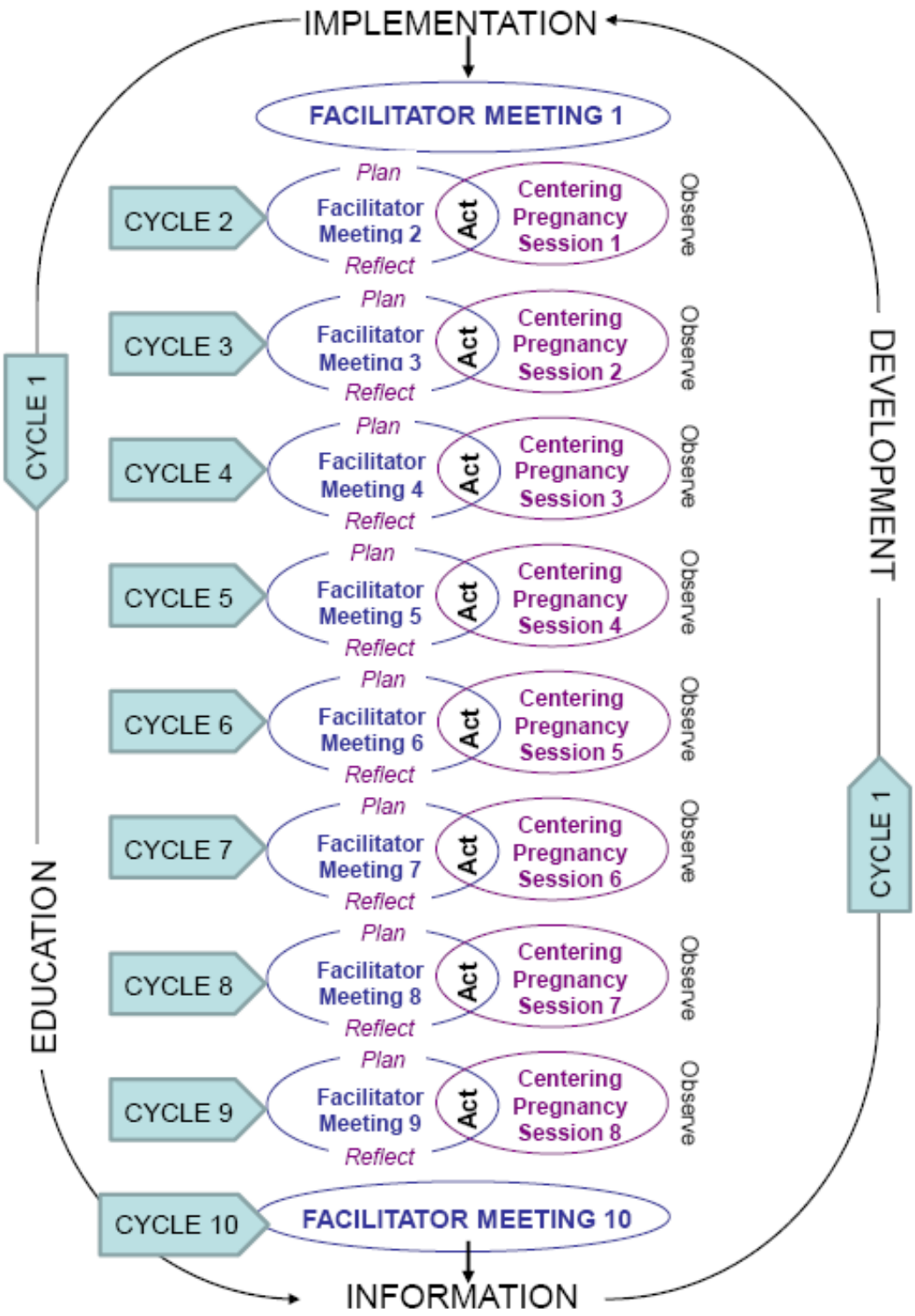
The design for the Midwives' Study was constructed as part of the broader CenteringPregnancy Pilot Study. Primarily it was a qualitative research design that employed two methodological approaches. These were Qualitative Description and Action Research. Qualitative Description was used to gain an understanding of the midwives' experiences of CenteringPregnancy from their perspective and experiences of being involved in the Australian CenteringPregnancy Pilot Study. It is a recognised methodological approach that involves a study that includes a social setting and has the intent of understanding the meaning of the participants' lives in the participants own terms (Janesick, 1994). The undertaking of the Pilot Study was divided into four major stages which were *Development, Information, Education*, and *Implementation*. An

Action Research design was used to enable these four stages to occur. This design included ten action cycles each having a process of Reflect, Plan, Act and Observe consistent with action research methodology (Reason & Bradbury, 2006).

The first three stages of the Pilot Study made-up the first action cycle. These stages were the *Development* of a CenteringPregnancy model that was designed to meet the specific needs of the chosen hospital settings. The provision of *Information* about the model to staff at both hospitals and the *Education* strategies undertaken to enable the midwives to learn about CenteringPregnancy and gain group facilitation skills.

The remaining nine action cycles made-up the *Implementation* of the CenteringPregnancy groups at the two hospitals. Each of these cycles had a CenteringPregnancy group preceded by a facilitator meeting. The facilitator meeting in each cycle involved the Action Research Group members. At the facilitator meeting the midwife facilitators and the research team came together to 'Reflect' and 'Plan' for the following CenteringPregnancy group. The CenteringPregnancy group then took place which is where the 'Act' and 'Observe' actions occurred for the Action Research cycle. Figure 2 depicts the overall design of the Pilot Study and the ten action research cycles. This figure and the 10 action cycles will be described in greater depth during this chapter.

Figure 2: Action Research Design for the Pilot Study



Methodological approaches

Qualitative Descriptive

Qualitative descriptive is one of the most frequently employed methodological approaches in the practice disciplines, such as midwifery or nursing, and is the method of choice when straight description of phenomena is desired (Sandelowski, 2000). It was used in this study to gain an understanding of the midwives' experiences of CenteringPregnancy from their perspective and experiences of being involved in the Australian CenteringPregnancy Pilot Study. Qualitative descriptive research relies on the presentation of solid descriptive data, so that the researcher leads the reader to understand the meaning of the experience under study (Sandelowski, 2004). The use of qualitative descriptive methods in this study engaged the research process in straightforward methods of inquiry. Simple methods of data interpretation allowed me, the researcher, to be with the data without needing to be overly abstract about the approach to data collection and analysis.

Qualitative descriptive studies offer a comprehensive summary of an event in the everyday terms of those events. Although qualitative descriptive studies are recognised as the least theoretical and unencumbered of qualitative approaches they tend to draw on the general views of naturalistic inquiry (Sandelowski, 2000). Naturalistic Inquiry is a generic orientation to inquiry that includes an array of qualitative and behavioural research that can involve humans or animals (Sandelowski, 2004). It is an approach of inquiry that is committed to studying something in its natural state. Therefore there is no pre-selection of variables to study or manipulate and no one theoretical view to align itself with. This means that any one qualitative descriptive study can involve a variety of approaches. This can be observed with the combined design of the CenteringPregnancy Pilot Study and the Midwives' Study. The Pilot Study used Action Research to develop and implement CenteringPregnancy and the Midwives' Study used Qualitative Descriptive design to describe the experiences of the midwives involved.

A combination of data collection and analysis methods were used and included participant observations, surveys and focus groups. These were used to provide an accurate description of events that the midwives involved in the study observed or

experienced. The methods of data collection and analysis will be discussed in more detail later in this chapter.

Action Research

The methodological approach used in the Pilot Study that informed the Midwives' Study was guided by action research principles. Action research was first believed to be documented by Kurt Lewin in 1946 (Reason & Bradbury, 2006). Lewin was a social scientist and was concerned with inter-group relations and minority problems. As a method of research, it has become increasingly popular with practice-based professions such as education, midwifery and nursing, and is gaining recognition in other professional fields (Hart & Bond, 1995; Reason & Bradbury, 2006). Action research has also become recognised as a form of participatory or collaborative research that is aligned with the foundations of Critical Social Theory (Carr & Kemmis, 1986; Hart & Bond, 1995).

Action research is a process whereby the researchers work explicitly with, and for, people rather than undertaking research on them (Reason & Bradbury, 2006). It seeks to engage practitioners collaboratively in taking action to improve their situation (Stark, 1994). Lewin, in his writings in 1946, placed much emphasis on joint studies between social scientists and practitioners that were practical and aimed towards social change through a problem solving approach (Meyer, 1993). Lewin's original description of a framework for action research included a four-stage spiral of steps. These were Planning, Acting, Observing and Reflecting. This framework has been used for many modern definitions of action research (Reason & Bradbury, 2006).

Four main models or typologies have been described that simplify the complex processes associated with the action research method (Hart & Bond, 1995). These are the experimental model that focuses on an experimental intervention and a controlled outcome. The second is an organisational model that is management or patient focused. A professionalising model that focuses on the clinicians and uses reflexive practice and finally, an empowerment model develops a bottom-up approach where the problem is defined, developed and addressed by a team who work collaboratively. Individual

action research projects are not defined by these parameters or typologies, but they tend to span the spectrum as they emerge and evolve (Hart & Bond, 1995). These typologies provide a fundamental framework for the practice of the action research.

The strengths of action research are that it enables participants to focus on generating solutions to practical problems. It also enables the practitioners to engage with research and 'development' or 'implementation' activities (Meyer, 2000). As a result, it is particularly suited to identifying problems in clinical practice and helping develop potential solutions. Action research is recognised as an effective method of social enquiry that is able to narrow the research-practice gap that is renowned within the health-care professions (Hart & Bond, 1995).

Action research was chosen as one approach for this research design for two reasons, one to facilitate change and the other to inform future development and implementation of CenteringPregnancy. It is acknowledged that the iterative action cycle of action research has the capacity to guide and engage clinicians, such as midwives, in change (Deery & Hughes, 2004). This was seen as an important factor in the design of the study as the implementation of this new model of care was to occur in two hospitals and hospitals are organisations known to be inherently resistant to change (Reason & Bradbury, 2006; Somekh, 2006). Action research, with its emphasis on collaboration and participation, was also considered to be an appropriate approach, because it facilitates understanding of, and is able to adapt to, changing situations within clinical practice (Deery & Hughes, 2004).

Action research was used to assist the development of a new model of care and facilitate change within the antenatal care system of these two hospitals. The potential of action research was to assist the midwives and the organisation to work both interactively and reflectively on a personal and at an organisational level (Swanson-Fisher, 2004). The purpose of this was to facilitate the midwives and organisation to reflect and change their own systems of antenatal care (Brydon-Miller, 2003). These strategic processes of reflection in which the midwives and the organisation engaged in were consequently measured and analysed as part of the study design. The information gained established an account of change associated with the development and implementation of

CenteringPregnancy. Hence this has the capacity to inform future developments of CenteringPregnancy.

The following section describes the processes I carried out to enable this research to be transparent, reliable and credible.

Positioning myself in the research

The reflexive nature of action research required me to reflect on my position in the study. This position involved the roles that I undertook as researcher, project leader and fellow clinician. The consequence of these roles was that I was very much an 'insider' at the beginning of the study and that my position had the potential to impact on the study. This was apparent, as all of my roles had the potential to bring bias to the study and to impact on the study process or outcomes (Coghlan, 2001). Such issues expose the 'insider' to conflicts of loyalty, behaviour and identification. Alternatively the 'insider' also has advantages of having an intimate knowledge or *'pre-understanding' of the organisation and 'the way it works: its everyday life, taboos and preoccupations'* (Coghlan, 2001, p. 3). Consequently these issues of being an insider can be framed as problems or opportunities depending on the context of the situation (Coghlan, 2001). Table 1 includes a summary of the advantages and disadvantages of being and insider with Action Research.

Table 1: Issues of being an insider in action research

Advantages	Disadvantages
➢ Know informal networks for information and gossip	➢ Assume too much when interviewing, and thus not probe as deeply
➢ Aware of critical events in the organisation, and what they may imply	➢ Think they know the answer in advance
➢ Can see beyond the 'window dressing'	➢ Find it more difficult to obtain relevant data than an outsider because of organisational boundaries
➢ Can use insider knowledge in questioning, to obtain richer data	➢ Be denied deeper access that would be granted to an outsider
➢ Can both participate and observe without drawing attention to themselves or creating suspicion	

(Coghlan, 2001)

At the end of the first year of the CenteringPregnancy study, I took on the role of the project officer and research midwife as a full-time position and had leave of absence from my clinical position as a Birth Centre midwife. This was because the combined workload of being both a clinical and research midwife was too much. My researcher role consequently evolved to be more of an 'outsider' role, than an 'insider', although I was not strictly positioned as an outsider as I still had prior knowledge of the midwives' work practices and their philosophy of midwifery care. My position in the study did change over time, but I continued to have close working relationships with the participants. This enabled me to maintain my position in the study and to stay close to the data. As a consequence I was able to reflect on the findings and observe and describe the limitations of the study.

Reflexivity

I established early on in the research process that it was important to consider the position of myself within the design. I realised that this had the potential to impact on the collection and analysis of data (Burns & Grove, 2005), particularly the qualitative data (Grbich, 2007). This was an important consideration as my dual role with the study as researcher and project officer/midwife required me to work closely with the participants throughout the study. This process is referred to as reflexivity and requires a researcher to engage in explicit self-aware analysis of their own role within the research process (Finlay & Gough, 2003). The use of qualitative description and action research also required me to engage constantly with the participants and the data during all stages of the study.

As a researcher I am also influenced by my life experiences. In turn these experiences are known to frame the way in which I view the world and how I participate and understand the world (Grbich, 2007) and, in particular, how I undertook the research. I had prior working relationships with many of the midwives who were involved with the study. I also had many years of experience with the development of new and innovative models and had an invested interest in the success of the CenteringPregnancy Pilot Study.

My previous working relationships with the participants in the study also influenced the processes of data collection and analysis. This was evident with our mutual desire to see

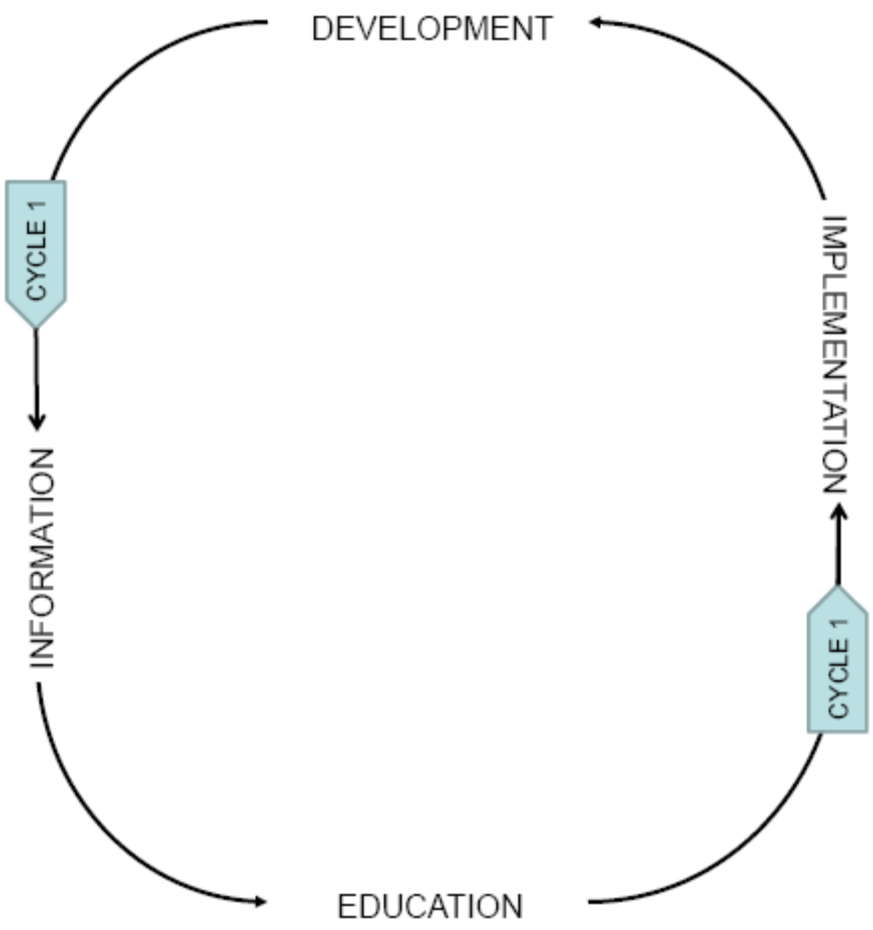
CenteringPregnancy succeed and with the close working relationship I held with them as we worked together to develop this new model of care. The close social interactions I undertook with the participants in the study required me to 'invest and divulge' (Webb, 1992, p. 749) much of myself in the research. Webb (1992) states, that the *'people you encounter within research are prone to respond to you the researcher, as they do with anyone in a social encounter, and they will make judgments about your backgrounds, motives, intentions, beliefs and preferences and respond as they judge appropriate'* (p. 749). These processes of mutual understanding or *verstehen* (Webb, 1992) on the part of researcher and researched are inherent to interpretative research such as in qualitative description and action research and cannot be ignored. Therefore the interpretations and responses of the participants and myself in this study are dependent on the context of this research and this consequently has the potential to impact on the objectivity of the analysis. For that reason the personal values and beliefs of the participant midwives' and myself will be discussed throughout this document to make these biases visible (Meyer, 2000).

The next section provides a detailed interpretation of the action research design used for the Pilot Study. It adheres more closely to a professionalising model approach, but has been informed by the three other typologies of action research; that is, experimental, organisational and empowering. I thought it necessary to describe the action cycles of the Pilot Study to enable a greater understanding of how the Midwives' Study was undertaken.

Action Research Design

This first cycle of action is best described as a 'single loop' of action. A single loop of action was used in the early stages of the study to develop a course of action that would assist the hospitals to implement CenteringPregnancy. Argyris (1993) describes a 'single loop' of action as a course of action that is used intentionally to create organisational change. In this study, this single loop of action included the *Development* of a CenteringPregnancy model that would meet the needs of the study setting, the provision of I*nformation* about the new model to the organisation and the study participants and the *Education* of the facilitators for the new model. Figure 3 depicts Cycle One of the Pilot Study.

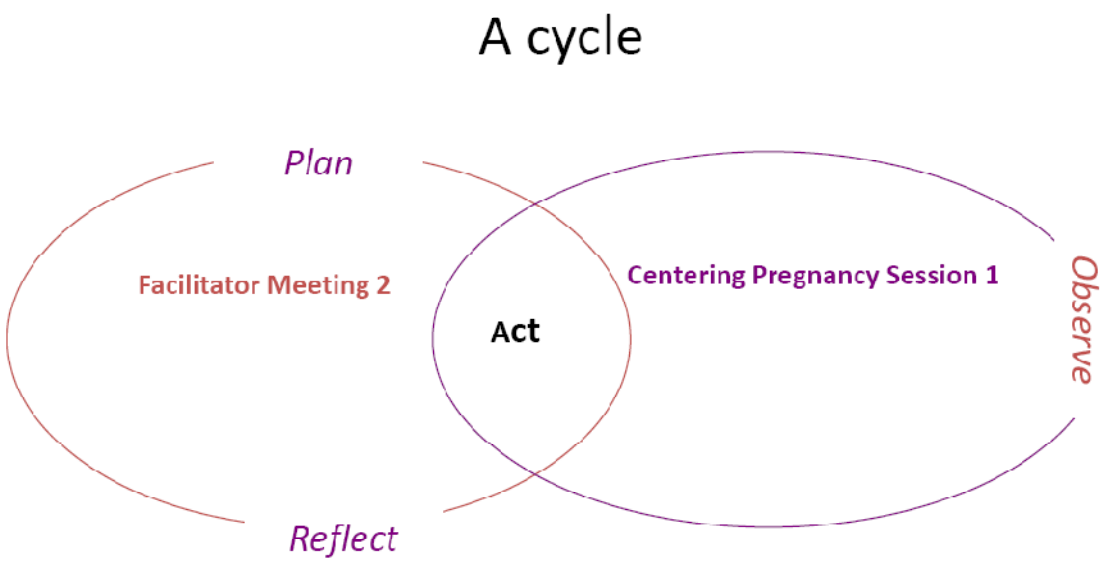
Figure 3: Action Cycle One



The next action cycles (two to ten) *implemented* the CenteringPregnancy model. Action cycle one informed these action cycles, but they sequenced through a process that did not include feedback to the first cycle until the end of cycle ten. This was when the implementation of the CenteringPregnancy groups was completed. At the completion of cycle ten, the information generated by the prior nine cycles was used to inform cycle one for another CenteringPregnancy group development process. Action cycles two to nine include the eight Action Research group meetings (facilitators meeting) and eight CenteringPregnancy group sessions, and cycle ten includes two focus groups. Figure 2 depicts the Action Research Design for the Pilot Study.

The facilitators meetings and the CenteringPregnancy group sessions included the phases of Plan, Act, Observe and Reflect that are synonymous with the design (Reason & Bradbury, 2006). These two events, the facilitators meeting and the CenteringPregnancy group session, occurred with each of the action cycles and created a feedback link that informed each subsequent cycle. Figure 4 represents the action cycles (two to nine).

Figure 4: An example of the Action Cycles (Two – Nine)



The study concluded, at the end of the *Implementation,* with the last meeting of the Action Research group. This meeting was structured as a focus group. Another focus group was also carried out with the Birth Centre midwives. The aim of these focus

groups was to explore the experiences of the participants' in relation to the development, implementation and experience of the CenteringPregnancy model.

Descriptions of the setting, participants, ethical approval processes and the funding of the CenteringPregnancy Pilot Study (Teate et al., 2009) are presented in the next section. This leads into a description of the method for the first cycle of the Pilot Study. The description of cycles two to ten of the Pilot Study follows, which informs the Midwives' Study. Findings are presented in the next chapter.

Setting

This study was carried out at two suburban metropolitan hospitals in southern Sydney: St George and Sutherland Hospitals. These make up the Central Network of South Eastern Sydney Illawarra Area Health Service (SESIAHS).

Site 1

St George Hospital is a principal referral public hospital located in the south-eastern suburbs of metropolitan Sydney. It is classified as a Level 5 Maternity Service[5] in New South Wales (NSW). The Maternity Service has 36 beds including 18 postnatal and 10 antenatal beds, six delivery rooms, a two room birth centre, an eight cot special care nursery, a day assessment service, outpatient clinics, outreach antenatal services at two community sites and access to operating theatres in the general section of the hospital.

In 2006[6], there were 2397 births including 1493 (62.3%) vaginal births, 295 (12.1%) instrumental deliveries and 609 (25.4%) caesarean sections (NSW Department of Health, 2007). St George Hospital offers a number of models of care including traditional maternity care[7], midwifery-led models of care, a homebirth service, collaborative community-based models of care, specialist obstetric service and shared antenatal care. There are 148 Full Time Equivalent (FTE) midwives, five obstetricians, four obstetric registrars and two resident medical officers (RMO), four paediatricians, two paediatric registrars and four RMO's in paediatrics and a number of midwifery and medical students working within the maternity service. A summary of the description of St George Hospital maternity service is included in Table 2.

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[5] Level 5 Maternity Service in NSW, provides care for women with normal pregnancies to those with selected high risk factors >32 weeks gestation. Level 5 services are supported by midwives, midwifery educators/ consultants, 24 hour obstetric, paediatric, anaesthetic on call services and onsite accredited medical practitioners. Level 5 units have neonatal nurseries capable of short-term complex care of neonates (NSW Department of Health, 2002).

[6] 2007 NSW Mothers and Babies Report is the most recent data to date

[7] Traditional maternity care is widely recognised in the Australian public health setting. It describes a maternity service that has separate areas for antenatal, labour and birth, and postnatal. Each of these areas is staffed by a core groups of clinicians specifically trained in that aspect of maternity care. `

Site 2

Sutherland Hospital is a district hospital in the southern suburbs of Sydney. It is classified as a Level 4 Maternity Service[8] in NSW. It is approximately 10 kilometres away from St George Hospital. The Maternity Service has 18 beds, postnatal and antenatal, five delivery rooms, a four-cot special care nursery, outpatient clinics and access to operating theatres in the general section of the hospital.

In 2006, there were 1038 births including 696 (67.1%) vaginal births, 111 (10.7%) instrumental deliveries and 231 (22.2%) caesarean sections (NSW Department of Health, 2007). Sutherland Hospital offers traditional maternity care, midwifery antenatal clinics, and shared antenatal care. There are 55 FTE midwives, five obstetricians, four obstetric registrars and two RMO's in obstetrics, four paediatricians, two paediatric registrars and two RMO's in paediatrics and a number of midwifery and medical students working within the maternity service. A description of the Sutherland Hospital maternity service is included in Table 2.

[8] Level 4 Maternity Service in NSW, provides care for women with normal pregnancies to those with moderate risk factors. The maternity service is classified as a Level 4 maternity service. Level 4 services in NSW are supported by midwives and have access to midwifery educators, 24 hour obstetric, paediatric, anaesthetic on call support and onsite accredited medical practitioners. Level 4 units have special care nurseries which provide care for neonates >32 weeks gestation with minimal complications (NSW Department of Health, 2002).

Table 2: Description of the Central Network for SESIAHS

Hospital		**St George**	**Sutherland**
Maternity Service Classification:		Level 5	Level 4
Number of Maternity beds	Antenatal and Postnatal beds	28	18
	Delivery rooms	6	5
	Birth Centre rooms	2	
Special care neonatal nursery	Number of cots	8	4
	Pregnancy Day Assessment Unit	√	
	Antenatal Outpatient Clinic	√	√
	Outreach antenatal services in community settings	2	
Other services	Access to operating theatres	√	√
	Midwifery (Full Time Equivalent)	148	55
Staff	Students – midwifery and medical	√	√
	Obstetricians	5	5
	Registrars	4	4
Obstetric:	Resident Medical Officers	2	2
	Students	√	√
	Paediatricians	4	4
	Registrars	2	2
Paediatric:	Resident Medical Officers	4	2
	Students	√	√
Models of care	Traditional maternity care	√	√
	Specialist Obstetric service	√	
	Shared antenatal care	√	√
	Midwifery antenatal clinics	√	√
	Midwifery-led models of care	√	
	Homebirth service	√	
	Collaborative community based models of care	√	
Number of births in 2006		2397	1038
Vaginal birth rate in 2006		1493 (62.3%)	696 (67.1%)
Instrumental delivery rate in 2006		295 (12.1%)	111 (10.7%)
Caesarean section rate in 2006		609 (25.4%)	231 (22.2%)

Information in this table was accessed from NSW Mothers and Babies Report 2006 (NSW Department of Health, 2007) and personal communication with managers at each hospital.

CenteringPregnancy Groups

Five CenteringPregnancy groups commenced in March 2007. Two were as a part of the community outreach maternity programme at St George Hospital known as the St George Outreach Maternity Programme (STOMP). The STOMP model of antenatal care is a continuity of midwifery care model provided by a discrete team of up to six midwives (Homer et al., 2001). There are two STOMP teams based in the suburbs of Hurstville and Rockdale, which are within the St George local government area. These midwifery teams provide antenatal care at the community child and family health-care centres in these suburbs for the women who are booked with them for their whole pregnancy care experience.

The remaining three CenteringPregnancy groups were held in the antenatal clinics, one at St George Hospital and two at Sutherland Hospital. These clinics provide antenatal care within a model of care that is representative of the majority of public hospitals in Australia. Women attend the clinics on set days and receive their care from rostered midwives or doctors. Unless the specific service has a midwives clinic[9] these women see a number of midwives or doctors with no emphasis on a consistent midwife or doctor throughout their antenatal care experience. Table 3 provides a description of the CenteringPregnancy groups conducted as part of the CenteringPregnancy Pilot Study.

Table 3: Description of the CenteringPregnancy groups

CenteringPregnancy group	Location		Time and Day
	St George Hospital	Sutherland Hospital	
1	Hurstville community centre		Tuesday 5.30-7.30pm
2	Rockdale community centre		Tuesday 5.30-7.30pm
3	Antenatal clinic		Wednesday 11am-1pm
4		Antenatal clinic	Thursday 10am – 12pm
5		Antenatal clinic	Thursday 6.30-8.30pm

[9] Midwives clinic is an antenatal clinic that is provided by midwives. It is an option of antenatal care for women who are physically well with no medical or obstetrical complications.

Participants

The participants in the CenteringPregnancy Pilot Study and the Midwives Study included five distinct groups: (1) Action Research Group, (2) Steering Committee, (3) Research Committee, (4) Research Team and the (5) Birth Centre midwives. A description of these groups is provided in next section.

(1) Action Research Group (facilitators group)

The members of Action Research group were the facilitators of the CenteringPregnancy groups. The group developed during the initial process of the study from a much larger group of people who expressed interest in facilitating CenteringPregnancy groups for the Pilot Study. A combination of organisational and recruitment issues affected the group size. At the end of the study (July 2007), the Action Research group had eight members. Members were existing midwives from both the hospitals and all were skilled in providing antenatal care. They self-selected for the study and, for the most part, had no prior experience with group facilitation or the provision of formal adult education. For these reasons they were representative of many midwives who work in Australian metropolitan public maternity hospitals. This group also included a Social Worker with previous group facilitation and antenatal education skills. The title 'participant' used in this thesis includes the midwives and the social worker. The title 'midwife' refers only to the participants who are midwives.

The participants in the Action Research group undertook a process of education and support throughout the study guided by the essential elements of CenteringPregnancy and their own learning needs. A workshop for CenteringPregnancy facilitators was provided at the beginning of the development and education process of the study. This workshop provided an introduction to the CenteringPregnancy model of care and group facilitation skills. After this workshop, the midwives requested further information about group skills and facilitation, as they felt unsure about their skills as facilitators. Extra workshops that featured these areas of interest and the theory behind adult learning were then provided. These subsequent workshops were provided in

collaboration with the research team and the education team from *Women's Health & Community Partnerships (SESIAHS)*[10].

(2) Steering Committee

A Steering Committee was formed to provide advice and governance of the development and implementation of the CenteringPregnancy model of care. The Steering Committee included key stakeholders such as managers from middle management[11] and the clinical level[12]; senior clinicians from many health-care areas, such as allied health, obstetrics, paediatrics and midwifery; and the three researchers. This committee met every three months and assisted with communication between the research team and the hospital staff. It also created links between the two hospitals, and between different health-care units, such as physiotherapy, nutrition, and drug and alcohol services. Once the initial information, education and development phases for the CenteringPregnancy Pilot Study were completed, this committee decreased to a smaller active group of between five to eight members. The fluctuation in the number of committee members was dependent on daily workloads at both hospitals. All the non-active members maintained email contact, but were no longer participants in the committee.

(3) Research Committee

A Research Committee was formed to provide guidance and support to the CenteringPregnancy Pilot Study and the Midwives' Study. It comprised of the three researchers and two experts in the areas of adult education and group facilitation from SESIAHS. This committee met every three months and utilised the experience and knowledge of the education experts and the research team to guide the study.

[10] Women's Health & Community Partnerships (SESIAHS) is an educational and training department for SESIAHS. The educators develop and provide educational and training programmes for midwives and child and family nurses involved in group-based education programmes, such as antenatal education and early parenting programmes.
[11] Middle management is a layer of management in an organisation whose primary responsibility is to supervise and support the activities of personnel while reporting to upper management.
[12] Clinical management is a layer or management in a health care organisation whose primary responsibility is to supervise and support the health practitioners who provide clinical care.

(4) Research Team

The research team included myself as the Project Midwife and researcher, and Professors Caroline Homer and Nicky Leap as the chief investigators. We had previous professional and working relationships with participants and managers from both of the sites and were recognised by the key stakeholders and the participants in the study as supportive colleagues. These prior relationships were believed to be important, as the successful adoption of innovations such as CenteringPregnancy is often dependent on the positive influence of both the expert opinion leaders (in this case Caroline Homer and Nicky Leap) and the peer opinion leader (Alison Teate) (Greenhalgh et al., 2004). If a project is insufficiently appealing it will not attract the support of key stakeholders or the clinicians involved (Greenhalgh et al., 2004; Hart & Bond, 1995).

Throughout the study period, the research team members worked closely with the Action Research group and were active members of these group meetings. Our engagement with the process was important in the development of the Action Research framework.

(5) Birth Centre Midwives

The midwives in the Birth Centre were involved in the initial stages of the study. For a variety of reasons they did not partake in the implementation stage of the study as they were unable to implement CenteringPregnancy. Data were collected as part of their involvement with the early stages of the study to explain why they were unable to implement CenteringPregnancy. It was believed that this information would inform the overall findings of the CenteringPregnancy Pilot Study and the Midwives' Study.

