

**Assessing 'readiness for change' in organisational culture:
a descriptive study using a sequential explanatory
mixed method design.**

Thesis submitted in fulfilment of requirements for the degree of
Professional Doctorate in Midwifery

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2017

Certificate of Original Authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of 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 preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This research is supported by an Australian Government Research Training Program Scholarship

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Catherine Adams

July 2017

Acknowledgements

To my supervisors, to say that I would not be at this point without you is an understatement and seems like a trivial sentiment. However, between us we know what this means. To Professor Maralyn Foureur I thank you for your endless support and dedication to my journey. Your confidence in me gave me the courage and ability to progress in those many times where my own confidence faltered. From our Sunday night musings, to your clarity of meaning, to your diligent edits I eventually told the story that we knew even before we started. I will always hold on to and value what you gave of yourself through my doctoral journey.

To Dr Angela Dawson who joined the journey along the way I thank you for your thoughtful examination of my words and concepts. As a non-midwife you challenged me to explain myself which was affirming and provided order to my thoughts and a way forward through some of those wicked problems. Thanks to Professor Nicky Leap who started the journey with me and provided the inspiration for me to believe in the value of this study.

Special thanks to Deirdre Breen who gave time to be my independent adjudicator for the interview material. You provided a balanced and thoughtful assessment of the participants' words that helped validate my own impressions and analysis.

To the participants who engaged in the interview process I will be eternally grateful for your openness and honesty that told a story that may have been difficult to tell. You revealed the unconscious of your work place in a professional manner so that we may be able to work towards increased safety and quality of care.

To be able to explore, examine, write, create and analyse you need to be fed, nurtured and encouraged. I thank my partner, David Brealey, for caring for me in such a way that I could concentrate on this doctorate knowing that life was taken care of around me. We have placed our lives on hold for some years now and it is time to reconnect and live again. Thank you for all your support, dedication and most importantly your belief in me that I could do this at all those moments along the way where self-doubt crept in.

The duration of a thesis can be long with many life changing events that colour the landscape of the journey. This thesis has been marked by several significant events that interrupted momentum, but which also provided the opportunity for me to re-examine what is most important in life. Two of the most significant events were the premature and unexpected departures of Mary and Bryson. The courage that you both displayed to the end in your own journeys gave me the impetus to continue when competing demands seemed overwhelming

and my commitment faltered. You both visited me in personal and individual ways either in my imagination or through our meta-physical connections and I believe you guided me to the end. Neither of you will ever read this thesis but my honour and dedication to you will live through these words.

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List of Abbreviations

CMC	Clinical Midwifery Consultant
CONSORT	Consolidated Standards of Reporting Trials
CS	Caesarean Section
EOC	Essentials of Care
IPC	Interprofessional Collaboration
MET	Medical Emergency Team
MGP	Midwifery Group Practice
MW	Midwife
NVB	Normal Vaginal Birth
NSW	New South Wales
OB	Obstetrician
PARIHS	Promoting Action on Research Implementation in Health Services
PEI	Photo Elicitation Interview
RCT	Randomised Control Trial
SCARF	Status Certainty Autonomy Relatedness Fairness
TNB	Towards Normal Birth
TOLAC	Trial of Labour After Caesarean
UGR	Unwritten Ground Rules
UK	United Kingdom
USA	United States of America
VBAC	Vaginal Birth After Caesarean Section
VMO	Visiting Medical Officer

Abstract

Concerns for increasing interventions in childbirth and associated adverse maternal and neonatal consequences influenced the introduction of a mandated government policy to reduce overall intervention in birth in New South Wales, Australia in 2010.

Literature suggests there are contextual factors that influence intervention in childbirth including the care location and its culture. However little evidence is available concerning the assessment of an organisation's culture to provide insight into changes required to reduce interventions. Therefore, this study aimed to examine the culture of one maternity service to assess its readiness for making changes to reduce birth interventions, specifically vaginal birth after caesarean (VBAC).

The research site was a tertiary maternity service in New South Wales, where clinical outcome data had demonstrated a higher rate of interventions than peer hospitals, and the highest rate in the state.

This study used three phases in a sequential explanatory, mixed method design; each phase informing the next. Phases 1 and 2 used quantitative methods; in phase 1 surveys administered to all clinicians measured attitudes towards VBAC and described the predominant culture; the phase 2 survey asked clinicians to nominate peers whom they regarded as having the qualities of an effective collaborator. Ten nominees were invited to participate in the phase 3 in-depth interview, with six sequential interview techniques, to elicit conscious and unconscious perceptions of the culture of the organisation. Data from the three phases were triangulated and themes analysed using the Status, Certainty, Autonomy, Relatedness and Fairness (SCARF) model developed by neuroscientists as the theoretical lens.

Each phase of this study revealed a maternity service without the characteristics of an organisation that is ready to embrace change. A hierarchical culture was identified with lack of teamwork, cohesion and collaboration. Characteristics of interprofessional collaboration that could improve safety and quality of care were not evident in this organisation. Participants revealed they had developed adaptive behaviour patterns as a mechanism for survival that ultimately threatened professional relationships and further inhibited their ability to collaborate. Negative professional experiences in the past coloured present behaviour, which limited trust, respect and confidence to interact in collaborative relationships. Avoidance behaviour resulted in working on the margins rather than actively participating in collaborative teamwork. Interpretation of the study findings using social cognitive neuroscience provided an

understanding of why avoidance behaviour and non-engagement occurs when a person's social domain needs are not met.

Maximising opportunities for social domains to be orientated to an approach (reward) response rather than an avoid (threat) response using the SCARF model appears to be a useful way forward. A clinical example of successful implementation of a practice change using the SCARF model in a different maternity service supported the findings of this study and its recommendations, providing evidence of the applicability of the model where there has previously been evidence of system inertia.

Assessment of an organisation's readiness to change is crucial prior to implementing a change process. Characteristics of organisational culture that may influence reshaping capabilities of organisations should be known and considered to maximise effectiveness of any change process. The SCARF model has potential to assist maternity services to identify strategies that are conducive to changing organisational culture to reduce interventions in childbirth thereby ensuring quality maternity care and health outcomes.

Publications Arising from This Thesis

This thesis contains two publications incorporated into chapters 7 and 8, that have been accepted for publication during my candidature and available on-line. Publication details for each article are outlined below as well as a statement of contribution and percentage contribution by each author.

Incorporated as Chapter 7

Adams, C., Dawson, A. & Foureur, M. 2016a, 'Competing Values Framework: A useful tool to define the predominant culture in a maternity setting in Australia', *Women and Birth*. <http://dx.doi.org/10.1016/j.wombi.2016.09.005>

Statement of Contribution	Percentage of Contribution
Concept and design of study	CA 80%; AD 10%; MF 10%
Supervision and conduct of field research	CA 80%; AD 10%; MF 10%
Data analysis and interpretation	CA 80%; AD 10%; MF 10%
Writing of initial manuscript	CA 100%
Manuscript revision through provision of detailed commentary	CA 70%; AD 15%; MF 15%

Incorporated as Chapter 8

Adams, C., Dawson, A. & Foureur, M. 2016b, 'Exploring a Peer Nomination Process, Attributes, and responses of Health Professionals Nominated to facilitate Interprofessional Collaboration', *International Journal of Childbirth*, vol. 6, no. 4, pp. 234-45.

Statement of Contribution	Percentage of Contribution
Concept and design of study	CA 80%; AD 10%; MF 10%
Supervision and conduct of field research	CA 80%; AD 10%; MF 10%
Data analysis and interpretation	CA 80%; AD 10%; MF 10%
Writing of initial manuscript	CA 100%
Manuscript revision through provision of detailed commentary	CA 70%; AD 15%; MF 15%

Presentations During Candidature

Adams, C. Amygdala Engagement: the Key to Successful Change in Maternity Care. *International Confederation of Midwives Triennial Conference, Prague, Czech Republic, 2014.*
Oral presentation.

Adams, C, Dawson, A, Foureur, M. Benefits of Peer Nominations to Recruit Research Participants. *Northern Sydney Local Health District Research and Innovation Conference.* Sydney, Australia, 2014:

Adams, C. Impact of engaging the brain for Practice Improvement. *Rural Critical Care Conference.* Tweed Heads, Australia, 2014

Adams, C. Unconscious processes at work to embrace change *Northern NSW Local Health District Nursing & Midwifery Conference.* Ballina, Australia, 2014

Adams, C. Policy into Practice: a journey to implementation. *Department of Health New South Wales, Towards Normal Birth Symposium* Sydney, 2012

Adams,C. "Development of an enabling environment for change through an organisational cultural assessment". *International Confederation of Midwives 29th Triennial Conference* Durban, South Africa, 2011.

Adams,C. Teamwork and SCARF: it's all in the mind. *Royal Hospital for Women, Towards Normal Birth Symposium.* Sydney,2010

Chapter 1: Introduction and Organisation of the Thesis

This thesis describes my exploration of organisational culture and interprofessional collaboration as the key elements of successful clinical practice change. Consistent with the premise of a Professional Doctorate the exploration arose from my concerns with an area of clinical practice: the rising rate of intervention in childbirth. This research explores the nature of the environment of the clinicians' practice world to describe the practice culture with respect to readiness to change. The underlying assumption is that if the clinical practice environment is ready for a proposed change, then change is more likely to be successful and sustained. This research aims to determine the nature of the environment from the clinicians' perspective and subsequently to invite clinicians to develop strategies that they believe could make a difference within their maternity care culture and could lead to a lowering of birth by CS.

The opportunity to be more strategic and deliberate about recommendations for change arose in 2010 with a mandated policy directive from the New South Wales (NSW) state government that set benchmarks to achieve changes in the outcomes of maternity care. The policy was Maternity – Towards Normal Birth (New South Wales Health 2010). My position as a senior clinician with jurisdiction of seven maternity facilities as a Clinical Midwifery Consultant placed me in a position of influence for implementing changes in clinical practice. This provided the motivation for me to incorporate my clinical practice work into the subject matter of research for my Professional Doctorate in Midwifery.

The policy directive, as the motivator and driver for change, influenced work directly related to this research. My clinical leadership role was essential to influence clinical practice and policy across the health service and between professional groups. This work was recognised and acknowledged through invitations from the State Health Department and other peer maternity services to discuss the strategies I implemented in relation to the policy as well as exploration of workplace culture that arose from my study.

The original intention of this study, to reduce overall CS rates did not become a reality during my three-year period of involvement with the research site. However, the journey towards that goal revealed information about the culture of one organisation and its readiness to change that may influence many other clinical practice changes in the future and is not limited to CS. The study findings may also facilitate a direction for change in other maternity services especially where system inertia may exist.

This chapter outlines the flow of the study and provides a guide to the reader of a journey to the start of creating clinical environments that are ready to change.

Chapter 2: Background and Justification for the Study

Chapter 2 describes the global concern for rising intervention in childbirth which influenced the State of NSW, Australia to implement a policy directive that required all maternity services to reduce overall intervention. In my role as Clinical Midwifery Consultant I had responsibility for implementation of this policy. During the preparatory work for implementation I identified that the major hospital within my health service had the highest rate of CS amongst peer hospitals and the highest in NSW in public maternity facilities. Understanding the reasons for this clinical variation was important to meet the policy directive requirements as well as improve the outcomes for women and babies in our services. This knowledge influenced my choice of this hospital to be the research site for this study. This research site also had the lowest successful vaginal birth after caesarean section (VBAC) rate in the state of NSW. Therefore, I intended to develop strategies to increase VBAC in this organisation as this could result in an overall reduction in CS in this health service and others.

Chapter 3: Strategies to improve rates of CS and VBAC: An Integrative Review of the Literature

Chapter 3 examines the historical and contemporary literature on strategies to reduce CS and increase VBAC. It was important to find a strategy that could be replicated or could provide insight into an alternate or untested approach to reduce intervention. The literature revealed that the values, beliefs and attitudes of clinicians appear to influence outcomes for women in childbirth more than characteristics of the women themselves. According to the literature, where the philosophies of clinicians were similar and there was a whole of service approach to consistent care there was greater possibility for positive change.

Gaining a greater understanding of the context for change, that is the characteristics of the organisation in terms of readiness for change, appeared crucial to any change strategy. Therefore, as a consequence of the review of the literature, I widened the focus of my research to the broader issue of the organisational context for change rather than limiting the focus to one clinical practice issue such as CS or VBAC.

Chapter 4: The CONTEXT for change: A Narrative Review of the Literature

Literature on implementation of effective organisational change emphasises the influence of context on the success rate of change and is highlighted in this chapter. The discussions in my health service prior to the study identified a division among the teams in their impression of the

effectiveness of the collaborative approach to care, with a suggestion that it was more rhetoric than reality. This discussion evoked interest for me in examining the nature of this group's dynamics, the relationship between the various sub-groups and how this may impact on a collaborative approach to care. The literature described in Chapter 3, suggested the characteristics of the organisation may be the key factor that influences outcomes in childbirth. Therefore, examination of the organisation's culture in terms of readiness to change became the main focus of this study. The questions posed for the study became:

1. What is the organisational culture in a hospital context where CS rates are high?
 - a. Does this organisation exhibit the characteristics associated with readiness for change to comply with policy to reduce intervention in birth?
2. How can an organisation be supported to develop a culture that embraces change and innovation?