The Birth Centre is situated at St George Hospital and is a separate clinical area to the antenatal clinic and delivery suite. It has two rooms where women give birth and two rooms for antenatal care. The midwives provide care to a caseload[13] of 40 women per year if they are full time. They work on an on-call basis and provide antenatal, intrapartum and postnatal care for these women. Two midwives work in partnership and

[13] The term 'Caseload' in midwifery care denotes a group of pregnant women who are cared for by a midwife for their antenatal, intrapartum and postnatal care.

share their on-call with this partner. Women are also able to access a homebirth through the Birth Centre (Homer & Caplice, 2007). Due to the way in which they work these midwives establish close working relationships with the women for whom they provide care (Page et al., 2001).

I had worked as a Birth Centre midwife for four years prior to the commencement of the CenteringPregnancy Pilot Study. During the first year of the study I maintained this role as a Birth Centre midwife in a part-time capacity. The second year of the study I took leave from the clinical role, but still maintained a close professional and personal relationship with the midwives in the Birth Centre.

Ethical considerations

Ethical approval

When undertaking research with human participants, consent is a necessary requirement to protect their rights and the rights of others in the setting (Burns & Grove, 2005). In this study, verbal and written consent was required at progressive stages. Consent forms were designed for the health-care professionals and submitted to the Human Research Ethics Committee. Ethics approval was successfully sought from both the Human Research Ethics Committee at UTS (UTS HREC REF NO. 2006-31) and SESIAHS (Ref NO. 06/35 Homer) during March - June 2006. Progress reports have also been accepted in June – July 2007 and June – July 2008 by both of these committees.

Consent process

The consent process included two stages of informed consent with both verbal and written consent gained at different times of the study. This was to ensure that the participants were able to *self-determine* their own level of involvement in the study. This was in accordance with the ethical principle of *'the right to self-determination'* that ensures research participants are treated as autonomous agents who are informed about the study and are allowed to voluntarily choose to participate or not (Burns & Grove, 2005).

The first stage (verbal) occurred when the health-care professionals who worked at St George and Sutherland Hospitals were invited to attend the CenteringPregnancy workshop in April 2006. Health-care professionals interested in being a part of the Pilot Study were requested to note their interest on the 'Interested in CenteringPregnancy' form included in their written workshop material. After the workshop, this core group of interested health-care professionals were invited to attend further workshops in November 2006 to assist with the development of their group facilitation skills. From this, a smaller group of individuals committed to being facilitators in the CenteringPregnancy Pilot Study came together to create the Action Research group. Written consent was gained from the Action Research group. Much later in the study (May 2007), written consent was gained for photos to be taken of the women and facilitators during both the CenteringPregnancy sessions and the Action Research group. Copies of all of these consents forms are included in Appendix 6, 8 and 9.

Ethical considerations took into account all the individuals who had contributed data. This included the Birth Centre midwives. These midwives provided written consent confirmed prior to their involvement in the focus group (July 2007). The key stakeholders, such as the managers and the social worker were also interviewed as part of the CenteringPregnancy Pilot Study. Written consent was obtained prior to their interviews. The midwives who were the CenteringPregnancy facilitators and who made up the Action Research group also provided written consent prior to their focus group (July 2007).

As the research midwife for this study, I ensured that when I met with the participants they were aware of my researcher role and their participant role. This process involved asking the participants for their permission to enter their comments either verbal or written into the data collection. These meetings were either formal meetings and focus groups, or informal meetings such as a 'corridor conversation'. This ensured the participants were not coerced or deceived at any stage of the study and prevented any concealment of my researcher status (Hansen, 2006; Sansone, Morf, & Panter, 2004).

The right to withdraw

The process of open disclosure that I undertook as the researcher, and used with each contact I had with the participants, was developed early on in the study. Participants needed to be aware that they could withdraw at any time during the study. This involved being able to withhold specific comments at informal meetings or being able to completely withdraw from the study. The processes of staged informed consent and my open disclosure enabled certain participants to not take part in the next stage of the study. This was demonstrated with the Birth Centre midwives not engaging in the *Implementation* stage of the study. Individual midwife participants also chose not to engage with the implementation stage. One example was a midwife who became pregnant during the *Development* stage of the study and did not become a CenteringPregnancy facilitator, as she could not commit to the facilitator role for the study.

Access to counselling services was also developed to support any participant who required support if they felt the need to withdraw or felt at risk from their involvement with the study. This included contact details of an independent member of staff from UTS on the information sheet of the consent and verbal acknowledgement of this support system at each point of written consent.

Ensuring the right to confidentiality, privacy and anonymity

A major proportion of the data collected was from group settings such as meetings or focus groups. Qualitative data collections methods, that involve a group of participants, pose challenges for the researchers both in terms of confidence and privacy (Hansen, 2006). The intention of Action Research is to develop both communication, participation and collaboration (Brydon-Miller, 2003) but, by doing this, people will often openly reflect and these comments can then be exposed by their fellow participants. As a result it was important to inform the participants of the ongoing data collection processes that were part of the study at the beginning of each of these events. It was also important to reiterate the need for respect and privacy of anyone's comments shared in the group, as maintaining confidentiality of other participants is often difficult to ensure in a group situation (Hansen, 2006).

The storage of all the data was security controlled to ensure confidentiality and privacy. The paper-based data was stored in a locked office filing cabinet at the university. All database information was stored on a computer that had restricted access and log-in. The office was also restricted by a security pin-code. Participant anonymity was also ensured as this is a known concern with qualitative data collection and analysis (Burns & Grove, 2005; Hansen, 2006). This was achieved with de-identification processes of all the data. During transcription of audio data I used pseudonyms for the individual participants and then deleted the audio file at the end of the transcription process.

At times I was able to recognise individual participant's comments in the data I had collected, as I was involved with the collection processes and had known professional relationships with many of the participants. I was aware that this had the potential to create bias during the analysis process. To alleviate this potential I frequently conferred with the research team and clarified the findings of the analysis process.

Funding

The Telstra Foundation grant provided $A80,000 over a two-year period to undertake the CenteringPregnancy Pilot Study. This provided funding for me as the project midwife. I was part-time for the first year and full-time for the second year. These funds also covered the flight expenses in 2006 for me to attend the inaugural CenteringPregnancy conference in the USA, and for Adjunct Professor (Adj Prof) Sharon Schindler Rising to come to Australia. Sharon Schindler Rising also received funds that compensated her for her keynote address at the 'Antenatal Care' seminar here in Australia and to lead and coordinate the first Facilitator's CenteringPregnancy workshop. During her time in Australia, the research team and Sharon Schindler Rising met to create professional, collegial and research links between UTS and the CHI.

Further funds contributed to the resources used for the study. The Centre for Midwifery, Child and Family Health provided these funds. The Centre for Midwifery, Child and Family Health is part of the Faculty of Nursing, Midwifery and Health at UTS and is one of the Centres for Enterprise, Research and/or Community Services (CERCS).

Funding support form UTS included:

- Educational and promotional pamphlets and posters
    - for the Pilot Study
    - for the CenteringPregnancy groups
- Fees for Ethics approval in the Area Health Service
- Development and supply of
    - Information leaflets and consent forms
    - CenteringPregnancy handbook for Australia
        - Rewriting and printing
    - Survey forms and checklists

Action Cycle One

Action cycle one is, in essence, a description of the development of the broader CenteringPregnancy Pilot Study. This is because the Midwives' Study was an integral part of the CenteringPregnancy Pilot Study. Due to this relationship between the two studies, the following description of the Midwives' Study will include many aspects of the Pilot Study. An early part of the Pilot Study was to develop a supportive learning environment for the midwives involved in the study. This supportive learning environment is best described as the first action cycle of the Midwives' Study.

This first action cycle assisted the participants to identify the information and education strategies that they felt they needed to develop confidence with CenteringPregnancy and group facilitation. The provision of further educational support enabled the midwives to engage in learning and development of their facilitation skills. It was this process of supported learning and reflection in the Pilot Study that triggered the development of the Action Research group to support the implementation of the CenteringPregnancy groups. The development of this Action Research group was in conjunction with the implementation of the CenteringPregnancy groups.

The following description is of the First Action Cycle and includes the three stages from the Pilot Study that is, (1) *Development*, (2) *Information* and (3) *Education*. These descriptions are essential, as they provide a background to the Midwives' Study. The fourth stage of the Midwives' Study, the *Implementation* stage will be discussed in the next section under the Action Cycles, Two to Ten.

(1) Development

During the first year (January 2006-January 2007) a literature review was undertaken (see Chapter Two). All of the written materials used for the USA CenteringPregnancy groups were rewritten for the Australian study during this stage. This included the documents used to provide information about the model for health-care professionals and pregnant women and the data collection documents used as part of the evaluation of the model. This was a lengthy but essential process for the development of the Australian CenteringPregnancy model. The process of rewriting both the facilitator's

manual and the woman's handbook was an opportunity to develop an in-depth understanding of the CenteringPregnancy model and the concepts of group leadership and facilitation. This also enabled me, as the researcher, to engage in the primary identification of these concepts surrounding group development and the subsequent development of strategies needed to support the midwives with the attainment of knowledge and skills to confidently lead and facilitate groups.

Once the rewriting the CenteringPregnancy documents were completed the surveys and checklists for the Australian study were then developed using the same structure as the USA studies. Appropriate terminology for an Australian setting was included. As a novice postgraduate student I undertook a literature search to enable the development of data collection tools that reflected a qualitative study that was both rigorous and trustworthy (Hansen, 2006) and met the evaluation requirements of CenteringPregnancy[14].

Pilot testing the data collection tools

After the literature search, a review process ascertained the content validity of the data collection tools (Creswell, 2002) for both studies. This was to ensure that these tools consistently measured what they were intended to measure and not something else (Sansone et al., 2004). The members of the Action Research group undertook the coordination of the pilot testing of the documents. The pilot testing was to determine the clarity of the questions, effectiveness of the instructions, completeness of the response sets, time required to complete the survey and the overall success of the tool (Burns & Grove, 2005; Hansen, 2006).

Two cohorts of women were invited to test the data collection materials for the Pilot Study. They were either pregnant or had recently given birth at one of the hospitals in the study. The initial cohort included six women. They were provided with copies of both surveys that were designed to collect data about the women's experiences of CenteringPregnancy. These two surveys were given out to the women during and after the course of the CenteringPregnancy groups. The antenatal survey was handed to

[14] Any organisation that undertakes the CenteringPregnancy model of group antenatal care is required to evaluate their model and give this data to CHI. This is to enable the development of a significant pool of data specific to the CenteringPregnancy model and to ensure fidelity of the model.

women at 36-38 weeks of pregnancy. The postnatal survey was posted to women when their babies were approximately eight weeks of age. Both terminology and content were amended after the advice from the women. These surveys were piloted a second time with a group of four women and these women found that no further changes had to be made.

Pilot testing of the tools to collect data for the Midwives' Study also took place during the *Development* stage. Five midwives who were employed at a variety of settings within SESIAHS were provided with copies of the surveys and checklists used to the collect the data about the experiences of the CenteringPregnancy group facilitators. None of these five midwives were engaged in the CenteringPregnancy Pilot Study but they had an insight into the CenteringPregnancy model because they had either attended the CenteringPregnancy seminar or the facilitator's workshop. These data collection tools included the attendance form and 'post-session' checklists that were completed by the midwives after each of the eight CenteringPregnancy group sessions, and two surveys. The surveys were to be given to the CenteringPregnancy facilitators before they commenced their first CenteringPregnancy group session and then after their eighth and last CenteringPregnancy group session.

The post session checklist was dramatically refined after this testing process. This refinement included two major changes. Firstly, there was a reduction in the number of questions about the midwives' experience to minimise the time to complete the form and, secondly, the group session attendance sheet was added to collect data on the women's attendance for the Pilot Study. The surveys were also rewritten. This included extra questions about the midwives' experience and changes in the terminology used. To complete this process, the Research Team also carried out a final review of these checklists and surveys. Only minor amendments were required. Examples of these data collection tools are included in tables 7, 10 and 11 that can be found in Chapter Five..

(2) Information

As part of the introduction to CenteringPregnancy, I was invited to attend the inaugural CenteringPregnancy conference in the USA. This conference was held in March 2006 and celebrated the first 10 years of CenteringPregnancy. During this visit, I was able to spend time with the founder of CenteringPregnancy, Adj Prof Schindler Rising and the

other key individuals involved with the CHI. These people were responsible for developing the CenteringPregnancy workshops and the evaluation requirements for CenteringPregnancy groups. Meeting with these people and gathering information about CenteringPregnancy enabled the development of the introduction of CenteringPregnancy to Australia and assisted with the initial development and provision of the first Australian 'facilitator's workshop' that is based on the USA 'Instructional' workshop.

In April 2006, Adj Prof Schindler Rising came to Australia to present CenteringPregnancy and to advise us on the establishment of the model of care. She was the keynote speaker at a one-day 'Antenatal Care' seminar held by UTS at the Royal Hospital for Women, which explored many current antenatal models of care and the issues involved with the provision of antenatal care in Australia. This seminar attracted health-care professionals from across Australia and was a great introduction to CenteringPregnancy. The first Australian CenteringPregnancy facilitator's workshop followed on from this seminar and was held at St George Hospital.

Individuals interested in being involved with CenteringPregnancy were invited from both Sutherland and St George Hospitals to attend the two-day facilitator's workshop. This included people interested in being facilitators, and those interested in providing management and education support. A total of 28 people attended with a mix of midwives, allied health-care professionals and managers from the two hospitals. It was an invigorating and entertaining two days that provided the group of health-care professionals with information and knowledge about the CenteringPregnancy model. From this larger group, three distinct groups evolved, the group of people wanting to be facilitators, the managers and key stakeholders, and the research advisers.

The group who wanted to be CenteringPregnancy facilitators evolved over the next few months into the Action Research group. This group included midwives and the social worker interested in being the facilitators for the initial CenteringPregnancy groups, the two chief investigators and me as the project/research midwife. The managers and key stakeholders became the Steering Committee. The research advisors became the

Research Committee. A detailed description of each of these groups was in the previous section.

After the initial seminar and workshop, a number of smaller information sessions were provided. These were tailored to meet the needs of many of the different staff at both hospitals. These information sessions comprised of meetings with the clerical staff from both antenatal clinics, specific educational forums for midwives, obstetric doctors, allied health-care and managers. The aim of these meetings was to provide staff with information about CenteringPregnancy antenatal group care and the Pilot Study. The two chief investigators and I also attended meetings with midwives and divisional managers from the Women's and Children's Division of the Central Network for SESIAHS.

(3) Education

Two more workshops were provided by SESIAHS to support the participants in group skills and facilitation. These follow-up workshops were developed as a result of the evaluations where midwives reflected that, although they felt comfortable with the concept of CenteringPregnancy, they still felt unprepared to undertake group antenatal care. This was because they had never led or facilitated groups before being involved with the CenteringPregnancy study. As a result, the research committee undertook the development of these subsequent workshops as one of its terms of reference.

The committee members were the three researchers and the SESIAHS programme coordinators for early parenting. A significant role of these programme coordinators included the development and provision of workshops for midwives and early childhood nurses undertaking group leadership and facilitation. Their specific knowledge of group skills and management of group dynamics were crucial as the research committee engaged with the development and provision of these workshops for the CenteringPregnancy facilitators. After each of these workshops, an evaluation was undertaken. The information from these evaluations informed the subsequent development strategies linked to the Action Research group.

Action Cycles, Two – Ten

(4) Implementation

As discussed earlier in this chapter, the next nine action cycles (two to ten) map out a process of problem solving and action for the *Implementation* of the CenteringPregnancy model. The next section describes these nine action cycles in greater depth. Figure 4 illustrates an example of one of the nine action cycles.

Description of the Cycles

The Action Research group meetings (facilitator meetings) took place before each of the CenteringPregnancy sessions. These two forums formed the action research cycles of the study. The first meeting of the facilitators was held in January 2007 and was the planning meeting for the entire schedule of the CenteringPregnancy groups. Subsequent facilitator meetings were scheduled to take place just prior to the eight scheduled CenteringPregnancy groups. Altogether, ten facilitator meetings took place with eight occurring before each of the CenteringPregnancy sessions. The tenth meeting, held in July 2007, followed the completed schedule of the sessions of the CenteringPregnancy groups and was the focus group designed to collect data from the midwives who were involved with the implementation of CenteringPregnancy.

On the weeks that each of the eight CenteringPregnancy sessions were held, a facilitator meeting took place on the Monday between 1-3 pm. Two CenteringPregnancy groups then followed on the Tuesday of the same week, one in the morning and one in the evening. The third group was held on the Thursday morning and the final two groups on Wednesday evening of the following week. A description of these action research cycles is provided in Table 4. The process of the facilitator's meeting and the CenteringPregnancy sessions aligned itself to the cyclical process of action research (Reason & Bradbury, 2006). The agenda for the facilitator's meeting was created to assist with this process of Plan - Act – Observe – Reflect (Reason & Bradbury, 2006; Somekh, 2006). Figure 4 illustrates the action research cycles and how the facilitator's meetings and the CenteringPregnancy groups combine.

Table 4: Descriptive table of action research cycle Two-Ten

Action Research Cycle	Scheduled Day, Date and Week/s	
	Action Research meeting Monday	**CenteringPregnancy session Tuesday - Friday**
	Planning meeting 22/1/07	
Cycle 2	5/3/07	**1st** 6/3/07 - 23/3/07
Cycle 3	2/4/07	**2nd** 3/4/07 - 20/4/07
Cycle 4	23/4/07	**3rd** 24/4/07 - 11/5/07
Cycle5	14/5/07	**4th** 15/5/07 - 1/6/07
Cycle 6	28/5/07	**5th** 29/5/07 - 8/6/07
Cycle 7	4/6/07	**6th** 12/6/07 - 22/6/07
Cycle 8	25/6/07	**7th** 26/6/07 - 6/7/07
Cycle 9	9/7/07	**8th** 10/7/07 - 20/7/07
Cycle 10	**Focus group** 23/7/07	

The terms of reference and the agenda of each of the facilitator meetings provided a framework for *Reflecting* and *Planning* at each of the CenteringPregnancy sessions. While the *Action* and *Observation* components of the action cycle were the CenteringPregnancy session with the pregnant women.

At the beginning of each meeting the previous CenteringPregnancy session was reviewed (reflected upon) by the facilitators. The facilitators would plan the next session based on their collective learning from the previous session. The researchers provided an ongoing range of educational activities and skills at every facilitator's meeting to assist midwives with the planning. Specific activities were also introduced in accordance with content of the next CenteringPregnancy session. For example, activities that enhanced discussion about labour and birth were provided at the facilitator's meeting before the CenteringPregnancy session where labour and birth were the focus.

The facilitator's meeting produced recorded minutes and field notes. The minutes provided data from each of the meetings and the field notes provided a record of the observations from the meetings. Both field notes and the collections of transcripts in the

form of minutes from meetings are recognised as appropriate data collection methods for research such as action research (Hansen, 2006). Each of the meetings was chaired by one of the researchers with the second researcher facilitating the meeting and the third writing field notes. Occasionally, only two researchers attended the meeting so then the roles of chairperson and group facilitator were combined.

After every meeting, the minutes were provided to each facilitator, either as a printed copy or by email. The facilitators were asked to accept the minutes at the beginning of the next meeting. Appropriate changes were included if necessary. Although this process of checking the minutes is an accepted formality of meetings, it was also used in this study to ensure an accurate portrayal of the meeting events was recorded. This process of checking of the minutes by the facilitators was included to ensure 'respondent validation' (Hansen, 2006) or used as a process of 'member checking' (Morse & Field, 1996). It is described as one of the important factors of qualitative data collection that has the potential to enhance the dependability or validity of data collected (Lincoln & Guba 1985; Morse, 1999; Pyett, 2003).

The minutes of the facilitator meeting also assisted the research team to structure learning activities to meet the needs of the midwives. The participants discussed their needs during each of the meetings and the research team would follow-up on these and provide appropriate information at the next meeting. The participants also reflected on the success of their CenteringPregnancy groups, shared knowledge and provided support to one another. This development of knowledge and confidence enabled the research team to progressively decrease their input in the meetings. As a result, the facilitators were able to structure their final CenteringPregnancy sessions with the majority of the input from their peers and not the research team.

Role-plays were an important group activity in the early facilitator meetings. They had been used as part of the learning structure of the CenteringPregnancy Instructional workshop and were an effective way to demonstrate group activities and facilitation skills. Role-plays have been used as an education tool for many years and are a constructive way of demonstrating skills that participants feel too uncomfortable to perform in front of others (van Ments, 1989). The inclusion of role-plays in educational

forums and activities also improve participation and active learning (Boud, Cohen, & Sampson, 2001). The researchers structured the first three facilitator meetings as a CenteringPregnancy group and engaged the midwives in a role play with the researchers acting as the facilitators and the midwives required to be the pregnant women. The aim of role-play scenarios in these meetings was to demonstrate what happened in a CenteringPregnancy group and the facilitator's role. The role-play was also used to demonstrate the use of appropriate language by the facilitators to encourage the CenteringPregnancy group members to discuss concepts and information between themselves and not rely on the facilitator's knowledge.

The next section of this chapter provides a description of the data collection and analysis methods used in the Midwives' Study.

Data Collection and Analysis

The collection and analysis of data related to the intent of collecting data to depict the midwives' experience and the changes they went through as part of the cyclical action research design of Plan-Act-Observe-Reflect (Burns & Grove, 2005). The purpose of this qualitative descriptive study was to collect date that illustrates the event that was under study (Sandelowski, 2000). It is also recognised that the description in qualitative descriptive studies includes the presentation of the facts of the case in everyday language. As a result, the analysis must be in accordance with the language used by the participants to describe their experience of the event.

The cyclical process of the studies provided a framework for the data collection and analysis that met the needs of the research aims and informed the action cycles (Reason & Bradbury, 2006). Action research is a process of collaborative inquiry and data analysis that guides the problem solving actions required to implement change (Reason & Bradbury, 2006). The action cycles of the Midwives' Study incorporated evaluation alongside inquiry and action as integral parts of the cyclical process (Hart & Bond, 1995). As a result, a combination of data collection and analysis methods were undertaken.

This comprehensive and sequential data collection approach ensured that the findings were consistent and not susceptible to conjecture (Morse, 1991). It is recognised that qualitative study designs that use only one method of data collection have the potential to be inherently weak (Creswell, 2002). It was also important to use each finding to develop the next process in the study and to present the data in everyday language (Sandelowski, 2000). For example, when the midwives described their fear of facilitating a group in the early workshop evaluations we were able to redirect the study design and implementation processes to include additional education and support. In addition, it was important to monitor and describe the progress of the implementation using observational and field notes, minutes from the meetings and the focus groups (Grbich, 2007).

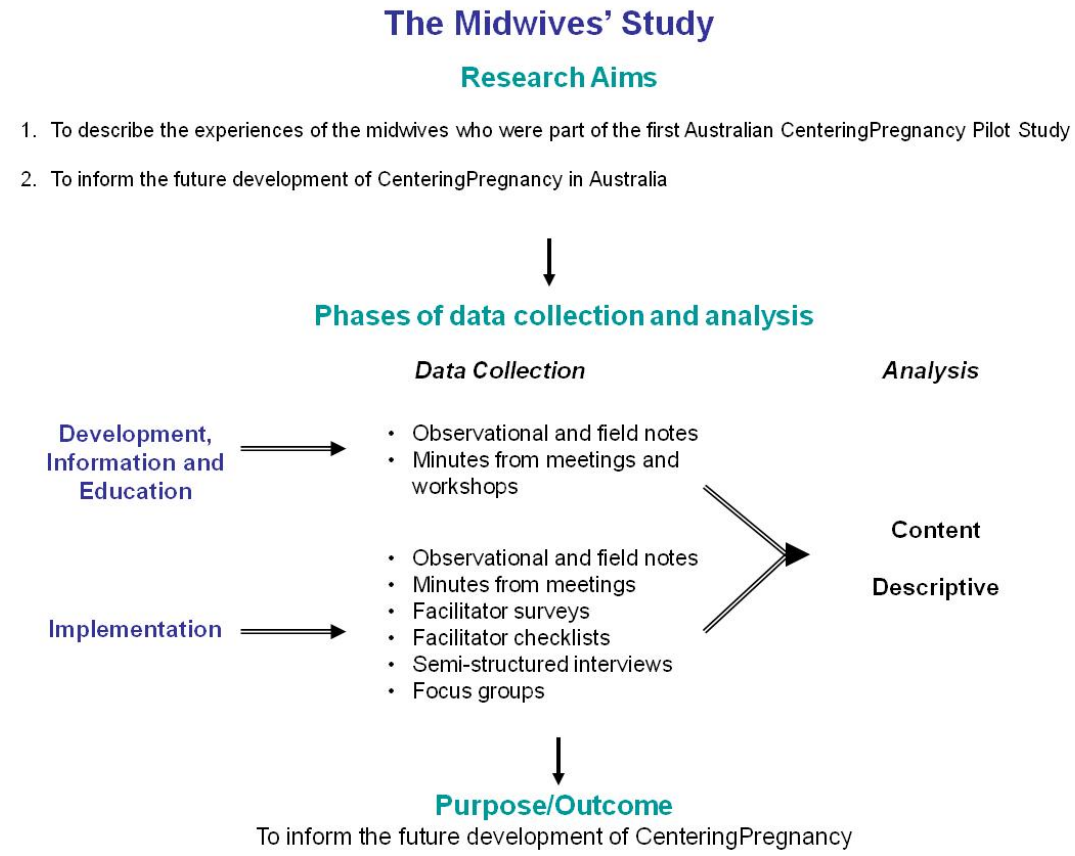
Validity

To enable the analysis to have credibility and dependability (Hansen, 2006) I have included in this document a description of how data were collected and analysed. Providing adequate description of the methods undertaken in any research process enables the reader to judge the dependability of the research (Hansen, 2006). Such processes have been described as ensuring validity within a qualitative method of research (Pyett, 2003) and are related to accuracy, relevance and reliability of measurement. Debate continues about the inclusion of the concept 'validity' in qualitative research, but many qualitative researchers support its relevance as an approach that ensures rigor (Lincoln & Guba 1985; Morse, 1999).

The reflexive nature of this study have enabled me to demonstrate the research process clearly so that it can be replicated by others in the future (Burns & Grove, 2005). Although this research would have been different if the research were undertaken in another setting or by another researcher it is important to emphasise the value of each individual piece of research. As stated by Robertson and Boyle (1984, p. 47) , *'reality is knowable in an infinite number of ways', therefore 'many equally valid descriptions are possible'*.

The next section describes the data collection and analysis methods. An illustration of all the data collection and analysis methods is included in Figure 5.

Figure 5: Data collection and analysis methods



Data Collection

Data were collected before, during and after the action research cycles to illustrate the implementation of the CenteringPregnancy model and to describe the process of change and skill development experienced by the midwives (Burns & Grove, 2005). A combination of quantitative and qualitative methods was used as action research typically uses both methods of data collection to describe the engagement and cooperation of the participants in the research (Hart & Bond, 1995). Using a mix of data sources provided information that informed the research aims and the experience of the implementation of CenteringPregnancy from different perspectives (Grbich, 2007).

Data were used in this study to obtain and describe in detail, the understandings and meanings constructed by the midwives as they undertook this health-focussed intervention (Grbich, 2007; Hansen, 2006). It has been described in many health related studies that descriptive research is a valuable approach to inform the development of health focussed interventions (Burns & Grove, 2005; Creswell, 2002). Rationale for the

use of each of these data collection methods is described briefly in Table 5. A discussion of these data collection methods is included in the next section.

Table 5: Data collection methods for the Midwives' Study and their rationale

Data collection Method	When / Who	Rationale
Two Surveys	➢ Provided to the CenteringPregnancy facilitators before (1) the first CenteringPregnancy group session and after (2) the last group session	➢ To gather data that represents the development and change in the participants' experience of facilitating the CenteringPregnancy groups ➢ Replicated from other CenteringPregnancy studies in the USA
Two focus groups	➢ (1) CenteringPregnancy facilitators ➢ (2) Birth Centre midwives (who chose not to undertake a CenteringPregnancy group)	➢ To obtain the perceptions of the participants in the study in a focused setting
Observational and field notes	➢ Continual process throughout the entire study and in particular during the Action Research group meetings	➢ To observe the participants involved. ➢ To view the development and change process associated with the implementation of CenteringPregnancy
Minutes from meeting	➢ Action Research group meeting ➢ Research committee meeting ➢ Steering committee	➢ To map out the development issues and the change associated with these as the CenteringPregnancy model was developed and implemented
Post session Checklists	➢ After each CenteringPregnancy group session	➢ To maintain a record of participants who attended the CenteringPregnancy groups and the facilitation skills used in each session
Evaluations from workshops	➢ After each of the educational workshops	➢ To describe the self-directed educational needs of the midwives as the study progressed

Surveys

The members of the Action Research group completed a self-reported survey on three occasions, twice before the commencement of the CenteringPregnancy groups and once

after. This survey was designed to explore the preconceptions and experiences of the participants (Burns & Grove, 2005). For the sake of parsimony, it was decided to use data from only two of these surveys: the survey completed by the midwives just prior to the commencement of the CenteringPregnancy groups and the one completed after the final CenteringPregnancy group. The data from the second pre-implementation survey was chosen for analysis as it represented the participants' perceptions closest to the commencement of the CenteringPregnancy groups. The post-implementation survey was completed close to the completion date of all the CenteringPregnancy groups and collected the participants' experiences of the groups.

The content of the surveys was essentially the same except the pre-implementation survey had three additional questions. These were at the beginning of the survey and collected demographic information and the participants' professional experience. Two of these additional questions were closed-ended and asked the participant about her experience as a midwife/health-care professional and her usual professional role. The third question asked if they had 'ever taught childbirth education classes?' and asked for clarification if their question was affirmative.

The 12 remaining questions in the pre-implementation survey were the same as in the post-implementation survey. These were divided into two sections. The first section had five questions that used a Likert scale. These questions explored the participants' beliefs and experiences of providing both individual and group antenatal care. In the second section, four open-ended questions explored the participants' views of CenteringPregnancy and their experience undertaking facilitation. Three questions then explored the participants' perception or experience of what they thought would occur/or what did occur in the group. These questions were closed and requested the midwife to allocate a percentage of time for specific activities in the group such as the physical examination or group discussion. Both surveys are included in Appendix 12 and 13.

The surveys were fielded before and after the implementation of CenteringPregnancy collected data to describe the development and change (Creswell, 2002) of facilitating CenteringPregnancy groups. These surveys were replicated from the CenteringPregnancy evaluation forms in the USA with the question content maintained.

The terminology was, however, modified to conform to the Australian health-care context and idiosyncrasies of Australian English. Replication of the same questions used from previous studies is important as it facilitates comparison of findings between the studies (Burns & Grove, 2005). CHI, the coordinating organisation for CenteringPregnancy, requires this fidelity to be applied in the evaluation process when any organisation undertakes CenteringPregnancy groups (Rising et al., 2004). Two recent CenteringPregnancy studies have used these evaluations were Klima et al. (2009) and Wedin, Molin, Crang and Elizabeth (2009). Findings collected from the two surveys are presented in Chapter Four.

Focus groups

Focus groups are an important method of data collection in Action Research (Hansen, 2006). Focus groups create a safe environment that facilitates interaction and discussion with the participants, and engages the participants in sharing of their experiences, attitudes and opinions (Hansen, 2006). This group dynamic can assist people to express and clarify their views in ways that are less likely to occur in one-to-one interviews (Burns & Grove, 2005). For these reasons, two focus groups were used to collect data that were not provided by the other methods in this study. These other methods had provided descriptive evidence of the development and implementation of the CenteringPregnancy model, but had not elicited any depth of the experience from the perspective of the midwives.

The first focus group was with the Action Research group members, the facilitators, who had successfully engaged with the development and implementation of the CenteringPregnancy groups. This focus group explored both the challenges of change implementation and the experience of facilitating and working with a group of women undertaking antenatal care. The second focus group was with the midwives from the Birth Centre who had engaged with the initial development, information and education phase of the larger study but did not undertake the implementation phase of CenteringPregnancy. This focus group was undertaken to gain insight into the barriers that inhibited change for this group.

Action Research Group Focus Group

The first focus group was with the facilitators. It was undertaken in July 2007 at St George Hospital in the tutorial room of one of the maternity wards. The intention was to make this focus group as accommodating as possible for the participants, as the research team valued the participants' work time and their commitment to the study. It is widely accepted that successful focus groups must also be provided in comfortable and safe environments (Hansen, 2006). The room was a familiar venue for the facilitators as they had spent half of their Action Research group meetings there. Food and cold drinks were also provided for the participants to celebrate their involvement with the study and to create a welcoming and sharing environment. The day and time chosen for this focus group was the same as the previous Action Research group meetings. This time chosen for the focus group was between shift times and allowed the participants to attend at the end of a morning shift or at the beginning of an afternoon shift.

The focus group was held two weeks after the last CenteringPregnancy group session. The timing of the focus group was important for two reasons. The first reason was to ensure that the participants would attend. The second reason was to provide a time close to the participants' experience of CenteringPregnancy so they could recall and reflect as effectively as possible (Finlay & Gough, 2003).

All eight participants from the Action Research group who became the lead or co-facilitators for the CenteringPregnancy groups were invited to the focus group. Six participants attended with one midwife unable to attend as she was on a night shift and the social worker unable to attend due to work commitments. This attendance reflected the commitment that the participants had exhibited during the entire study timeframe. The Associate Professor in Midwifery in SESIAHS facilitated the focus group. She was also aware of the study due to her academic position at the CMCFH and her involvement as one of my co-supervisors. She was chosen to facilitate, as her relationship with the midwives did not impact on the midwives either in the sense of her professional or academic position. This was to allow them to discuss their experience of CenteringPregnancy in a non-threatening environment (Burns & Grove, 2005; Hansen, 2006). She also had a relevant and working understanding of qualitative research methods and is skilled in the art of interviewing and facilitation of focus groups.

The questions that guided the focus group were constructed to enable the participants to reflect on their experience of facilitating the CenteringPregnancy groups. These questions covered four areas of interest:

- Participants' experiences of CenteringPregnancy
- Need for education/up-skilling to undertake CenteringPregnancy
- Issues with recruitment to CenteringPregnancy groups
- Challenges and benefits of facilitating CenteringPregnancy groups

The questions that were designed for the focus group included:

- Why were you interested in being involved in the CenteringPregnancy study?
- How did you find your experience with learning to facilitate?
- Working in the CenteringPregnancy model – what are your views feelings/comments?
- Having done an entire CenteringPregnancy group what are your recommendations for future practice?

The facilitator started the focus group with a brief explanation of the areas of interest and wrote the questions up on the whiteboard. By doing this she was able to guide the focus group and ensure that the process of enquiry directed the discussions. The findings from this focus group are presented in Chapter Four.

Birth Centre Midwives Focus Group

During the early stages of the Pilot Study, the research team were aware of the difficulties faced by the Birth Centre midwives in relation to CenteringPregnancy. The midwives were initially interested in CenteringPregnancy and invested time and energy in the development, information and education phases of the study. However, after two unsuccessful attempts of recruitment they chose not to implement the model. It was these topics and experiences that guided the development of this second focus group.

The rationale for arranging this as a separate focus group was to gain information about their decision not to engage with CenteringPregnancy. This was seen as relevant as the midwives had different experiences and perceptions with the CenteringPregnancy

model than those who ultimately became facilitators. It is recognised that participants in focus groups with similar experiences create more open discussion about their unique experience as a particular group (Burns & Grove, 2005). It was necessary to undertake separate focus groups to draw out specific data from each group. This was in an attempt to discover why one group of midwives were able to implement CenteringPregnancy and not the other.

The focus group was undertaken in June 2007 and included the four midwives from the Birth Centre who had engaged in early stages of the study and one other midwife who had commenced working in the Birth Centre after the CenteringPregnancy Pilot Study commenced. The facilitator of the focus group was one of the research team. The facilitator has experience with both quantitative and qualitative research and is experienced with focus groups. I attended as an observer to learn the processes needed to undertake facilitation of a focus group.

The focus group facilitator initially outlined the need for more information about the issues and challenges associated with the development of CenteringPregnancy. She emphasised the need for this information to inform both the Midwives' Study and the Pilot Study. At the beginning of the focus group, we discussed my presence at the focus group and she sought permission for me to be a part of the group. The midwives all agreed for me to be present. This was important as my relationship with the Birth Centre midwives included not only my role as the CenteringPregnancy project midwife and Masters Student but also in a peer relationship. The findings from this focus group are presented in Chapter Four.

Field Notes of observation and personal reflection

Observation is described as unobtrusive method of data collection that involves a combination of watching, listening and recording of social activity (Hansen, 2006). My situation, as both as an 'insider' and 'outsider' in the study allowed me to observe during the educational workshops, all the meetings and one focus group. This participatory role also enabled me to build rapport with the midwives that assisted me to gain an understanding of the issues and changes that occurred as part of the Pilot Study (Creswell, 2002).

The observations were documented as informal field notes. These provided data that described the course of the Pilot Study. Changes that were noted in these field notes and the observations provided both a 'memory trigger' and a chronological description of the study events. These field notes provided both a personal interpretation and an experience of the study events that assisted with the final analysis of the data. Consequently, these notes do not appear separately in the findings. This is because data such as these field notes do not provide enough information by themselves, but are a supportive method that provide insight and understanding (Creswell, 2002; Hansen, 2006). An exemplar of these field notes is included in Appendix 14.

Minutes from meetings

The minutes from all of the meetings are best described as additional field notes that map out the study events. These included the development issues and concerns and the required individual and organisational changes that were implemented. These data were included as reference points in the study description and assisted with the final analysis. A template used for the facilitator meeting is included in Appendix 15.

Post session Checklists

After each of the eight CenteringPregnancy group sessions, the midwives completed short checklists. These checklists maintained a thorough and accurate record of participants who attended the CenteringPregnancy groups, which was an important tool for the Pilot Study. They also included eight questions that were relevant to the Midwives' Study. These questions explored the group skills the participants undertook, their perceived highlights and issues with each of the group sessions. Likert scales were used to ascertain the participants' perceptions of how facilitative or didactic they were, how involved they felt the women were and their confidence levels with facilitation of each of the group sessions. A copy of this checklist is included in Appendix 11.

Evaluations from workshops

The participants attended a combination of workshops as part of their involvement with the study. These included the CenteringPregnancy workshop and the extra group skills and facilitation workshops that were developed to meet the needs of the participants in regards to group facilitation. At the completion of each of these workshops the participants completed evaluation forms specific to these workshops. The data collected from these evaluation forms provided information that described the participant's concerns about not knowing enough about group facilitation. This specific workshop evaluation information enabled the development of these extra educational workshops and informed the Action Research approach of the study. A template used for the evaluation form for the Instructional/Introductory workshop is included in Appendix 7.

Data analysis

The action research method meant an early and constant process of data analysis was undertaken (Reason & Bradbury, 2006). Two major data collection and analysis phases were undertaken that reflected the two major stages of the study described in the previous chapter. These included the *Development*, *Information* and *Education* stages of the study and included data from observations, minutes from meetings, and evaluations from educational workshops. The next major stage of the study was the *Implementation* stage that involved the midwives commencing facilitation of the CenteringPregnancy groups and the supportive systems put in place to support the midwives. Data included from this stage were from surveys, observational and field notes, minutes from Action Research group meetings and focus groups.

The analysis of the surveys and focus groups occurred at separate stages. The findings from these two data sets were then combined to provide the overall findings. Both qualitative and quantitative data were collected and analysed. Content analysis was used to analyse the qualitative data from the surveys and focus groups. The quantitative data from the surveys were analysed using simple descriptive statistics.

Content analysis

The three open-ended questions from the surveys were analysed together using qualitative content analysis as described by Graneheim and Lundman (2004) and Grbich (2007). This is a process of systematic coding and categorising that was used to explore large amounts of text. This systematic process was used to ensure the process of coding was transparent and ensured trustworthiness (credibility, dependability and transferability) throughout the steps of the research procedure. Qualitative research approaches use inductive analysis which means that categories, themes and patterns come from the data and are not imposed prior to data collection (Janesick, 1994).

The process I undertook involved a systematic reducing of text. This involved reading the data and finding similar concepts within it and grouping these together, as described by Graneheim and Lundman (2004). It is recognised that no one system of analysis is best with qualitative descriptive research (Janesick, 1994). Ultimately the choice of

analysis will rest with the researcher. The researcher must find the best way to tell the story and to convince the reader. Staying close to the data is the most powerful means of telling the story (Janesick, 1994; Lincoln & Guba 1985). Initially I reduced the statements by combining comments with similar use of words and statements, removing statements or words that were unrelated to the questions or did not add to the overall statements. These reduced statements were then grouped together when they had a similar meaning attached. These groups of meaning statements became a meaning unit. Meaning units with common concepts were then grouped together and became codes. Further analysis of the codes resulted in categories and eventually a theme.

This process of analysis was used to explore the trends and relationships between the two surveys and then within each survey to ascertain a description of the participants' experience before and after the implementation process. The comments in both surveys reflected the challenges the midwives had with undertaking the facilitator role. Issues around confidence in the model and the anxiety with the process of facilitation were evident throughout the process of implementation. Recruitment issues and the lack of time to develop and implement a new model were apparent in the first survey but were less of a concern by the time the facilitators completed their final survey after the final CenteringPregnancy group session.

A similar process of analysis was undertaken for the focus groups (Graneheim & Lundman, 2004). I transcribed the audio files from the focus groups and then commenced the analysis over a period of weeks. During this time I became familiar with the comments shared on these two occasions. I found meaning with comments provided by the participants and pulled these similar meanings into meaning units and continually reduced the text with all the comments. As this process continued I was able to bring the meaning units together into codes, categories and themes. Once, each of the focus groups had been analysed, I combined the themes to explore if any relationships were evident between the two sets. During this time I spoke to my supervisors to ensure that the analysis process was robust. This involved demonstrating the process of reduction of the text and describing the development of the categories and themes.

Descriptive Statistics

The quantitative data from the surveys were analysed descriptively to provide a specific portrayal of some aspects of the midwives' experiences of facilitating CenteringPregnancy groups (Burns & Grove, 2005). CenteringPregnancy studies undertaken, to date, have provided minimal information about the issues that are associated with the implementation of this model or the experiences of novice facilitators.

The data obtained from the surveys included data from closed questions and questions that used the Likert scale. The Likert scale was a range from negative to neutral to positive comments, whereas the closed questions were yes or no answers. The data was initially entered into an Excel spread-sheet and then analysed using the Excel programme and simple calculations. The use of two surveys to collect data from the midwives before and after the implementation of a CenteringPregnancy group was to explore the midwives' experience and to gather information about their development as facilitators.

The findings are presented in Chapter Four.

Chapter Four: FINDINGS

This chapter presents the findings of the Midwives' Study. This chapter is divided into two sections. The first section describes the findings from the surveys and the second section describes the findings from the focus groups. Each section is in turn divided into the separate findings from each of the different methods used. The reason for dividing the findings was to provide a clear account of each method to assist with overall interpretation of the study that is provided in the discussion chapter.

Surveys

The findings from the surveys provide a description of the facilitators of the CenteringPregnancy Pilot Study. The pre-implementation and post-implementation surveys are named as the *Before* and *After* surveys in the next section. The *Before* survey was completed at the Action Research group meeting just prior to the commencement of the CenteringPregnancy groups. The *After* survey was completed at the Action Research group meeting after the final CenteringPregnancy group session.

Seven out of the eight possible participants completed the *Before* survey. Of these, three had experience of group facilitation. The other participant's experience with groups was through formal antenatal education programmes, commonly known as 'childbirth classes'. The social worker was a perinatal mental health-care worker who had no antenatal care experience but had eight years of experience as an antenatal educator and group leader and facilitator. The surveys were de-identified, but certain responses from the social worker were able to be compared with the midwife participants with the initial three questions in the *Before* survey. All other responses were pooled and not presented by professional group.

The midwife participants involved in the study had a range of professional experience. This was from one year of postgraduate experience to 15 years with most having more than seven years of midwifery experience. All the midwives were employed in antenatal care on a part-time or full-time basis and stated they have recent and up-to-date knowledge on antenatal care. Two of the midwives held clinical educator positions and these roles required them to support student midwives in all areas of midwifery:

antenatal, intrapartum and postnatal. One of the midwives was based in the antenatal clinic on a part time basis. Two of the four remaining midwives worked between the antenatal clinic and the delivery suite and provided antenatal care in a midwives clinic. The two remaining midwives provided continuity of midwifery care in a team midwifery programme known as STOMP (Homer et al., 2001). The data from the first survey are presented in Table 6.

The Midwives' Study included a small number of participants and it is prudent to be cautious with making definite assumptions about the participants or generalising their experience. The survey findings can only provide data on the experiences of the participants involved in this one small study.

Table 6: Demographic data from the participants - *Before* survey

Item	**Answers**	
Years of experience providing antenatal care	**Number of participants**	**Years of experience**
	1	1 - 3
	4	4 – 10
	1	> 10
	1	N/A (social worker)
Usual professional role	**Number of participants**	**Area of employment**
	6 midwives	Work in either • Midwifery Education • Continuity of care • Antenatal clinic
	1 social worker	Perinatal mental health
Experience in childbirth education classes	**Number of participants**	**Description of experience**
	3	• Not specified • Birthing classes • Antenatal and Childbirth classes

Eight participants completed the *After* survey. This survey did not include the first three questions about prior work experience. In general, the participants were more positive about their experience as a CenteringPregnancy facilitator after the experiences rather than before.

The next section describes the perceptions and experiences of the participants. Each question is discussed separately. A description of the first five questions is included in Table 7.

Table 7: Comparison between before and after questions that used a Likert scale

Question	Answer	Before n=7	After n=8
When you compare the care you provide with individual antenatal appointments, the antenatal care in CenteringPregnancy group will be/was?	'Much worse' to 'Somewhat worse'	0	0
	Equal to	2	1
	'Somewhat better' to 'Much better'	5	7
Compared to individual antenatal appointments, I think antenatal care in groups will be/was?	'Much less rewarding' to 'Somewhat less rewarding'	0	0
	As rewarding	1	0
	'Somewhat more rewarding' to 'Much more rewarding'	6	8
Compared to the women I have seen in individual antenatal appointments, women in group antenatal care will be/was?	'Much less ready for labour' to ' Somewhat less ready for labour'	0	0
	Equally ready for labour	1	0
	'Somewhat more ready for labour' to 'Much more ready for labour'	6	8
Compared to the women I have seen in individual antenatal appointments, women in group antenatal care will be/was?	'Much less ready for parenting' to 'Somewhat less ready for parenting'	0	0
	Equally ready for parenting	2	2
	'Somewhat more ready for parenting' to 'Much more ready for parenting'	5	6
How important do you think it will be to provide care in a group model in the future?	'Not at all important' to 'Somewhat unimportant'	0	0
	Neither important or unimportant	1	1
	'Somewhat important' to 'Very important'	6	7

Some changes in the response to 'group care' can be seen between the two surveys, although caution should be made due to the small numbers. A greater positive response was noted after the experience of the CenteringPregnancy group sessions.

Before the groups commenced, the participants indicated a positive response to the concept of group-facilitated care and believed it would be a 'rewarding' experience. When asked to compare antenatal care in groups to individual visits the participants rated the idea as positive in both surveys. After facilitating the CenteringPregnancy groups, they were more positive about the idea of group antenatal care. A high rating on the positive end of the scale was indicated by all eight participants in the *After* survey noting it as a 'somewhat more rewarding' to a 'much more rewarding' experience.

Participants in the *Before* survey indicated that they perceived CenteringPregnancy to be a model of group antenatal care that would assist the women to be more prepared for labour and parenting. There were strong positive responses towards preparation for labour in the *After* survey. The responses for the 'preparation for parenting' question were not as positive, as two neutral responses were noted in both surveys.

Two questions explored the benefits of CenteringPregnancy as a model of antenatal care to enhance women's antenatal education/preparation is presented in (Table 8). The findings suggest that participants were more confident about the benefits of CenteringPregnancy after their experience of it.

Table 8: Analysis of the questions that explore CenteringPregnancy as an antenatal education/preparation model

Question	Answer	Before n=7	After n=8
Compared to the women I have seen in individual antenatal appointments, women in group antenatal care will be/was?	Much less ready for labour	0	0
	Somewhat less ready for labour	0	0
	Equally ready for labour	1	0
	Somewhat more ready for labour	5	4
	Much more ready for labour	1	4
Compared to the women I have seen in individual antenatal appointments, women in group antenatal care will be/was?	Much less ready for parenting	0	0
	Somewhat less ready for parenting	0	0
	Equally ready for parenting	2	2
	Somewhat more ready for parenting	4	2
	Much more ready for parenting	1	4

Most participants envisaged group antenatal care as being 'somewhat' to 'very important'. The positive responses displayed in these surveys may be because the participants were all self-nominated and could see the value and importance of the model. There was consensus that a model of group antenatal care such as CenteringPregnancy enhances antenatal care provision. Comments from the open-ended questions in the *Before* and *After* surveys included statements such as *'improves support'* and *'community and networking'*. One comment typified this belief in support and networking by stating that CenteringPregnancy is:

> *'Important for women building social contacts while being pregnant, which will provide [them with] long-term support after the birth and decrease the need for postnatal care and the loneliness for the women'.*

The participants were invited to comment on the benefit of widespread implementation with the first of the open-ended questions '*Can you see the benefit of this model for widespread implementation?'*. Participants responded in the affirmative in both surveys. CenteringPregnancy was described as a rewarding way to work and decreased the daily repetition of antenatal care. One comment that typified this belief was:

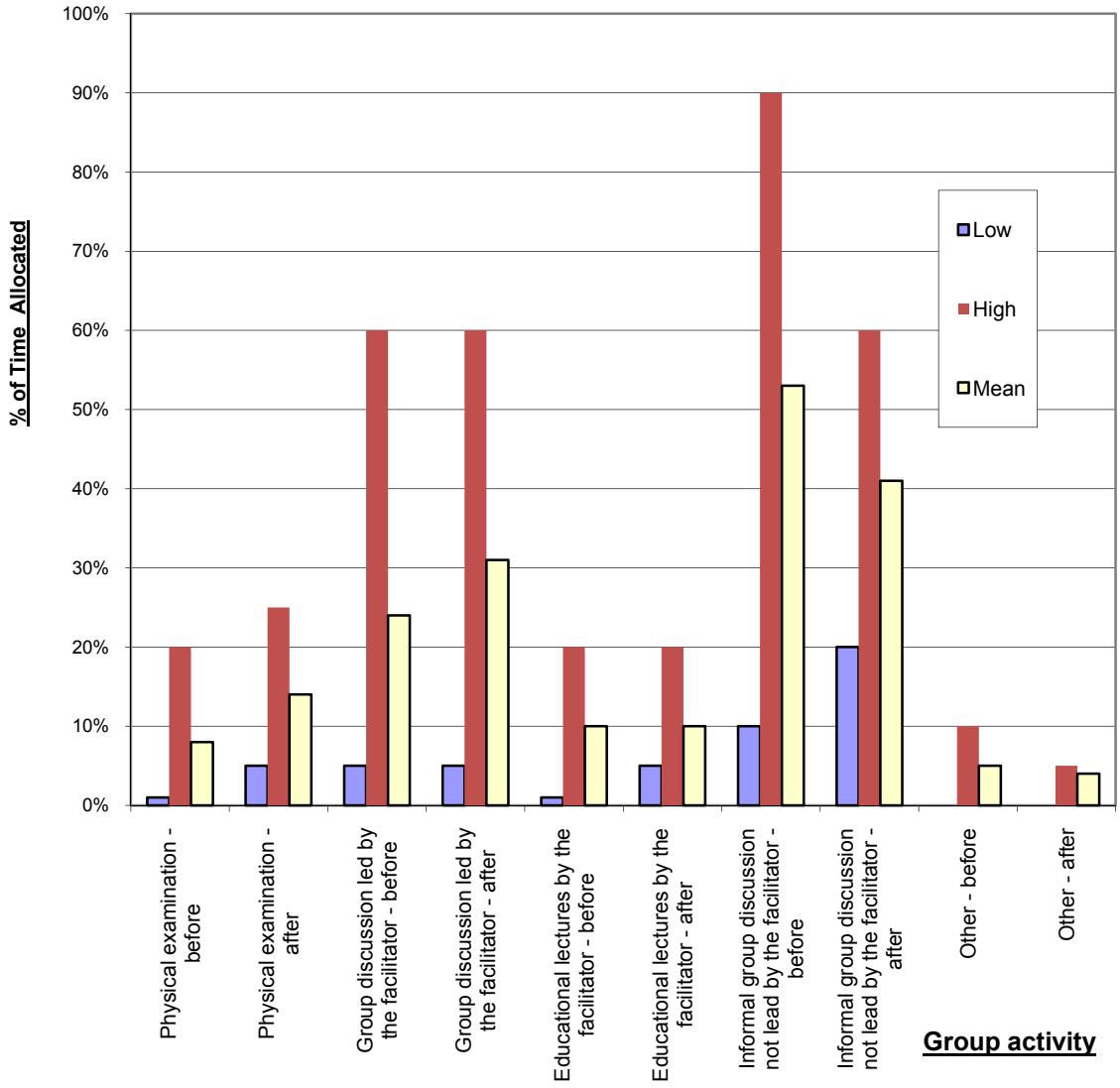
> *'This will decrease the amount of time you repeat yourself, allows women to realise things are normal as they can see other women's experience of this'.*

Many other written comments reflected the benefit for both the women and the midwives. Two examples were, *'Definite advantages for those that choose this mode, networking, sharing experiences and gaining support'*, and *'more efficient use of midwifery resources and an opportunity to collaborate with other relevant health professionals'*.

Even though the answers to the question exploring widespread implementation of CenteringPregnancy were answered in the affirmative, negative comments were included. Such comments showed that participants generally believed in the concept of antenatal group care, but that they felt they had experienced an increased work involved with the development of a new model. One such comment was that it *'Really benefits the women, but was a very tiring process for the midwife and there also was difficulties with rostering and it was hard to incorporate into a team'*. It was also acknowledged that CenteringPregnancy '*Would not suit every woman'*.

The allocation of session time to specific antenatal group activities by the facilitators was explored both before and after the implementation of CenteringPregnancy. The participants were asked to allocate the amount of time as a percentage to specific group activities. To analyse this I chose the highest and lowest percentage responses for each question and then calculated the mean of these two responses. A comparison could then be made between the surveys. Findings from these calculations are shown in Table 9.

Table 9: Calculation of the allocation of time to group activities



To explore if the participants' perception of leading groups had changed from before to after the implementation the *Before* and *After* surveys were compared. The only mean percentage of time that was the same between the two surveys was for the *educational lectures by the facilitator* (10%). Both the allocated mean times for *physical examination* and *group discussion led by the facilitator* were greater in the *After* survey. The mean estimated time for *physical examination* in the *After* was 14% compared to 8% in *Before* survey. The mean time for the *group discussion led by the facilitator* was 31% with the *After* survey compared 24% in the *Before* survey. The only group activity that scored less in the *After* survey was *informal group discussion not lead by the*

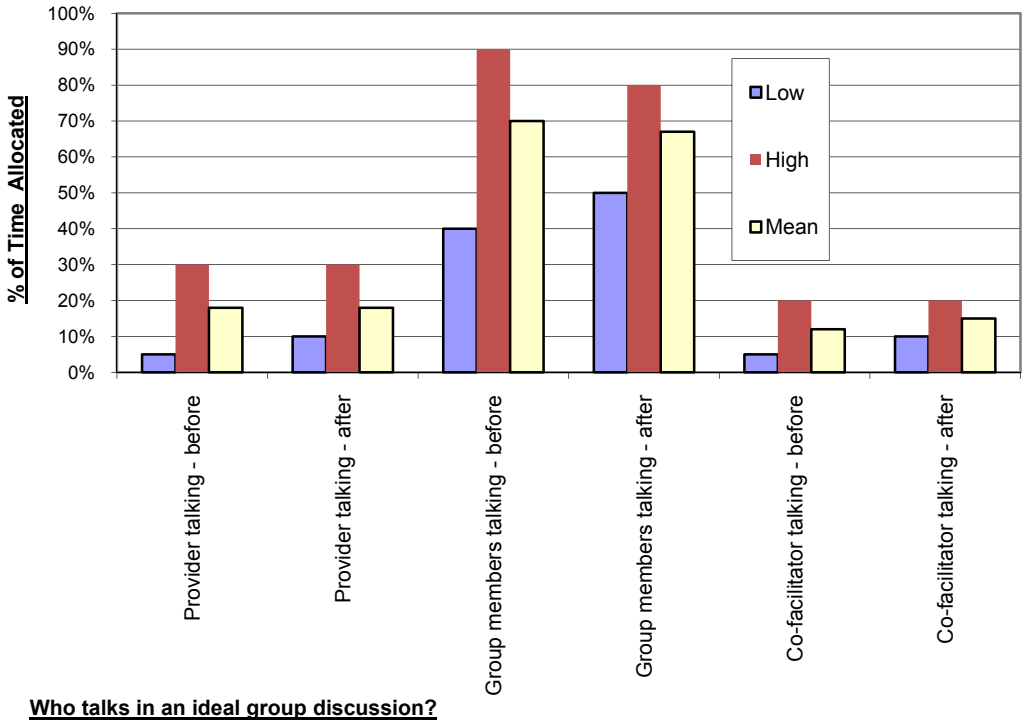
facilitator at an average 41% in the *After* survey compared to 53% for the *Before* survey.

In the *Before* survey, the inexperienced facilitators perceived that the majority of the CenteringPregnancy group session time would be an *informal discussion not led by the facilitator* with a mean estimate of 53% of group time allocated to this. The next significant part of the group indicated by the facilitators was *group discussion led by the facilitator* with a mean estimate of 24% of group time allocated by the facilitators. *Educational lectures* and *physical examination* were allocated the lesser amounts of time with means estimates of 10% and 8% respectively in the *Before* survey

The reality of actually facilitating a group was different to the initial perceptions, particularly with undertaking the physical examinations and with facilitating the group discussions. The challenges with being a CenteringPregnancy facilitator included needing confidence with group facilitation. Two examples were. *'developing confidence in facilitating groups'* and *'at the beginning, throwing things back to the group – not talking too much myself'*.

The comparison between the *Before* and *After* surveys to the question that asked the participants to allocate a percentage of time to '*Who would talk in the ideal group discussion?'* did not show any differences. Statements from the *Before* survey such as, *'learning new skills of group work'* and the *After* survey, '*gaining confidence to facilitate a group'*, appear to reflect the facilitators' knowledge and understanding of group-facilitated discussions. A summary of this numerical data to this question is included in Table 10.

Table 10: A before and after comparison of the allocated time in an ideal group discussion



The implementation of the CenteringPregnancy groups required a commitment from the management of the organisation and the facilitators. The midwives were competent in antenatal care provision, but not with group facilitation and they required support and training with this. Much of the initial education and support for these new facilitators was the provision of group facilitation and skills workshops. This was exhibited by the amount of hours the midwives documented in their surveys for training. On average, each respondent undertook a combined total of between 30-40 hours of training with the Action Research component being on top of this education component. The Action Research groups were well attended by the midwives and social worker and enabled the new facilitators to gather more group facilitation skills and knowledge. A description of the training hours for the new facilitators is included in Table 11.

Table 11: Description of time spent training to become facilitator

Question	Hours of training (Action Research group meeting hours not included)	Number of participants Before n=7	After n=8
How many hours of training have you attended for CenteringPregnancy?	Unsure		1
	15 - 30	4	1
	30 - 50	1	4
	50 - 60	2	2

The analysis of the three open-ended questions at the end of the surveys revealed the highlights and challenges of the CenteringPregnancy experience. The participants described their experience as positive and this was related to them learning new skills, the experience of developing relationships between each other and the women, and observing the women develop self-confidence and supportive relationships. Two comments were that it was about, '*getting to know the women'* and *'watching the women get to know each other and support of each other'*. CenteringPregnancy was about sharing with colleagues as they engaged with a new and exciting opportunity that enabled them to learn new skills with like-minded and respected colleagues. One comment exemplified the benefits of their involvement in the group was, '*watching my co-facilitator develop'*. Collaboration and partnerships were also strong concepts highlighted by the participants. Examples of comments from these questions were, '*gaining confidence to facilitate a group'* and *'being a part of something new and exciting'*.

Finally the overall analysis of the open-ended questions demonstrated that, while the development and implementation of a new model like CenteringPregnancy was difficult and time consuming, the opportunities that it provided were positive. A copy of the content analysis of the qualitative data is included in Appendix 16. The following section describes the findings from the focus groups.

Focus groups

The Action Research focus group and the Birth Centre midwives focus group were analysed using content analysis (Graneheim & Lundman, 2004; Grbich, 2007). The findings from these two focus groups are presented here.

Action Research group

The findings from the Action Research group focus group resulted in seven codes and one major theme. This following section discusses the codes and principal theme in more detail.

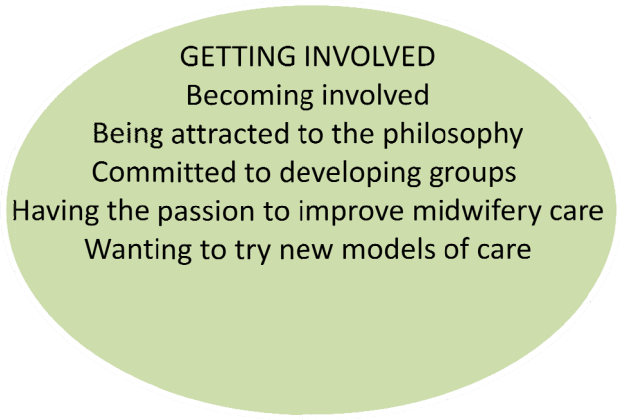
Building and maintaining relationships

The principal theme was 'Building and maintaining relationships' that developed from seven codes. These codes were (1) 'Getting involved', (2) 'Getting prepared', (3) 'Giving it a go', (4) 'Becoming a facilitator', (5) 'Meeting together', (6) 'Trusting CenteringPregnancy' and (7) 'Creating communities and connections'. The theme and the codes describe a pattern of development and change that was experienced by the midwives who undertook the facilitation of the CenteringPregnancy groups in the Australian Pilot Study. These findings demonstrated the journey the midwives took as they engaged with the unfamiliar skills of group leadership and group facilitation, and the subsequent development of confidence they gained during this study. It also revealed how the midwives valued the relationships they developed with the women they cared for and the colleagues they worked with during the study.

To assist with the description of these findings a variety of quotes from the focus group analysis will be used to present the findings and explain the codes. Words in square brackets indicate added words to assist the meaning of the quote. As discussed earlier in the Methods Chapter, all of the quotes from the focus group were condensed into meaning units and then categorised prior to being coded (Graneheim & Lundman, 2004). The codes and categories developed from the analysis are described in the following chapter and reflect the transformational impact of the implementation of a new model of care such as CenteringPregnancy. A concept map is provided as Figure 8.

Figure 6: Concept map of the theme and codes from the Action Research group's focus group

(1) Getting involved



The first code was 'Getting involved'. Throughout the focus group the midwives revealed both positive and negative feelings about becoming involved with CenteringPregnancy. Many comments were linked to the reasons why they enrolled in the study. These comments highlighted both the individual's interest and that of the

organisation with implementing the CenteringPregnancy model. This shared interest in the CenteringPregnancy model revealed a desire to develop this model of antenatal care.

Becoming involved

At commencement of this study, midwives from the two hospitals were invited to take on the role of developing and implementing CenteringPregnancy. This invitation was initiated with the first Australian CenteringPregnancy workshop held at St George hospital. Many of the midwives who became facilitators for the study had attended this workshop. Attendance at the workshop was either voluntary or by direction of hospital management. The group of midwives who attended voluntarily had prior knowledge of CenteringPregnancy, as they were interested in the concept of 'group' antenatal care. While the second and larger group of midwives, who had no prior interest or knowledge of 'group' antenatal care, were directed to attend by hospital management. One of the midwives commented about the voluntary nature of becoming involved:

> *'...when we were invited to go and hear Sharon [Schindler Rising] speak from America. After that presentation I thought this sounds really exciting. So, yeah I think excitement, a little bit of apprehensive about pioneering it though,'*

Another midwife echoed this sentiment explaining her desire to become involved:

> *'...and when this concept came up we thought it was worth it. And then when it became the research project then I wanted to be involved because we had sort of been working on it for a while…'*

The majority of comments from the midwives regarding their initial involvement with the CenteringPregnancy study were linked to a non-voluntary process. Two typical comments included:

> *'I wouldn't say we initially volunteered for it. We were sent to the presentation by Sharon [Schindler Rising] - the two-day workshop. We volunteered after that. So initially, it was who could be rostered on. And we were sent off to it. We had no understanding what we going off to at all. And then there was a bit of*

scepticism on my part, as to whether the women would participate and whether it would work. That's changed since.'