These questions are not hypotheses to be determined or refuted, but are posed to direct the line of enquiry. The answers to these questions are revealed throughout the findings of the three phases of this sequential, mixed methods study which are described in the next chapter.

Chapter 5: Study design and Methods

An overview of the sequential explanatory mixed methods design chosen to explore and explain one organisation's readiness to change is provided in this chapter. With the focus of the study now on organisational context for change I became aware of the increased complexity of the investigation required that was different to my initial intention of developing a strategy to increase VBAC. Therefore, the study design needed to mirror this complexity.

The study was undertaken in three sequential phases; the first two using quantitative survey designs and the third an in-depth multi-method qualitative interview phase. The results from each phase influenced the design of the next with each leading to a greater understanding and appreciation of the context of this organisation with respect to readiness to change. This chapter also describes the selection of the research site, the participant recruitment, the ethical issues considered and the steps taken to ensure trustworthiness of the data.

Chapter 6: Phase 1a: Assessing Clinicians' Attitudes Towards VBAC

This chapter provides details of the Phase 1a survey that aimed to measure the attitudes of clinicians towards intervention, using the example of VBAC. This was based on the literature that suggested that attitudes influence interventions. A specific survey tool developed in the United

Kingdom (UK) based on the characteristics of high performing organisations with respect to intervention rates was used and is described fully in this chapter. The survey results from my study using this tool indicated the research site did not have characteristics that would lead to lowering of intervention in birth; a crucial finding in examination of the context for change.

Chapter 7: Phase 1b - Defining the Predominant Culture of the Organisation

This chapter describes Phase 1b; the use of a validated tool, the Competing Values Framework (CVF), to determine the predominant culture of the organisation from the clinicians' perspective. The respondents described the culture as one of hierarchy with low emphasis on teamwork, collaboration, innovation and flexibility. However, clinicians would prefer the culture of the organisation to be opposite to the existing culture. This created an impetus for change which is acknowledged as an intrinsic motivator for change and an important understanding in moving forward with this clinician group.

This chapter includes a peer reviewed article published during my candidature (Adams, C., Dawson, A. & Foureur, M. 2016a, 'Competing Values Framework: A useful tool to define the predominant culture in a maternity setting in Australia', *Women and Birth*. <http://dx.doi.org/10.1016/j.wombi.2016.09.005>)

Phase 1a and 1b results indicated that this organisation did not have the reshaping capabilities to effect change. This information influenced the design of phase 2 to identify clinicians whom their colleagues considered to be good interprofessional collaborators to participate in Stage 3, a multi-method interview technique to examine the concept of interprofessional collaboration and its relationship to readiness for change

Chapter 8: Phase 2-Identifying effective interprofessional collaborators to be change agents

A novel method was employed to identify a cohort of clinicians with the requisite skill set to be effective collaborators to then participate in the third phase of the study; the interview. Clinicians could recognise effective collaborators amongst their peers and the attributes that made them so.

This chapter includes a peer reviewed article published during my candidature (Adams, C., Dawson, A. & Foureur, M. 2016b, 'Exploring a Peer Nomination Process, Attributes, and responses of Health Professionals Nominated to facilitate Interprofessional Collaboration', *International Journal of Childbirth*, vol. 6, no. 4, pp. 234-45).

Chapter 9: Phase 3-Exploring interprofessional collaboration through in-depth, multi method interview: “revealing the unconscious”

The chapter describes the multi-method interview which included six different techniques to reveal the overt, conscious as well as the unconscious understanding of interprofessional collaboration. Each of the interview techniques is described in full and a justification for the inclusion of each.

Chapter 10: Interview Findings – Describing the State of Interprofessional Collaboration in this Organisation

The findings from each of the interview techniques are described in this chapter together with thematic analysis and reflections on the rich and evocative data. Participants described an organisation that did not exhibit readiness for change with little evidence of effective interprofessional collaboration. These findings provided insight into reasons for the variance in clinical outcomes when compared with peer hospitals. The organisation can be described as having system inertia and as being *stuck*. I concluded that this organisation would require a unique method to move into a dynamic state where change is possible which led me to the discovery of social cognitive neuroscience described in the next chapter.

Chapter 11: SCARF and Social Cognitive Neuroscience – a lens for analysis

In finding a way forward from system inertia and disengagement the data were further analysed using knowledge from social cognitive neuroscience to seek out strategies for developing greater adaptive behaviour in this organisation. This chapter describes the triangulated analysis of data from the three phases using the lens of SCARF, a model for understanding human behaviour (Rock 2008). The data provides evidence of threats to participants’ social domains which has influenced the development of adaptive behaviour that includes avoidance, disengagement and lack of effective collaboration. The analysis raises concern for the clinical outcomes for women and babies in the service as well as the wellbeing of clinicians immersed in the organisation.

Chapter 12: Engaging the Organisation for Change: recommendations

This chapter presents recommendations based on the analysis of the three phases and interpreted through the lens of SCARF. The recommendations describe an investment in skill development of leaders for change in social cognitive neuroscience techniques. These leaders would then facilitate replication of the components of this study with a whole of service

engagement and using the SCARF model. If successful, these recommendations could improve clinician engagement and reduce intervention in birth or influence other organisational change.

Chapter 13: Postscript to study: Using the SCARF model to introduce innovation in maternity care: Water Immersion as an example

As a postscript to the formal study, this chapter provides an example of how the insights from this study were implemented in a different site but one where similar cultural and organisational limitations were identified. The SCARF model was used for the framework to influence a change strategy that achieved greater progress than others implemented over the previous years. This clinical practice exemplar is provided as a validation of the insights gained through the 3 phases of this study and as evidence of the applicability of the recommendations made.

Figure 1 outlines the organisation of the study in a flow chart. This provides a visual representation of the phases and how each one was connected to the next.

Assessing 'readiness for change' in organisational culture: a descriptive study using a sequential explanatory mixed method design.

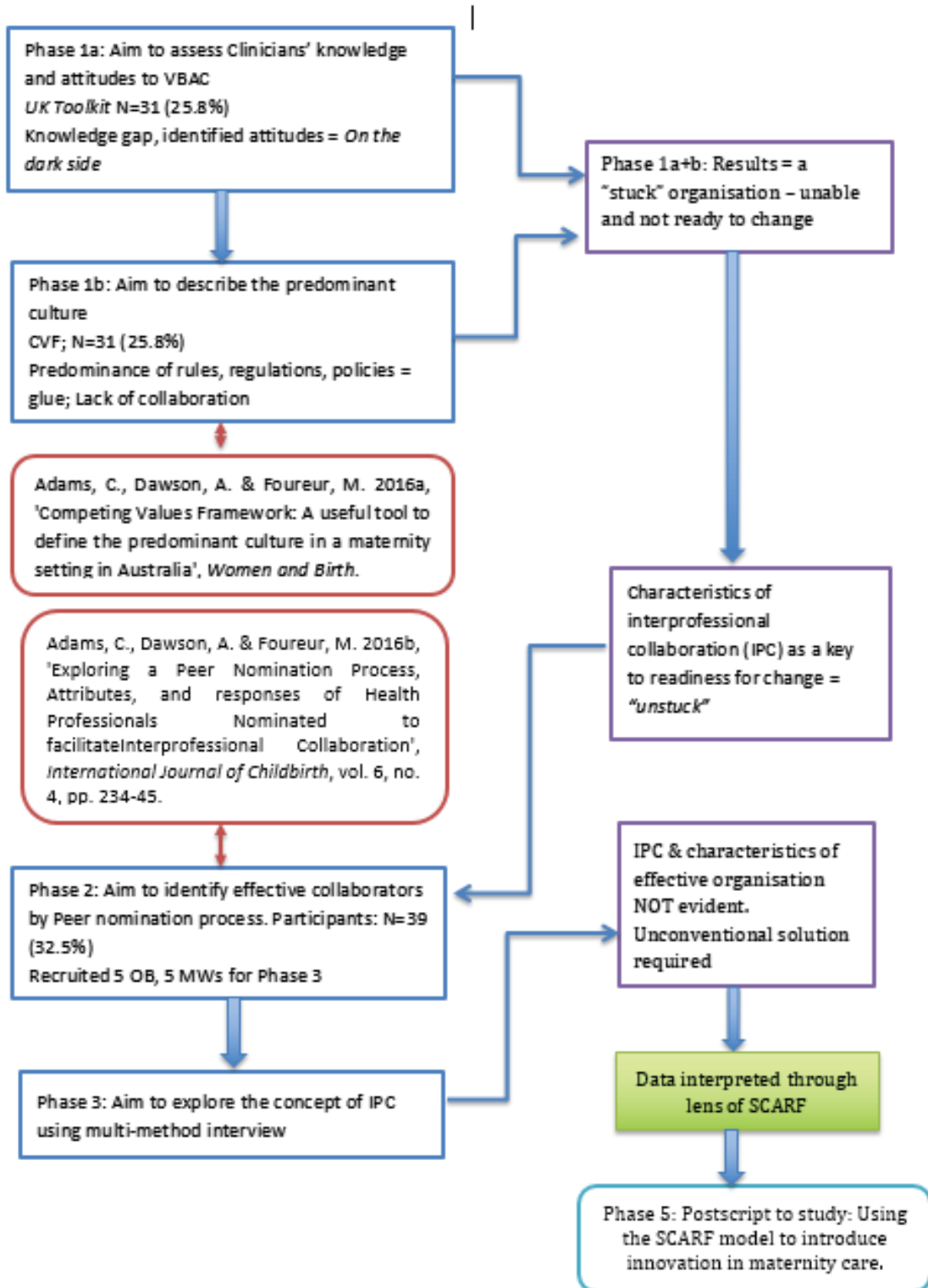


Figure 1: Flow of the Study to assess readiness for change

Chapter 2: Background and Justification for the study

2.1: Introduction

Currently there is a rising rate of birth by CS in almost every developed country in the world. While the lives of many mothers and babies can be saved by a timely and necessary CS new research reveals that the number of CS has reached a level that now has potential, negative health impacts for women (Liu et al. 2007; Rosen 2008; Usta 2005) and their babies (Tracy, Tracy & Sullivan 2007). Many countries and jurisdictions have implemented a range of strategies to reverse this rising trend but appear to have limited success in a sustained change to the CS rate. This may be because most strategies for change have concentrated on clinical practice changes, such as management of women in labour, rather than on the workforce who are involved in implementing the changes (Catling-Paull et al. 2011). Studies have investigated clinician and consumer attitudes to CS, but there has been little evidence of implementation of change with respect to the knowledge gained (Klein et al. 2009; Meddings et al. 2007).

This chapter provides a background to the research that began in 2010 in New South Wales (NSW), the most populous state in Australia. It describes a policy handed down from the state health department to publicly funded maternity services throughout NSW; a policy that would require significant practice change to be made to reduce the high rate of birth by CS (New South Wales Health 2010). An examination of the impetus for this mandated policy provides a background and context for this research and provides a justification for the research to be undertaken.

In 1985 the estimated rate for safe and effective CS was set at 10-15% and that estimate remains unchanged from a world health perspective (World Health Organisation, 1985). In 2010 there were only a few countries around the world, such as Sweden and Denmark, able to maintain this recommended rate. Elsewhere across the globe there has been a continued rise in the CS rate (Committee on Quality of Health Care in America 2001) and Australia followed this trend with a rate of 31.6% in 2010 and a current national average CS rate of 33% in 2014 (the most recent national data) (Australian Institute of Health and Welfare 2015). Of considerable concern is the fact that the increase in CS has not resulted in improved perinatal outcomes (Centre for Epidemiology and Evidence 2016). CS rates also vary dramatically depending on the insurance status of the mother, the location for birth and the model of care she receives (Tracy et al. 2013; Tracy, Peat & Roberts 2000; Tracy, Tracy & Sullivan 2007).

Consequences of high CS rates for mothers, babies and the health system

The issue of concern with a rising CS rate is the risk of significant perinatal morbidity and mortality for women and infants because of the CS. The adverse consequences of CS for women include abnormal implantation of the placenta in a subsequent pregnancy (Liu et al. 2007; Rosen 2008; Usta 2005; Wise 2008); amniotic fluid embolism and deep venous thrombosis (Abenhaim et al. 2008; Colman-Brochu 2004). Post pregnancy infections have three times higher incidence with CS than planned vaginal birth and contribute to 12% of maternal deaths (Liu et al. 2007; Tharpe 2008). These outcomes have produced a risk of postpartum death that is 3.6 times higher after CS than after a vaginal birth (Deneux-Tharaux et al. 2006).