'... basically another team member was rostered on to come to the programme which she did come, but she did not want to be a facilitator. In order to have a facilitator at ..., I was the only one left that had basically been to the programme and [had] seen Sharon's thing [the workshop]. So I went. I thought OK I can talk! Everyone knows that. So, I said well I guess it is up to me. I probably felt obligated because the other person didn't feel confident to be able run a group.'

Being attracted to the philosophy

Once the midwives had gained an understanding of CenteringPregnancy they appeared to engage with it positively and were attracted to the philosophy. Some of the midwives immediately identified with the philosophy of CenteringPregnancy group care. These midwives appeared to be extremely proactive with their involvement in the study. They had the capacity to be able to envisage the potential benefits of a facilitated group situation where people shared, discussed and supported each other through a comparable life event. One midwife said she was not fearful of CenteringPregnancy and thought of it as a wonderful concept:

'Didn't feel scared I knew that it was very new and could see, could imagine that it would be a rich concept having done antenatal clinics for a long time. There had to have been value in women coming together as a group. How I don't know.'

Another midwife's comment emphasised that CenteringPregnancy as a model of group care was a contemporary initiative for the improvement of antenatal care and that the introduction and development of it appeared appropriate as a model of group antenatal care:

'... yeah ... we were looking at sort open groups that the women would facilitate the discussion and Sharon's [Schindler Rising] model [CenteringPregnancy] sort of worked along that like that as well. I was pretty keen that we give it a go.

I don't think I wasn't necessarily scared, like I was just like…, a bit excited to see if it would work as well…'

Even when they were being critical about the study, or their experience of CenteringPregnancy, they were still able to enlist confidence and certainty that it was a valuable model of care:

'Yeah I'd say give it a go as well, like yeah to trust the process and for the women they really would enjoy like meeting with other women and it gives them a lot more time with other women and a midwife to focus on what they want to learn out of their pregnancy.'

Committed to developing groups

There was commitment from the midwives and the organisations to the development of 'group' antenatal care at both of the hospitals involved in the study. These hospitals provided a number of venues and catering for the CenteringPregnancy workshops. They also provided financial support to the midwives who attended these. As part of the midwives commitment to the study they were required to attend the initial CenteringPregnancy workshops and the subsequent facilitator meetings. One midwife articulated her individual commitment to CenteringPregnancy when she said:

'Well I was pleased to have the opportunity to go to the workshop, to the days, I really didn't know what it was about either, but I know that groups works and I know women probably together would … it would work.'

Having the passion to improve midwifery care

The midwives expressed a passion to improve the way in which antenatal care is provided to enhance the experiences for both the women and themselves. One midwife highlighted the benefits of CenteringPregnancy as a model of antenatal care for both the women and the midwives:

'…it is a wonderful opportunity to meet other women who are doing the same thing at the same time going through like a life crisis at the same time and to have the potential to learn from one another and to make lifelong friends…a

wonderful opportunity to be able to develop your skills in a group you know it was mind blowing for me just how much I could just sit back and allow the group to run itself…'

Other statements highlighted the benefits of group care and the passion and desire of the midwives to see it succeed. For example:

'They actually said that. 'In the end it wasn't about the education it was about the connection'. … So that really pleased me …'

'Well I know I wanted it to work…'

Wanting to try new models of care

The midwives saw the concept of group antenatal care as an attractive new model of care that had the potential to improve traditional antenatal care:

'… I knew that it was very new and could see, could imagine that it would be a rich concept having done antenatal clinics for a long time.'

CenteringPregnancy also appealed to the individual midwives and the organisation as a new model of 'group' antenatal care that they collectively believed was worth trying. For example:

'… we were working on the group concept before the Centering … And we were sort of looking at maybe doing some groups, not all groups as antenatal care, and when this concept came up we thought it was worth it. And then when it became the research project then I wanted to be involved because we had sort of been working on it for a while. So I sort of believed it would work.'

(2) Getting prepared

The next process in the development and implementation of the CenteringPregnancy groups was for the midwives to 'get prepared'. This included planning and developing the groups and ensuring that the midwives became proficient group leaders and facilitators. The midwives discussed this experience of 'getting prepared' from different angles. The following categories reveal the efforts that were undertaken by the midwives and the organisation to 'get prepared' and the factors that helped or hindered.

Having information

Information appeared to be a key factor in the midwives' experience. The timing and manner in which the information was provided was important to the midwives' experience. The midwives' level of confidence with becoming facilitators was linked closely to the provision of information. The midwives expressed that in the early stages of the study more information would have been beneficial:

> *'Initially I think, a little bit more explanation about what you are actually getting into would be [have been] good, because I really didn't have any idea.'*

Once the midwives had attended the initial workshops and facilitator meetings they reported being less worried. The information provided in both of these forums appeared to alleviate their concerns and fears. One midwife described this:

> *'And I didn't know what to expect ... until we went to the initial meeting. I suppose I could see it would work well running it in a group fashion [facilitated group style].'*

These regular facilitator meetings, that the midwives attended, provided the midwives with information about group dynamics and skills. This knowledge enabled them to feel more at ease with this new technique of providing antenatal care and also developed their confidence with it. One midwife discussed the benefit of attending these facilitator meetings and how these meetings helped the midwives understand effective group dynamics. For example:

> *'I think it was understanding, it was understanding group dynamics, because ... was the only other person in the group who had done any of that sort of group dynamic work'*

Working with the logistics

The midwives raised issues that they believed hindered the implementation of the CenteringPregnancy. A significant logistical issue was the protracted delays during the early stages of the study. These delays impacted heavily on the implementation of the groups and the midwife participants. For example:

> *'I think there was quite a gap between when we got the information sessions and recruiting and in actually starting the programme and I think that [it] was too long. I think that was one of the things that people got sick of hearing Centering all the time and didn't know what it was about'. And I think other people in the organisation didn't think that was very good and said 'Oh you're actually starting it now?!'*

Even though this logistical delay impacted heavily on the study and the midwives there was still an air of optimism about the project. As one midwife said*, 'I think that was a real problem. So next time I think we recruit and you know and get onto it'.* As a result it appeared to be a lesson learnt and not a reason not to continue with CenteringPregnancy care.

Another logistical issue that was highlighted by the midwives was the size and dimensions of the rooms used for the groups. It was not until the first group session had been completed that issues of room size and dimension were noted to impact on the

group process. One midwife's experience highlighted the difficulties with her entire CenteringPregnancy group because she was unable to alter her room or move it to another venue. She said she needed to do her antenatal assessments in the corridor as, *'It's the only place we had - off to the side, but in the corridor'*. When asked about this concern she said she had, *'No idea what to do'*.

Another midwife described how they were able to resolve this logistical issue after their first group:

> *'So the first session was the most difficult, because it was cold and 18 people sitting around in a room and it was huge and the room didn't work. So after the first session we knew we had to move the venue and then once we moved into a bigger venue it just was great.'*

(3) Giving it a go

The next code 'giving it a go', reflected the air of optimism and hope evident throughout the focus group. For all their initial reservations about their involvement in the study and with CenteringPregnancy the midwives reflected on their experience positively. This code explores the issues that the midwives encountered and the solutions they believed would permit CenteringPregnancy to be undertaken by themselves and others in the future. The midwives used the term 'give it a go' frequently. One such quote was:

'It was worth giving it a go. Yeah I was willing to try, because you can't knock something if you haven't done it.'

Feeling overwhelmed

An initial and significant point raised by the midwives who undertook the development of the CenteringPregnancy groups and the group facilitation was that they felt overwhelmed. Even the midwives who 'volunteered' for the study described a feeling of being overwhelmed in the early days of the study. They found the benefits of group care were considerable, but that the process of development and implementation of this new model of care required a great deal of work, time and commitment from them as individuals. One midwife summed this up:

'Yeah, volunteering the amount of time and energy that would be expected. I didn't appreciate. That was sort of overwhelming.'

Being challenged with recruiting

Recruitment was also an issue that the majority of the midwives struggled with. The midwives commented on the women's reasons for not enrolling in the CenteringPregnancy groups. These reasons were, *'It was a lack of interest [and] it was a time thing. There were [also] a lot of child care issues.'* Although challenged by the process of recruitment the midwives were able to offer positive comments on how to improve recruitment for future groups. One midwife said:

'I think if I was going to actually recruit a woman [to CenteringPregnancy] I would say it is a great way of actually gaining all their knowledge, developing relationships and a sense of community …'

Feeling resistance from colleagues

The midwives found the resistance displayed by their colleagues as confronting and frustrating and a negative experience. This was particularly noticeable with the recruitment of women to the CenteringPregnancy groups. The new facilitators also found they had little support from their colleagues in the group sessions when the co-facilitator's role was undertaken by someone who was not a member of the Action

Research group. They believed that their colleagues' inability to assist with the development and implementation of the model ultimately affected the success of the Pilot Study for them and their individual clinical areas.

The team midwives commented that the midwives in their team who did not undertake CenteringPregnancy resisted the development and implementation of CenteringPregnancy. They believed their unsupportive colleagues justified their lack of enthusiasm towards CenteringPregnancy by saying it restricted the care they could give to the women who were not doing the CenteringPregnancy groups. This was illustrated by such comments as, *'They didn't like that, because it was blocking out appointments that they wanted to give to other women and they really resisted that'*. The midwives who undertook CenteringPregnancy also believed their colleagues thought the CenteringPregnancy groups would be extra work. One midwife said, *'... our colleagues, they just saw it as, well they had to work back'*.

The midwives also commented that the resistance they experienced from their colleagues often decreased once these colleagues had 'given it a go' and experienced a CenteringPregnancy group session. One midwife who had her colleagues rotate into the co-facilitator role said that, '*after they did a group, their like this is fabulous, totally changed their mind set'*. This enthusiasm for CenteringPregnancy was also voiced during the focus group when one midwife stated that if she spoke to her colleagues she would say, *'It's not so scary once you know them, it just like talking to friends'*.

Structuring the sessions

The structure of all the eight sessions for the groups in the CenteringPregnancy study was designed during the development stage of the study. They were based on the model from the USA, but also had input from the midwives who were planning to facilitate. When the midwives reflected on the session structure after their group experiences they were concerned about the content of the sessions and the need for this to be changed. One midwife stated:

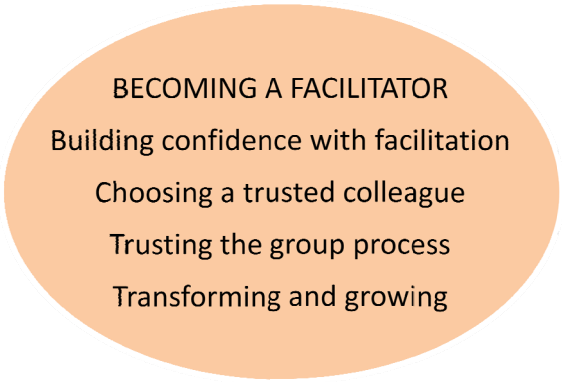
> *'I think the beginning sessions didn't have enough content, I know they are get to know you sessions, but talking about diet for a whole two hours was very*

difficult and I think we needed more birth session. The birth sessions were where the women talked and we ran over time and I think we need more sessions designated to birth.'

Another midwife offered more constructive criticism but still implied that the session structure needed to be changed before 'giving it a go' next time:

'I think we could look at it a bit differently and sort of look at the changes in the dynamics in their relationships or the lifestyle. Yeah maybe do it in a different way, not just the focus was on nutrition and minor disorders of pregnancy.'

(4) Becoming a facilitator



This next code, 'becoming a facilitator', represents the initial and significant reservation voiced by the midwives about their role as the facilitator for the CenteringPregnancy groups. The midwives noted this reservation mostly during the initial development stage of the study and before they had experienced leading their own group:

'It was quite stilted and difficult and I was really scared that I wouldn't have enough information, as in enough prepared in case they didn't talk, and how was I going to do it. And just practising being a facilitator was very difficult.'

In these early days the midwives' principal concern was with the impact of CenteringPregnancy on their antenatal skills. As CenteringPregnancy facilitators they were expected to undertake a new approach to antenatal care that waived the one on one ritual of antenatal assessment that they were proud of and comfortable with. The reason

for this concern was that the antenatal assessment component of CenteringPregnancy was expected to be a quick and succinct process that was given three minutes in the group room outside the group circle. All of the midwives had been trained in traditional antenatal assessment that involved an abdominal palpation, fundal height measurement and a fetal heart auscultation followed by a discussion between the midwife and the pregnant woman. This combination of clinical skill and one-to-one communication was the mainstay of the antenatal appointment. The midwives were skilled in this manner of antenatal care provision and were very proud of their skills. Their participation in the study as novice facilitators was initially challenging as stated by one midwife:

> *'... my issues about the group initially were that I had this thing about this three minute check, and, you know, I take great pride in palpation and listening for hearts and getting the position right ... and sharing the information...'*

The midwives also noted that their role as a competent, effective and successful midwife was built on the fundamental principle of effective one-to-one communication with individual women and not with groups of women. The main concept with 'group' care is that a group discussion is generated, involves all the women and is facilitated by the midwife who is leading the group. As a result the midwives found the initial process of group facilitation extremely confronting. For example:

> *'... dealing with a big group of people. Never done anything like that before. I'm fine with one-on-one, but yeah get a group together and I go to jelly.'*

Building confidence with facilitation

The midwives felt that they initially built up their confidence with group facilitation by sharing the process of learning with a colleague. Once the midwives had experienced group facilitation in a supportive environment they then began to build up their individual confidence:

> *'... yeah I was involved in two groups, and in the second group the other person wasn't very confident at all and it was fantastic to see her just grow…'*

With their confidence developed they were then able to undertake group facilitation without the assistance of a trusted colleague. For example:

> *'I feel much more confident now, yeah where I said before I was scared, stupid and now I know, like if ... wasn't there, which she wasn't for one week and I stepped up to the plate quite ok.'*

It was also evident that the midwives' confidence with group facilitation was reliant on an effective and supportive working relationship between the two facilitators who lead the CenteringPregnancy groups. The facilitators who experienced their CenteringPregnancy groups without a consistent co-facilitator struggled to gain confidence with group facilitation. One midwife in particular highlighted that being the, *'sole facilitator' was difficult 'because my colleagues would not always actively participate'*. A midwife who had to discontinue her role as the regular co-facilitator for this one group appreciated the role of the co-facilitator and supported the lead facilitator whenever she was involved. The 'sole facilitator' midwife stated:

> *'... occasionally there was one other midwife ...who was trained [to facilitate] who couldn't do it. When she was in the group it worked so much better, because she understood how to do it, so I had someone else to take some of the load and she would help negotiate those dry spots in conversations but when she wasn't there or there was someone who wasn't particularly interested it was really hard.'*

Choosing a trusted colleague

It appeared to be important for the midwives to feel secure with this new experience of group antenatal care before they started it. To do this they commented that they chose a trusted colleague to work with in their CenteringPregnancy group. The trust they felt with their chosen colleagues was strongly communicated throughout the focus group. As one midwife said, *'I knew who I was going to work with would be OK. She would help me. So I was happy to give it a go.'*.

Trusting the group process

The midwives gained an understanding of successful facilitation when they had experienced groups where the women lead the groups or group discussions themselves. As new facilitators they found it difficult to 'trust the process' of the group. They were worried that the women would not talk at all or that they would not discuss issues about their pregnancies and health in an informative or helpful way. Two typical comments were:

> *'It was quite stilted and difficult and I was really scared that I wouldn't have enough information, as in enough prepared in case they didn't talk, and how was I going to do it. And just practising being a facilitator was very difficult.'*

> *'…it is hard to learn that facilitator role, like you know, sometimes you did just want to give the answer, but if you waited, then the women themselves would give the response.'*

The midwives reflected about this concept of trusting the process of the group. It was apparent from their comments that as they gained experience with group leadership and facilitation they had more faith in the flow of the group discussions. One midwife aptly described this experience of group facilitation as, '*You know, sitting around 'gas bagging*[15]*' for two hours with some wonderful women'*. The midwives gained confidence and trust in the group process after they experienced each of the eight group sessions with their own CenteringPregnancy group. They experienced the development or maturity of their own group and were able to reflect openly about individual situations in these groups. One such positive reflection was:

> *'You know you would have this set agenda for the day and you'd think and you would throw it out to the group and if you just trusted the group someone would come up with the response at the right time and the timing was just so incredible.'*

[15] Gas bagging is a slang term to denote chatting together.

Importantly, they had also gained an understanding of when they needed to intervene if the group discussion was stilted or harmful to the group:

> *'I think it was understanding, it was understanding group dynamics ... Coz you end up being more didactic the drier, the less they speak the more didactic you end up being. And you are trying not to be, and yet you're having to be sometimes.'*

Transforming and growing

The process of change and growth was apparent from the midwives comments. They felt it as a personal experience as described by one midwife, '*... from something I thought was going to be so hard it was easy in the end. So!'*. Plus they observed how their fellow midwife facilitator grew throughout the eight CenteringPregnancy group sessions that they facilitated together. One midwife described how her colleague developed through her experience of the CenteringPregnancy study.

> *'She just grew. I mean it was just really fantastic and she would do anything now. I mean she is a really good midwife and has a lot of knowledge, but she really just blossomed'.*

This sense of achievement appeared to be more evident with the midwives who had shared the experience of leading and facilitating a group with a specific colleague. This involvement for the two midwives had been from the beginning of the study and they had experienced the education workshops, facilitator meetings and the majority of their group sessions together. While the midwives who had not had the consistent support of just one facilitator colleague appeared to have a less transformational experience. One of these midwives stated that, *'I found it very difficult to facilitate,* because *'in some ways I was the sole facilitator and my colleagues would not always actively participate'*. She also said, *'I found it quite exhausting sometimes'*.

Other midwives described other changes that they had noticed during their journey of CenteringPregnancy. One midwife reflected on how much she had personally changed. She used the amount of preparation she needed to do prior to each group session as an example:

'It was so funny [when] I looked at, I was preparing my last group and I looked at my first group so I've got this large folder of everything that I have done and my first group you know [I had] nice typed out computer printout and [for] my last group I had a bit of paper I had ripped out of my diary.'

Another midwife reflected on how the experience of CenteringPregnancy had changed her perspectives on antenatal care provision:

'... it did change the way you look at your practice and I mean I guess we try to say we practice in a woman centred [way]. Anyway it certainly gives them that opportunity to discuss things that are of interest to them…'

Another midwife also stated how CenteringPregnancy had changed her philosophy on how childbirth education is provided. She said, *'I've actually had a turnaround with my philosophy with birth education, it has completely changed'.* These educational benefits of CenteringPregnancy groups were also reinforced when one midwife commented about the educational component of CenteringPregnancy. She said:

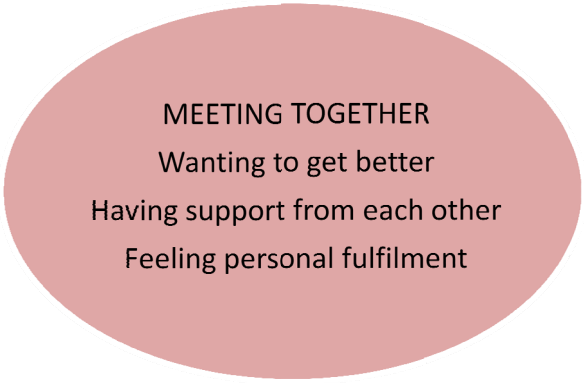
'I didn't feel as though they got very much at all about childbirth education, but they thought they did and they said they actually got more than when they went to the child birth classes. And I thought we didn't do a birth video, we didn't do this and we didn't do that…'

A discussion that compared CenteringPregnancy to traditional antenatal care followed on from this discussion about the personal and philosophical changes the midwives experienced with CenteringPregnancy. They discussed that the women had appeared to gain significantly more confidence during the group sessions than what they experienced with traditional antenatal care. They said that it did not appear to relate to the educational or assessment components of CenteringPregnancy. One midwife commented that:

'Well it has demonstrated to me the impact of the group for the woman and the group and the community. That really we are not doing them a service by doing

a 20 minute check in a clinic on one on one, because you're not really… I mean it is safe practice but that's about it …'.

(5) Meeting together



The process of the midwives 'meeting together' regularly throughout the study characterises this next code. The midwives attended a combination of workshops that included the CenteringPregnancy workshop and local group skills workshops on two occasions. They then met intensively during the implementation phase of the study at the structured facilitators meetings and with their fellow facilitators on an individual basis. Their experience of meeting together was discussed extensively during the focus group. The following categories placed an emphasis on this process of regularly coming together to discuss, share and plan for each group session.

Wanting to get better

As a collective of individuals they met together regularly. This process of meeting together appeared to enhance their individual desires of wanting to improve the way that they provided antenatal care and facilitated groups. Such individual desires were expressed by comments such as the following two quotes:

'I'd heard the outcomes were so wonderful in America but I'm thinking I hope we can repeat them here.'

'I had this agenda that they would get everything out of the group and that they wouldn't have to do childbirth classes and in fact that was their outcomes. They

actually said that. 'In the end it wasn't about the education it was about the connection'. So that really pleased me,'

The midwives realised that their collective commitment enabled them to provide successful CenteringPregnancy groups and to become better facilitators. One midwife commented about how she would meet with her co-facilitator and debrief after every session and try to improve:

'... and I would get together after each group ... and we would go through each session, check it and say what [do] you think. We [would] sort of debrief a bit ... after? It was a bit time consuming, but it's just, I had this need that we wanted to make sure we were dotting our i's and crossing our t's, because it was new and we were doing something a bit differently.'

The value of meeting together ran throughout the comments about their experiences and included working with their fellow facilitators. This midwife expressed how important it was to work consistently with her co-facilitator:

'... and I worked together and throughout all the group we got better at knowing when you know the other one would jump in…'

Whereas another midwife highlighted how her experience of working without a consistent co-facilitator meant that she met regularly with the lead facilitator from another group. They met together to plan and follow-up collectively for their own groups. She said that, *'because we were solely responsible for our groups for our team, we used to work together to plan our things'.*

One of the key aims of the facilitators meetings was to assist the midwives with developing their skills as group facilitators. This meant that, particularly during the early meetings, effective facilitation was discussed and demonstrated frequently. The midwives were also asked to reflect on their experiences of leading the groups in each of these facilitator meetings. With this direction and support of the meetings the midwives were able to engage with facilitation and become better at it. One midwife described this experience:

'As far as facilitation, it was drummed into us at the beginning that it was to be a facilitative process and that we had to sort of throw it back to the group. So we actually got really good at it. Didn't we …?'

Another midwife described that for an individual to become a competent facilitator they needed to be involved with a CenteringPregnancy group on a regular basis. Her belief was that the supportive learning provided by the study may not necessarily be needed for the development of all new CenteringPregnancy groups or facilitators, but that regular attendance at a CenteringPregnancy group was necessary for the new facilitator to learn. Her comment was:

'I think your model does show that you know that if someone was trained you could train a co-facilitator on if they kept coming and you may not need all those sort of planning sessions, but you need some sort of prep time.'

Having support from each other

The midwives who were involved with the study were obligated to attend these facilitator meetings. These meetings provided them with information and ideas about group facilitation. The midwives described their experience of these meetings as a supportive process. This perceived support appeared to boost the midwives' confidence and enabled them to develop new skills to use in the CenteringPregnancy groups:

'I guess we always had a planning session before we ran the groups or like the fortnight before the groups were sort of due to run. So that sort of helped us to sort of have some, I guess, strategies and things planned we could do in the groups…'

The midwives commented about their experiences with the facilitator meetings in both a positive and negative light. The role-play scenarios and the practising of group activities did appear to challenge the midwives, but helped then learn from and support each other. One midwife said, *'so sometimes we would practice the activities with Ali [Teate], like we would role-play. And some days it was a bit, I didn't like role-playing sometimes.'* This sentiment was echoed by another midwife who said, *'I hated that'* .

Their reflection of these practise sessions revealed that although they disliked the role-plays and structured practise sessions they did gain confidence from them. This self-confidence enhanced their experience with leading and facilitating the CenteringPregnancy groups:

> *'But, I mean it is a good way to learn. Like it was sort of ... you know we would have a go on the mat, we could sort of see how, you know how a group would interact. We wrote up questions and things like that, so…'*

The midwives' description of the overall experience of all of the facilitator meetings revealed their personal and professional growth as facilitators. The process of the meetings was initially formal, but as the midwives gained confidence they were able to share with each other in a supportive fashion. This was comparable to the supportive principles of a CenteringPregnancy group session. One midwife said:

> *'It was formal in the beginning, it was quite formal. And then as we became more relaxed with the sessions we sort of shared one another's experiences with one another…'*

Group activities were provided in these meetings. These activities enabled the midwives to have extra strategies if they were needed in the group. The midwives found these activities supportive and helpful, allowing them to enter each group session feeling prepared, for example:

> *'... and Ali [Teate] had set activities or whatever. But quite often we would not use those in our group, but we knew they were there as a backup. Quite often women would run the group, so we didn't really need those handouts and so forth, so. But it was nice to have them just in case…'*

Feeling personal fulfilment

The midwives' sense of feeling personal fulfilment was evident throughout the focus group. A sense of triumph was evident as one midwife stated: *'Yeah, yeah and I can do it you know and I feel pretty good about it'.*

This sense of personal fulfilment with their experience with group facilitation also appeared to have a much greater impact on the midwives than just the development of their professional skills. One midwife indicated that her involvement with the study had enabled her to have greater confidence with herself as an individual and as a midwife:

> *'So I have gained more confidence in myself and in my practice and in what I actually do know and I don't doubt myself anymore.'*

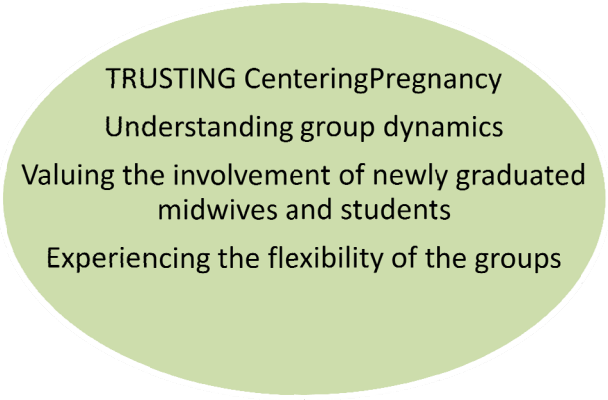
Such personal satisfaction with their own achievements with facilitation also mirrored their satisfaction with their experience of seeing their group communicating effectively and working together. For example:

> *'A wonderful opportunity to be able to develop your skills in a group, you know. It was mind-blowing for me just how much I could just sit back and allow the group to run itself and there was no pressure, it was just easy to facilitate this group…'*

A sense of conviction about CenteringPregnancy was illustrated by the midwives pride in how effective the groups were. They revelled in the relationships they observed between the women in the groups and the relationships they themselves gained from this new way of working:

> *'It was easy. They've created relationships, you've created a relationship with them and we had fun you know we laughed'.*

(6) Trusting CenteringPregnancy



The next code is 'trusting CenteringPregnancy'. It was evident that the midwives had gained confidence and trust with their peers and the other people they worked with in the CenteringPregnancy groups. They had also developed a trust in the process of facilitated antenatal group care. One midwife explained that she had greater confidence with the model after hearing from the women about how effective they believed CenteringPregnancy was as an educational model of care:

> *'... having done childbirth classes you feel as though, I didn't feel as though they got very much at all about childbirth education, but they thought they did and they said they actually got more than when they went to the child birth classes'.*

The midwives realised, from their experience with CenteringPregnancy, that successful group facilitation underpins the success of a CenteringPregnancy group. One midwife commented how they had learnt to trust this process of facilitation as CenteringPregnancy facilitators:

> *'They did talk about learning from each other. It is hard to learn that facilitator role, sometimes you did just want to give the answer, but if you waited, then the women themselves would give the response'.*

Understanding group dynamics

The midwives found, from their experiences of facilitating the CenteringPregnancy group, that a successful group required two facilitators who understood group dynamics*:*

> *'I think it was understanding group dynamics, because ... was the only other person in the group who had done any of that sort of group dynamic work. Having talked about it [together] it was understanding the group dynamics and understanding that your role is not to teach'.*

Valuing the involvement of newly graduated midwives and students

The midwives described that the capacity of an individual to become a successful CenteringPregnancy facilitator was not linked to the individual being competent with antenatal skills such as those displayed by an experienced midwife. They highlighted that students and newly graduated midwives, could successfully undertake facilitation. What they saw as important was the individual's knowledge of understanding how effective groups worked. The comments of one midwife highlighted this capacity of the student midwife she worked with in her CenteringPregnancy group:

> *'She'd been used to using groups and I was quite impressed with her level of knowledge and she read the group well'.*

Another midwife echoed this sentiment when she said, *'I think it was great. They were all B Mid*[16] *students and it worked well.'*

The midwives also described how they valued the involvement of the student midwives in the study. The skills that the students brought from other areas of their lives that did not pertain to midwifery appeared to be valued in this new group model of antenatal care. For example:

> *' It was actually the student who were really great recruiters and there was one who recruited most of them. They were very valuable for that.'*

[16] B Mid is a shortened title for a bachelor of Midwifery student in Australia

The midwives' also commented that '*the women valued the student being in the group'* as well.

The newly graduated midwife involved with the study voiced her own experience with CenteringPregnancy. She said that her involvement with CenteringPregnancy had enabled her to overcome her initial fears about leading an antenatal group. She was able to reflect that this experience had not only increased her confidence as a group facilitator, but that it had also increased her confidence with being a midwife:

> *'Yes! Like I said I was petrified, I think my words were, at the beginning were I was 'absolutely petrified'. Yeah I feel so much more confident as a midwife [and] in my practice more. I have learnt so much more. I actually also didn't realise how much I really knew as well. I think I really doubted myself in what I actually did know. The fact was that it didn't matter how junior I was to the rest of my colleagues who were also a part of it. Yeah you are still a midwife and you have become a facilitator of a group and that it has worked so well.'*

Experiencing the flexibility of the groups

The midwives' experience with CenteringPregnancy also exhibited that the model was flexible enough for the individual groups to dictate who else became involved in the group. The midwives at one of the hospitals described that the women were able to choose between attending a morning or an evening group. These two groups of women then dictated whether they as a group would be women only or that their group would involve partners or support people.

> *'At [one hospital] they had a choice; you know the day group it was women only and the evening was couples. So the couples wanted their partners to be there, it was very much this is what we are doing. So we had no problems there with them being uncomfortable with partners there'*

This ability of the CenteringPregnancy groups to be flexible was also described by other midwives. They said, *'We kept asking our group do you want your partners or something next week and it was nuh [no], nuh, nuh. They just wanted it totally women only didn't they?!'*

(7) Creating communities and connections

The last code 'creating communities and connections' describes how the midwives described their experience of CenteringPregnancy as a worthwhile journey. They felt they gained much from this experience as individuals and as a collective. Their experience of CenteringPregnancy enabled them to develop stronger relationships with both the peers they worked with and the women whom they cared for as part of the study. They also described the benefits of this model for students, new graduates and the women and their partners.

Finding rewards and creating relationships

The midwives described the overall enjoyment that they gained from facilitating the CenteringPregnancy groups. One facilitator commented that, *'It was rewarding I just enjoyed it immensely'*. The capacity of CenteringPregnancy to be rewarding for the midwives appeared to be related to the meaningful relationships they made. One such comment was that, '*It was easy. They've created relationships, you've created a relationship with them and we had fun you know we laughed*'.

Other comments by the midwives reinforced that CenteringPregnancy is a relationship-based model. The major benefits of the group, that the midwives described, were both the relationships that they experienced as the facilitator and the networks and relationships that they witnessed develop between the women. The midwives saw the antenatal assessment component of CenteringPregnancy as a less significant element. They felt that it was the process of the group and the development of the connection between the women that made the difference not the antenatal assessment. One quote sums this up:

'I mean it just reinforced that the clinical side is just so miniscule compared to the dynamics of what the women are going to gain from one another and it really is about the community and connection. And the antenatal check is just so small, you can't share what they share in that it group in a 20 minute one to one antenatal visit. You do get to know the woman, but you don't get to know the rest of the family, or the partner or what she is going to go home to or how she is going to parent this child and you touch on it every session in this group for 8 sessions. So it is just huge.'

One of the midwives who was used to providing continuity of care throughout the pregnancy, birth and postnatal period found that her connection with the women was not dependant on her being at the birth. Her comment was:

'I still think the antenatal period is still very important. I have also found that even though I haven't been there for their birth experience I still have that connection with them'.

The midwives found that the experience of CenteringPregnancy was amazing in regards to the connection they experienced as well as them witnessing the connection they saw happening with the women. They believed that, *'In the end it wasn't about the education it was about the connection'.* This insight provided them with the belief *'that connection is really important isn't it and that's what they remember!'*

In conclusion the midwives revealed that it was the time and space that the group environment provided women that was important, not their midwifery skills or knowledge:

'And maybe that is actually even more value than really what we did. The time gave them time to develop a network, which is something that women really struggle with in our community.'

Birth Centre midwives

The codes and categories developed from the analysis of the Birth Centre midwives focus group are described in the following section. The midwives from the Birth Centre who initially engaged with the CenteringPregnancy Pilot Study during the Development, Information and Education stages did not go on to implement CenteringPregnancy as discussed in the Methods chapter. As a result they were invited to a focus group to obtain further data to inform the Midwives' Study.

The codes obtained from this analysis of the focus group reflect the conflicting ideals felt by the midwives. These were that they struggled with the implementation of a new model of care that they felt did not meet the needs of the women they cared for or themselves. The CenteringPregnancy Pilot Study was also undertaken at a time when the Birth Centre midwives felt they had few resources to undertake change. Their staffing levels were low and the Area Health was struggling with financial restrictions.

Why do I want to do that, I get what I want already

The main theme gained from this focus group was that 'Why do I want to do that, I get what I want already'. The midwives believed that CenteringPregnancy enhanced antenatal care for women who did not experience their care in a continuity of care model like they offered in the Birth Centre. This theme was underpinned by three codes that expressed the rationale of Birth Centre midwives for not undertaking CenteringPregnancy. These were:

- 'The women would benefit and the midwives too',
- 'We lacked knowledge, time and staff to implement CenteringPregnancy' and
- 'CenteringPregnancy conflicted with the relationship-based model of caseload midwifery'.

These codes revealed that the midwives believed that the relationships that they developed with the women they cared for in a caseload[17] model of midwifery care

[17] Caseload midwifery is a term used to describe a group of midwives who work together is a supportive work environment. Each individual midwife is responsible for the care of an agreed number of women each year. This midwife will provide midwifery care to the woman throughout her pregnancy, birth and the postnatal period. These midwives rely on each other for support with the management and administration responsibilities of their work area, their individual workloads and on-call demands.

would not be enhanced with the introduction of CenteringPregnancy group antenatal care in the Birth Centre. As one midwife stated:

> *'I think they get such a good service from us here. For example, one woman said when I was trying to recruit, 'Why do I want to do that, I get what I want from you guys already'. This is especially true if they have been here before.'*

The women would benefit and the midwives too

The midwives acknowledged that CenteringPregnancy was an effective antenatal care model that had benefits for both women and midwives. They believed it provided enhanced continuity of care and learning for the women. They also saw it as a better way of working for midwives who worked in standard antenatal care models. In particular they saw the benefits of CenteringPregnancy for sites that do not provide midwifery continuity of care. One midwife highlighted the benefits CenteringPregnancy could potentially provide women attending standard antenatal clinics. Her comment was:

> *'I've always thought something like this would be I mean particularly when I worked in Antenatal clinic for three months. Worst time of my life! Back then, it just struck me that it was such a waste of time. These poor women would come and sit around for hours, waiting and then they would be seen for five minutes and the person seeing them wouldn't even know their name. Just crazy! Such a great opportunity for education!'*

The acknowledgement of CenteringPregnancy as an effective model of antenatal care was reiterated on other occasions during the focus group. Two such examples were:

> *'Women would benefit and the midwives too, but the women you know would have less waiting and their time is more well spent'.*

> *'They [the women] are getting better continuity, as well as learning from each other.'*

The midwives appreciated the value of group care, particularly for the women who they cared for who were socially isolated by their choice of place to give birth. The midwives saw this benefit of social support gained from other women attending antenatal group care such as with CenteringPregnancy, for example:

> *'Choosing to give birth in the birth centre or at home can be socially isolating and having a group in the birth centre could provide support.'*

This midwife was also able to interpret the benefit of an antenatal group for women who had something in common, such as a choice to have a Birth Centre birth or a homebirth. She said:

> *'I had some people say they don't get a lot support at all. They get questioned why they are having their baby in the Birth Centre or you're even thinking about a homebirth. Yes I just want to do it the natural way, and this would give them the opportunity to meet other people who think the same way.'*

We lacked knowledge, time and staff to implement CenteringPregnancy

The second code, 'We lacked knowledge, time and staff to implement CenteringPregnancy', described the midwives' logistical reasons for not undertaking CenteringPregnancy during the study. Some of the midwives felt they had insufficient information, as one midwife said, *'What is it about? How often do you do Centering? Do they do it for the whole eight visits or?'* This lack of information added to the confusion about CenteringPregnancy and how best to implement it. In particular, there was confusion about how to develop their groups of women and remain true to the Essential Elements of CenteringPregnancy[18]. One midwife stated, '*It might suit primips [primiparous women]'* and another stated, '*Then you miss out on the exchange of information that the multi [multiparous women] can actually give'*.

A lack of knowledge and time to develop CenteringPregnancy in the Birth Centre and to successfully recruit for the model was also highlighted. For example:

[18] The CenteringPregnancy model is founded on a set of core concepts known as the Essential Elements of CenteringPregnancy – these are referred to in the Introduction chapter in Figure 1.

'I have say, to be honest that I didn't know what I should sell [CenteringPregnancy model], I probably didn't educate myself enough and I had enough to do with getting into the project [Birth Centre] that I was not very good at it'

The small number of staff that worked in the Birth Centre at the time of the study also made it difficult to introduce group antenatal care, as it was believed that it would impact on both the choices of how the midwives worked and how the women received their care. One such comment was:

'Basically we had four midwives who could do the Centering and that was what made it impossible. ... I suppose if two of us had worked together and all our women that month had been happy to do it – we would have had eight women. But ... yeah that was the difficulty and I think if we had just said to all the women this is how we're doing it.'

The combination of lack of knowledge, staff and time affected the ability of the midwives to commit to implementing CenteringPregnancy, and this was acknowledged when one midwife said, *'And that is our problem I guess. You know to commit to something'***.**

CenteringPregnancy conflicted with the relationship-based model of caseload midwifery

The third code, 'CenteringPregnancy conflicted with the relationship-based model of caseload midwifery', described how the midwives were able to understand the benefits of CenteringPregnancy, but that they could not envisage how it would improve the care that they provided with caseload midwifery. This also revealed the midwives' enthusiasm for a model of midwifery care that enhanced their relationship with the women.

The midwives were concerned about how to offer a new model of care that had the potential to impact on the care the women received in the Birth Centre. This was a

particular concern for the midwives caring for women who had experienced caseload midwifery before. For example:

> *'What about your previous [women] who don't want to do Centering? How do you get that continuity for those who don't want to come through it [CenteringPregnancy group]?'*

The midwives' felt unable to configure their caseload of women and undertake a CenteringPregnancy group within the caseload model. This was particularly apparent with the decisions on how to allocate women to a CenteringPregnancy group. The midwives' voiced that if they undertook a CenteringPregnancy group they felt they would miss out on caring for women whom they had built up relationships with during previous pregnancies. For example:

> '*Something that surprised me, I was very much behind Centering. I think it is a great idea. Then suddenly one month I got two previous women [who] came in, one who was interested and one who wasn't and I'm like 'But I want them both'. So as a midwife it was suddenly, what if one wants to go and do Centering and I won't have her because I'm not involved in Centering then I'll miss out on caring for her. Then what if I am involved with Centering and I will miss out on caring for the other woman who was a previous of mine. So I had never even thought about that, what if you have that conflict. So that surprised me!*

The midwives also felt that the implementation of CenteringPregnancy in the Birth Centre would decrease the flexibility of the care the women were currently offered. For example:

> *'They can pick the times here, morning or afternoon, but they didn't have that flexibility with Centering.'*

There was also a belief that the development of a relationship between the midwife and the woman was extremely important for the Birth Centre midwives' and that

undertaking group care would impact on this one-to-one focus. One midwife stated: '*I wanted to have woman centred care and wanted to look after them myself.'*

The Birth Centre midwives were proud of their caseload model of care and that they believed that they did not need to improve it by engaging with CenteringPregnancy. They believed that the antenatal care they offered at the Birth Centre was an ideal model of care that meets the needs of the women and their families who go there. One quote acknowledged this:

> *'It a whole experience isn't it? It is a family experience. We just do it too good!'*

The following chapter discusses these findings in further depth and includes limitations of the study.

Chapter Five: DISCUSSION

Chapter five discusses the findings of the Midwives' Study and the study limitations.

Overview of the Study Aim

The original aim of the Midwives' Study was understand and describe the impact of the introduction and implementation of the CenteringPregnancy model on the midwives. This will inform the future development of CenteringPregnancy in Australia by having explored the experiences of the midwives involved.

Overview of the Findings

The Midwives' Study sought to describe the experiences associated with the development and implementation of the first Australian CenteringPregnancy group model of antenatal care. The findings from this study describe the experiences of the midwives who underwent the development and implementation of CenteringPregnancy.

The findings demonstrated that the process of developing and introducing a new model of group antenatal care was, on the whole, a positive experience for the midwives. The demands placed on the midwives during the implementation phase of CenteringPregnancy did impact on their usual work practices and increased their workload. Nevertheless, even with this increased workload, the midwives valued the relationships and new skills and experiences they gained from working in the CenteringPregnancy model. These relationships were primarily with the women who they cared for in the antenatal groups and also with their co-facilitators and Action Research group members.

A further finding was that the action research approach used in the study enabled the midwives and the organisation to successfully implement CenteringPregnancy within a supportive framework. This support provided by the research team and the organisation during the study enabled the midwives to plan, act, observe and reflect on their learning as they engaged with the CenteringPregnancy group.

Implementing CenteringPregnancy is possible

The Midwives' Study showed that the implementation of CenteringPregnancy group antenatal care was possible at these two Australian metropolitan suburban hospitals. CenteringPregnancy was shown to be an achievable and feasible model of antenatal care to implement, as long as adequate support and time were provided for the new facilitators to learn and become confident with their new skills. Adequate support and time needs to be allocated to the organisational systems that support the change to group antenatal care. This includes development of appropriate education and group activities for the new CenteringPregnancy groups, effective recruitment resources and strategies, systems for group antenatal appointments for booking the women into the CenteringPregnancy groups and enhanced communication between staff and management. Time and energy also needs to be allocated to the adaptation of related documents. Documents that need to be considered include handbooks for the women attending the CenteringPregnancy groups, evaluation forms for each group session and surveys to measure clinical outcomes and satisfaction for the overall CenteringPregnancy experience.

It was acknowledged at the outset of the study that by introducing CenteringPregnancy group antenatal care, fundamental changes to the traditional antenatal care system would have to happen. These changes to traditional antenatal care would require the application of strategies to develop group facilitation skills and organisational systems to support group care. The reasons for this fundamental change were that the current system of antenatal care is based on women receiving their care at individual appointments. Since its inception in the early 1900s, little change has occurred to this traditional concept of antenatal care. As a consequence, midwives and doctors are trained to provide most care on an individual basis with no emphasis on the development of group facilitation skills. This has also meant that the traditional antenatal clinic system has been focused on the provision of short individual appointments and not organised to provide group appointments in larger rooms and for a longer block of time.

This need for fundamental change required a coordinated approach to the implementation and introduction of CenteringPregnancy, one which was directed by an

action research process. This involved active participation from the midwives, guidance from the research team and ongoing supervision from the management team of the organisation. The midwives decided on their learning needs and this resulted in extra educational workshops on group skills being provided and ongoing planning and support from peers in the Action Research group meetings. This enabled the midwives to understand CenteringPregnancy and become confident group facilitators. Changes to the traditional individual antenatal care system were also instituted by the midwives in the Action Research group and involved such processes as finding group rooms, group scheduling and notification of system changes to key stakeholders such as medical, administration and allied health-care staff.

CenteringPregnancy required a process of organisational change. It is widely acknowledged that skilled management, participation and support are important factors involved in successful change management (Lindberg et al., 2005; Swanson-Fisher, 2004). CenteringPregnancy was successfully introduced because these factors were included in the development and implementation phases of the study. As a consequence of this positive experience of implementing change, the findings from the Midwives' Study have assisted the development of information to assist other health-care facilities with the implementation of CenteringPregnancy. This information includes identification of the factors that enhance attainment of group facilitation skills using peer support strategies for the new facilitators and the inclusion of skilled and supportive managers and mentors to guide their learning. Other factors that need to be considered include strategies to develop and implement a CenteringPregnancy model that meets the unique needs of both the individuals and the organisation. These factors are described later in this chapter as the Ten Essential Steps for Effective Implementation of CenteringPregnancy. A detailed copy of these Ten Essential Steps is included as Appendix 18.

The action research process undertaken for the study was important, as it provided a supportive framework for the development and implementation of CenteringPregnancy. The midwives were initially fearful of facilitating the CenteringPregnancy groups as they had little knowledge of group skills or experience of working in a group environment. The cyclical approach of action research provided the midwives with a

framework in which to work that enabled them to voice their concerns and fears about engaging with CenteringPregnancy. With peer support and guidance from the research team the midwives were then able to develop strategies to resolve their fears and to reflect on each strategic step that they made.

The process of change is often associated with the emotion of fear, because people are unable to understand the values or benefits of a new idea as they have no experience of it (Greenhalgh et al., 2004) and therefore are resistant. Resistance to change is also linked to fear, because people are hesitant to engage in a new process if it is unfamiliar or unknown to them (Hart & Bond, 1995). Resistance to change is a multi-faceted concept and relates to both individuals and organisations. As first described by Watson (1971), individuals develop habits to protect themselves against adversity and the unknown, while the social systems in which these individuals exist or work also develop customary and expected ways of behaving. For example, large organisations such as health institutions, demand that employees such as midwives or other health-care professional conform to the institutional norms such as time schedules for work, the wearing of uniforms and compliance to policies. These norms are constructed to make it possible for people to work together as each knows what to expect of the other (Watson, 1971).

The findings from the Midwives' Study identified several different examples of resistance to change. The midwives who undertook facilitation were fearful of the process, but found the support and guidance of the Action Research group a valuable process to help them. This support enabled them to engage with CenteringPregnancy and overcome their fear of facilitating a group. A more overt example of resistance to change was noted amongst midwives at the two hospitals who were not participants in the Midwives' Study, but did work alongside the midwife facilitators. Findings showed that these midwives did not engage with the recruitment phase of the study and did not support their midwife facilitator colleagues during the planning for individual CenteringPregnancy sessions or system changes to accommodate the new model of care. Their fear of change impacted on the overall success of the implementation of CenteringPregnancy during the study. Resistance to change was one factor involved in the decision of the midwives from the Birth Centre that they could not implement a

CenteringPregnancy group. They were unable to rationalise the idea of changing their current practices or engaging in alternative work processes.

The ordered process of action research has been noted as a key approach to be used when undertaking the implementation of new health-care models (Bradbury & Reason, 2003; Cheyne, Niven, & McGinley, 2003). The reason for this is that health-care institutions are governed by convention and order and need implementation strategies that are well-organised and process orientated. Undertaking the development and implementation of CenteringPregnancy required changes to the conventional and expected ways in which antenatal care was provided. Action research was useful as its approach is problem focused, context specific, participative, involves change intervention and is based in a continuous interaction between research, action, reflection and evaluation (Hart & Bond, 1995). This cyclical framework of action research - plan, act, observe and reflect - was successful in guiding the change process and enabled the midwives to engage with CenteringPregnancy in their own way and to meet their individual needs. While it provided the midwives with direction and purpose it also addressed the implementation needs of the hospitals, such as meeting timelines.

The process helped with local engagement with stakeholders. In our planning we were mindful of the importance of developing strategies that enhance the engagement of organisations and individuals with change (Greenhalgh et al., 2004; Rogers, 2003). A systematic review of literature that explored implementing change in a variety of professions theorised that certain factors need to be included in the successful adoption of a new clinical behavior or process (Greenhalgh et al., 2004). In a health-care organisation these were noted to be the nature of the topic chosen for improvements, the capacity and motivation of the individuals, their leadership and team dynamics, the motivation and receptivity to change of the organisation, the quality of the facilitation, particularly the provision of opportunities to learn from each other in an informal space and the quality of support provided to the teams during the implementation phase (Greenhalgh et al., 2004). This evidence was useful in our consideration of how to implement CenteringPregnancy.

The Midwives' Study included many factors identified by Greenhalgh et al (2004). The first of these was that our action research process used a facilitated process to create change. This process fostered team dynamics, motivation and provided learning opportunities. Another important factor was that the nature of the change, that is CenteringPregnancy, was an appropriate model to engage in, as it was known to enhance the current antenatal care model based on evidence (Kennedy et al., 2007; Klima et al., 2009). The two hospitals had already recognised that their current antenatal system of care was not meeting the needs of the local community and were receptive to exploring new ways to improve antenatal care. The demographics of the area were also extremely diverse and the benefits of group care appeared to be one option to improving social capacity and community within the local cultural context. The midwives were also interested in exploring new ways of working to improve their work situation for both themselves and the women for whom they cared. These factors were critical in bringing about the organisational change that was required.

At the time of the study, the hospitals in the study were engaged in a process of amalgamation that brought together the two services that formed the Central Health Network. This had disturbed much of the organisational structure of both hospitals and subsequently individuals at clinical and management level were hesitant to engage in any other change at that time. This impacted on the implementation of CenteringPregnancy. The formation of the Central Health Network also restricted staffing levels and increased the overall workload for the hospitals. As a result, at times during the study, managers restricted the midwives' attendance at the Action Research group meetings, even though they had agreed to support the implementation of CenteringPregnancy. Midwives who had chosen not to engage in CenteringPregnancy, but who worked alongside the new facilitators were also tentative about the new model and were not supportive of their colleagues who were engaging in CenteringPregnancy. The midwives who were the new facilitators noted that their disenfranchised colleagues did not engage in recruiting for the CenteringPregnancy groups and did not help the new facilitators with planning or organising any group sessions. These actions by managers and colleagues unsettled the midwives and increased the pressures associated with implementing CenteringPregnancy.

The midwives who undertook CenteringPregnancy felt that greater support from their peers and managers would have improved the uptake of the model. Despite some difficulties, they felt that they gained from the experience, as they had successfully and confidently engaged in a new way of providing antenatal care. This included a new way of relating to the women through a mutual sharing of knowledge and learning from the experiences of others in the group setting. They also believed that the opportunities involved with the developing and implementing of CenteringPregnancy enhanced their ability to learn new skills as individuals and with their peers.

CenteringPregnancy meant a new partnership was forged between the woman and the midwives. Both the action research approach and the CenteringPregnancy model embraced the concepts of equality and inclusion (Brydon-Miller, 2003; Massey et al., 2006), both concepts acknowledged in the partnership model of health-care. The partnership model of health-care includes having a strength-based approach to care and education that endorses the sharing of knowledge between the woman and the midwife (Guilliland & Pairman, 1994; NSW Department of Health, 2005; Rising et al., 2004). This experience of CenteringPregnancy and a facilitated and supported approach to implement this model exposed the midwives to new ways of being in partnership with the women as well as having peer support from their colleagues. These two experiences of partnership were highly valued by the midwives and compensated for the difficulties in implementing a new way of working.

CenteringPregnancy was a positive experience

CenteringPregnancy was a positive experience for the participants in the study. The midwives found the experience of engaging with both the study and group facilitation as positive and powerful. Although there were some negatives, overall, it was continually described as a positive experience with concepts such as sharing, collaboration and partnerships highlighted as valuable in the findings. The midwives believed the process of meeting regularly with the Action Research group fostered their development and learning of group facilitation and enhanced their experience of CenteringPregnancy. Their positive experiences related to: learning new skills; development of relationships between each other and the women; observing the women develop self-confidence; and supportive relationships with their peers. CenteringPregnancy was also about sharing

with colleagues as they engaged with a new and exciting opportunity that enabled them to develop new skills with like-minded and respected colleagues.

The midwives' experience of undertaking a new model of care on top of their usual clinical role was also described as time consuming and demanding. Their experience of being the individuals responsible for the implementation of CenteringPregnancy was also confronting as some of their colleagues were resistant and unsupportive. However, the process of meeting regularly with the Action Research group and with their fellow group facilitators encouraged self-confidence in the new facilitators. Sharing the experience of group facilitation and implementation of CenteringPregnancy with chosen peers and a known supportive group was an important positive factor that overcame negative influences. These factors of ongoing peer support, developing relationships with their peers and enhancing confidence through learning are significant in the implementation of a new process (Hart & Bond, 1995; Lindberg et al., 2005; NSW Department of Health, 2007).

The midwives' experience of engaging with, and learning how to facilitate a group for pregnant women was challenging. They were initially anxious about working with a group of women as they were used to working with women on an individual basis and they felt unskilled with facilitating group activities and discussions. Their experiences of midwifery and antenatal care are similar to those of many midwives throughout the world. Midwifery care is recognised as being a profession that is deeply-rooted in providing one-to-one care to women and their families on an individual basis where the potential is to develop a relationship between the midwife and the mother (Hunter et al., 2008; Kirkham, 2000). Group antenatal care for pregnant women such as CenteringPregnancy is a new idea and issues about the development of effective relationships between the midwife and mother within a group environment were raised at the start of this study by many participants.

The quality of the midwife/mother relationship and the amount of support given by the midwife are described as being significant for the woman's experience and these factors may also impact on her clinical outcomes (Hatem et al., 2008). Effective communication is suggested as the key to the quality of the midwife/mother relationship

and is seen as essential for safe practice (Redshaw, Rowe, Hockley, & Brocklehurst, 2007). It is also stated that developing relationships with women is an important factor for midwives job satisfaction (Kirkham et al., 2006; Sandall, 1997). The provision of midwifery care to one woman at a time (with or without her support people) is a central concept of midwifery care and is expressed as a significant advantage for women when they are seeking a known relationship with this professional (Hunter et al., 2008). Recent research and literature has demonstrated caseload midwifery as the pinnacle model of care that enhances the relationship between the mother and the midwife, leading to improved care for the mother and improved job satisfaction for the midwife (Leap, 2000; Page et al., 2001; Stevens & McCourt, 2002b). In spite of this prioritising of the one-to-one relationship in many texts, the experience in the Midwives' Study demonstrated that once the facilitators had gained confidence with facilitating the group they were surprised by the benefits of the group, not only for the women, but also for themselves. Many of the participants in this study commented that once they had gained experience for caring for women in a group environment and with group facilitation, useful, in-depth discussions resulted within the group. They commented that they believed these group discussion enhanced the relationships they had with women and also relationships between the women in the group.

CenteringPregnancy and the development of relationships

The key element of the midwife facilitators' positive experiences was the development of relationships with the women for whom they cared in the group and with their peers and co-facilitators in the Action Research group. Findings from the study highlighted the importance of the development of these relationships for the midwife facilitators. Relationship development is not a new professional concept for midwives, but being able to develop these with women who are in a group environment is novel. The development of supportive relationships between the midwife and the mother and the midwife and her peers is extremely important for the midwife's level of job satisfaction, as is the relationship between the midwife and the organisation (Ball et al., 2002; Kirkham et al., 2006). Other health-care professionals, such as nurses, also indicate that relationship development with peers, patients and the organisation are important contributors towards job satisfaction (Hayes et al., 2006).

Midwives who work in standard or traditional antenatal care often struggle to develop positive relationships with women, due to the fragmented way that antenatal care is provided (Brodie, 2003). Contemporary publicly-funded antenatal care usually focuses on the provision of appropriate screening and assessment of the woman's pregnancy and has not been provided within a continuity of care framework. Antenatal clinics are busy places that provide short appointments for women. This means that women and midwives struggle to discuss anything apart from what is clinically recommended for each specific appointment. This restricts the development of relationships and time to discuss the social or emotional issues that many women highlight as significant concerns for them during their pregnancy (Olson & Jansson, 2001; Raymond, 2009). This inability to meet with the same women, develop relationships and provide a known caregiver often reduces job satisfaction for the midwife (Ball et al., 2002; Kirkham et al., 2006; Stevens & McCourt, 2002b).

The opportunity to develop successful relationships with women is linked to midwifery continuity of care, particularly in models that provide a primary caregiver, such as caseload or midwifery group practice (Page et al., 2001; Sandall, 1997). The advances in midwifery in many parts of the world have focussed on developing systems that provide continuity of care and are moving away from the existing fragmented systems of care (McCourt, Stevens, Sandall, & Brodie, 2006). These advancements have been founded on the increased awareness of the expectations of midwifery and maternity care for women and midwives, brought about by rigorous research and reports (Commonwealth of Australia, 2009; DOH England, 2007; Garling, 2008; Hatem et al., 2008). The Birth Centre at one of the hospitals involved in this study provides midwifery care in a caseload model. The midwives who work in the Birth Centre chose to work in this way and are avid supporters of relationship-based midwifery care. However, they struggled with the notion of group-based relationships

The Birth Centre midwives' enthusiasm for working in a relationship-based model of care hindered their engagement with CenteringPregnancy. They could not envisage that group antenatal care had the capacity to develop the relationships they had with women in their current caseload model. At the time of the Midwives' Study, the Birth Centre had low staffing levels, which meant that they only had a small pool of women from

which to recruit. A minimum of eight women due to give birth in the same month meed to be recruited to a CenteringPregnancy; this would mean that two Birth Centre midwives would have to include all their caseload of women for an entire month. The midwives believed that the act of directing all women into the CenteringPregnancy group for a one month period restricted the choice of care for this cohort of women. This was described by the midwives as being unacceptable on two levels. Firstly, they did not want to mandate group antenatal care and limit the woman's options of care. Secondly, the midwives did not want to risk losing the relationship they had developed with the women who had previously booked in with them for a prior pregnancy.

The capacity for CenteringPregnancy to provide improved antenatal care was also noted by the Birth Centre midwives in their focus group. They could see the potential benefits of group antenatal care for women who were in need of social support, such as those living in vulnerable social situations. They also stated that a woman's choice of care, such as homebirth, has the potential to isolate her and that group care could improve her avenues of social support. However, the limitations imposed on the Birth Centre midwives at the time of the study and their fundamental belief that one to one midwifery care is the ideal model of midwifery care inhibited their uptake of CenteringPregnancy.

In regards to the concept of relationship building, the team-based midwives who undertook facilitating a CenteringPregnancy in the Midwives' Study also expressed mixed feelings about CenteringPregnancy. They found, however, that being the consistent facilitator of the CenteringPregnancy group enabled them to establish a successful relationship with the women in the group; something that they had not expected and that they found rewarding. In contrast, their involvement as CenteringPregnancy facilitators during the time of the study limited their ability to meet the other women booked with their team who were not having group antenatal care. They also identified that although their involvement with the Action Research group was rewarding, their participation in the study negatively impacted on the existing relationships they had with their team midwifery peers. The issues that impacted on the relationships between the midwife facilitators and their team midwifery peers were that

CenteringPregnancy impacted on rostering, antenatal clinic allocation and took their focus away from the team model of care and their peers.

The team midwives who chose not to engage with CenteringPregnancy or who undertook the rotational co-facilitators role were not included in any of the formal evaluations. Anecdotally team midwives reported that they did not like the rotational role. It appeared that for the facilitators to gain a satisfying and significant relationship with the women in the CenteringPregnancy group they needed to have a consistent presence as facilitator or co-facilitator. This constancy of relationship between the woman and the midwife has been recognised as a significant benefit of continuity of carer models compared to team models that provide continuity of care, but not a consistent caregiver (Homer, Brodie, & Leap, 2008; Kirkham, 2000). CenteringPregnancy is a model of care that enables the consistency of carer in the antenatal period.

The experiences of the team midwives who were the study participants and who undertook the consistent facilitator role were different from their team peers. They identified that they developed an enriched relationship with the women in the CenteringPregnancy group as they were able to meet with them every antenatal visit. Their prior experience of team-based midwifery had not enabled them to meet the same women at every antenatal appointment in the way that they were able to through facilitating CenteringPregnancy groups.

The simple concept of having consistent facilitators at each CenteringPregnancy group session appeared to be an effective way to provide continuity of care that had previously not been linked to job satisfaction for the facilitators. It is well recognised in the CenteringPregnancy literature that consistency of group facilitator/s is important to the group members and the development of cohesive group dynamics and effective group facilitation, but is not identified to be a significant factor for the development of relationship-based care for the facilitators (Klima et al., 2009; Rising et al., 2004). The midwives, in this study, gained satisfaction from experiencing all the relationships in the group and could see the importance of women developing supportive peer relationships as well.

Apart from the relationships they developed with the women in the CenteringPregnancy groups, the midwives also valued the opportunity to develop relationships with their CenteringPregnancy peers. The midwives gained security in the early days of the study when they were able to work with midwives they trusted and respected. This concept of support was related to working with likeminded peers and working towards a model of care in which they all believed. They also felt that they gained support and reassurance from their involvement with the Action Research group meetings, particularly, with the educational structure of the meetings that was designed to aid them with preparation for each CenteringPregnancy session. The concepts of developing successful working relationships with peers and being supported by managers to engage in new knowledge skills are all recognised as significant factors to maintaining job satisfaction (Ball et al., 2002; Curtis et al., 2006b; Kirkham et al., 2006). These are also factors significant to the process of building capacity.

CenteringPregnancy and capacity building

The findings of this study show that CenteringPregnancy is about capacity building and is more than just an education or training model (Brodie, 2003; Labonte & Laverack, 2001). CenteringPregnancy appeared to build capacity within the organisation and for the individual facilitators. The actual process of working with the CenteringPregnancy model enabled the new facilitators to develop and strengthen their skills and abilities with antenatal care provision and group facilitation and develop new relationships. Their experience of undertaking the CenteringPregnancy introduction workshop in conjunction with the supportive group skills workshops and the Action Research meetings enabled the midwives to reflect on their learning and plan for all the CenteringPregnancy group sessions in a supportive environment.

The Action Research group meetings and the structured planned regular meetings developed for the Pilot Study brought together all the participants. The coordinated approach enabled the implementation timeline to be developed, amended and completed. This coordination developed effectual and time efficient communication and documentation that informed the organisation and implementation of CenteringPregnancy at the study sites. The regular meetings included terms of

reference, strict timeframes and action plans associated with conventional meeting plans. These meetings, including the Action Research group, Steering and Research committees, Research team and the Birth Centre midwives, assisted the implementation strategies. This in turn facilitated the learning for the facilitators and development of a CenteringPregnancy model that met the needs of the local women, hospital and staff. For example, the midwife facilitators were able to engage in extra group skills workshops when they voiced they did not feel competent enough to facilitate a group. These concerns were raised at an Action Research group meeting and then the Steering and Research Committee coordinated the provision of the group skills workshops tailored to meet the needs of these new CenteringPregnancy facilitators.

The choice of action research as the research approach also enabled the development of appropriate resources for use in the CenteringPregnancy model. These included recruitment information, evaluation tools adapted from the CHI in USA, handbooks for the pregnant women and educational activities for the groups. At each Action Research group meeting group activities were brought to the meeting and demonstrated to the facilitators. Initially this was by the Research team, but as the study progressed and the facilitators became confident they developed their own tools and shared them with their peers. As a result, these group activities and workshop materials have been adapted and developed for the CenteringPregnancy workshops provided at UTS and at individual sites since the Pilot Study commenced.

Capacity building is linked with health promotion and as such has been described as a process where a hospital or health-care facility is able to develop, deliver and sustain a particular programme to meet particular health needs of the community (Labonte & Laverack, 2001). Findings from the CenteringPregnancy Pilot Study about the women's experiences demonstrated the capacity for CenteringPregnancy to meet the needs of the local community (Teate et al., 2009). These findings from the Pilot Study describe a high level of satisfaction for the women who attended the CenteringPregnancy groups. The women also stated that the participation of their partners was important. CenteringPregnancy group antenatal care was also described as a model of care that assists women with the development of social support networks and is an acceptable way in which to provide antenatal care in an Australian setting (Teate et al., 2009).