In terms of neonatal outcomes there is an increased risk of respiratory complications and admissions to higher level care nurseries (Tracy, Tracy & Sullivan 2007). There are also concerns about epigenetic and microbial consequences of drugs to which the unborn infant is exposed during a CS (Cho & Norman 2013; Dahlen et al. 2013). Financial implications are evident with the cost of surgery, higher-level care with complications and increased length of hospital stay (Harper et al. 2003; Liu et al. 2007; Tracy, Tracy & Sullivan 2007; Whiteman, Kuklina & Hillis 2006).

There are identified medical and obstetric indications for a CS which are reflected in the WHO recommended CS rate of 10-15% (World Health Organization 1985), but there is no evidence from randomised controlled trials that could recommend a practice of CS for non-medical indications (Lavendar et al. 2006). The absence of improved perinatal outcomes with rising rates of CS is an important perspective when considering this issue. CS can be a lifesaving surgery and if reserved for those occasions where there is an identified medical indication, can be cost effective and efficient, health promoting and socially acceptable.

In addition, there is a potential social consequence to the rising CS rate. With one third of women having a surgical birth it is now more common for women to have a CS than it was a decade ago. Normal birth was considered a natural process that most women could achieve however that perspective is slowly being changed. Maternity carers today may be more familiar with interventions and the maintenance of skills in supporting a non-interventionist approach to birth may be threatened.

In summary, there is currently a global trend towards intervention in birth and in particular CS. This intervention has not resulted in improved outcomes for women or neonates with a rising trend in maternal morbidities and a static neonatal mortality rate over the past decades. There

has been a financial impact to services and the more insidious effect could be the social enculturation of women and professionals towards the normality of intervention and surgical births.

NSW Rates and Global Trends

The rising CS trend internationally is reflected in Australia with a current national average rate of 33% in 2014 (Australian Institute of Health and Welfare 2015). In 1990 the combined elective and emergency CS rate in NSW where this research is located, was 16% (Lancaster, Huang & Pedisich 1995) which was consistent with the recommended rate expected in a safe and effective maternity service (World Health Organisation, 1985). By 2014 that rate had increased to 32% and continues to rise (Centre for Epidemiology and Evidence 2016). This CS rate equates to approximately 31,000 women who experience a surgical birth in NSW each year. Figure 2 reveals that as the rates of CS continue to rise in NSW, overall rates of normal vaginal birth (NVB) continue to fall so this situation is unabated.

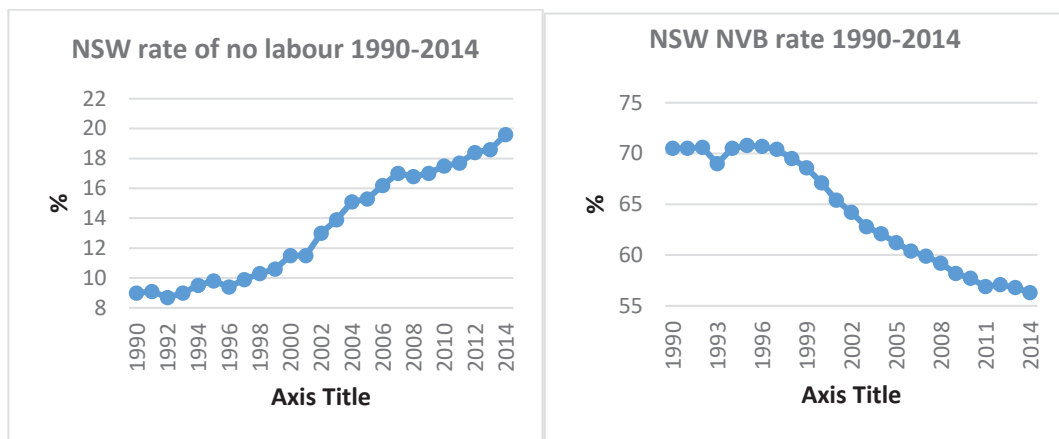


Figure 2: Rates of No labour* and Normal Vaginal Birth in NSW

* (no labour = birth by CS which does not include ‘in labour’ CS) (Centre for Epidemiology & Research, 2000, 2005, 2009, 2016)

This rise in CS has not improved the outcomes for infants in NSW with the perinatal mortality rate remaining constant at 9/1000 births for the past two decades (Centre for Epidemiology and Research, 2016). However, the financial burden of increased lengths of hospital stay and the associated increased maternal and neonatal short and long-term morbidity is of concern from a community wellbeing and a health economics perspective (Tracy *et al.*, 2007).

Justification for the research: Policy Directive: Maternity-Towards Normal Birth

In 2010, in response to the concern for the rising rate of intervention in birth, the government of NSW issued a public health policy, Maternity – Towards Normal Birth (New South Wales Health 2010). The policy contained ten key steps with target measurements to be achieved within five years to increase the normal birth rate (see Appendix 1 for the policy). Meeting the targets in any, or all, of the key steps could result in a reduction in overall intervention rates. For many services this was the first time such targets had been set with a perception by many that reaching the targets would require a significant reorientation of current systems to achieve improvements.

2.3: Personal Motivation for the Study

At the time of the publication of the Maternity – Towards Normal Birth policy directive I was employed in the role of Clinical Midwifery Consultant with oversight of seven maternity services in one area health service. Five facilities provided care for all risk women and two were birth centre-type facilities for women identified as low risk so were not equipped to undertake surgical interventions for birth. The domains of the role required me to be actively engaged in service development and planning, implement practice change, education, research and risk management. Therefore, the policy directive was to become a key influence on the direction of my work for the next five years.

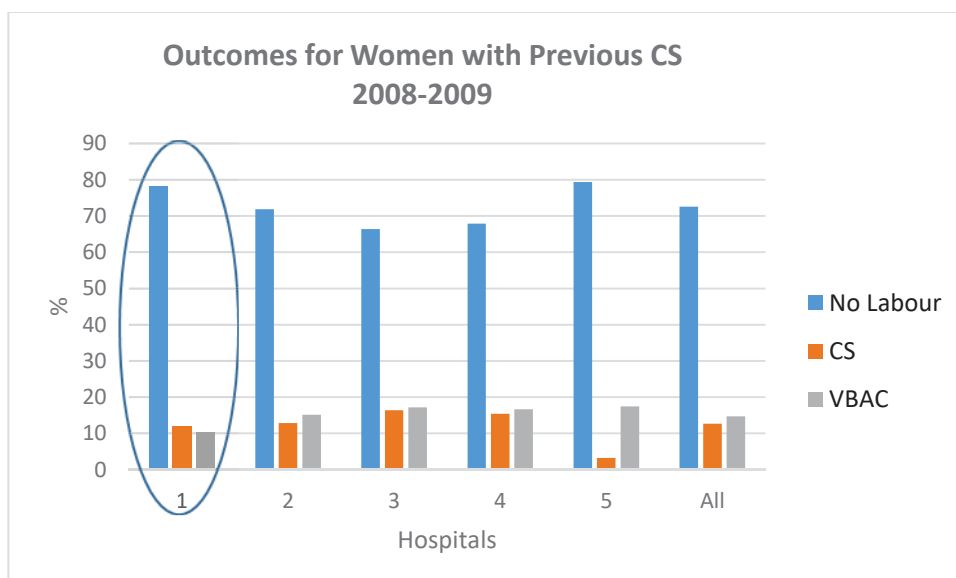
To gain a clearer understanding of what strategies might need to be implemented to bring about changes to meet the policy requirements I examined a range of data in the seven maternity services. This examination (Table 1) highlighted that improvements would be necessary to meet the requirements for all ten steps. For some steps strengthening the guiding documents to ensure consistency of practice across all sites would be required, for example step 6 the guideline for postdates management of pregnancy. For others, a new and formalised system was required, for example step 10 regarding formal debriefing for women following their CS. The maternity service needed to increase access to continuity of midwifery care and external cephalic version and increase attempts at VBAC to meet the new targets.

Table 1: Maternity-Towards Normal Birth Policy – Comparison of 2010 performance at one LHD in NSW compared with 2015 targets

No.	* 10 Steps to providing woman centred labour and birth care	Current rate	Target by 2015
1	Have a written normal birth policy/guideline, along with other relevant policies, that are routinely communicated to all health care staff.	Update	100%
2	Train all health care staff in skills necessary to implement this policy.	Unknown	100%
3	Provide or facilitate access to midwifery continuity of carer programs in collaboration with GPs and obstetricians for all women with appropriate consultation, referral and transfer guidelines in place.	13%	35%
4	Inform all pregnant women about the benefits of normal birth and factors that promote normal birth.	Unknown	100%
5	Have a written policy on pain relief in labour that includes the use of water immersion in labour and birth.	Update	100%
6	Have a written postdates policy/guideline that is routinely communicated to all health care staff.	Update	100%
7	Provide or facilitate access to vaginal birth after caesarean section operation (VBAC)	14.7%	60%
	Have a written VBAC policy/guideline and health care staff with the skills necessary to implement this policy/guideline.	Update	100%
8	Provide or facilitate access to external cephalic version.	60%	100%
9	Provide one to one care to all women experiencing their first labour or undertaking a vaginal birth after caesarean section operation, vaginal breech or vaginal twin birth.	Unknown	100%
10	Provide formal debriefing in the immediate postpartum period for all women requiring primary caesarean section operation or instrumental birth with the opportunity for further discussion and information transfer	Unknown	100%

***(PD2010_045: Maternity - Towards Normal Birth (New South Wales Health 2010) unpublished LHD audit, 2010)**

In examining the data, I also recognised the disparity between many of the current clinical outcomes of the maternity facilities in this health service and the required outcomes from the policy directive. This was particularly evident with VBAC outcomes. Five of the hospitals offered VBAC, the low risk birth centres did not. Of these five hospitals, the largest in terms of birth numbers, site 1, had a VBAC rate of 10.2% (Figure 3).



**Figure 3: Outcomes for women eligible for VBAC at five hospitals in Health Service
(No labour=Repeat CS; CS=Failed VBAC; VBAC=Successful VBAC)**

The range for the five hospitals was 10.2 – 17.2% and the average 14.7%. Improvement was required at all five sites and at site 1 a sixfold improvement was required to meet the target of 60%. Reorientation to current processes and practices and potentially to the philosophies of the clinicians regarding birth and intervention would be required. Since evidence indicates an achievable VBAC success rate of up to 73% for eligible women (Rossi 2008) this appeared to be a logical cohort of women to target for improved outcomes in overall rates of intervention. Site 1 with the lowest successful VBAC rate (10.2%) in this health service also seemed the logical site to focus the research work.

The data for Site 1 were then compared with peer hospitals in NSW. Figure 4 demonstrates comparative data for site 1 against all peer hospitals numbered 2-7, with the State average for public facilities at number 8, which includes the data for all maternity facilities in the state. Site 1 had the highest rate of emergency (in labour) CS (18%) of all tertiary hospitals in the State (range 9-18%) which was also higher than the State average (13.9%). The combined CS rate (emergency + elective) at site 1 is also highest amongst peer hospitals (35.9%) with the State average at 29.9%.

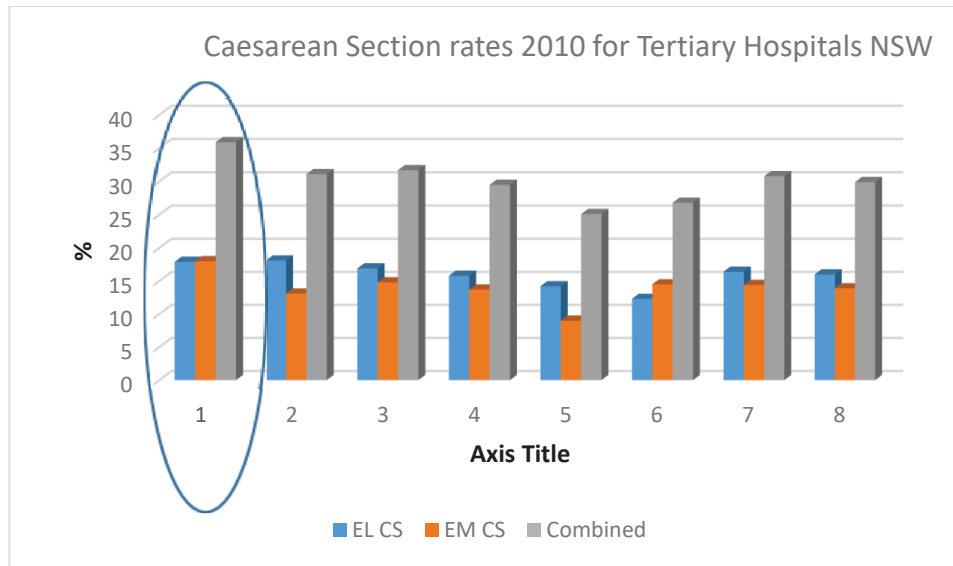


Figure 4: Comparison of NSW Caesarean Section rates for 2010 by Hospital

Of relevance to this study is the VBAC rate. Site 1 had the lowest VBAC success rate amongst peer hospitals at 11.6%; which is also the lowest in the State where the average was 17.2% (range 11.6-26.2%) (Figure 5). The intervention rates for women were higher at site 1 in comparison to hospitals in the local health service, peer hospitals and the State average for all hospitals. Such clinical variations cannot be explained by the demographics or clinical characteristics of the women birthing at site 1 since these were similar across all Level 6 Hospitals in NSW. It seemed reasonable to propose therefore that such clinical variations could be explained by internal characteristics of this site and these characteristics were worthy of further exploration.

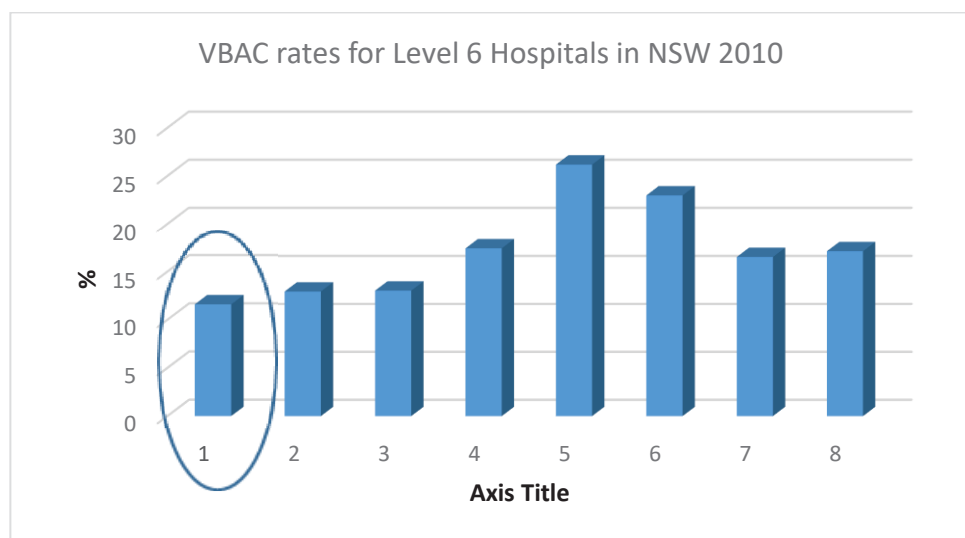


Figure 5: VBAC rates by NSW Hospitals

(Centre for Epidemiology and Evidence 2012)

Similar variations in the rates of intervention in childbirth have been observed across Australia and similarly cannot be explained by either the demographics or clinical history of the women (Lee et al. 2013; O'Leary et al. 2007; Women's Healthcare Australasia 2014). Possible explanations for such variations that have been cited in the literature are the effectiveness of collaboration between care providers and aspects of team work, or team dynamics (Australian Department of Health and Aging 2009; Downe et al. 2009; Hastie & Fahy 2011; Monari et al. 2008; Raab et al. 2013; Simpson, James & Knox 2006). These authors suggest that aspects of the context and cultural characteristics of organisations may influence intervention in birth, rather than the clinical variables of the woman or her baby. Therefore, gaining a detailed understanding of the characteristics of organisations prior to the implementation of change, such as the Maternity - Towards Normal Birth policy, could be beneficial in terms of supporting the overall change process.

2.4: Summary

This chapter outlines the issue of rising interventions in childbirth and the associated increased maternal and neonatal morbidity and mortality, increased financial burden and enculturation of surgical birth becoming the norm. In NSW, the government was sufficiently concerned about the clinical outcomes of birth to mandate a policy directive that required maternity services to meet target measurements that would reduce overall interventions and in particular CS. In my role, I had responsibility for the implementation of this policy in one setting that had the highest CS rate in NSW. My deductions at this point in time were that developing an understanding of the reasons for clinical variations in this context could assist with the development of strategies to reduce CS. An exploration of the current literature was therefore required to provide insight into possible solutions and ways forward. A narrative review of the literature focused on strategies for reducing CS or increasing VBAC (two interrelated issues) is presented in the next chapter.

Chapter 3: Improving rates of CS and VBAC: An Integrative Literature Review

3.1: Introduction

In the previous chapter the global situation with respect to the rising number of CS and the potential adverse consequences for women and their babies were described. In NSW, birth outcome data reflected international trends which influenced the government to mandate a policy aimed at reducing overall intervention in birth. The challenge for health services, and myself as a clinical midwifery leader and researcher, was to find a strategy or solution to stabilise or reverse the rising CS trend. This chapter presents an integrated review of the literature that aims to provide evidenced-based insight into potential solutions. The ideal situation would be to prevent the primary CS, that is to aim for the first birth to be a vaginal birth. However, given the fact that one third of births currently result in a CS, achieving a vaginal birth in the next pregnancy would further reduce the number of CS. Therefore, decreasing CS and / or increasing VBAC are interrelated concepts in the literature search for strategies to reduce overall interventions in birth.

3.2: Historical Background: literature on strategies to improve rates of CS and VBAC

In the intervening two decades prior to the commencement of my studies (1989-2009) there were few studies that described successful interventions to reduce CS. To explore this literature, the CINAHL, Medline and PsychINFO databases were searched using search terms such as caesarean section interventions (and spelling variations; 'cesarean', 'cesarian') and VBAC success (in full and spelling variations). The focus of the search was on studies where non-clinical interventions were used to improve outcomes. The literature was limited to documents in English, peer reviewed journals and availability of the full article.

As indicated in Table 17 Appendix 2, the initial search located seven relevant studies; five randomised controlled trials (RCT) (Alhabe et al. 2004; Farnworth et al. 2008; Homer et al. 2001; Lomas et al. 1991; Shorten et al. 2005), a quasi-experimental study (Sloan et al. 2000) and a qualitative study (Fraser et al. 1997).

Prior to the time of this literature review one earlier 1988 RCT had demonstrated a statistically significant improvement in the CS rate in a hospital in the United States (US) (17.5% to 11.5%, $P < 0.05$) (Myers & Gleicher 1988). This improvement was achieved by the mandatory requirement to seek a second opinion prior to performing a non-life threatening CS in a public hospital setting. This reduction in CS continued for a further six years (Myers & Gleicher 1993), but by 2010 the CS rate in this hospital had risen to 49%, one of the highest rates in the US

(National Centre for Health Statistics 2010). The intervention implemented in 1988 was no longer effective in reducing or maintaining the CS rate.

The initial positive results from this study influenced replication in two studies examined for this review (Althabe et al. 2004; Sloan et al. 2000) with a similar statistically significant reduction in CS observed for both. In these studies, the influence of an opinion from another consultant prior to performing a non-urgent CS was shown to successfully reduce intervention. When the consultant opinion was not available the intervention rates increased (Sloan et al. 2000). There was a positive correlation between the second opinion of a consultant and the CS rate; however, the change did not appear to be sustained in the absence of that opinion.

The effectiveness of an opinion leader to provide education and guidance to clinicians providing care for women eligible for VBAC was compared to two groups: one giving audit and feedback to clinicians and the other usual care (Lomas et al. 1991). No difference in the rate of VBAC was observed in the latter two groups but there was an 85% increase in VBAC rates with the engagement, support and education provided by an opinion leader (14.5% vs 11.8% vs 25.3%, $p=0.003$).

Consistency of practice, support and collaborative engagement were factors that were observed in these three studies (Althabe et al. 2004; Lomas et al. 1991; Sloan et al. 2000) and provide insights to possible facilitators of change. The factors that influence sustainability of these changes are yet to be identified.

An alternate focus for change was on the knowledge level of women eligible for VBAC rather than the clinicians providing care; the premise for this focus was that if women had greater information about VBAC then this may increase the choice for VBAC. Women were randomised to either an educational pamphlet to read ($N=634$) or individual verbal educative information provided by a clinician on VBAC ($N=641$) (Fraser et al. 1997). There was no difference in the choice or preference for VBAC between the two groups (RR1.1; 95% CI 1.0-1.2). However, there was a strong correlation between the initial motivation level and preference for VBAC and actual mode of birth. The education did not change the intention or motivation for mode of birth that the women had when they commenced care. Similar findings were found when information was provided through decision aids.

Two RCTs studied the effect of decision aids for women who had one previous CS (Farnworth et al. 2008; Shorten et al. 2005). Increased knowledge of the risks and benefits of CS were observed as well as decreased decision conflict with the use of the decision aids. The choice for VBAC was

not increased despite varied designs of the tools used. Increased knowledge and confidence in decision-making were important outcomes that may improve the satisfaction of women with the overall experience, however the decision aids did not result in a reduction in CS or increase in choice of VBAC. Three of the studies examined the effectiveness of education tools and none of these were successful in increasing the choice of VBAC. Another line of enquiry is required.

An alternate approach was observed in a RCT of women recruited to continuity of midwifery care in collaboration with obstetric colleagues (N=550) compared with standard care (N=539) (Homer et al. 2001). This study demonstrated a statistically significant reduction in CS rate in the intervention group (13.3% vs 17.8% OR=0.6, 95% CI 0.4-0.9, P=0.02). The women recruited to this study included those who had risk factors, such as a prior CS. This factor increases the importance of the overall research findings as these women had traditionally been excluded from midwifery-led models of care. This study is now part of a large body of knowledge that suggests the organisation of care that enables women to have a known carer during pregnancy and childbirth can result in less intervention in birth and lower CS rates (Sandall et al. 2016; Tracy et al. 2013). However, in clinical practice few women can access this model of care since it is only provided to limited numbers of women in Australian maternity settings. This situation is echoed internationally despite robust systematic review evidence of the effectiveness of the model (Sandall et al. 2016).

In summary, a reduction in CS rates was observed with the mandatory second opinion (Althabe et al. 2004; Sloan et al. 2000), with the influence of an opinion leader for guidance and education (Lomas et al. 1991) and the reorganisation of care to provide continuity with known carers (Homer et al. 2001). Other strategies that aimed to improve women's knowledge and decision efficacy did not affect the overall intervention in birth (Farnworth et al. 2008; Fraser et al. 1997; Shorten et al. 2005). The human factors that influence clinical care could reduce intervention rates and warrant further exploration.

3.3: Subsequent literature

A subsequent literature search was conducted to identify possible reasons for clinical outcomes that could be about the influence of people in care-provision. This search was conducted for the period 2000-2010 using the CINAHL, Medline and PsychINFO databases that focused on the attitudes of clinicians and women to CS using the keywords of attitudes, decision-making, birth, women, midwives and obstetricians, Caesarean section and vaginal birth after caesarean section (including spelling variations). The aim of this literature search was to identify possible reasons

for clinical outcomes that could be about the clinicians involved rather than about the processes (Table 17, Appendix 2).

Possible Reasons for Limited Success of Strategies

Few of the fourteen studies identified could demonstrate a successful and sustained reduction in CS or increase in VBAC. The studies used a mixture of qualitative and quantitative designs to elicit opinions through surveys with obstetricians and / or midwives (Habiba et al. 2006; Reime et al. 2004; Robson et al. 2009; Wax et al. 2005); interviews with obstetricians and /or midwives (Chaillet et al. 2007; Karlström et al. 2009; Monari et al. 2008); interviews with women (Béhague, Victora & Barros 2002; Goodall, McVittie & Magill 2009; Meddings et al. 2007; Moffat et al. 2006) and interviews with clinicians and women (Flamm, Berwick & Kabcenell 1998; Turner et al. 2008; Weaver, Statham & Richards 2007). Three broad themes emerged from the literature that explored attitudes towards, and perception of, CS and VBAC rather than interventions directly aimed at improving CS rates. These themes were practitioners' fear of litigation, maternal request for CS and attitudes of practitioners towards CS and each will be discussed further.

Practitioners' Fear of Litigation

The threat of litigation arising from adverse outcomes was cited by 67-69% of consultant obstetricians surveyed as a reason to perform a repeat CS for women who had a previous CS (Habiba et al. 2006; Weaver, Statham & Richards 2007). Obstetricians with a concern for litigation state that they would deviate from established guidelines in order to perform a repeat CS until there was stronger evidence for the safety of VBAC (Chaillet et al. 2007). These studies demonstrate a correlation between the attitudes of clinicians and CS and suggest that they simply did not believe the current evidence of the relative safety of VBAC. It would be interesting to observe whether attitudes have changed in the intervening decade where more evidence of the serious consequences of the high CS rate have been revealed.

Maternal Request for CS

Maternal request for surgical birth has been cited as a reason for a rise in CS. In this review of the literature there are four studies designed specifically to explore maternal request for CS (Habiba et al. 2006; Robson et al. 2009; Wax et al. 2005; Weaver, Statham & Richards 2007) and other studies that include the exploration of maternal request within their design but where this was not the primary focus (Chaillet et al. 2007; Goodall, McVittie & Magill 2009; McGrath & Ray-Barruel 2009; Meddings et al. 2007; Moffat et al. 2006; Monari et al. 2008; Reime et al. 2004; Turner et al. 2008). The inconsistent results within and between studies left an equivocal finding

as to whether maternal request is a dominant driver for CS. There is inconsistency between obstetricians' perceptions of the incidence of maternal request for CS and the opinion of women themselves towards CS.