The understanding of a health promotion programme that is capacity building is related to the concept of empowerment and can be described as 'strengthened community action' (World Health Organization, 1986). In addition, capacity building is also seen as a dynamic entity that is based on both social and organisational relationships. As a result, for the capacity of a new programme to be continually successful, it needs to be delivered through the development of a partnership network of organisations and community groups. For example, the ongoing success of CenteringPregnancy in Australia can be seen to be reflected in the continued interest by midwives and managers from around Australia in attending introductory workshops that were developed as part of the Pilot Study.

Since the Pilot Study began The Centre for Midwifery, Child and Family Health (CMCFH) at UTS have developed a partnership with the CenteringPregnancy parent organisation, Centering Health-care Institute (CHI), to assist the development and implementation of CenteringPregnancy in Australia. CMCFH has worked with individual sites to deliver site-specific workshops and has also provided standard workshops on campus for midwives from around Australia.

The success of CenteringPregnancy is also seen with the ongoing implementation of CenteringPregnancy groups at the hospitals involved in the Pilot Study. Due to issues outside the control of the Pilot Study and Midwives' Study, CenteringPregnancy groups were initially discontinued following the completion of the studies at both hospitals. This was due to organisational changes occurring at the completion time of the studies. However, one of the hospitals involved in the Pilot Study and Midwives' Study has subsequently commenced CenteringPregnancy groups. One of the midwife participants and facilitator in the Midwives' Study developed a CenteringPregnancy group to specifically meet the needs of one local neighbourhood and has implemented an option of CenteringPregnancy group antenatal care at a local community health-care centre. A second CenteringPregnancy group is to start soon at another local community health-care centre attached to the hospital and a Child and Family Health Nursing service and will initially be led by this midwife while other midwives learn to facilitate by undertaking the co-facilitator role for the first group. As a consequence, this hospital has

also changed the structure of an antenatal group for teenage women to incorporate antenatal health assessments and education. However, this group for teenage women is not acknowledged as a CenteringPregnancy group as the weekly meeting design does not meet the Essential Elements of CenteringPregnancy (Rising et al., 2004). For example, the teenage group is offered every week and is provided by one facilitator.

A third factor in capacity building is the problem-solving capability of organisations to increase their ability to identify health issues and develop ways to address them. This capacity has been demonstrated at the second hospital site in the study when a need for a culturally appropriate option of antenatal care was identified for Chinese women. The need identified for these women was an option of care that could potentially enhance their local social support networks. As a result, a Chinese CenteringPregnancy group has commenced this year. A midwife and multi-cultural worker, who are both Chinese-born and speak Mandarin, are facilitating this group with support from myself and another English-speaking midwife. Apart from the multi-cultural worker, both the midwives were involved in the early stages of the Pilot Study, but withdrew for personal reasons. As part of the development of this new CenteringPregnancy group a second introductory workshop was provided at the hospital and it attracted 30 participants. The organisation and the midwives continue to be interested in CenteringPregnancy group antenatal care some three years since the first workshop was provided as part of the Pilot Study. Apart from improving care for the women, the midwives who participated in the study also attributed their involvement with CenteringPregnancy and the Midwives Study as a positive experience for themselves.

CenteringPregnancy and job satisfaction

The key findings of the study were that the midwives felt that by engaging with CenteringPregnancy they improved their antenatal skills, learnt group facilitation skills and enhanced the relationships they had with the women they cared for and with the midwives they worked with in the antenatal period. The midwives reported that learning new skills and developing and improving relationships with the women and their peers were positive benefits of being involved in CenteringPregnancy. These findings indicate that implementing an innovative model such as CenteringPregnancy can impact positively on midwives job satisfaction.

The ability of a health-care programme or model of care to enhance learning and relationships has been shown to affect midwives and other health-care professionals such as nurses in relation to job satisfaction (Curtis et al., 2006b; Hayes et al., 2006; Kirkham et al., 2006; O'Brien-Pallas et al., 2006). Job satisfaction is an important factor in creating a workplace that is innovative, appealing and enhances retention (Ball et al., 2002; O'Brien-Pallas et al., 2006). The midwives were required to invest personally in CenteringPregnancy when they undertook the facilitator's role. This required them to develop and change their professional role, learn group facilitation skills and experience group care, which was an unknown concept. Their sense of personal involvement was demanding and challenging, particularly with the changes in their role, but this appeared to enhance their sense of responsibility and enabled the midwives to have an increased sense of professionalism (Eraut, 1994). In other words, the midwives were able to develop professional knowledge and competence in a new midwifery role in the same way that midwives are able to with caseload practice models (Stevens & McCourt, 2002b).

As a rule, the concept of empowerment is associated with a model of care having the potential to enable the health-care recipient to gain empowerment. The experience of CenteringPregnancy demonstrated that both pregnant woman and midwife facilitators experienced a sense of empowerment. A theorised link is believed to happen between empowerment and job satisfaction and is divided into two broad inter-related concepts, structural empowerment and psychological empowerment (Hayes et al., 2006). Structural empowerment is recognised as opportunity, information, support, resources, formal power and informal power and psychological empowerment is recognised as meaningful work, competence, autonomy and impact. Implementing change consequently can impact on both. For example, developing change in structural empowerment will have direct effects on changes in psychological empowerment and job satisfaction. The experience of the Midwives' Study demonstrated that changing the structure of antenatal care from individual to group care by introducing CenteringPregnancy and including resources and support with the action research approach enabled the midwives to become competent and to experience a new professional role that was meaningful for them.

As a result of their involvement in the study, as group facilitators, the midwives were able to develop or improve their skills in providing antenatal care and learn new skills in group facilitation. Learning new skills was one of the highlights of the midwives' involvement with the study as it was an opportunity to share and reflect with their peers in the Action Research group. This coherence of the midwife's work and her ability to take on reflective practice and to develop learning from experience is also recognised as a positive benefit when midwives feel they are able to learn and work in a way that enhances their sense of their professional identity (Stevens & McCourt, 2002b). The implementation of CenteringPregnancy enabled the midwives to engage in this new way of working.

The capacity of CenteringPregnancy to enhance the midwives' job satisfaction within antenatal care was a significant result, as this area of midwifery care is often an unsatisfactory area in which to work (Brodie, 2002). Fragmentation of midwifery care in Australia has resulted in midwives predominantly working in one area of the hospital such as antenatal clinic, labour ward or postnatal ward. This has lead to the midwife's role being dominated by tasks and routines, prohibiting the opportunity for midwives to interact closely with women or have a sense that they make a difference to individual women (Kirkham et al., 2006). Getting to know the women in the CenteringPregnancy groups enhanced the midwives' experience of antenatal care. Their ability to develop meaningful relationships with women was also an unexpected additional benefit.

The structure of CenteringPregnancy is to have a consistent facilitator and co-facilitator for every session (Rising et al., 2004). This means that the facilitator and co-facilitator attend each group session. This regular attendance of both the midwife facilitators and the women encouraged familiarity for all the group members. In addition, the CenteringPregnancy group design encourages discussion, sharing and networking which also increased facilitator awareness and knowledge of all the group members. Familiarity facilitated effective conversations that were aimed at encouraging individuals to share their own knowledge with stories of their experiences. This created effective relationships and a sense of knowing between all in the group (Massey et al., 2006).

Developing relationships with childbearing women and feeling supported and valued by peers and managers are known factors that improve job satisfaction for midwives (Kirkham et al., 2006). The CenteringPregnancy model not only enabled the midwives to gain these relationships both with the women and with peers, but the use of the action research approach also encouraged a supportive environment during the midwives' transition. The midwives developed social and emotional networks with peers and enhanced their job satisfaction. Occupational stress is a key deterrent for effective working by health-care professionals, particularly during change. The capacity of the Midwives' Study to alleviate this at a time of transition was an important aspect of the study. CenteringPregnancy has the capacity to provide the social and emotional networks for the midwives with the women and their co-facilitator peers that they need for job satisfaction, which is a similar to the capacity of continuity of midwifery care models.

CenteringPregnancy and the development of continuity of midwifery care

An unexpected benefit from the study was that, after being exposed to a continual relationship with the women during the antenatal period in the CenteringPregnancy groups, the midwives found that they were eager to have further involvement in models of care that provided opportunity for greater continuity of care. Previous experience for the midwives with continuity of care models had been team-based midwifery or through a midwives clinic. Neither of these models had enabled the midwives consistency of relationship with the women or time to sit and discuss relevant issues for the woman. As a result, CenteringPregnancy heightened their understanding of the benefits of having a relationship with the women. Gaining this experience of relationship-development with the women encouraged them to explore the opportunity of working in a continuity of midwifery care model.

Prior to the study, the majority of the midwives had a limited concept of relationship-based care. As a result of their involvement in the study, they found the experience of CenteringPregnancy enriching. Team midwives who undertook facilitation found that they had less involvement with the women from the CenteringPregnancy group during the birth and were to some extent dissatisfied by this. This could have been expected, as

their usual job in team midwifery was centred more about having a familiar caregiver at birth rather than in the antenatal period or postnatal period (Homer et al., 2008; Homer et al., 2001). One team midwife's experience of not being at all the births of the women in the CenteringPregnancy group was that she continued to experience professional fulfilment that was not reliant on the labour and birth experience. This experience is congruent with the suggestion that, for some midwives, the development of antenatal relationships with women could be of equal importance to them, in terms of work satisfaction, as being there for the birth (Kirkham, 2000).

One midwife's experience was that the CenteringPregnancy women missed her being at the birth and she felt that the women had developed a dependent relationship with her. Although this experience was not repeated in the study is does reveal that women's expectations of their care are high and that they would prefer a known caregiver at birth (Fereday et al., 2009; Hodnett, 2006; Lundgren & Berg, 2007). Although the current model of CenteringPregnancy developed for the study did not encapsulate antenatal, labour and birth and postnatal care it still delivered significantly better care than the current fragmented model experienced in the antenatal clinics at the two hospitals involved in the study. Further research and development of the CenteringPregnancy model needs to be undertaken to include not only the women's expectations of continuity of care, but also the midwives inclination to practise in this way.

LIMITATIONS

It is important to recognise that although the findings of this study establish new knowledge about the CenteringPregnancy model, conclusions are limited by the size of the study and by the research design and intent. This was a single site study, involving a small number of participants who were self-selected and the data were from only two data sources. The intent of the study was a descriptive implementation of CenteringPregnancy that was specific to one site and to the experiences of one cohort and one organisation.

Other sources of data collected in the study that explored the experiences of women, mangers and key stakeholders were not included in the Midwives' Study. This was

because of the time and study size limitations of the Master of Midwifery (Honours) degree.

The study was undertaken at one site that included two hospital campuses. These two hospitals are within metropolitan Sydney and have similar levels of service delivery, but provide care to two very different demographical areas. One hospital is located in an area where people are predominantly Australian born, English speaking and Caucasian. The other hospital is located in an area where many of the people have recently immigrated or are first generation Australians with Asian or Mediterranean background. Although the study included a representation of the cultural diversity in contemporary metropolitan Australia, the socio-cultural profile of participants is not necessarily transferable to maternity units throughout Australia.

The manner in which the midwives were recruited, the small number and their similar scope of practice limit the findings. The midwives self-recruited to the study as they originally attended the CenteringPregnancy workshop at the beginning of the study and notified the research team of their interest in facilitating CenteringPregnancy groups. All the midwives were experienced in antenatal care prior to the study and they were all employed at the two hospitals in the study. The system of care that they worked in is representative of an Australian suburban metropolitan hospital, but not a tertiary, rural or remote setting. A proportion of the participants also worked in team midwifery which is not a common role in Australia. As a result, the participants do not represent the general midwifery profession in Australia and their experiences of participating in the study were, to some extent, affected by their predetermined interest in CenteringPregnancy.

Time, the number of participants and their limited exposure to CenteringPregnancy during the Pilot Study also restricted the generalisability of study findings. Recruitment of women to the CenteringPregnancy groups was more difficult and took longer than expected. Both the Pilot and Midwives' Study had a predetermined timeframe that did not allow a second phase of recruitment. Consumer involvement during the development and implementation of the CenteringPregnancy groups did not occur, which lead to a paucity of publicity within the community. These factors limited the

number of CenteringPregnancy groups implemented which, in turn, meant fewer facilitators were required to participate in the Midwives' Study. Only one phase of CenteringPregnancy groups took place and this resulted in the midwife facilitators only being involved in one CenteringPregnancy group each. As a result, the number of participants was small and both the midwives and the organisations were exposed to only one phase of recruiting and setting up of the CenteringPregnancy groups. Future research needs to include more groups to ensure wider diversity of experience and participation.

As part of the study data were collected from multiple sources, but only the data from the focus groups and surveys have been included here. Timeframes and the volume of data were managed to ensure the study was completed and written up in a timely fashion.

Even with these limitations, the findings are able to inform the further development and implementation of CenteringPregnancy in Australia. Further research into the implementation of CenteringPregnancy needs to continue to address the process involved and the potential role of action research within this. Any developments in maternity care need to ensure pregnant women get optimum and appropriate care and that the midwives are able to work in a model that is concerned with their welfare and professional practice.

The final section of this chapter addresses a range of strategies to assist the implementation of CenteringPregnancy care. This includes a proposal I have developed identifying suggestions for the effective implementation of CenteringPregnancy: *Ten Essential Steps for Effective Implementation of CenteringPregnancy*. I developed this framework from the study findings and literature reviewed during the course of the study. A conclusion for the dissertation will complete this chapter.

IMPLICATIONS FOR PRACTICE

The future for CenteringPregnancy in Australia appears to be positive with many other hospitals exploring the potential for developing and implementing this new group model of antenatal care. Many individuals have attended workshops provided by the CMCFH

since the Pilot and Midwives' Studies were completed. The CMCFH has also supported the implementation of the CenteringPregnancy model at specific sites in Sydney. This has included regular communication and individual consultation with these sites. CenteringPregnancy has also been included in the design of innovative research strategies in NSW that are awaiting the approval for grant funding, in particular group antenatal care for women with obesity and women who have had a previous caesarean section. The tentative findings from the Midwives' Study have demonstrated the importance of CenteringPregnancy as a future model of antenatal care and one that requires supportive implementation strategies.

Current evidence supports the development of continuity of midwifery models of care that enhance the relationship between the pregnant woman and her midwife. This evidence has explored the midwife-woman relationship in one-to-one models of midwifery care, such as caseload and midwifery group practice. Many health and social benefits have been attributed to the development of a trusting relationship between the pregnant woman and her midwife.

Studies evaluating CenteringPregnancy have begun to show that women who receive antenatal care in a group situation are experiencing enhanced health-care and the potential for improved health outcomes (Grady & Bloom, 2004; Ickovics et al., 2007; Ickovics et al., 2003; Kennedy et al., 2009; Wedin et al., 2009). This study and the Pilot Study have demonstrated that CenteringPregnancy care also enables the development of effective relationships between the women and the group facilitator that appear to have significant advantages for the women and the midwife, similar to those indentified with midwifery continuity of care models.

Implementing a new model of care, such as CenteringPregnancy, requires a change process that is adaptive and includes an implementation process. Effective communication and collaboration is critical. To ensure professional fulfilment a work environment for health-care professionals, such as midwives, needs to be adaptable to meet the needs of the worker and also be a positive place in which to work. CenteringPregnancy as a model of care is able to adapt to the needs of individual

settings and participants as well as enhancing the professional fulfilment of the facilitators.

The framework of CenteringPregnancy was based on the Essential Elements developed by Rising (2004). These essential elements allow for adaptation of the CenteringPregnancy model for each site and guide the development of relationship-based care between the pregnant women and the health-care professionals facilitating the groups. The findings of this study enabled me to develop the *Ten Essential Steps for Effective Implementation of CenteringPregnancy*. The 'Essential Steps' are aimed at the midwives and organisations who want to implement CenteringPregnancy. A more in-depth description of these Essential Steps is included in Appendix 18.

Ten Essential Steps for Effective Implementation of CenteringPregnancy

1. Know your setting
2. Get information on CenteringPregnancy
3. Get a group together
4. Develop facilitator skills
5. Make time
6. Design the best model for your setting
7. Build in support and guidance
8. Identify and find resources
9. Have a go
10. Reflect, evaluate and talk about it

Conclusion

The CenteringPregnancy model is acknowledged as having health and social benefits for women who attend this group model of care. The Midwives' Study was undertaken to ascertain the experiences of midwives who engaged with this innovative way of working. Antenatal care, traditionally, has been provided on a one-to–one basis since it commenced early last century. As a result of this, it is recognised that midwives providing contemporary antenatal care do not have knowledge or experience of facilitating groups.

The Midwives' Study aimed to inform the future development of CenteringPregnancy in Australia and to understand and describe the impact of the introduction and implementation of the CenteringPregnancy model on the midwives. The experience of the midwives who provided CenteringPregnancy care suggests that it is an appropriate model of care for the Australian midwifery context, particularly if organisational support, recruitment strategies and the access to appropriate facilities are addressed. The midwives who undertook CenteringPregnancy engaged in a new way of working that enhanced their appreciation of relationship-based care and their job satisfaction.

As a consequence of this study, I have developed the *Ten Essential Steps for Implementation of CenteringPregnancy*. Further study needs to continue to understand and appreciate the complexities of developing and implementing CenteringPregnancy care. It is also important to gain further knowledge of health promotion strategies aimed at improving health outcomes for women and job satisfaction for midwives who facilitate CenteringPregnancy groups.

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APPENDICES

Appendix 1: Comparison of reduced number of antenatal care visits versus standard antenatal care visits

Outcome:	TOR (Total Odds Ratio for all trials)	95% CI (Confidence Interval)
Low birthweight	1.04	0.93 – 1.17
Pre-eclampsia	0.91	0.66 – 1.26
Severe postpartum anaemia (1 trial)	1.01 (OR) (Villar, Ba'aqeel et al., 2001)	
Urinary tract infection (1 trial)	0.93 (OR) (Villar, Ba'aqeel et al., 2001)	0.79 – 1.10
Perinatal mortality	1.06	0.82 – 1.36
Antepartum haemorrhage	1.25	0.83 – 1.88
Induction of labour	0.97	0.82 – 1.15
Caesarean section	0.98	0.86 – 1.11
Postpartum haemorrhage	0.97	0.84 – 1.12
Preterm birth	1.05	0.93 – 1.19
Small for gestational age	0.96	0.93 – 1.12
Admission to neonatal intensive care unit	0.96	0.75 – 1.23
Maternal death	0.87	0.50 – 1.50

Data taken from The Cochrane Systematic Review on *Patterns of Routine Antenatal Care for low-risk pregnancy (Villar, Carroli et al., 2001).*

Appendix 2: Additional antenatal support versus usual care during 'at-risk' pregnancy

Beneficial Outcomes	n	RR (Relative Risk)	95% CI
Less likely to have a caesarean section	5108 (9 trials)	0.88	0.79 to 0.98
More likely to choose terminate the pregnancy	4195 (4 trials)	2.96	1.42 to 6.17
Reduced antenatal anxiety	60 (1 trial)	- 7.85 Weighted Mean Difference (WMD)	- 13.14 to -2.56 (Dawson, Middlemiss, Coles, Gough, & Jones, 1989)
Less worry about their baby	509 (1 trial)	0.57	0.39 – 0.82 (Oakley et al., 1990)
Less dissatisfied with antenatal care	158 (1 trial)	0.42	0.25 – 0.73 (Blondel, Bréart, Llado, & Chartier, 1990)

Data taken from The Cochrane Systematic Review of s*upport during pregnancy for women at increased risk of low birthweight babies* (Hodnett & Fredericks, 2003).

Appendix 3: Comparison of Midwife-led versus other models of care for childbearing women - statistical significant clinical outcomes

Outcome:		n =	RR	95% CI
Women randomised into midwife-led care were less likely:	**Antenatal hospitalisation**	4337 (5 trials)	0.90	0.81 -0.99
	Fetal loss/neonatal death less than 24 weeks	9890 (8 trials)	0.79	0.65 – 0.97
	Regional analgesia/anaesthetic	11,892 (11 trials)	0.81	0.73 – 0.91
	An instrumental birth (forceps, vacuum)	11,724 (10 trials)	0.86	0.78 – 0.96
	An episiotomy	11,872 (11 trials)	0.82	0.77 – 0.88
	Shorter length of hospital stay for infants of women randomised for midwife-lead care	259 (2 trials)	2.00 days (WMD) -	-2.15 to -1.85
Women randomised into midwife-led care were more likely to:	**No intrapartum analgesia/anaesthesia**	7039 (5 trials)	1.16	1.05 – 1.29
	Attendance at birth by known midwife	5525 (6 trials)	7.84	4.15 – 14.81
	A spontaneous vaginal birth	10,926 (9 trials)	1.04	1.02 – 1.06
	Breastfeeding initiation	405 (1 trial)	1.35	1.03 – 1.76
	High perceptions of control	471 (1 trial)	1.74	1.32 – 2.30

Data taken from the Cochrane Systematic Review of *Midwife-lead versus other models of care for childbearing women (Hatem et al., 2008)*

Appendix 4: Comparison of Midwife-led versus other models of care for childbearing women - maternal satisfaction during antenatal period

	Satisfaction	Intervention	Control (n/N)	Relative rate	95%CI
Flint 1989	Very well prepared for labour	144/275 (52%)	102/254 (40%)	1.3	99%CI
Mac Vicar 1993		N = 1663	N = 826	Difference	
	Very satisfied with antenatal care	52%	44%	8.3%	
Kenny 1994		**N = 213**	**N = 233**		
	Carer skills, attitude and communication (antenatal care)	57.1/60	47.7/60		
	Convenience and waiting (antenatal care)	14.8/20	10.9/20		
	Expectations of labour and birth (antenatal care)	9.8/18	9.3/18		
	Asking questions (antenatal care)	8.5/12	6.9/12		
Rowley 1995				**OR**	
	Encouraged to ask questions	N/A		4.22	2.72-6.55
	Given answers they could understand	N/A		3.03	1.33-7.04
	Able to discuss anxieties	N/A		3.60	2.28-5.69
	Always had choices explained to them	N/A		4.17	1.93-9.18
	Participants in decision making	N/A		2.95	1.22-7.27
	Midwives interested in women as a person	N/A		7.50	4.42-12.80
	Midwives always friendly	N/A		3.48	1.92-6.35
Turnbull 1996		**n/N**	**n/N**		
	Antenatal care	534/648	487/651	0.48	0.585-0.41
Waldenstrom 2001		**%**	**%**	**OR**	
	Overall antenatal care was very good (strongly agree)	58.2%	39.7%	2.22	1.66-2.95
Hicks 2003	Care and sensitivity of staff (antenatal)	1.32	1.77		
Biro 2000	Satisfaction with antenatal care (very good)	195/344 (57%)	100/287 (35%)	1.24	1.13-1.36

Data taken from the Cochrane Systematic Review of *Midwife-lead versus other models of care for childbearing women* (Hatem et al., 2008)

Appendix 5: An Evaluation of Midwifery Group Practice, Part 1: Clinical Effectiveness - Intrapartum results

Obstetric Risk Status	Low Risk		Moderate Risk		High Risk	
Outcome %	**MGP**	**Other**	**MGP**	**Other**	**MGP**	**Other**
Spontaneous labour	87.2	74.9	78.2	70.5	80.4	65.9
Unassisted vaginal birth	78.9	66.9	72.3	53.9	67.4	46.1
Epidural anaesthesia	22.5	49	20.3	38.4	17.4	32.6
Perineal trauma (excluding caesarean section)						
No trauma –First degree	56.4	34.2	49.5	38.2	68.6	52.3
Second degree or greater	26.2	39.4	31.6	35	14.3	22.6
Episiotomy +/- tear	12.3	20.1	8.2	18.6	14.2	16.6
Labia/vagina/cervix	5.1	6.3	10.7	8.2	2.9	8.5

Data taken from *An Evaluation of Midwifery Group Practice. Part 1: Clinical Effectiveness* (Turnbull et al., 2009)

Appendix 6: CenteringPregnancy Introduction Workshop - Expression of Interest form

ARE YOU INTERESTED IN BECOMING THE FACILITATOR OR CO-FACILITATOR OF A CENTERINGPREGNANCY GROUP DURING THE ST GEORGE/SUTHERLAND HOSPITALS PILOT STUDY?

The CenteringPregnancy pilot study at St George/Sutherland Hospitals will involve the setting up and running of approximately 10 groups, 4 groups which will run July 2006 - February 2007, and 6 groups which will run approximately April 2007 – October 2007.

Each group will require a facilitator and co-facilitator who are prepared to commit to lead these groups over a 6 month period, covering for each other during annual leave etc. Times and dates will be available at the start of the project. The role would suit any midwife who enjoys working with groups, is interested in changing the way antenatal care is currently provided, and would enjoy being part of a research project.

The groups will run during normal working hours and full training and support will be provided. All the facilitators and co-facilitators will be asked to participate in a focus group and/or interview at the completion of their Centering group as part of the pilot study.

If you are interested in becoming a facilitator/co-facilitator for a group within the CenteringPregnancy Pilot study, please complete this form and hand it in at the end of the Workshop.

Any questions please speak with Ali Teate or Nicky Leap.

NAME……..

POSITION……..

ADDRESS……..

TEL NO……

Appendix 7: Instructional Workshop content evaluation

CENTERINGPREGNANCY®
INSTRUCTIONAL WORKSHOP CONTENT EVALUATION (required)

Please respond to the following core content items by circling 1-5 according to your workshop experience.

Content Area	Not Covered		Covered		Well Covered
Supporting Literature	1	2	3	4	5
Facilitative Leadership	1	2	3	4	5
Centering Data	1	2	3	4	5
Evaluation Component	1	2	3	4	5
Overall Model Design	1	2	3	4	5
Audio/Visual Materials	1	2	3	4	5
Design of Educational Component	1	2	3	4	5
Promotion/Recruitment Issues	1	2	3	4	5
Strengths/Difficulties of Model	1	2	3	4	5
Cultural Issues	1	2	3	4	5

Specific comments on content:

_____

CENTERINGPREGNANCY®
INSTRUCTIONAL WORKSHOP EVALUATION FORM (required)

Location_____**Date**_____

	Excellent	Good	Fair	Poor
1. The degree to which this programme will enhance my professional skills and/or knowledge	☐	☐	☐	☐
2. The degree to which the content met the stated objectives	☐	☐	☐	☐
3. The degree to which the instructors were effective in conveying content	☐	☐	☐	☐
4. The degree to which resource materials were adequate/useful	☐	☐	☐	☐

5. The degree to which time allocated was adequate

   Too much time (specify)_____

   Too little time (specify)_____

6. The degree to which the entire programme was meaningful and appropriate

   1 2 3 4 5 6 7 8

   Poor Good Excellent

7. How do you plan to use this information in your practice setting? Please choose all answers that apply to you.

   ☐ I work in a practice setting that already has a CenteringPregnancy® Programme.
   ☐ I plan to implement a CenteringPregnancy® Programme in my practice setting.
   ☐ I plan to discuss the possibility of a CenteringPregnancy® Programme in my practice setting.
   ☐ I will use components of the workshop but do not plan to implement a CenteringPregnancy® Programme in my practice setting.
   ☐ Other; please specify_____.

CENTERINGPREGNANCY® INSTRUCTIONAL WORKSHOP

8. What do you see as the major barrier(s) to implementing a CenteringPregnancy® Programme in your practice setting? Please choose all the answers that apply to you.

☐	Sustaining Funds	☐	Providers (midwives, physicians, Advanced Practice Nurses, etc.)
☐	Cost	☐	Overall unwillingness to change
☐	Nursing Staff	☐	Patient Reluctance
☐	Space	☐	None
☐	Administration	☐	Other please specify:

Additional comments:_____

_____

_____

_____

Additional Demographic Information

Your ethnicity is: (optional) _____

You are a practicing:

☐	Social worker (B.A, MSW)	☐	Office Manager
☐	Midwife	☐	Medical Assistant
☐	APRN	☐	Office Staff
☐	MD_____ob/gyn_____ fam pr	☐	Childbirth
☐	Nurse (LPN, RN)	☐	Other please specify:

Type of Facility:

☐	Community Health Center (CHC)	☐	HMO
☐	Primary Health Care Center (PHCC)	☐	Hospital Clinic
☐	Private Practice	☐	Other

Approximate number of births per year _____

Appendix 8: Consent form and Information sheet

A PILOT STUDY TO DEVELOP, IMPLEMENT AND TEST 'CENTERINGPREGNANCY' IN AUSTRALIA PARTICIPANT INFORMATION SHEET

SOUTH EASTERN SYDNEY ILLAWARRA NSW HEALTH

WHO IS DOING THE RESEARCH?
My name is Ali Teate and I am a Masters student at UTS. My supervisors are Professor Caroline Homer and Associate Professor Nicky Leap, Centre for Midwifery and Family Health at the University of Technology Sydney.

WHAT IS THIS RESEARCH ABOUT?
This research is to find out about whether this new way of providing care during pregnancy (CenteringPregnancy programme) is acceptable to women, midwives and doctors in Australia. CenteringPregnancy is a different way of providing antenatal care that means that all the usual pregnancy check-ups, information and support take place as part of a small group. Women are able to share their experiences, learn from one another and make new friends.

IF I SAY YES, WHAT WILL IT INVOLVE?
Women will have their pregnancy care in a CenteringPregnancy model, that is, as a small group rather than individually. The structure of the CenteringPregnancy programme incorporates all the usual pregnancy checks, education and information and support in a group situation. All pregnancy care will take place in the group except for the initial midwifery and medical checks or during any other checks or situations that require privacy. Midwives who have received training in the CenteringPregnancy programme will run the groups. We will ask the pregnant women in the study to fill in three short surveys – one when you start the groups, the next when you are about 8 months pregnant; and the last one when your baby is about 12 weeks old. We will also collect information from your hospital records after your baby is born. We will also ask the midwives and doctors involved in the programme to participate in a one to one interview or a focus group at the beginning of the project and again after 12 months.

ARE THERE ANY RISKS?
We will ensure that you receive all the usual and necessary care during your pregnancy. This is to ensure that you receive the best care. It is possible that at times things might get discussed in the group that causes your distress. If this occurs we will make sure that there is private time at the time or after the group to ensure you have extra support and assistance, as you need it. It is possible that the interviews or doing the surveys may raise incidents or stories that may cause distress. We will provide support to you if this occurs and ensure that you have extra care and support as needed.

WHY HAVE I BEEN ASKED?
You have been asked to be part of this study because either you are pregnant and will be having your baby at St George or Sutherland Hospital or you are a doctor or midwife and you are involved in the CenteringPregnancy programme.

DO I HAVE TO SAY YES?
You don't have to say yes.

WHAT WILL HAPPEN IF I SAY NO?
Nothing. I will thank you for your time so far and won't contact you about this research again.

IF I SAY YES, CAN I CHANGE MY MIND LATER?
You can change your mind at any time and you don't have to say why. I will thank you for your time so far and won't contact you about this study again.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?
If you have concerns about the research that you think I or my supervisors can help you with, please feel free to contact us on 9514 2977. If you would like to talk to someone who is not connected with the research, you may contact the South Eastern Sydney and Illawarra Area Health Service Human Research Ethics committee on 9350 3968, and quote this number *(SESIAHAS Approval Number 06/35)*.

A PILOT STUDY TO DEVELOP, IMPLEMENT AND TEST 'CENTERINGPREGNANCY' IN AUSTRALIA
PARTICIPANT (PREGNANT WOMAN) CONSENT

SOUTH EASTERN SYDNEY ILLAWARRA NSW HEALTH

I _____ agree to participate in the research project *A pilot study to develop, implement and test 'CenteringPregnancy' in Australia* (*approval reference number: 06/35)* being conducted by Professor Caroline Homer and Associate Professor Nicky Leap at the Centre for Midwifery and Family Health at the University of Technology Sydney (telephone 9514 2977). Alison Teate is studying for her Masters of Midwifery (Hons) degree and is also working on this study. The Telstra Community Development Foundation has provided funding for this research.

I understand that the purpose of this study is to develop and implement the CenteringPregnancy programme in Australia. CenteringPregnancy is a different way of providing antenatal care that brings women together into small groups for all their pregnancy care. CenteringPregnancy incorporates all the check-ups, information and support in these groups.

I understand that my participation in this research will involve receiving my antenatal care in a group setting. The same number of visits will occur through my pregnancy but they will occur in the group. I will also fill out three surveys – one at the beginning, one towards the end of my pregnancy and one when my baby is 3 months old. The researchers will also collect some information about my baby's birth from my hospital records.

I am aware that I can contact Caroline Homer, Nicky Leap or Alison Teate (telephone 9514 2977) if I have any concerns about the research. I also understand that I am free to withdraw my participation from this research project at any time I wish, without consequences, and without giving a reason. Withdrawing from the study will not change my care at the hospital and will not change my relationship with the midwives and doctors providing my care.

I agree that the research team, Caroline Homer, Nicky Leap or Alison Teate, have answered all my questions fully and clearly.

I agree that the research data gathered from this project may be published in a form that does not identify me in any way.

_____ ____/____/____
Signature (participant)

_____ ____/____/____
Signature (researcher or delegate)

REVOCATION OF CONSENT

I _____, withdraw my consent to participate in the above study.

_____ ____/____/____
Signature (participant)

NOTE:
The South Eastern Sydney and Illawarra Area Health Service Human Research Ethics Committee and the UTS Human Research Ethics Committee have approved this study. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the SESIAHS Ethics Committee through the Research Ethics Committee-Southern Section, St George Hospital, Gray Street, Kogarah NSW 2217, (Ph: 9350 2481, Fax 9350 3968) and quote HREC reference number 06/35. Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

A PILOT STUDY TO DEVELOP, IMPLEMENT AND TEST 'CENTERINGPREGNANCY' IN AUSTRALIA
HEALTH CARE PROVIDER CONSENT

SOUTH EASTERN SYDNEY ILLAWARRA NSW HEALTH

I _____ agree to participate in the research project *A pilot study to develop, implement and test 'CenteringPregnancy' in Australia* (*approval reference number: 06/35)* being conducted by Professor Caroline Homer and Associate Professor Nicky Leap at the Centre for Midwifery and Family Health at the University of Technology Sydney (telephone 9514 2977). Alison Teate is studying for her Masters of Midwifery (Hons) degree and is also working on this study. Telstra Community Development Foundation has provided funding for this research.

I understand that the purpose of this study is to develop and implement the CenteringPregnancy programme in Australia. CenteringPregnancy is a different way of providing antenatal care that brings women together into small groups for all their pregnancy care CenteringPregnancy incorporates all the check-ups, information and support in these groups.

I understand that my participation in this research will involve participation in a face to face interview or a focus group with a number of other health professionals. The aim of the interview or focus group is to discuss the CenteringPregnancy programme and to see whether it can be more widely implemented. The interview should take no longer than one hour. The interview or focus group will be tape recorded. Hand-written notes will be taken during the interview or focus group. No identifying information will be kept about me.

I am aware that I can contact Caroline Homer, Nicky Leap or Alison Teate (telephone 9514 2977) if I have any concerns about the research. I also understand that I am free to withdraw my participation from this research project at any time I wish, without consequences, and without giving a reason. Withdrawing from the study will not in any way change my relationship with the hospital, employer or my manager.

I agree that the research team, Caroline Homer, Nicky Leap or Alison Teate, have answered all my questions fully and clearly.

I agree that the research data gathered from this project may be published in a form that does not identify me in any way.

_____ ____/____/____
Signature (participant)

_____ ____/____/____
Signature (researcher or delegate)

REVOCATION OF CONSENT

I _____, withdraw my consent to participate in the above study.

_____ ____/____/____
Signature (participant)

NOTE:
The South Eastern Sydney and Illawarra Area Health Service Human Research Ethics Committee and the UTS Human Research Ethics Committee have approved this study. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the SESIAHS Ethics Committee through the Research Ethics Committee-Southern Section, St George Hospital, Gray Street, Kogarah NSW 2217, (Ph: 9350 2481, Fax 9350 3968) and quote HREC reference number 06/35. Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Appendix 9: Media Consent form

SOUTH EASTERN SYDNEY
ILLAWARRA
NSW HEALTH

Media/Patient Consent Form

To be used for Filming, Photography, Media Interviews

Patient's Name: _____

MRN: _____

Facility and Ward: _____

Address: _____

Media Involved: Newspaper / Magazine / Television / Radio / Film / Website

Reason: _____

Media Representative: _____

Media Organisation: _____

I/We: _____ give my permission for:

a) The filming/photography in which I appears and/or

b) Contents of the interview given by me and/or

c) Details in relation to my medical condition (delete where necessary) to be used by the media outlet named above.

I accept that I do not have to participate in any media-related activity if I choose, and I agree to comply with any request made by the Hospital Executive, Area Media Liaison Officer or Security.

Signature: _____

Address: _____

Relationship to child: _____
(If appropriate)

Witness: _____

Area Media Liaison Officer: _____

I _____ give permission for the media-related activity to take place on the premises.
However, the management of the facility reserves the right to stop any media-related activity at any time in order to protect the health of any patient and/or allow the provision of health care services.

Hospital Executive: _____

Date: ___/___/___

SOUTH EASTERN SYDNEY
ILLAWARRA
NSW HEALTH

Media / Staff Consent Form

Staff member's name: _____

Staff number: _____

Facility: _____

Ward / Dept: _____

Media involved: _____

Press _____

TV _____

Radio _____

Website _____

Film _____

Reason (include program where relevant): _____

Media representative: _____

Contact phone number: _____

I _____
give my permission for (delete where necessary):

1. any filming / photography in which I may appear; and / or
2. the contents of the interview given by me

to be used by the media outlet identified above.

I understand that this information may also be used in SESIH publications.

I understand I do not have to participate in any media-related activity if I so choose and I agree to comply with any reasonable request made in relation to this interview by Hospital Staff.

Signed: _____ **Date:** __/__/__

Facility witness's signatures: _____ **Date:** __/__/__

Witness's name & staff # _____

Witness's facility & position title: _____

SESIH Media Officer: _____

Date: __/__/__

The South Eastern Sydney Illawarra Area Health Service's Corporate Communictations Directorate gives permission for the media activity described above to take place. However, facility management also reserves the right to stop any media activity at any time in order to protect the health of any patient and / or to allow the provision of health care services.

Appendix 10: CenteringPregnancy group attendance list

UNIVERSITY OF TECHNOLOGY SYDNEY

CenteringPregnancy
Attendance checklist

Thank you for your involvement in the CenteringPregnancy pilot study.

It would be greatly appreciated if you can fill this checklist out after each session.
Please bring this checklist to the next facilitators meeting or place it in the CenteringPregnancy folder.

Which Group: _____

Session No & date. _____

Facilitator's: _____

_____

Names of the women and support people who attended:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Appendix 11: CenteringPregnancy Post-session checklist

UNIVERSITY OF TECHNOLOGY SYDNEY

CenteringPregnancy
Post session checklist

Thank you for your involvement in the CenteringPregnancy pilot study.

It would be greatly appreciated if you can fill this anonymous checklist out after each session. We are hoping to assist you with becoming more confident with leading groups and to also gain an understanding of your experience with becoming a facilitator.

Please bring this checklist to the next facilitators meeting or place it in the CenteringPregnancy folder.

Session No. _____

Have any participants transferred out of the course: Yes/ No

1. List the names of any women who have transferred and where they have transferred to:

   _____
   _____

2. List the names of any new participants:

   _____
   _____

3. What did you plan for this session?

   _____
   _____

4. What areas did you cover today?

   _____
   _____

5. What was your biggest challenge in this session?

   _____
   _____

6. What were the highlights of this session?

   _____
   _____

Please circle the number that you feel best represents how you are feeling today.

7. To what extent was the group session didactic vs. facilitative today?

1	2	3	4	5	6	7	8	9	10
Very didactic								Very facilitative	

8. How much do you think the group members were involved and connected today?

1	2	3	4	5	6	7	8	9	10
Not at all							Very much		

9. How confident did you feel facilitating the group today?

1	2	3	4	5	6	7	8	9	10
Not at all confident							Very confident		

10. Do you have any other comments?

    _____

Appendix 12: CenteringPregnancy Facilitators Pre-implementation survey

UNIVERSITY OF TECHNOLOGY SYDNEY

Date:_____

Pre-survey for CenteringPregnancy Facilitators

Thank you for your involvement with CenteringPregnancy. As part of this pilot study we are exploring your experience of becoming a facilitator. To understand your experience we need to gain and understanding of your prior knowledge and skills with providing antenatal care and education.

Please take some time to fill out this brief survey.

1. How many years experience do you have providing antenatal care?_____
2. What is your usual professional role? _____
3. Have you ever taught childbirth education classes? No/Yes [if yes, please specify]

_____

The following statements refer to what you are thinking at this point.
Please circle the statement that best describes how you feel.

4. When you compare the care you provide with individual antenatal appointments, the antenatal care in CP group will be:

Much worse	**Somewhat worse**	**Equal to**	**Somewhat better**	**Much better**

5. Compared to individual antenatal appointments, I think antenatal care in groups will be:

Much less rewarding	**Somewhat less rewarding**	**As rewarding**	**Somewhat more rewarding**	**Much more rewarding**

6. Compared to the women I have seen in individual antenatal appointments, women in group antenatal care will be:

Much less ready for labour	**Somewhat less ready for labour**	**Equally ready for labour**	**Somewhat more ready for labour**	**Much more ready for labour**

7. Compared to the women I have seen in individual antenatal appointments, women in group antenatal care will be:

Much less ready for parenting	**Somewhat less ready for parenting**	**Equally ready for parenting**	**Somewhat more ready for parenting**	**Much more ready for parenting**

8. How important do you think it will be to provide care in a group model in the future?

Not at all important	**Somewhat unimportant**	**Neither important or unimportant**	**Somewhat important**	**Very important**

9. Can you see the benefit of this model for widespread implementation?
   YES/NO Comment: _____

10. Please state the percentage of time for each of the following activities that you believe will occur in an ideal group. (the % should add up to 100%)

	%
• Physical examination	_____
• Group discussion led by the facilitator	_____
• Educational lectures by the facilitator	_____
• Informal group discussion not lead by the facilitator	_____
• Other	_____

11. Please state the percentage of time for each of the following that you believe will occur in an ideal group discussion. (the % should add up to 100%)

	%
• Provider talking	_____
• Group members talking	_____
• Co-facilitator talking	_____

12. Approximately, how many hours of training have you attended for CenteringPregnancy (include CenteringPregnancy workshop or group skills workshop)?

_____

13. What have been your challenges with being a CenteringPregnancy facilitator?

_____
_____

14. What have been your highlights with being a CenteringPregnancy facilitator?

_____
_____

15. Do you have any other comments?

_____
_____

Appendix 13: CenteringPregnancy Facilitators Post-implementation survey

UNIVERSITY OF TECHNOLOGY SYDNEY

Date:_____

Post-survey for CenteringPregnancy Facilitators

Thank you for your involvement with CenteringPregnancy. As part of this pilot study we are exploring your experience of becoming a facilitator. To understand your experience we need to gain and understanding of your experience with facilitating your first CenteringPregnancy group.

Please take some time to fill out this brief survey.

The following statements refer to what you are thinking at this point.
Please circle the statement that best describes how you feel.

1. When you compare the care you provide with individual antenatal appointments, the antenatal care in CP group was :

Much worse **Somewhat worse** **Equal to** **Somewhat better** **Much better**

2. Compared to individual antenatal appointments, I think antenatal care in groups was:

Much less rewarding **Somewhat less rewarding** **As rewarding** **Somewhat more rewarding** **Much more rewarding**

3. Compared to the women I have seen in individual antenatal appointments, women in group antenatal care were:

Much less ready for labour **Somewhat less ready for labour** **Equally ready for labour** **Somewhat more ready for labour** **Much more ready for labour**

4. Compared to the women I have seen in individual antenatal appointments, women in group antenatal care were:

Much less ready for parenting **Somewhat less ready for parenting** **Equally ready for parenting** **Somewhat more ready for parenting** **Much more ready for parenting**

5. How important is it to you to provide care in a group model in the future?

Not at all important **Somewhat unimportant** **Neither important or unimportant** **Somewhat important** **Very important**

6. Can you see the benefit of this model for widespread implementation?
YES/NO Comment: _____

12. Please state the percentage of time for each of the following activities that you believe occur in an ideal group. (the % should add up to 100%)

	%
• Physical examination	_____
• Group discussion led by the facilitator	_____
• Educational lectures by the facilitator	_____
• Informal group discussion not lead by the facilitator	_____
• Other	_____

13. Please state the percentage of time for each of the following that you believe will occur in an ideal group discussion. (the % should add up to 100%)

	%
• Provider talking	_____
• Group members talking	_____
• Co-facilitator talking	_____

16. Approximately, how many hours of training have you attended for CenteringPregnancy (include CenteringPregnancy workshop or group skills workshop)?

_____

17. What have been your challenges with being a CenteringPregnancy facilitator?

_____
_____

18. What have been your highlights with being a CenteringPregnancy facilitator?

_____
_____

19. Do you have any other comments?

_____
_____

Appendix 14: Exemplar of Field notes

NB. All the names of the participants have been de-identified.

Field Notes: Facilitator's meeting 2/4/2007

Pre- meeting before second CenteringPregnancy session
13 participants

Feedback from 1st session:

Nicky, Caroline and I were feeling apprehensive and negative about the session as we were worried no one would turn up.

STOMP still an issue as not all facilitators are attending the meetings due to lack of roster support.
Need to Follow this up
We set up before the time and had organised notes and a plan to facilitate the session.

……, ….., …. ….., …, ….., ….., …., …., ….. all attended.

We were surprised by the turn up, but would have been better if lead facilitators attended for STOMP.

Role play was energising and fun and relaxed with good flow through of information with mat check and beginning of the session.

Reinforced 3 minute mat time
Round with Icebreaker – describing names was good.

Round of feedback from groups were positive and reassuring. Everyone happy that CP has started, felt good and confident about the process.

Reflected well on what needed to be improved:

Problems with too much talking, answering questions and 'throwing back' and not answering the questions. Advised the phrases that could be used.

Looking forward to the next session.

SAS, button game and woman diagram for common disorders used.

Food discussed
Stress of time management to get to sessions commented on by all.

Next round of CenteringPregnancy briefly touched on recruiting problems and further education for this.

Increased women in groups for time and cost effectiveness.

Session felt good – flowed well.

Nicky, Caroline and I fed off and lead each other well with discussion and facilitating.

People appeared relaxed and confident
Video – early birds group was well received and accepted. We particularly looked at language used which highlighted to the facilitators well about open ended questions and throwing back to the group.

RAH Rah Rah effect – demanding and feel apathetic staff are hard work. Which makes it daunting with each session I need to lead.

Feedback from 1st session:

SGH

- 5-6women - culturally diverse group – and all 1st time mothers.
- Really enjoyed it.
- … recognised that she talks too much – takes practice to say 'What does anyone else think about that?'
- Once she let them go and they came up with the answer.
- During the mat check time the women, who were still in the circle, kept asking the SM lots of questions.
- Women actually brought up nutrition and then the facilitator's could keep going on this.
- A few questions came up on the mat and these were directed back to the larger group.
- One woman still to join the group.
- Really excited after it – 'on cloud nine'.

Rockdale

- Really impressed by the amount of knowledge in the group – really empowering.
- Realised how little you learn in one to one AN care, comment from a midwife who had experienced AN care as a pregnant woman and as a midwife.
- 3 men came along – really enthusiastic – almost took over at some points – one was the group 'clown' – one man kept saying how lucky they were to have the group and meet the midwives.
- Mat checks during the break meant all women went to kitchen and it was hard to get them back in the room. Broke up the group and removed the emphasis of the women and men sitting together and talking.
- ….. really enjoyed it – prepared a bag with things in it to pull out
- Balance between throwing back in to group and giving them an answer.
- ….. showed that preparation assisted with the group flowing well.

Hurstville

- None of these midwives were at today's meeting. Ali provided feedback.
- Went well
- Used the same nutrition bag as Rockdale STOMP.
- One woman did not come and won't come – one had transferred her care to another hospital, but another will join (so only lost one).
- A few partners came and were very encouraging about the group concept – one said that if there was any time that the women wanted to be women only – he would be happy to step out.
- Need re- arrange the room a bit – not to do mat check in the corridor.
- One of the women's mothers came as a support person as well.
- Culturally diverse group as well.

Sutherland

- Went well- bit disjointed at the beginning. Only 3 women to start with, so we started the mat checks. Another woman arrived later.
- Will have 5 women next week as 1 could not make it to the first group as she had an appointment.
- Women hung around at the end to chat
- Good feeling in the group.
- Women attended the group as they were new to Sydney and wanted to link in with other women.
- All but one of the women were 1st time mothers.
- The multip brought up the issue of induction and ….. advised her about the hospital policy and that it was early days and that we could talk about it later. Nicky advised ….. to reconnect with this woman at the next group to confirm IOL would be discussed at a later group, so as to ensure that we were listening to her and not fobbing her off.

Sutherland

- Had a fantastic time.
- Great to experience the process.
- 'Everything we dreamed came true'.
- 9 couples and 1 woman who's partner was home tiling at her request.
- Found the confidentiality issue really hard – seems like other CP groups had the same problem
- Men were also beginning to engage by the end of the group.
- Ali felt the dynamics were markedly different with all the people attending as couples.
- Room was not big enough and the shape had a big impact on the flow of the group.
- Going to try and use the waiting area next time as it is bigger and not used at night.
- Women did not mind having checks with others around, including the men. All the men were involved with the mat check with their partners.
- One young woman who is really quiet came to the group at her partner's request as he wanted to come – she became more involved in the group as it progressed.

Discussion:

Importance and the value of continuity of facilitator – hard to without this.

Recruiting:

- Facilitator's keen to do the next lot of recruiting for the next groups.
- Talked about promotion eg photos for AHS newsletter and the Leader
- Think it would be easier to 'sell it' once it has actually been happening for both women and midwives.
- Possibility for using women's words to promote in the future.

Value of inviting women to come back with their babies to tell their story.

Lyn raised the issue of reunion after the groups have finished.

Open trust & communication exhibited:

- Women had access to their noted at SGH sites
- Some women found errors in their notes and really liked being able to correct them.
- Putting things on the white board shows that the groups are led by the women.

Adult Activities & Group Facilitation:

- Decided to use SAS for Comfort, Posture and Minor Disorders.
- Concerns raised bout the level of literacy in the groups.
- One other option for Adult activity was for the women to draw/colour/mark on the outline of a woman where her problem/issue is. This outline is either posted on the board or given to the woman+/- her support person to fill out.
- The 'button' activity was also reviewed.
- SAS – need to review these for the next session, before we use them.
- The 'Early Birds' group programme video was viewed.
- This highlighted language and phrases to use to assist with group discussion and inclusion of all members.
- Conflicting advice – strategies can be used to not obliterate trust.
- Iron supplements issue was also covered.

Appendix 15: Template for Facilitator meeting

CenteringPregnancy Facilitators

Support and Planning Meeting.

AGENDA

2nd April, 1-3pm
Sutherland Hospital
Tutorial Room, level 3 near Delivery Suite

Apologies:

Present:

Minutes:

1. Role Play

2. Round

3. Review of 1st Session

4. 2nd Session Plan

5. Adult Education Activities – video 'Early Birds'

6. The facilitator's meeting

7. Other business

Appendix 16: Description of content analysis of challenges and highlights of being a CenteringPregnancy Facilitator

Challenges - Before Comment	Meaning Unit	Code	Theme
Facilitator skill That it is a new challenge Getting head around different approach and style of giving antenatal care Never have run groups before New way of providing AN care	That it is a new challenge New model New skill	New challenge	New
Being more conscious of anxiety created by movement out of comfort zone for my colleagues Getting over the nerves about facilitating a group Out of my comfort zone	Anxiety for my colleagues Nerves about facilitating a group	Anxiety Nervous about facilitating	Nervous
The confidence to let it happen – believing in the process – making it happen.	The confidence to let it happen Believing in the process	Developing confidence in the process	Developing confidence
Am enthusiastic about it – trying to enthuse others Supporting staff members who are not involved with CENTERINGPREGNANCY to be aware of it's concepts, progress of the CENTERINGPREGNANCY re Recruiting at interviews	Enthusiastic about it Motivating other staff Supporting other staff	Motivating self and others	Motivation
Having time to prepare or lack of time Spending and organising the time to inform the rest of my team members about Finding time to concentrate on being a facilitator along with other roles Meetings with co-facilitators to plan sessions Being free to attend meetings	Time to prepare Lack of time Finding time Free to attend meetings	Lack of time Finding time	Time
Centering as the recruiting has been partly left for the facilitator Recruiting women Recruitment (hard) Recruitment and lack of prep time	Recruitment (hard).	Recruitment	Recruitment

Challenges - After Comment	Meaning Unit	Code	Theme
Developing confidence in facilitating groups	Developing confidence with facilitation	Developing confidence	Developing confidence
At the beginning, throwing things back to the group – no talking too much myself	Throwing it back to the group	Learning group facilitation skills	Learning to facilitate
	Not talking too much		
Learning to keep mouth shut and let women lead discussion – trust the women	Let women lead discussion		
	Trust the women		
Keeping the women talking and not talking too much myself	Balance of agendas		
Balance between our agenda and women's agendas.			
Adapting to a new model of AN care	Adapting to a new model of AN care	Adapting to a new model	Adapting
Felt prepared for it – but was always vigilant to being very precise that all was done thoroughly and as others were judging from the outside (Doctors, etc).	Being prepared, vigilant, precise and thorough as judgement from others	Being prepared and thorough	Being prepared
Running the CenteringPregnancy model within the AN clinic and finishing one workload to commence another	Increase in workload	Increased workload	Increased workload
Being rostered to go to meeting	Rostering		
Have never facilitated a group before fear factor was an issue	Fear of facilitating	Fear	Fear
	Fear of not knowing		
Overcoming fear of not knowing enough and not knowing what the women want			
The time spent in organising the group sessions	Time spent organising	Time	Time

Highlights - Before Comment	Meaning Unit	Code	Theme
Being excited about doing something 'new' in midwifery New experience Excited as a new way to provide antenatal care Being involved in the exciting 'new' concept	Being excited about something new New way to provide care Excitement	Excitement New New Excitement	New Excitement
Being a pioneer Meeting the challenge of doing something I have never done before	Challenge of doing something I have never done before Being a pioneer	New challenge Pioneer	Pioneer
Fun, learning new ideas techniques Enjoying it as much as the women Learning from each other.	Fun Learning new skills Learning from each other Enjoyment	Fun Learning new ideas Enjoyment	Fun Learning
Developing group skills to provide care Learning new skills of group work	Developing and learning new skills	Learning new skills	New skills
Working collaboratively with midwifery colleagues Being with the group of facilitators Attending the preparation groups to practice facilitation Networking	Working collaboratively with midwifery colleagues Involvement in a new concept	Collaboration	Collaboration
Having the opportunity	Opportunity	Opportunity	Opportunity
New innovative project Providing a new type of care for women Be involved in something that is so new that involves antenatal care	New innovative project New type of care New antenatal care	Involved with a new antenatal caret	New antenatal care

Highlights - After Comment	Meaning Unit	Code	Theme
Forming great relationships Getting to know the women Making friends with the women Developing a relationship with women.	Forming relationships Friends Developing a relationship with women.	Developing relationships	Relationships
Realising how much I do know, gaining the confidence in running a group Gaining confidence to facilitate a group	Realising how much I know Gaining the confidence in running a group Gaining confidence to facilitate a group	Gaining confidence with facilitation	Confidence
Watching the women grow as a group and in confidence each session Watching the women get to know each other and support of each other Watching their relationships together strengthen and supporting each other Nothing compared to seeing the group form It was wonderful. The guys and gals became so close and supportive of each other. They stated they would be friends for life The bond in the group – the openness of group members – when some members come back to the group with their babies, the difference was so obvious – total involvement of parents	Watching the women grow Watching women get to know and support each other Watching their relationships Seeing the Openness of group member Involvement group form	Watching women grow Openness of the group Involvement	
Seeing the benefits and hearing their positive experience of Centering and views re: impact on their birthing and parenting	Seeing the benefits and hearing their positive experience of Centering	Experiencing the benefits of CenteringPregnancy	Experiencing the benefits of CenteringPregnancy
Watching my co-facilitator also develop	Watching my co-facilitator also develop	Watching colleagues develop	Watching colleagues develop
Working with a skilled midwife The workshops and the commitment and enthusiasm of everyone involved, made a huge difference	Working with a skilled midwife Commitment and enthusiasm of everyone	Working with skilled colleagues Commitment and enthusiasm	Working with colleagues
Being a part of something new and exciting	Being a part of something new and exciting	Being a part of something new	Being a part of something new Exciting

Other comments

Before

- Really positive about the process.
- I think this is an exciting process.

After

- Fantastic experience – this has become much more apparent on reflection of the process after the event. The way to go. The women know what they want – lets give it to them.
- We had all primips think a mix would be good as women then have previous experience
- Need at least 8-10 in a group to make it cost effective to replace individual visits.
- Having a student with the group was great learning experience. Limited preparation time to review notes prior to sessions. Think it would be easier to recruit now we know how well groups run.
- Think the group format is ideal for special populations – would love to run a teenage group or see it used for Chinese or Arabic women.
- The groups carried in facilitator input depending on the topic of the week and the women's knowledge in that area.
- I thought my role would change greatly – but the group were very welcoming of the presence of the midwife – although I was not the 'expert' – I was their facilitator and at the end a 'good friend'. It was wonderful. I was invited to their reunion at 6 weeks- all couples were present (except one). They were a great group.
- My concern for future groups is how necessary it is for the women to be of similar gestation. Manger at TSH said she could not accommodate this. It would be more difficult for the group to work.
- Enjoyed the whole experience. I hope Centering is offered and implemented into AN care for women.
- Would love to see this take off especially for ANC. May have some issues incorporating into models of care as I believe women do get some benefit from AN care more so in the models of care than ANC. Issues such as staffing and rostering so the groups can meet all the midwives and issues would also be using the time effectively would need to have adequate numbers in the group to use up the time allocated.

Appendix 17: Women's experiences of group antenatal care in Australia-the CenteringPregnancy Pilot Study

Women's experiences of group antenatal care in Australia—the CenteringPregnancy Pilot Study

Alison Teate, RM, BM (Research Midwife)[a], Nicky Leap, RM, MSc, DMid (Professor of Midwifery Practice Development)[a,b], Sharon Schindler Rising, MSN, CNM, FACNM (Founder and Executive Director)[c], Caroline S.E. Homer, RM, MscMed (ClinEpi), PhD (Professor of Midwifery)[a,*]

[a] Centre for Midwifery, Child and Family Health, Faculty of Nursing, Midwifery and Health, University of Technology Sydney, P.O. Box 123, Broadway, NSW 2007, Australia
[b] South Eastern Sydney and Illawarra Area Health Service, Australia
[c] Centering Healthcare Institute, 553 Maple Avenue, Cheshire, CT 06410, USA

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ABSTRACT

Objective: to describe the experiences of women who were participants in the Australian CenteringPregnancy Pilot Study. CenteringPregnancy is an innovative model of care where antenatal care is provided in a group environment. The aim of the pilot study was to determine whether it would be feasible to implement this model of care in Australia.
Design: a descriptive study was conducted. Data included clinical information from hospital records, and antenatal and postnatal questionnaires.
Setting: two metropolitan hospitals in Sydney, Australia.
Participants: 35 women were recruited to the study and 33 ultimately received all their antenatal care (eight sessions) through five[CH_1] CenteringPregnancy groups.
Findings: difficulties with recruitment within a short study timeline resulted in only 35 (20%) of 171 women who were offered group antenatal care choosing to participate. Most women chose this form of antenatal care in order to build friendships and support networks. Attendance rates were high and women appreciated the opportunity and time to build supportive relationships through sharing knowledge, ideas and experiences with other women and with midwives facilitating the groups. The opportunity for partners to attend was identified as important. Clinical outcomes for women were in keeping with those for women receiving standard care; however, the numbers were small.
Conclusion: the high satisfaction of the women suggests that CenteringPregnancy is an appropriate model of care for many women in Australian settings, particularly if recruitment strategies are addressed and women's partners can participate.
Implications for practice: CenteringPregnancy group antenatal care assists women with the development of social support networks and is an acceptable way in which to provide antenatal care in an Australian setting. Recruitment strategies should include ensuring that practitioners are confident in explaining the advantages of group antenatal care to women in early pregnancy. Further research needs to be conducted to implement this model of care more widely.

Introduction

Antenatal care has been routine practice throughout the world since early in the 20th Century (Oakley, 1984; Moos, 2006). In most developed countries, antenatal care consists of a scheduled programme of individual consultations with a health-care practitioner, using a doctor or midwife. Many women also undertake childbirth education programmes, or 'antenatal classes', where they receive information about pregnancy, labour and birth, and parenting. A Cochrane Systematic Review (Gagnon and Sandall, 2007) concluded that the effects of structured antenatal education programmes for childbirth or parenthood remain largely unknown due to a lack of high-quality evidence from trials in this area.

Criticisms of conventional antenatal care are common; principally, prolonged waiting times, lack of continuity of caregiver and hurried staff (Williamson and Thomson, 1996; Laslett et al., 1997). Women seek antenatal care that provides a physical review of the health and development of their unborn baby, the reassurance and ability to be listened to, and the opportunity for their partner to be included in their care (Clement et al., 1996; Langer et al., 2002; Handler et al., 2003; Hildingsson and Radestad, 2005).

* Corresponding author.
E-mail address: carol ne.homer@uts.edu.au (C.S.E. Homer).

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Group antenatal care takes a different approach in that it combines the traditional elements of antenatal care assessment with antenatal education and social support from peers and trained facilitators. In the USA, this model has been provided for the past decade and has been named 'CenteringPregnancy' (Rising, 1998). In CenteringPregnancy, antenatal care is provided in small groups of eight to 12 women with specially trained facilitators. Women of a similar gestational age join a CenteringPregnancy group after their initial one-to-one 'booking' appointment with a midwife or doctor.

The CenteringPregnancy Pilot Study was conducted in Sydney, Australia in 2006–2007. This paper describes the CenteringPregnancy model of care, and reports on the experiences of the women who were involved in the pilot study.

CenteringPregnancy as a model of care

CenteringPregnancy, as a model of antenatal care combining assessment, education and support in group settings, has been widely implemented and evaluated in the USA (Rising, 1998, 2004; Ickovics et al., 2003; Klima, 2003; Novick, 2004; Massey et al., 2006). CenteringPregnancy enables more time to be spent with the health-care provider compared with a one-to-one care model (16 hours in group care versus three to four hours in a one-to-one care model involving eight appointments). This provides opportunities for additional information about pregnancy, labour and birth, and parenting to be discussed and for women to learn from, and support, one another (Massey et al., 2006). The model is based on the development of relationships and the provision of social support. It has been suggested that, by taking health care out of an examination room and into a group setting, barriers between health-care providers and women are decreased, leading to improved communication (Massey et al., 2006).

CenteringPregnancy has recently been evaluated in two randomised controlled trials (Ickovics et al., 2007; Kennedy et al., 2007). In the first trial ($n = 1047$), women assigned to group care were significantly less likely to have preterm births compared with standard care: 9.8% vs. 13.8% (odds ratio 0.67, 95% confidence interval 0.44–0.98; $p = 0.045$). Women assigned to group care had significantly better psychosocial function and higher rates of satisfaction with care and breast feeding. There were no differences in costs associated with antenatal care or delivery (Ickovics et al., 2007). Preliminary findings from the second trial ($n = 322$) suggest that the group model was effective in meeting women's needs in a military setting (Kennedy et al., 2007). Other, non-randomised, studies of CenteringPregnancy have demonstrated improvements in rates of social isolation, prematurity, low birth weight, and social and emotional outcomes for women (Ickovics et al., 2003; Grady and Bloom, 2004; Klima et al., 2003, 2009).

The premise of CenteringPregnancy is that antenatal care is provided more effectively and efficiently to women in groups (Rising et al., 2004). Learning and support are enhanced by drawing on group resources, in particular the knowledge, experiences and ideas of individual group participants; the potential for empowerment is increased when women are actively involved in monitoring and documenting their health throughout pregnancy (Rising et al., 2004). The format of the model is founded on a set of core concepts known as the 'Essential Elements of CenteringPregnancy' (Fig. 1; Rising, 1998). These elements provide a framework for the groups and are necessary requirements for each site to fulfil in order to be 'registered' as a CenteringPregnancy site, thereby ensuring model fidelity and the potential to contribute to research in this area.