Respect for the woman's autonomy in her choice of mode of birth is cited as an explanation for rising CS rates by obstetricians particularly in this era of consumerism and woman centred care (Flamm, Berwick & Kabcenell 1998; Habiba et al. 2006; Monari et al. 2008; Turner et al. 2008; Wax et al. 2005). Obstetricians surveyed in Australia indicate that 80% would perform a CS without medical indication in response to a woman's request and up to 14% of those surveyed would disguise the reason for the CS in order to comply with guidelines (Robson et al. 2009). Fear and a willingness to respect the autonomy of women altered some obstetricians' integrity in decision-making that enabled them to practice against established guidelines. However, there is inconsistency in findings between studies especially when the women are surveyed.

Globally there is a variation in CS for maternal request: in Sweden the rate increased three fold in the decade to 2006 (Karlström et al. 2009); in the UK most obstetricians stated they would not respond to such a request (Weaver, Statham & Richards 2007). In the USA, 84% of obstetricians indicated that they would perform a CS for maternal request, however, only 21% preferred a CS for themselves [female obstetricians] or for their partners [male obstetricians] (Wax et al. 2005). Data from eight European countries demonstrated inconsistency in attitude to CS for maternal request with only 15% of surveyed clinicians in Spain agreeing to maternal request on a hypothetical scenario whereas in the United Kingdom 79% of clinicians would support maternal request for CS (Habiba et al. 2006). This is a direct contrast to the results described above (Weaver, Statham & Richards 2007) and adds to the equivocal evidence about attitudes towards CS.

When women were surveyed, the evidence did not reflect the same prevalence of a request for CS as stated by the clinicians. Many women indicate they do not have the required information to make an informed decision for themselves and the solution for some is to relinquish the responsibility for the decision to the practitioner (Goodall, McVittie & Magill 2009; Meddings et al. 2007; Moffat et al. 2006). Therefore, the request for CS may not be initiated by the woman at all. The burden of responsibility for the decision is uncomfortable for some women; they wished to be included but prefer guidance to be provided by clinicians with information that was individualised (Moffat et al. 2006):

“I feel every time I go and see the doctor or the midwife they keep talking about elective Caesareans ... they keep findings reasons why I’ll probably need an elective Caesarean so yeah it feels like choice is a lot more limited this time” (Goodall, McVittie & Magill, 2009 p 8).

Obstetricians perceive women are requesting CS in some areas of the world and not others; some women feel the burden of decision-making and on occasions abdicate the decision-making to a clinician. These inconsistencies do not provide clarity as to whether women’s request for CS is a driver for increased intervention rates.

Maternal fear of birth for reasons of safety for the baby or trauma for themselves did influence decisions for mode of birth for some women (McGrath & Ray-Barruel 2009). Up to 84% of obstetricians in one state in US cite ethical considerations to support maternal request under circumstances where women feared for themselves or their baby (Wax et al. 2005). However, the evidence that obstetricians would disguise the reason for a CS (Robson et al. 2009) may also challenge the ethical stance taken to support women’s choice. One may wonder whose choice is being protected.

The lack of homogeneity in global populations does limit the generalisability of some studies which may account for the variations in findings. However, differences are also observed in similar populations. Two states on opposite sides of the US, for example, had differing results regarding CS for non-medical indication. The state of residence, therefore, could be an influencing factor in mode of birth rather than any clinical indicator (Wax et al. 2005). In neighbouring European countries, there are similar findings; living in Spain would result in a lower possibility of CS for maternal choice whilst in the UK there would be a higher chance of successfully requesting a CS (Habiba et al. 2006).

Attitudes of practitioners towards CS

Obstetricians, midwives and general practitioners (GP) demonstrate varied attitudes to CS with an observed heterogeneity within each group. Generally, midwives are more likely to support vaginal birth, VBAC and low levels of intervention, Obstetricians are more likely to favour CS, technology and intervention and when GPs are included they are placed somewhere between (Monari et al. 2008; Reime et al. 2004; Turner et al. 2008). The outcomes of birth could be influenced by the care provider and their attitude to birth; this is evident in the RCTs of midwifery continuity of care models (Homer et al. 2001; Sandall et al. 2016).

When women's attitudes to CS are compared with clinicians they are closer to the attitudes of midwives; women are more prepared to accept higher risks than obstetricians (Turner et al. 2008). Attitudes of clinicians and women to CS are not homogenous. Understanding the motivations, beliefs and attitudes of clinicians to CS may be essential to enable the implementation of any intervention that aims to reduce CS.

3.4: Summary

The literature cited here does not provide certainty as to the influencing factors for the rising rates of intervention but does provide evidence to speculate on contributing factors. Providing women with the means to increase their knowledge on the risks and benefits of CS and VBAC reduces decision conflict but does not change preference for the mode of birth which seems to be decided prior to an opportunity for clinician influence (Farnworth et al. 2008; Fraser et al. 1997; Shorten et al. 2005). Factors which seem to influence intervention rates are the attitudes of the clinicians. The threat of litigation influences obstetricians' decision for CS especially where there is a lack of confidence in the evidence for the safety of VBAC (Chaillet et al. 2007). Fear and a willingness to respect the autonomy of women altered their integrity in decision-making and they would disguise the information to practice against established guidelines.

Effective strategies in reducing CS and creating positive change are observed where there is consistency of practice, support and collaborative engagement (Althabe et al. 2004; Homer et al. 2001; Lomas et al. 1991; Sloan et al. 2000). Acknowledging that this was the situation in the intervening period prior to commencement of my research, it was then important to examine how consistent this is with the current situation at the time of completion of this work. A subsequent literature review was conducted to determine the more contemporary landscape with respect to CS and VBAC.

3.5: Contemporary Landscape: Integrated Literature Review 2010-2016 of Strategies to Improve CS and VBAC

A review of the literature for the two decades prior to the commencement of this study yielded three strategies that were successful in reducing the rate of CS: mandatory second opinion (Althabe et al. 2004; Sloan et al. 2000), support from an opinion leader (Lomas et al. 1991) and continuity of midwifery care (Homer et al. 2001). Further investigation is required to assess the sustainability of these strategies or any new strategies in the most recent decade.

A subsequent literature review was conducted for the period 2010-2016, to determine the current landscape of strategies aimed at the overall reduction in CS. An analysis of the literature reveals limited evidence of new or successful strategies to reduce CS. Exploration of the subject from more diverse sources and not limited to experimental designs, for example, aims to provide new insights, frameworks or theories. I, therefore, chose an integrated review method which is an appropriate method for this purpose (Torraco 2016; Whitemore & Knafel 2005).

The CINAHL, Medline and PsychINFO databases were searched from January 2010 to December 2016; and was limited to documents in English, peer reviewed journals and availability of the full article. The search included any study that explored interventions to reduce CS rates or where the aim was to gain insights into non-clinical factors that could influence CS such as knowledge, attitudes and perceptions of women and clinicians. I used the same search terms as in my initial search such as caesarean section interventions (and spelling variations) and VBAC success (in full and spelling variations) and the first search yielded 240 citations. After reading the abstracts of these citations I excluded all studies exploring clinical interventions, replicated citations and opinion papers. Twenty-three studies were deemed suitable for inclusion in the literature review as detailed in Table 18 in Appendix 3.

Analysis of the 23 studies reveals two broad areas of focus; the first explores the characteristics of women in terms of physical characteristics, and women and clinicians in terms of knowledge, perceptions and attitudes that could influence the decision for, and the success of, the intended mode of birth. The second concerns work place practices such as the use of decision aids, guidelines and models of care. In some studies, there is a combination of the two areas of focus that influenced change; for example, clinicians' positive attitude to VBAC influenced the development of a model of care which increased women's knowledge which then influenced positive decision-making for their choice of birth.

Women's Clinical Characteristics

Clinical and physical characteristics of women may influence success of VBAC and is the focus of two studies (Mone et al. 2014; Siddiqui 2013). The overall aim of these studies was to determine physical characteristics of women that influence VBAC success which could then form a quasi-predictor to use when counselling women in their decision-making on mode of birth. The first study identified the characteristics of women who elect to have a VBAC (Mone et al. 2014; Siddiqui 2013). A birth interval of less than two years from the first CS influenced women's decision for elective repeat CS ($p < 0.001$) and an interval greater than two years increased the success rate of VBAC ($p = 0.001$). In other words, women are more likely to choose elective CS if

the last CS occurred less than two years previously and if that period is greater than two years there is a higher VBAC success when this mode of birth is chosen. Similarly, both studies identified a correlation between body mass index (BMI) > 25 and decision for VBAC ($p < 0.001$) and VBAC success rates ($p < 0.001$). These studies were designed to provide information that may predict the success of VBAC and if this information is reliable it could form the basis of counselling after the primary CS to facilitate inter-pregnancy decision-making. However, the findings should be considered with caution as one study is limited to specific ethnic groups (Mone et al. 2014) and the second examines data over a two year period with no consideration of confounding factors such as attitudes and potential practice variation that may have occurred over time.

Women's Knowledge and Perceptions

Studies that assessed the effect of decision aids, as mentioned in the initial literature review, observe that women have determined their mode of birth early in pregnancy and usually prior to commencement of interactions with health providers. Understanding women's knowledge about and perceptions of CS and VBAC that influence this decision-making was thought to be useful. Thematic analysis from interview data (Faisal et al. 2014; Litorp, Mgayya, Kidanto, et al. 2015) and quantitative analysis from questionnaires (Sharpe et al. 2015) explored the overall perceptions of women regarding CS and two questionnaire based studies explored women's knowledge and decision efficacy for their birth choice (Chen & Hancock 2012; Scaffidi et al. 2014). Identifying the determinants of women's decision on mode of birth could influence clinician education and counselling and for some this could commence after the primary CS. These findings may influence subsequent studies that explore the timing of education and counselling to influence the preference for the mode of birth following a prior CS; this is yet to be tested.

There is evidence from these studies of a wide variation in the women's perceptions regarding the overall safety of any CS. A cohort of Iranian women based their decision for elective CS on their overwhelming fear of the pain of childbirth and the possible physical trauma that may occur (Faisal et al. 2014). The portrayal of traumatic childbirth is prevalent in the media for these Iranian participants is reinforced by influential social contacts. Conversely, Tanzanian women highlight their strong preference for vaginal birth and reveal a philosophical opposition to a caregiver's decision for a CS where the women did not perceive sufficient indication for one (Litorp, Mgayya, Kidanto, et al. 2015). These women are strongly influenced by their religious beliefs and by influential community members. The results of these two studies need to be

considered in relation to specific cultural influences and may not be generalisable. However, the importance of considering the practice context and issues related to culture with relevance to specific groups is highlighted.

The six studies cited above identify a knowledge gap for women is consistent with the results of the previous review of the literature (Goodall, McVittie & Magill 2009; Meddings et al. 2007; Moffat et al. 2006). Almost a decade of studies reveals that women's knowledge accuracy in relation to VBAC or the safety of VBAC has not improved. Women identify VBAC as having increased risk especially with respect to rupture of the uterus during labour and subsequent deleterious neonatal effects. The actual risk of uterine rupture is not known by women but is linked to their fear of VBAC (Chen & Hancock 2012). These authors attribute responsibility to caregivers for not ensuring adequate information to facilitate decision-making and went further to suggest this is a violation of the woman's rights (Chen & Hancock 2012). Where women do have higher knowledge scores of risks and benefits of VBAC there is higher choice for VBAC ($p=0.03$) (Scaffidi et al. 2014). Unfortunately, in this study the validity and reliability of the tool used to assess knowledge is uncertain and the number of participants is half the required sample size; the findings need to be considered in view of these limitations. A method of improving women's knowledge accuracy with respect to the safety of VBAC and potential negative consequences of surgical births is yet to be determined.

Decision Aids

Despite the evidence that tools to support decision-making do not influence a woman's decision on intended mode of birth but can reduce decision conflict (Farnworth et al. 2008; Fraser et al. 1997; Shorten et al. 2005) this strategy has been studied again comparing a different tool (Eden et al. 2014). The effects of an interactive tool and a paper based brochure were compared which demonstrated the same result as previous studies, that of an increase in decision confidence. All studies cited here have concluded that decision aids do not change women's decision for mode of birth, therefore, continued studies in this domain may not be useful if the primary intent is to reduce CS.

Attitudes of Clinicians

Knowledge of the attitudes of care providers to intervention in birth is thought to provide further insight into women's decision-making. Women with a knowledge gap regarding CS and VBAC can be influenced by care providers; 57% of Iranian women, with an identified knowledge gap of the risks and benefits of CS, chose an elective CS based on the trust they have in their doctor

(Faisal et al. 2014). Clinicians' positive attitudes to VBAC could influence more women choosing this option and vice versa. For example, the previous review of the literature revealed fear of litigation as a motivator for obstetricians recommending elective CS over VBAC (Habiba et al. 2006; Weaver, Statham & Richards 2007).

Studies that explored the homogeneity of opinion regarding VBAC within and between obstetric and midwifery professional groups indicated wide variance. Inconsistency in clinician attitudes and beliefs about the safety of VBAC can impact on a woman's ability to confidently choose a mode of birth especially where the woman has a knowledge gap. Swedish midwives who work predominantly in the delivery of antenatal care believe that maternal choice for CS without a medical indication is an acceptable option. Whereas, the midwives and obstetricians working in the labour ward of the same hospital do not believe this to be acceptable (Gunnervik et al. 2010). If women are not engaged in a model of care with a focus on continuity they are likely to be in contact with multiple care providers throughout the pregnancy, labour and birth. Divergence in attitudes between care providers through the woman's journey may impact on a woman's decision-making ability and experience. Women may experience a lack of preparedness and loss of expectations if they are supported during their pregnancy to choose elective CS and then not supported with this birth option during the next phase of their journey in labour and birth. Inconsistent attitudes between the antenatal and labour periods of care could be detrimental to the woman's experience and greater collaboration between clinicians could be more effective.

This need for greater collaboration and consistency of information is also observed when clinicians (N= 54) and women (N=166) are presented with hypothetical clinical scenarios and asked to assess their perception of risk (Sharpe et al. 2015). In the first three scenarios posed that describe low risk situations women are more concerned than midwives for the safety of the baby than the clinicians are (mean of the 3 scenarios for each group: women 24.4% vs MW 7.3%), and less concerned about injury to themselves than the clinicians are (women 14.6% vs MW 29.6%). More women believe that maternal choice for CS in an uncomplicated pregnancy is reasonable whereas clinicians do not (19.4% vs 2.4%, $p<0.001$) and more women having a subsequent pregnancy held this belief compared with first time mothers (21.1% vs 4.2%, $p=0.04$). There is divergence in priorities based on risk and experience between women and clinicians that requires clarification in terms of knowledge gap and greater understanding of experiential drivers for choice of mode of birth, such as previous traumatic birth for example.

Clinical Practice Guidelines

Clinical variations are observed between facilities that have relative homogenous populations (Gross et al. 2015; Lee et al. 2013) and could be the result of a difference in attitudes to intervention rather than the need for intervention. This variation in attitude can be observed in the clinical practice guidelines that influence the way care is provided as these are often based on consensus rather than sound evidence. In one study where several national guidelines were compared it is evident that the recommendations for VBAC were based on the relative risk of that mode of birth and not necessarily on evidence for the risk (Foureur et al. 2010); this suggests preferential variations.

Clinicians' view of birth as normal

Clinician groups are also observed to have divergent attitudes regarding the normality of the birth process. This divergent attitude can influence the degree of practice variations and the rate of surveillance and intervention within facilities (Healy, Humphreys & Kennedy 2016; Kennedy et al. 2010; Manohar, Woods & Lindow 2015). Where an ethos of normality of birth exists, there is a higher rate of normal birth and less intervention (Kennedy et al. 2010). The correlation between philosophy and outcomes is evident in a retrospective analysis of the outcomes of an Amish birth centre in the US between 1993 and 2010 where the local culture and practices are in support of VBAC. During the study period the CS rate is 4%, the attempted VBAC rate 100% and the VBAC success rate 95% with perinatal outcomes comparable to the national average (Deline et al. 2012). Consistency of guidelines, attitudes and practices of all the clinicians and cultural expectations of the community around the normality of birth are key to low intervention rates in this study. The influence of the whole of service approach, as opposed to individual preference and attitudes, is consistent with previously cited studies in this review (Althabe et al. 2004; Homer et al. 2001; Lomas et al. 1991; Sloan et al. 2000). Whilst these results are hopeful they need to be considered in the context of observing this unique cultural group and may not be generalisable.

Summary of the evidence presented so far demonstrates limited successful strategies to reduce CS rates. Repetition of one strategy, that of decision aids, yielded the same result as previous studies; there is no influence on the woman's decision on mode of birth. Maternal factors of BMI > 25 and interpregnancy interval of < 2 years may decrease the success rate of VBAC and could be used as a predictor of success in counselling. An identified knowledge gap for many women regarding the relative risk of VBAC is observed and a divergence in clinicians' attitudes to CS and VBAC could influence women's outcomes. Clinical practice guidelines that are not

based on sound evidence can sustain divergent attitudes. Consistency of practice, guidelines and attitudes may have a positive influence on VBAC rates.

Models of Care

There is a demonstrable reduction in the CS rates in maternity settings that reorganised the way care is provided adopting all or a combination of the following elements of care: continuity of care, increased collaboration, consistent guidelines and philosophy of care, strong leadership and interprofessional education (Gardner et al. 2014; Gu et al. 2013; Ma et al. 2012; Marshall, Spiby & McCormick 2015; Martin et al. 2014; Tracy et al. 2013; White, le May & Cluett 2016). Inclusion of these elements aims to reduce clinician variation in practice, provide greater certainty for women in the expected and accepted practice and philosophy of the facility and increase team effectiveness between clinicians. The studies described previously demonstrate a variation in clinicians' and women's attitudes to risks of VBAC and the acceptability of elective CS without a medical indication. Aiming for greater consistency across an organisation and by adopting a whole of service approach could reduce this clinical variation.

In a study undertaken in China (Ma et al. 2012) where a whole of service multi-faceted collaborative approach to care was implemented and assessed over a six-year period a 20% reduction in the CS rate was observed (54% vs 40.3% $P < 0.001$). In this study, there was evidence that interprofessional education sessions increased clinician knowledge of, and confidence in, the standard guidelines. In addition, obstetricians were held accountable for their decision-making regarding CS and all women were provided with an education session that was consistent with the philosophy of the facility. Since this study was conducted in China the findings may not be reproducible in non-Asian settings, however, the results are the most clinically significant compared with other cited studies in achieving an overall reduction in CS rates. Replication should be considered.

RCTs that assess the effectiveness of midwifery continuity of care models that provide consistent high quality antenatal care (Gu et al. 2013) and where that care is continued through to labour and birth (Tracy et al. 2013) are effective in reducing overall intervention rates. Similar results are evident when antenatal care that is obstetric-led (in 2008) and midwifery-led (in 2011) are compared; intended VBAC: 77% vs 90% (aOR2.69), actual VBAC 46.9% vs 61% (aOR1.79) (White, le May & Cluett 2016). Acknowledging the limitation of this cohort study of confounding factors including potential organisational changes during the intervening three years, the results are consistent with the RCTs mentioned above (Gu et al. 2013; Tracy et al. 2013) and consistent with others previously mentioned (Homer et al. 2001; Sandall et al. 2016). As the world struggles with

the rising intervention rates in birth it is curious that models of care that have a positive effect on reducing intervention are still being tested and have limited national and international implementation.

Models of care that are established for women with a previous CS with continuity of midwifery and obstetrician care have similar positive outcomes to the midwifery-led care models. In a prospective cohort study with pre-and post-implementation analysis of outcomes a higher successful VBAC rate is observed (17% vs 27% $p < 0.001$) (Gardner et al. 2014). Despite the limitations of a single centre cohort study, there seems to be a positive effect on CS rates where continuity of care provided by either midwives or obstetricians is evident.

These studies do not describe or define the clinicians' philosophy or attitudes to VBAC. There is an assumption, however, that there would be a positive orientation towards this mode of birth owing to the purpose of the studies. Therefore, a reduction in CS could be reliant on the individuals who self-select to provide continuity of care or where there is a whole of service change where clinicians are held accountable for their performance as in the study in China (Ma et al. 2012); the reverse could also occur. As previously described, Swedish midwives working in antenatal clinic were more likely to accept women's request for a non-medically indicated CS and believed this to be a reasonable option (Gunnervik et al. 2010). In this Swedish setting the results of an intervention of continuity of care may not yield the same results if these same midwives are to provide the continuity of care. The context of the change is relevant and this is not defined specifically in the studies describing the effects of continuity and may be a limitation to replication.

In the UK, a whole of service approach across 20 Trusts focused on the ability to manage change with effective team work, strong leadership, a commitment to evidenced based practice and a philosophy that promoted normal birth to reduce intervention (Marshall, Spiby & McCormick 2015). The context for change was considered in this study and in fact is the focus. A suite of tools was used to facilitate a self-assessment process with a focus on identification of the organisational culture with an action research-type methodology to implement strategies for change. Multidisciplinary engagement was required at all stages of the process with identified opinion leaders facilitating the momentum of activities. An overall reduction in the CS rates of 0.5% was observed (from 26.4 down to 25.9%); the reduction was most evident in the Trusts with the highest CS rates at the commencement of the project. Where positive organisational characteristics were identified including interprofessional collaboration and education,

continuity of care, consistency of guidelines and philosophy, leadership and shared decision-making, change was more effective.

3.6: Summary

In summary, the most significant improvements to the rates of CS were observed with a whole of service approach rather than relying on change to individuals' practice. This observation is important considering the variation observed in clinician attitudes to intervention and variations in clinical practice. Acknowledging the limitations to the study of the Amish birth centre (Deline et al. 2012), the influencing factor for positive results is the consistency in expectations between clinicians and women. Similarly, where a whole of service approach to achieve a reduction in interventions in China was implemented the CS rate reduced by 20% (Ma et al. 2012). The internal organisation factors that may influence this success are a shared philosophy prioritising normal birth, clear interprofessional communication, strong leadership and consistent processes (Kennedy et al. 2010; Marshall, Spiby & McCormick 2015). An awareness of these characteristics of the organisation can also suggest the degree of readiness to change and therefore the likelihood of success of change processes such as a reduction in the CS rate.

The effectiveness of implementing innovations in healthcare was the focus of a large systematic review in 2004 (Greenhalgh et al. 2004). The review confirmed that prior to implementation of innovations there was little assessment of an organisation's readiness to change. There was little awareness of the culture and values of organisations that may facilitate or hinder the adoption of change and therefore these aspects could not be considered during the change process. This failure to recognise or understand the culture may have significant impact on the success of a change regardless of the integrity of that change. The concept of readiness for change will be a focus of this research as a possible way forward in reducing intervention in birth.

If characteristics of the maternity service and the values, attitudes and beliefs of clinicians can influence the outcomes of women eligible for VBAC, then implementation of a mandated government policy, such as Maternity – Towards Normal Birth, may not be successful without a greater understanding of the characteristics of the organisation and the influence that the context can have on outcomes. Gaining an understanding of the organisation's readiness for change seems to be integral to the ability to effect and sustain change and gaining this understanding became the focus of this research.

The following chapter further explores the influence of the context in which change needs to occur and the importance of assessing readiness for change if the implementation of change is to be successful and sustained. Being cognisant of the organisation's readiness for change is

crucial where the change is significant such as that described for the policy Maternity – Towards Normal Birth.

Chapter 4: The Context for change: A Narrative Review of the Literature

4.1 Introduction

What is known from the previous chapter is that intervention rates for women in birth, including CS, cannot be explained by the characteristics or clinical history of women alone (Lee et al. 2013; O'Leary et al. 2007; Women's Healthcare Australasia 2014). Possible explanations for these intervention variations are the effectiveness of collaboration between care providers and aspects of team work, or team dynamics (Australian Department of Health and Aging 2009; Downe et al. 2009; Hastie & Fahy 2011; Monari et al. 2008; Raab et al. 2013; Simpson, James & Knox 2006). As previously identified, the context and cultural characteristics of organisations may influence intervention in birth rather than the clinical attributes of the woman or her baby. Therefore, gaining a better understanding of the characteristics of organisations prior to attempting implementation of change may influence the success of change.

Exploration of the influence of context on change has occurred across disciplines and clinical areas with similar findings that suggest there is a correlation between context and effective change (De Bono, Heling & Borg 2014; Dopson, Fitzgerald & Ferlie 2008; Glasgow, Yano & Kaboli 2013; Gross et al. 2008; Guerrero & Kim 2013; Hagedorn & Heideman 2010; Krein et al. 2010; Latta 2009; Ovretveit 2011). Despite the similarity in findings, however, the definition of context in relation to organisational change is inconsistent throughout the literature.

In exploring the meaning of *context* it is suggested (McMormack et al. 2002) that there is a direct relation between context and culture as it is the assumptions, beliefs and values of those in the organisation that have developed over time that influence behaviour and give the organisation its characteristic nature. The culture of an organisation is described as organic and developed and sustained by the people within the organisation at every level and therefore understanding the culture is crucial in a change process. It is clear that any proposed change needs to be context sensitive to maximise effectiveness (Ovretveit 2011).

Despite the identified importance of understanding context there is limited evidence of this understanding being achieved or being clearly articulated in studies focused on change. A decade ago a comprehensive systematic review that explored the effectiveness of innovations in healthcare confirmed that prior to implementation of innovations there was little assessment of the context in relation to readiness of an organisation to change (Greenhalgh et al. 2004). There was little awareness of the culture and values of organisations that could facilitate or hinder the adoption of change. Where contextual factors were described there was a greater

ability to explain differences in the outcomes of quality improvement initiatives (Alexander & Hearld 2011; Kringos et al. 2015).