All the health professionals who facilitate CenteringPregnancy groups are provided with formal training in the 'essential elements' through facilitated workshops (Rising et al., 2004). The Centering Healthcare Institute (CHI), previously registered as the Centering Pregnancy and Parenting Association, is a non-profit organisation that provides basic and advanced training for health professionals (Carlson and Lowe, 2006) in the USA. CHI also tracks implementation sites, evaluates the outcomes from these sites, and provides support and guidance for the health professionals involved (Novick, 2004). This formal training and ongoing evaluation are important components of CenteringPregnancy to ensure fidelity of the model.

CenteringPregnancy in Australia

The reported successes of CenteringPregnancy in the USA led to the development of the Australian CenteringPregnancy Pilot Study. The study aimed to determine whether CenteringPregnancy would be a practical and acceptable model of care for health professionals and organisations, and whether it would meet the needs of Australian pregnant women and their families. The model of CenteringPregnancy developed for the Australian pilot study was designed for women with uncomplicated pregnancies at booking, with midwives as the lead carers and facilitators. A successful grant application from the Telstra Community Grants Foundation enabled the employment of a

- Health assessment occurs within the group space
- Women are involved in self-care activities
- There is stability of group leadership
- A facilitative leadership style is used
- Each session has an overall plan
- Attention is given to core content; emphasis may vary
- The group conduct honours the contribution of each member
- The group is conducted in a circle and group size is optimal to promote the process
- The composition of the group is stable, but not rigid
- Involvement of family support people is optional
- Group members are offered time to socialise
- There is on-going evaluation of outcomes

Fig. 1. Essential Elements of CenteringPregnancy.

- The Australian CenteringPregnancy model of care consists of a one-to-one 'booking' visit followed by eight two-hour sessions through pregnancy
- The first group meeting occurs between 16 and 20 weeks of pregnancy
- The groups are facilitated by two midwives or one midwife and one student midwife
- Each group ideally contains eight to 12 women who are due to have their babies in the same month
- Each woman has an individual check-up performed by the midwife
- The check-up occurs on a floor mat located just outside the group circle but within the group space
- The sessions focus on issues of pregnancy, labour and birth, and parenting
- The discussion is guided by group activities paying attention to group dynamics
- Individual appointments with a doctor/allied health professional are undertaken if required

Fig. 2. Guidelines for the Australian Pilot Study model of CenteringPregnancy.

project midwife to coordinate the implementation of the pilot study in collaboration with the research team at the university and a project development group. A process of adapting the CenteringPregnancy model and resources for an Australian context was undertaken with the assistance and support of CHI in the USA (Fig. 2).

Methods

A descriptive study was undertaken in two suburban metropolitan hospitals in southern Sydney, New South Wales (NSW). Ethical approval for the study was obtained from the relevant area health service and university prior to commencement.

Setting

One hospital caters for 2500 births per year and provides care for women with uncomplicated pregnancies as well as for those with an identified range of complications. Women who are less than 32 weeks pregnant or who have severe complications are transferred to a tertiary referral hospital for labour and birth (NSW Department of Health, 2002). Caseload and team midwifery models of care (Homer et al., 2001; Passant et al., 2003) are offered at this hospital. The other hospital caters for 1000 births per year and, for the most part, provides care for women with uncomplicated pregnancies. Both sites provide hospital-and community-based antenatal care and 24-hour obstetric, neonatal and anaesthetic services from on-site and on-call medical practitioners. Both hospitals offer women a midwifery postnatal care service at home, known as the Midwifery Support Programme.

Training of facilitators

Following a series of information sessions about CenteringPregnancy, midwives, student midwives and a social worker expressed interest in becoming CenteringPregnancy facilitators. They attended a two-day 'Introduction to CenteringPregnancy' workshop facilitated by the founder of CenteringPregnancy (Sharon Rising). Further workshops were provided to assist facilitators with the development of group facilitation skills and support for the planning and evaluation of group sessions.

Table 1
Reasons for declining CenteringPregnancy at the first antenatal visit.

No reason given	28
Childcare responsibilities make group care difficult	25
Work commitments make group care difficult	12
Wanting shared care with general practitioner (more flexible and close to home)	13
Groups a bigger time commitment than routine antenatal care	8
Wanting one-to-one antenatal care or not liking groups	12
Baby due in a different month	10
Other[a]	22

[a] Other reasons included: limitations in English language ability; the group time or day did not suit; waiting to go to the birth centre/homebirth model; moving house so transferring to another hospital; wanting partner to be more involved; and transport not available at the time of the group.

Information posters and pamphlets were designed and made available at all of the antenatal clinics. A series of hospital in-service education sessions, just prior to recruitment of women, were also provided to refresh and remind staff of the model and the study.

Recruitment

The intention was to invite all women with uncomplicated pregnancies who were due to give birth during July 2007 at both hospitals to participate. Many women were not offered the CenteringPregnancy model of care. The reasons included a lack of time, language barriers, and midwives being unaware of the study or unsure about recommending CenteringPregnancy.

Women identified as having an uncomplicated pregnancy at their first antenatal visit were provided with verbal and written information about CenteringPregnancy and invited to participate. A total of 171 women were offered CenteringPregnancy care, and 35 (20%) accepted. The reasons that women gave for declining are identified in Table 1. Following recruitment, two women changed their mind about attending the group; one who identified that the times the groups were held did not suit her, and another who moved out of the area and transferred her care to another maternity unit.

Five CenteringPregnancy groups were ultimately formed. Three were situated in the hospital antenatal clinics and scheduled at different times: 10–12 am, 1–3 pm and 6.30–8.30 pm. The other two groups were located in local community health centres and

held between 5.30 and 7.30 pm and were provided by midwives within a team midwifery model. The three groups held in the antenatal clinics had consistent leadership with the same facilitator and co-facilitator throughout the eight sessions. A social worker assisted the facilitation of one of these groups. The two groups in the community health centres had a consistent group facilitator, but the co-facilitator position was filled by team midwives on a rotational basis. Student midwives participated in three of the groups on a regular basis in order to learn about CenteringPregnancy, and to optimise the chances of getting to know women who they might later attend in labour or the postnatal period.

The time of day that the groups were provided generally dictated whether partners and support people attended. Partners or support people were more likely to attend groups provided out of office hours, while the daytime groups were predominantly attended by women alone.

Data collection

Data were collected at several time points. Women's demographic details and clinical outcomes were obtained at recruitment and after discharge from hospital. The hospital records and a computerised database, used to record information on pregnancy, labour and birth, and postnatal outcomes routinely, were accessed. At their first groups, women were asked to record anonymously their expectations of the group on sheets of paper that were displayed at each of the sessions.

Two self-administered questionnaires were used to measure women's experiences. The first was distributed at 36–38 weeks of pregnancy. The initial questions identified which group the woman attended and her current gestation. Women were asked to rate their antenatal care on a scale from one to 10 'the worst care' to the 'best care'. The remainder of the questions offered women the opportunity to comment further if they wished. Twenty-one statements measured satisfaction of different aspects of care on a five-point Likert scale, ranging from 'very dissatisfied' to 'very satisfied'. These questions were adapted from a version of the Patient Participation and Satisfaction Questionnaire (PPSQ; Littlefield and Adams, 1987) that was used by Ickovics et al. (2007) in a CenteringPregnancy trial.

The second questionnaire was posted to women eight weeks after they gave birth. The purpose was to gather women's views of their antenatal care at a time when they would be able to reflect on the significance and relevance of their participation in the CenteringPregnancy groups in relation to their experience of the early weeks of parenthood. The postnatal questionnaire was similar to the antenatal questionnaire with two additional questions. These addressed whether the woman had received any other antenatal care from another health professional, and if so, whether this had impacted on their attendance at the CenteringPregnancy group.

Terminology in the CenteringPregnancy documents and evaluation tools from the USA were changed to accommodate the common terms pertinent to the Australian use of the English language. The Australian questionnaire has not been tested for reliability or validity, but relies on the previous use of the original tool from the USA.

Questionnaires were piloted with eight women who were either pregnant or had recently given birth at the study hospitals. They were asked to provide any comments relating to difficulties with the wording of the questionnaires and the length of time needed to read and complete them. Comments were collated and reviewed by the research team and a small number of changes were made.

Analysis

Quantitative data were initially entered into an Excel spreadsheet and then transferred into Statistical Package for Social Science format for descriptive analysis. The 21 questions adapted from the PPSQ were allocated into five principal aspects of care: 'information and explanation', 'service delivery', 'privacy, support and reassurance', 'choice' and 'individualised care for the woman and her family'. The measures of the five-point Likert scale were: 'very dissatisfied', 'fairly dissatisfied', 'neutral', 'fairly satisfied, and 'very satisfied'. The open-ended questions from the questionnaires and data from the group activities were analysed using content analysis to identify common themes.

Findings

All 33 women who received antenatal care in a CenteringPregnancy group were included in the study. The women ranged in age from 19 to 41 years (mean = 29 years), which is comparable to the mean age of women attending these hospitals for maternity care (NSW Department of Health, 2007). The majority ($n = 30$) reported being in a stable relationship and most were having their first baby ($n = 28$). The sample reflected the multicultural nature of the settings (NSW Department of Health, 2007). Less than two-thirds were born in Australia ($n = 21$), five were born in Europe, four on the Indian subcontinent, three in the Asia-Pacific region and two in the Middle East. English was the dominant language spoken at home, with only four women stating that they spoke another language at home. Most women were healthy without medical or obstetric complications.

As is routine practice in maternity units in NSW, women completed a psychosocial health assessment at their first visit using the Edinburgh Depression Scale and an antenatal risk questionnaire. Three women identified that they were at risk of depression and six identified significant anxiety and emotional needs. These women were referred to the perinatal mental health team for review prior to commencing CenteringPregnancy care.

Attendance at CenteringPregnancy groups

Women's attendance at the groups was measured in two ways. The facilitators used an attendance list for each session and the women were asked the number of groups they attended in both the questionnaires. With the exception of women who gave birth before the eight group sessions were completed, the majority attended all the sessions. Women who did not attend a session were followed up by the midwife facilitators and arrangements were made for an individual consultation. Out of a possible 280 group sessions offered for the five CenteringPregnancy groups, a total of 268 (95%) group sessions were attended by women. The most common reason for non-attendance was giving birth before the group sessions had been completed (45%). Work and other commitments was the second most common reason for not attending a group session (27%).

Clinical outcomes

Clinical data for labour and birth outcomes were collected for the 33 women. Most women gave birth between 37 and 42 weeks of gestation ($n = 29$). One woman gave birth at 36 weeks and two after 42 weeks. Most women went into labour spontaneously ($n = 24$), with eight requiring augmentation of labour. Six women had their labour induced. Twenty-one women had a spontaneous vaginal birth, four had a vacuum extraction and six had an

emergency caesarean section. Two women had an elective caesarean section; one for a breech presentation and the other for uterine fibroids.

All babies were born alive with birth weights ranging from 2065 to 4500 g. The only baby with a birth weight of less than 2500 g was born at 36 weeks. Three babies had neonatal complications. These were associated with prematurity, interim poor feeding ability and a cerebral abnormality that was not diagnosed in pregnancy. Almost half of the women (48%) chose to go home early and receive care through the Midwifery Support Programme. The rate of breast feeding on discharge from the hospital service was 88%.

Table 2
Women's expectations of CenteringPregnancy at their first group.

Theme	Examples of women's responses
Friendship	An opportunity to network and make friends A way to connect early especially for after the birth
Reassurance	A place to get reassurance An opportunity to talk about concerns
Support	An opportunity to get support Way for more involvement for guys (partners)
Sharing	Share ideas and experiences Hear other people's experiences and different experiences
Information	Get information about birth and be confident with a new baby Have more time with midwives to ask questions
A fun alternative	Find a different way to have antenatal care Excited about having fun and being supported

Women's expectations of CenteringPregnancy care at the first session

At the first CenteringPregnancy session, women were asked, 'What you want to get from the group?' Most women chose group antenatal care to obtain friendship and support (Table 2).

Women's experiences of CenteringPregnancy care: antenatal survey

The response rate to the antenatal questionnaire was high: 32 of the 33 women who attended the groups completed the questionnaire. When asked to rate their care on a scale from 0 to 10 (0 representing the worst care and 10 representing the best care), almost all of the respondents indicated that their care was nine or higher on the scale. The overall rating had a mean of 9.2. None of the women rated their care lower than seven.

Women's satisfaction with their CenteringPregnancy care was measured by asking them to rate different aspects of their care with a series of 21 statements. The statements were directed at the five particular aspects of care described earlier. Each of these is reported in the next section and in Table 3. In the interests of parsimony, only the 'very satisfied' ratings are presented in the table. Any ratings of very or fairly dissatisfied are presented in the text.

Most women reported being very satisfied with the information and explanation provided in the groups. A small number of women were neutral (neither satisfied nor dissatisfied) or only fairly satisfied in relation to 'procedures and special tests were clearly explained to me before they were done'. The three statements measuring service delivery were rated as very satisfied by the majority of women. Only one woman was very dissatisfied in relation to 'someone could be reached by telephone to answer my questions'. Five women reported being neutral or only fairly satisfied about the consultation with other health professionals.

Table 3
Women's rating of experience with CenteringPregnancy in the antenatal and postnatal periods.

	Rated as 'very satisfied'	
	Antenatal $n = 32$ n (%)	Postnatal $n = 18$ n (%)
Information and explanation		
Procedures and special tests were clearly explained to me before they were done	26 (81)	14 (78)
Helpful information was given to me about my pregnancy	31 (97)	16 (89)
Someone was available to talk with me at my visits	30 (94)	17 (94)
My questions were answered honestly and openly	32 (100)	17 (94)
Service delivery		
Someone could be reached by telephone to answer my questions	26 (81)	13 (72)
Other health-care professionals were consulted about my care appropriately	26 (81)	14 (78)
Someone knew about my individual health concerns and provided appropriate care	30 (94)	15 (83)
Privacy, support and reassurance		
I felt physically comfortable during my visits	29 (91)	15 (83)
I was given emotional support	27 (84)	13 (72)
Someone was warm and caring	29 (91)	18 (100)
My privacy was protected	28 (88)	15 (83)
I was treated with respect	32 (100)	18 (100)
Choice		
I was allowed choices with my care	28 (88)	17 (94)
My wishes were taken into consideration about medications	25 (78)	17 (94)
My wishes were taken into consideration about activity and exercise	25 (78)	16 (89)
Individualised care for the woman and her family		
Someone helped me with future planning for me and my baby	23 (72)	11 (61)
My family was included in my care to the degree I wanted	20 (63)	14 (78)
My wishes were taken into consideration about procedures	27 (84)	17 (94)
My wishes were taken into consideration about family involvement	28 (88)	17 (94)
I was allowed to actively participate in my own care	30 (94)	17 (94)
I could voice my opinions about my care	32 (100)	18 (100)

The measures of the five-point Likert scale were: 'very dissatisfied', 'fairly dissatisfied', 'neutral', 'fairly satisfied' and 'very satisfied'. Only 'very satisfied' ratings are reported in this table.

Almost all women indicated that they were very satisfied with the five statements related to privacy, support and reassurance. One woman had a neutral response to one of these five statements, with a small number rating these as only fairly satisfying. Most women rated being very satisfied with the three statements about choice. A small number were neutral and no one was dissatisfied. The six statements relating to individualised care for the woman and her family were rated highly by almost all women. Only one woman rated any of these statements as 'fairly dissatisfied'; this was the statement 'my family was included in my care to the degree I wanted'.

In the open-ended section, women indicated that they felt the group antenatal care created a supportive environment where they were able to share ideas and discuss different views and opinions. They were reassured by hearing stories of the experiences of other women. This is typified by this woman's comment:

> I really enjoyed having others who were at the same stage of pregnancy as me to talk to and compare feelings and symptoms.

Women commented that the development of relationships with their peers and the midwives was important, and that having their care in groups provided them with the time and opportunity to do this and to develop support networks, for example:

> The atmosphere in the group was always friendly and relaxing and we were always made to feel comfortable in the group environment. I hope these groups continue to provide other newcomers to Sydney (like me) the opportunity to meet people and build a support network before their babies are born.
>
> I have been supported by the midwives who are now familiar to me and new peers.

Time was an important factor identified by most women, for example one wrote:

> You do not sit around waiting at your clinic appointment which I have friends complain about who have the typical antenatal visits.

Three women however, found that towards the end of their pregnancy, a two-h session was too long:

> I found it a little long. Maybe one and a half hours should be enough.

Women's experiences of CenteringPregnancy care: postnatal survey

The response rate for the postnatal questionnaire was 54% ($n = 18$). The age range of the babies of the women who responded was between six and 13 weeks. In the postnatal survey, women were asked again to rate their antenatal care. As before, they rated this highly with a mean score of 9.1 (scale of 0–10). None of the women rated their care lower than seven. Women were asked if they had attended extra or alternative antenatal care during their pregnancy, with seven women responding in the affirmative.

Overall, women were very satisfied with their care (Table 3). The majority were very satisfied with the information and explanation provided. No women were neutral, with the remainder being fairly satisfied. Most women were also very satisfied with the service delivery. Two women were fairly dissatisfied with the appropriate consultation with other health providers, and the others were fairly satisfied with the rest of these statements. Equally, most women were very satisfied with the privacy, support and reassurance provided. However, two women were fairly dissatisfied; one with the physical comfort during the visits and one with the emotional support she was provided. Almost all women were very satisfied with the statements about choice.

The statements about individualised care for the woman and her family were rated by most women as very satisfied; however, one woman was fairly dissatisfied with the assistance with future planning, and two women were very dissatisfied with the involvement of their family in their care.

The open-ended responses indicated that many women benefited from the group discussions. One woman wrote:

> I could discuss concerns immediately with other midwives and have my issues normalised by talking with other pregnant women who I'd got to know well and felt comfortable with.

The sharing of thoughts, feelings, opinions and experiences in the facilitated environment seemed to enhance women's learning and their sense of being cared for and supported. This was described by one woman in terms of enhanced well-being:

> Being part of a group brought great laughter and even more joy to the pregnancy experience. It definitely facilitated a positive vibe and encouraged happiness.

Four women required more information about the early weeks of parenting and felt that this was not provided as well as the information about pregnancy, labour and birth, and breast feeding. One woman expressed this as:

> At the time, we were given ample information. I was very well informed for my birth. More information about coping with a newborn would be helpful.

The inclusion of family, partners and support people was highlighted as an important aspect of the group. The groups who included partners were unanimous about the benefits of this involvement, for example:

> I love the men being involved. They need support too.

Three women identified disappointment that they were in groups where partners were not able to attend:

> I wish my partner could attend some of the sessions.

Fifteen women stated that the support they gained from their CenteringPregnancy group members and the midwives was a fundamental aspect for their satisfaction. The friendships and connections they developed with one another, and the reassurance and support they gained from sharing of information and experience in the group enhanced their antenatal care. They reported that their antenatal care was fun and did not think that this would have occurred in one-to-one antenatal care:

> It felt good being with other pregnant women going through the same stages.

Discussion

This is the first reported evaluation of the implementation of the CenteringPregnancy model in Australia. While the study was small and was not meant to provide evidence of efficacy or safety, the results suggest that this may be a beneficial form of care that has the potential to be implemented and evaluated more widely. Women identified that the type of care they received was positive and satisfying. In particular, they valued the opportunity to

develop supportive relationships with both their peers and their midwives. This is in keeping with findings from studies in the USA (Rising et al., 2004; Massey et al., 2006). The women also described group antenatal care as an experience that met their individual needs; enhanced information sharing about their pregnancy, labour and birth; and enabled the development of friendship and support networks. This is significant as antenatal care that enables positive and supportive relationships is widely recognised as promoting benefits for the new mother and her family (Courtney et al., 1996; Oakley et al., 1996; Barclay et al., 1997).

Designing health-care provision for groups instead of individuals is a relatively new idea that is increasingly attracting attention. Group models of health care, particularly for the management of chronic disease, have begun to emerge and are showing improved clinical outcomes and patient satisfaction (Beck et al., 1997; Scott et al., 2004). Traditionally, the experience of group activities for women during the childbearing years has predominantly been with either antenatal education programmes or with new mothers groups. More recently, the importance of antenatal groups that promote social support and the sharing of information have been highlighted, citing the groups provided by the Albany Midwifery Practice in South East London as an example (Leap and Edwards, 2007). The CenteringPregnancy model of group antenatal care has combined the assessment component of antenatal care with these aspects of education and social support, demonstrating high satisfaction levels for women and providers (Rising, 1998; Grady and Bloom, 2004), and improved clinical outcomes for women and the babies (Ickovics et al., 2003, 2007).

The childbirth experience has been shown to be more positive when the woman and her family/partner have been able to develop a relationship with their maternity care practitioner during the antenatal period (McCourt et al., 1998; Page et al., 2001; Homer et al., 2002; Hildingsson and Radestad, 2005; Hodnett 2006). Although the CenteringPregnancy model usually does not include intrapartum and postnatal continuity, it enables continuity of care during the antenatal period and the development of a relationship between the woman and the health-care provider. This is a vast improvement on the level of continuity that is currently evident in most Western antenatal care systems (Rising, 1998; Massey et al., 2006).

In this study, the predetermined CenteringPregnancy group structure and adherence to a punctual start and finish time ensured that the women's time was not wasted sitting in clinic waiting rooms. Instead, the two hours of group time were spent communicating and building trust between the women and the midwives facilitating the groups. The facilitated and supportive process of the group enabled women and the midwives to share their knowledge and experiences, enabling a relationship that was not reliant on the professional's knowledge but embraced the shared knowledge of the group.

CenteringPregnancy includes antenatal education as one of its major elements. Antenatal education programmes, using many different approaches, are attended by many women worldwide with little evidence to support their efficacy (Svensson et al., 2006; Gagnon and Sandall, 2007). The concept of women experiencing their antenatal care in a group such as CenteringPregnancy aligns itself well with the adult learning approach identified by Svensson et al. (2006) in facilitating learning that is individualised.

Recruitment to the CenteringPregnancy groups presented problems, with only 20% of women who were offered the model choosing to participate. There are several possibilities to explain this reluctance. The implementation of a new model of care, such as CenteringPregnancy, is often met with resistance by the proposed recipients of this care (Hart and Bond, 1995). People find the concept of change difficult to understand and are often fearful of engaging with a new process (Greenhalgh et al., 2004). Many women declined CenteringPregnancy group care even when potential advantages were described to them. This could be because midwives in the antenatal clinics did not promote the model as they were unsure of the benefits and felt uncertain about how women would respond. Anecdotal evidence from the experience in the USA suggests that recruitment of women to CenteringPregnancy groups improves once 'word of mouth' enthusiasm from women who have experienced this model reverberates in the local community. Further research needs to explore ways that women and health-care providers can better understand the model of care in order to provide accurate information that will improve recruitment.

This study is a useful adjunct to previous research on CenteringPregnancy and provides evidence that this model of care has benefits in a non-USA context. It is, however, limited by study size, design and the lack of an economic analysis. The small number of participants restricts the overall findings and the subsequent generalisability of the study. Future studies should explore reasons for uptake of the model of care, both from the perspective of the women and the health-care professionals. A randomised controlled trial in an Australian context needs to be conducted, which would include a comprehensive cost analysis to determine the economic ramifications. Trials in other settings in Australia and with more diverse populations would also be important in the future.

Despite the limitations, the study is an integral step towards the development of a larger study involving CenteringPregnancy antenatal group care in Australia. Particular attention needs to be paid to the enthusiastic response of women who attended the groups with their partners, and the fact that women who attended the women-only groups believed that not having their partners at the group was a disadvantage of their group antenatal experience. Other areas that need further exploration include the potential needs of some women for more privacy and individualised care.

Conclusion

CenteringPregnancy is an innovative model of facilitated group antenatal care, incorporating assessment, education and support. The Australian CenteringPregnancy Pilot Study is the first time the feasibility of this model of antenatal care has been undertaken in this country. The results from this study propose that CenteringPregnancy care was an acceptable model of care for the women in this study. Further research is required to implement it in other settings in Australia. This study helps to inform future research in this area.

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Appendix 18: Ten Essential Steps for Effective Implementation of CenteringPregnancy

1. Know your setting

- What do the women need?
- What do the midwives need?
- What systems are in place?
- What are the barriers and facilitators?

At the outset of the implementation process it is important to assess what the needs of the setting are, so that you can develop a CenteringPregnancy programme that meets the needs of the setting. Each hospital and health-care centre has unique qualities and communities. For that reason, it is important to find out what the women need who are attending the health service. Do they have specific cultural, language needs or specific restrictions on what time or day they attend for the group session? It is also necessary to ensure the midwives' work situation is not compromised by the implementation of a CenteringPregnancy group. Ensure the timing of the group is within their work hours and also not an extra burden for them. Ensure they have time to prepare for each session, particularly with reviewing the antenatal files for the women, reviewing and ordering pathology and developing session plans.

The systems required to support group antenatal care are different to those for standard antenatal care. Group rooms which are private and have amenities such as nearby bathrooms and kitchen facilities are needed. Group appointments need to be interwoven into the antenatal clinic scheduling system and include time to set-up for a group and then pack up after. The system for referring a woman should be same as standard care, but the facilitator needs to know where to refer the women and for what complication. For example, if a woman needs review during a group visit for something that requires urgent consultation then one of the facilitators may need to escort her to the nearest obstetric unit.

It is also important to know what or who in the organisation will hinder the implementation of CenteringPregnancy. It is then important to engage with these individuals or processes to support the change processes to group care. This may require individuals to be involved with the steering committee, so they feel that their concerns are being met. Finding out who supports the implementation of CenteringPregnancy is just as important. They can be involved with the implementation process by supporting the changes at steering committee level or at grass-roots level.

2. Get information on CenteringPregnancy

Organise the staff who will be involved in the implementation to attend the Introductory Workshop. The most effective way to engage everyone at the hospital in CenteringPregnancy is to include all of them in an Information Session or an Introductory Workshop. This includes all the health-care professionals involved in antenatal care at the hospital as well as the administration staff and managers. Currently, an *Introduction to CenteringPregnancy* workshop, developed by UTS in conjunction with CHI, is available for individual sites or as a standard format for a group of interested individuals from multiple sites.

Shorter information sessions are also provided to staff not directly involved in the groups. The staff in the hospital need to understand the CenteringPregnancy philosophy and model of group care to be able to develop, promote and implement it. This is because, CenteringPregnancy is unique and all the staff need to know specific information about the structure and programme. A website supported by CHI also provides access to an array of CenteringPregnancy research, implementation tools, and group activities and skills.

For the individuals, who are undertaking the responsibility of leading the implementation, it is important for them to read and review current evidence to underpin their knowledge about the model. This will help them to design the group structure and also to inform other people about the significance and uniqueness of the CenteringPregnancy model of group antenatal care.

3. Get a group together

Creating a team environment that includes all individuals from the clinicians, managers, stakeholders, ancillary staff and consumers will enhance the change process. Providing people with a forum to express their thoughts and issues, where they are also involved in joint decision making creates joint ownership. This has the potential to decrease the resistance to change. To involve everyone in this process of effective communication and collaboration regular meetings with different groups of individuals need to run parallel to the development and implementation process. Having a number of forums such as steering committee, facilitator's support meetings and a development and implementation team will share the workload and share the transfer of information.

Enabling the midwives to gain a sense of autonomy and control over their involvement in the change process is important. The midwives should be involved from the outset of the development phase of the CenteringPregnancy group to create a model that fits in with their workload and personal commitments and meets their needs as well as those of the women. Having control and autonomy in the job and in the implementation of change are significant factors involved in successful change processes and with job satisfaction.

4. Develop facilitator skills

Training and extra education for those not skilled with group facilitation or antenatal care is important. The facilitators need to learn group skills through workshops, either provided by CenteringPregnancy or by their local area health. These workshops will provide them with more information on facilitating a group and include group activities to enhance learning and communication within the group. Group facilitation is not part of the standard curricula for health-care professionals and they generally are not exposed to group care in their everyday jobs. As a result, it is important to engage them in learning group skills to gain confidence for when they undertake facilitating their first CenteringPregnancy group.

Antenatal care knowledge and skills may need to be re-visited for midwives undertaking CenteringPregnancy for the first time and who have not been involved with antenatal care provision in the

recent past. Many midwives in Australia work in specific areas of maternity care and are often skilled in only one area of care, such as labour and birth or postnatal care. At least one of the CenteringPregnancy facilitators needs to be competent in antenatal care provision. The 'mat' check is a quick antenatal assessment (check) that needs a competent and knowledgeable health-care professional to undertake it. This is to ensure effective and safe care is provided and that the group runs to time. The group is a busy place and if the antenatal assessments take too much time then little time is left for group discussion.

5. Make time

Develop a timeline that includes education, training, resource acquisition, communication, collaboration and plenty of time to discuss and reflect. Adequate time is needed to develop and implement the CenteringPregnancy model in conjunction with enabling the new facilitators to become proficient with facilitating group sessions. CenteringPregnancy as a group model of health-care is a new concept that individuals are not skilled in developing. Ensuring enough time is allocated to the development and implementation of the model and education for the facilitators is essential to longevity of the model. Developing a timeline to guide the set-up of the CenteringPregnancy groups is essential and needs to include the needs of all the contributors involved.

6. Design the best model for the setting

The group needs to meet the requirements set out by the CenteringPregnancy Essential Elements and also the needs of the participants, the facilitators and the organisation. Developing the model to enhance care and health outcomes for a specific group of women would also be viewed as a benefit by management, key stakeholders and funding bodies. To create a CenteringPregnancy group that is appealing to participants it needs to have the group session at a mutually acceptable time and venue for the participants and the facilitators, and to be close to public transport and parking.

Midwives like other health-care professionals require fulfilment with their professional work. CenteringPregnancy is a model of care that enhances the relationship between the facilitator and the pregnant women and enables the facilitators to experience women developing relationships between themselves and the facilitators. Creating a positive work environment is a significant factor in the processes of developing job satisfaction. For this reason, it is important to involve the midwives undertaking the facilitator role in the development and implementation phases of the model. They can then take ownership of the model and ensure it meets their needs as well as those of the women.

7. Build in support and guidance

CenteringPregnancy is a group model of care that enhances and enables relationship-based care. It is necessary to support the new facilitators as they transition from individual or fragmented models of antenatal care to group care. Working in a CenteringPregnancy group requires them to engage in care that is based around a reciprocal and respectful relationship between themself as the midwife and the women. This requires them to gain new skills and reflect on their practice. Change is difficult to implement and at times confronting and stressful, but with appropriate support and guidance the facilitators can undertake

their new role with less apprehension. They can also gain knowledge and experience in a supportive process that has the benefits of supportive guidance instead of an authoritarian approach to the change process. To ensure this is nurturing and supportive the process requires close guidance and support from peers who are skilled with group facilitation and managers or educators involved in the development of the CenteringPregnancy group.

8. Identify and find resources

Funds for the provision of education sessions and information workshops, for the purchase of group activity tools and antenatal care equipment that are used in the group sessions are needed. Without these it is difficult to engage in developing a CenteringPregnancy model. The majority of antenatal care equipment will be available through the current antenatal programme of care that you provide, but group activity tools will need to be purchased as will the workshop participation. It is essential to budget for these costs.

9. Have a go

It is difficult to know how CenteringPregnancy will perform until you have done it. Once you have engaged with the model, issues that arise can be reviewed and changed and the advantages that have been experienced can be shared with everyone.

10. Reflect, evaluate and talk about it

The CenteringPregnancy facilitators need to become competent with facilitating a group. This includes developing confidence with facilitating and accumulating a variety of group activities for their use in group sessions. The facilitators should be encouraged to attend support meetings during their first CenteringPregnancy group experience. As the majority of health-care professionals are not skilled at facilitation and need time to develop these skills and also to develop group session plans. Providing this learning in a group space with like-minded peers enables the new facilitators to feel protected and nurtured.

A process of meetings that parallel and precede each new CenteringPregnancy group session is an important implementation strategy. These meetings need to include the new facilitators and supportive colleagues and provide a framework such as the Action Research cycle of plan, act, observe and reflect, to guide their learning. It appears that shared learning enables the new facilitators to learn from each other, and gain knowledge of their own strengths and weaknesses. This process of reflection of the previous group session, followed by planning for the next session develops their ability to plan for sessions, include the group activities that they are competent with and gain confidence within a supportive environment. Sharing this learning process together with like-minded peers also develops relationships with colleagues that are important for professional fulfilment.

Each CenteringPregnancy group needs to be evaluated and the CHI and CMCFH have developed evaluation tools to assist with this. Evaluation not only provides the organisation with information about

attendance, uptake of the programme and clinical outcomes it also enables the facilitators to learn about their group skills from feedback. Reflection and evaluation are important tools to use when implementing a new strategy and maintaining best practice.