The failure to recognise or understand the influence of the organisational culture has been described as the root cause of mediocre success of programs designed for quality improvement (Glasgow, Yano & Kaboli 2013; Krein et al. 2010; Kwahk & Lee 2008; Taylor et al. 2011). Ultimately failure to understand the cause and effect may have significant impact on the success or sustainability of a change regardless of the integrity of that change.

Where contextual factors that influence readiness for change are articulated they are described broadly as the collective capability and motivation of the individuals within the organisation for change (Ben-Gal & Tzafrir 2011; Brennan et al. 2012; Dopson, Fitzgerald & Ferlie 2008; Krein et al. 2010; Lau et al. 2016; Shum, Bove & Auh 2008). There are attributes within organisations such as strong and supportive leadership, participant trust of each other and the organisation with opportunity for engagement, valence for the specific change as well as there being an adaptable environment for change (Guerrero & Kim 2013; Lavoie-Tremblay et al. 2015; Ovretveit 2011; Taylor et al. 2011). Culture types that promote teamwork, flexibility and support for individual engagement are more likely to have a change-ready environment (Shum, Bove & Auh 2008). The relationship between the cultural characteristics and practice can ultimately influence performance and outcomes and must be considered to ensure the quality and safety of care and ultimately sustained positive change (Glasgow, Yano & Kaboli 2013; Guerrero & Kim 2013; Koh 2012; Lau et al. 2016). Quality improvement strategies have demonstrated the relationship between the nature of the context and change strategies and is particularly evident with compliance with clinical practice guidelines. A triangle of performance has been described (Nold & Michel 2016) whereby culture, leadership and systems can influence the agility and resilience of the people within the organisation and can directly affect the rate and quality of change strategies. Where strong and positive leadership is evident that promotes a culture of shared status and safety amongst clinicians (Nembhard & Edmondson 2006) there is more likely to be a willingness and effective ability to influence and sustain change. Unfortunately, the converse is also possible where a culture that does not exhibit these qualities of leadership and engagement there can be a direct consequence to patient safety.

Implementation of change initiatives are described as mediated and shaped by the organisational culture (Latta 2009) and therefore the focus of assessing effective change should be on *why* or *how* the change occurred rather than *what* the change was, which could provide insights for evaluation and replication (Krein et al. 2010).

One of the main recommendations of the comprehensive systematic review (Greenhalgh et al. 2004) with respect to readiness to change is for a targeted assessment of the context to determine the characteristics present that would facilitate the uptake of evidenced based practice change. These authors urged that to achieve an environment receptive for change there must be an initial evaluation or assessment process conducted to identify the facilitators and barriers to change.

4.2: Theoretical Frameworks for change and the influence of context

In addition to my review of the literature I also searched for a possible theoretical framework for this study. I identified three influential and well cited theoretical frameworks that contributed to my understanding of the importance of context on successful organisational change processes. These are Promoting Action on Research Implementation in Health Services (PARIHS) framework (Kitson et al., 2008), Realistic Evaluation (Pawson & Tilley, 2008) and the Diffusion of Innovations framework (Rogers, 2003)

PARIHS Framework

The PARIHS framework has a strong emphasis on implementing evidence into practice. The overarching principle suggests that successful implementation (SI) of evidence into practice is a function (f_n) of the combination of the strength of the evidence (E), the context (C) that the participants exist within and the manner in which the implementation is facilitated (F); $SI = f_n(E, C, F)$ (Kitson et al. 2008). This framework provides some insight into why there is not a simple linear relationship between providing evidence for effective care and the evidence being adopted in clinical practice. Implementing evidence into practice requires people to change and the success of that process depends on many other contextual factors.

Realistic Evaluation

Pawson and Tilley's (2008) Realistic Evaluation framework emphasises the importance of understanding why a change may have occurred and not just the change that occurred. The formula that they propose as providing insights into developing this understanding is to identify the change mechanism (M) plus the details of the context in which it occurred (C) in order to clearly understand how the outcome occurred (O); $(M+C=O)$. In other words, this framework enables an exploration of how the outcome was influenced by the processes and the interplay between the participants and their environment. The realistic evaluation framework suggests that the same result will not necessarily be achieved every time a change is implemented as the outcome will be dependent on the individual nature of each group and setting. What the

evaluation can provide is a description of *what* worked for *whom* and in *what circumstances* (Pawson & Tilley 2008).

Diffusion of Innovations Framework

The Diffusion of Innovations framework describes how the implementation and / or spread of an innovation (I) can be influenced by the interaction between the knowledge (K) of the innovation, the nature of those who will be involved in the adoption (A) of the innovation and the nature of the context (C) where the implementation will occur (Rogers 2003); $I=K+A+C$. This formula was developed by myself to provide consistency with the other two frameworks. In this framework, the innovation is synonymous with the proposed change which may be technical or process; the knowledge of the innovation will also include the value that is placed on the innovation by those required to adopt, the acceptability of the change and the degree of perceived autonomy in implementation processes. The context will also include the interrelated social networks that exist amongst those required to adopt. The framework is influenced significantly by theories of human behaviour from both psychology and sociology and emphasises that development of an understanding and consideration of the attributes of people involved in complex change is essential in order to bring about successful change (Rogers 2003).

This overview suggested quite complex processes that all could be effective in facilitating a change in organisational culture; each framework contains common elements important for organisational change. As illustrated in Figure 6 the element that each has in common is an emphasis on the context of the participants' world.

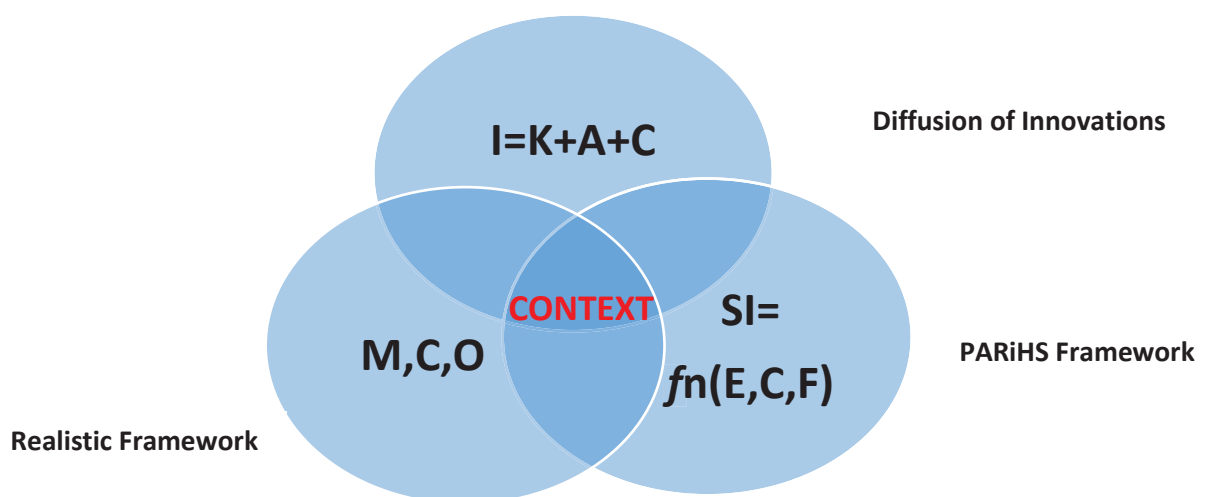


Figure 6: Theories converge around the importance of Context

Examining these three theories confirmed my understanding that an exploration of the context where change is to be implemented and gaining a greater understanding of the characteristics of that context may be a key to greater success in implementation of change. As previously explored, the literature suggests that there are variations in the attitudes of clinicians to CS and VBAC (Monari et al. 2008; Turner et al. 2008; Wax et al. 2005; Weaver, Statham & Richards 2007) and a fear with respect to the safety (Chaillet et al. 2007) and potentially litigious outcomes if the birth outcome is compromised (Habiba et al. 2006). These attitudes need to be made more conscious in the environment of change to enable change to occur. I became more aware that the sub-conscious attributes of the social context could be more relevant to the implementation of change than what may be overtly apparent.

4.3: Informal Explorations of the Research Context

In preparation for my proposed study, I conducted discussions with the different professional teams at the research site. During the discussions, I identified divergent opinions on CS and the priority for such a project. These opinions ranged from acceptance that CS is a safe and reasonable birth option for women to those who had a concern for the physical, financial and social consequences of the rising CS trend. The themes in these discussions were consistent with literature that describes clinician attitudes (Habiba et al. 2006; Healy, Humphreys & Kennedy 2016; Klein et al. 2009; Litorp, Mgaya, Mbekenga, et al. 2015; Robson et al. 2009).

The discussions at the research site also identified a division among the teams in their impression of the effectiveness of the collaborative approach to care, with a suggestion that it was more rhetoric than reality. This discussion evoked interest for me in examining the nature of this group's dynamics, the relationship between the various sub-groups and how this may impact on a collaborative approach to the proposed project.

At the time of the commencement of this study the maternity service was engaged with the NSW Health Department in implementation of the Essentials of Care (EOC) program (Nursing and Midwifery Office 2007). This program is based on the principles of transformational practice development that facilitates engagement within teams where attributes and creative imagination is blended with practice skills and wisdom to develop person-centred cultures (Manley, McCormack & Wilson 2008). At this stage the research site had experienced limited success in achieving traction in any meaningful way with EOC. My understanding from the previews of the literature was that a contributing factor for program's such as EOC's lack of success could be the cultural context of the maternity service. I hoped that exploration through

this study could help to reveal modifiable aspects of the culture that might also assist with progressing the EOC program.

4.4: Identifying a method for assessing the context: The *Toolkit*

In 2008 I attended the International Confederation of Midwives triennial conference in Scotland. This conference is a valuable event for all midwives as a mechanism for providing insight into innovative practices and emerging evidence both of which can contribute to outcomes in maternity care. Whilst the conference was informative and insightful it was on the final afternoon that a presentation resonated with me like no other during that event or any similar event beforehand.

The presentation described an initiative of the National Institute of Innovation and Improvement in the UK to reduce intervention in birth. The initiative was driven by the concerns for the rising rate of intervention in birth without a related improvement in maternal or neonatal outcomes and a potential negative impact on the national health expenditure (Institute for Innovation and Improvement 2006). The initiative aimed for an efficient and effective approach to maternity service reform that could be achieved through identification of the characteristics of organisations where innovations were achieved more readily and where birth interventions were low. Identification of the characteristics of these services that set them apart from others could provide an approach to successful change for all services (Baldwin et al. 2007).

The project team identified maternity services that achieve lower intervention rates and improved outcomes. The characteristics of the organisation were then examined to determine the influence of these characteristics on improved outcomes. The results of this work resulted in the development of a toolkit, *Pathways to Success: a self-improvement toolkit. Focus on normal birth and reducing Caesarean section rates* (National Health Service Institute for Innovation and Improvement 2007). Hereafter referred to as the *Toolkit*.

The design of this *Toolkit* provides a mechanism for organisations to undertake a multidisciplinary self-assessment where a comparison can be made between themselves and high performing organisations. The *Toolkit* then provides a mechanism to identify the characteristics of the organisation that might indicate potential areas for change. An action research-type process is then used to design potential changes for implementation with cyclic evaluation and re-modelling depending on outcomes.

The design of the *Toolkit* provides a methodology to assess the readiness for change first and then steps to move in a deliberate and targeted manner for change. I recognised the potential

that the *Toolkit* offered for a change process that I could use for my study. The value of the *Toolkit* was reinforced with the report of the project's progress with an overall reduction in Caesarean Section rates of 0.5% in organisations that participated (Spiby et al. 2011). The *Toolkit* therefore provided me with a feasible method and the motivation to embark on a project that offered a positive way forward to reduce overall intervention in birth, which until now had seemed insurmountable. The specifics of the *Toolkit* design are addressed in Chapter 5.

4.5: Original Study Design

In 2009 at the commencement of this Professional Doctorate I regarded the *Toolkit* as a mechanism whereby the changes required for the implementation of the Maternity – Towards Normal Birth policy directive could be achieved. I proposed to undertake a participatory action research (PAR) study using the *Toolkit* as the framework. The study would aim to achieve a higher rate of normal birth at the research site. This could be achieved through a self-assessment process by key stakeholders, and development of strategies responsive to the findings of the assessment to create a change in culture towards a positive orientation to normal birth. This approach was also consistent with the Professional Doctorate framework that had a clinical focus and one where leadership, influence on policy and clinical practice could be demonstrated by the doctoral candidate.

Ultimately the PAR study did not eventuate as originally intended. As I began the project I delved more deeply into other frameworks, philosophies and ideologies concerned with the processes of culture change with the intention of strengthening my understanding and ultimately the contribution my study could make to knowledge in this area. In the following chapters of this thesis I present the beginning of this exploration and how my focus was drawn from a pragmatic need to implement a government mandated policy to increase the rate of normal birth, including vaginal birth after caesarean in one organisation to a broader, more nuanced understanding of the concept of culture change itself.

4.6: Summary

In summary, the initial focus for this study was to bring about a change in an organisation so that more women eligible for VBAC would be offered this choice and would have a greater chance of achieving a successful VBAC and thereby reducing overall CS. The current rates for VBAC were low and clinicians were divided on whether VBAC was a safe option for birth, which was reflected in the clinical variation in the VBAC rates across NSW. The publication of a government policy directive mandated that the VBAC rate be increased to a target that was at least fivefold higher than the current rate. My challenge therefore was to investigate ways to

influence a change in the culture of one organisation to determine whether the policy could be successfully implemented. My study focus became one of investigating the culture of the organisation to assess its readiness for change and to implement strategies to improve its readiness for change if needed.

Therefore, the aim of the study evolved to be an exploration of the practice CONTEXT of one organisation, to reveal cultural characteristics influencing relationships between the quality and safety of maternity care, and to determine the organisation's readiness for change.

4.7: Research Questions

The research questions became:

1. What is the organisational culture in a hospital context where CS rates are high?
 - a. Does this organisation exhibit the characteristics associated with readiness for change to comply with policy to reduce interventions in birth?
2. How can an organisation be supported to develop a culture that embraces change and innovation?

The complexity of the investigation became more apparent as I examined the many forms of influence of the context on clinical care. It was apparent that the cultural characteristics of an organisation could be more influential to the outcomes of women's birth experience than the characteristics of the women themselves. The study evolved from a participatory action research design where participants could develop strategies for change to a more complex, in-depth exploration of the dynamics of the people and culture that make up the fabric of a maternity care organisation.

Maternity care "organisation" that will be referred to in this study is the maternity service or unit where maternity care is provided within the greater organisation of a large tertiary facility. The culture that is referred to is that which is relevant to the maternity service only and not the more macro environment of the entire hospital. In describing the micro, meso and macro levels of culture, this analysis is at the meso level addressing collective action, group culture, identity and networks within the maternity service only. Whilst there is an appreciation of the influence that the entire culture of an organisation may have on the meso level culture and vice versa, the analysis described in this study will consider the maternity service in isolation.

The method of exploring this situation would need to be multi-dimensional and potentially of similar complexity as the situation itself. In the next chapter I describe the sequential, explanatory mixed methods study design chosen to explore the questions posed.

Chapter 5: Study Design and Methods

5.1: Introduction

The complexity of healthcare organisations and the influence that organisational culture can have on the care and outcomes of childbearing women has been described in the previous chapter. This chapter provides an overview of the study design and methods chosen to explore the concept of organisational readiness to change leading to implementation of a mandated government policy. Where change is required, exploration and exposure of the less overt but potentially more influential organisational characteristics is required to influence successful change. These characteristics can reveal the readiness to change which can then guide the development of targeted strategies for change that are contextually sensitive. A complex issue requires a complex study design; therefore, a sequential explanatory mixed method design was chosen as the most appropriate and is described in this chapter. In addition, the original design of the study is described and an explanation for the change in focus through the process based on the findings from the individual phases.

This chapter also describes the study site, the ethical approval and the steps taken to ensure trustworthiness of the data.

5.2: Study Site

The research site for this study is a tertiary hospital in NSW. Consistent with the role and responsibility for similar tertiary hospitals, it is the local hospital for residents living adjacent to the site, a referral centre for the other six hospitals in the health service/district as well as having a responsibility for rural sites within a defined geographical boundary. There are approximately 2500 births per annum at this hospital and women are supported in their choice of model of care ranging from shared care between the hospital maternity service and a nominated General Practitioner who provides most pregnancy care in the community, handing over intrapartum and postnatal care to the hospital; continuity of midwifery care in a Midwifery Group Practice where midwives provide pregnancy, intrapartum and postnatal care to a specified group of women regarded as low risk; midwives' and doctors' antenatal clinics for low risk women and an obstetric led model of care for women regarded as high risk. This hospital is typical of tertiary hospitals in NSW in terms of the services it provides, the staff it employs and the policies and procedures governing the delivery of clinical care. As previously described in the opening chapters of the thesis, the clinical outcomes in this unit are however, very different to peer organisations, making this an ideal site in which to explore contributing organisational cultural factors that may have the potential to influence clinical variation.

5.3: Study Design and Methods

Mixed methods design has more recently been acknowledged as a valid research methodology after significant debate between the proponents of both quantitative and qualitative methodologies (Creswell & Plano Clark 2011; Teddlie & Tashakkori 2009) and does not require further general justification. As the aim of mixed methods is to develop, complement and expand on what is already known (Greene 2008) this is an appropriate methodology for this study. Exploring the attitudes and beliefs of clinicians in the context of healthcare organisations is complex and challenging and the exploration needs to include multiple perspectives to increase the breadth and depth of enquiry to gain a better understanding of the context.

A sequential explanatory mixed method design was a suitable choice for this study as it enabled each data set to build on the previous to increase the depth of understanding. The quantitative methods were used first as a way of providing a benchmark measurement of aspects of one organisation that had not previously been explored. This data could then be examined from a qualitative perspective through interviews that would provide greater scope for enquiry and explanation; these processes were sequential. Consistent with this methodology there was also a degree of flexibility to adjust the line of enquiry in response to findings that became apparent through the process (Creswell et al. 2011; Creswell & Plano Clark 2011). The data from the qualitative phase became the most predominant in terms of providing a deeper understanding of the characteristics of this organisation but the quantitative data provided the platform on which to build the enquiry.

5.3.1: Original Study Design

In defining and describing in a thesis of the research methods and study design used one would usually expect to have a well-articulated and constructed explanation that guides the reader through the process. In this study the original study design changed in the process of exploration and enquiry and the explanation of this could become cumbersome if not described separately. Therefore, I have chosen to describe the original design up front and the findings that influenced the change of focus. There was a significant turning point in the study which moved from what I initially perceived to be a more simple and linear approach to one with greater complexity and I believe more relevant in terms of knowledge gained.

This will be an overview of the study to describe the change in focus and a more detailed description of each phase will be included in the following sections. The original research question was *VBAC: Do the Values, Attitudes and Culture within maternity units influence the outcomes for women seeking VBAC* and was to include an action research methodology. There

were 3 phases proposed (Figure 7): Phase 1a and 1b used quantitative survey tools to assess the attitudes of clinicians to VBAC using the *Toolkit* and the CVF was used to describe the predominant culture of the organisation. The results of the two parts of this phase would provide a benchmark measure of the organisational characteristics. The intention was then to conduct focus groups with a purposeful sample of clinicians to further explore and describe the findings from the first phase to gain a deeper understanding of the attitudes of the clinicians; phase 2. A cohort from the focus groups would then be invited to continue with the research as change agents in a participatory action research study; phase 3.

The focus of phase 3 would use a collaborative approach to the development of strategies to reduce intervention in birth. There would be an iterative process using the cycle of Plan – Do – See- Act with the aim of increasing successful VBAC and thereby reducing the overall CS rate. The *Toolkit* would be used to conduct a self-assessment to further identify attitudes to VBAC. The group would then work towards gaining a consensus opinion regarding their preferred position to be on the scale of dark to light in the *Toolkit* design. Strategies would then be designed and implemented to move the clinicians and their practices towards the light side.

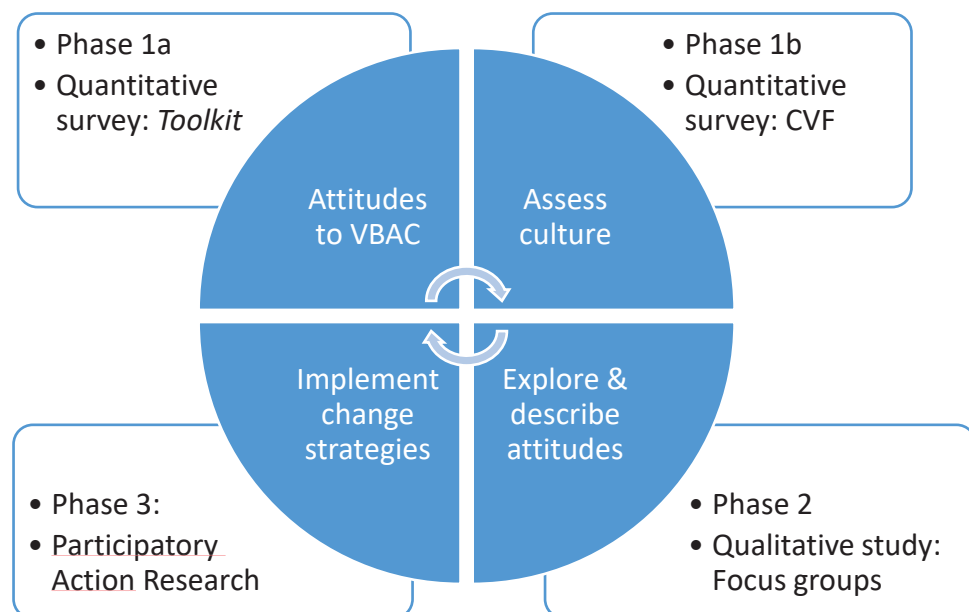


Figure 7: Original Study Design

This design followed the methodology recommended by the authors of the *Toolkit* (Baldwin et al. 2010) and had a focus on collaborative participation that encouraged engagement, ownership and investment that could encourage successful and sustained change.

Consistent with the sequential explanatory design of the study, the results from Phase 1a and 1b influenced the design of the next phase. The original design could not be implemented

beyond the first phase as the level of engagement was considered to be insufficient to complete a participatory action research project. The response rate to the survey was low, there was divergent attitudes to VBAC across and within professions and the culture was described as one that lacked collaboration, cohesion and teamwork.

These results influenced the change of focus for the second and third phases of the study to a more in-depth exploration of the characteristics of the culture that influenced disengagement. As the researcher, I felt at this stage that there was more to be gained from this change of focus than attempting to continue with the proposed collaborative project with a specific focus on VBAC. The results and findings from each phase will be presented in the following chapters in the revised design which will make more apparent the reasons for this change in direction.

5.4: Overview of Revised Study Design: Sequential, explanatory mixed methods design.

Having described the original study design I will now provide an overview of each of the phases of the study with the understanding that it was at phase 2 where the design changed (Figure 7). Two research questions guided the design of the study to direct the line of enquiry:

1. What is the organisational culture in a hospital context where CS rates are high?
 - a. Does this organisation exhibit the characteristics associated with readiness for change to comply with policy to reduce interventions in birth?
2. How can an organisation be supported to develop a culture that embraces change and innovation?

The sequential design facilitated the process of exploration which was conducted over three phases of the study; phases one and two used quantitative methods of self-reported surveys. In phase three in-depth semi-structured interviews were conducted to generate qualitative data that described the participants' views of the context of the organisation in which they worked.

The process was sequential in that quantitative data were obtained first which then influenced the design and content of the qualitative study, the interview. Both the quantitative and qualitative data were analysed and a process of methodological triangulation undertaken to enhance, complement, corroborate or refute the findings of both methods (Collins, Onwuegbuzie & Sutton 2006; Greene 2008).

Following the process of data triangulation and interpretation of the findings using insights gained from the field of social cognitive neuroscience, an implementation example is provided. This example was not an intentional component of the study design but arose following my own change in context when I moved to a leadership role in a different health service. This phase demonstrates how the insights gained from phases 1-3 could be implemented effectively and is presented as evidence of my leadership in influencing policy and clinical practice.

The following sections present an overview of the aim and design of each of the four phases of the study.

5.4.1: Phase 1: Assessing attitudes and defining the culture

This phase consisted of a two-part survey whereby clinicians' attitudes towards VBAC were assessed to provide benchmark data and the predominant culture of the Organisation is explored. These two parts were conducted simultaneously and presented on the same survey form.

Phase 1a: Assessing Clinicians' Attitudes Towards VBAC

A quantitative research methodology that used a previously developed survey instrument, the *Toolkit* (National Health Service Institute for Innovation and Improvement 2007), aimed to elicit the attitudes of midwives' and obstetricians' employed in the research site. One of the *Toolkit* sections, Vaginal Birth after Caesarean (VBAC), was used to provide a quantitative analysis of the attitudes of obstetricians' and midwives' to thirteen aspects of care with respect to VBAC. The results aimed to identify whether there was a positive or negative orientation to supporting VBAC and the degree of consistency in attitudes between the two professions. The details of this study, including a description of the research site and further details of the *Toolkit* are presented in Chapter 6.

Phase 1b: Defining the Predominant Culture of the Organisation

The second part of the quantitative study was undertaken using a well-validated survey instrument, the Competing Values Framework (Cameron & Quinn 2006), that aimed to describe the current, predominant culture of the organisation and how clinicians' would prefer the culture to be in the future. The results describe organisational characteristics such as leadership, which can indicate the effectiveness of the organisation. Analysis of the survey data was used to guide the development of the specific content of the subsequent qualitative phase, the interviews. The details of part of the first phase are presented in Chapters 6 and 7.

5.4.2: Phase 2: Identifying effective interprofessional collaborators to be change agents

To gain further insight into the understanding of the culture of the organisation, the second phase invited all midwives and doctors to nominate colleagues whom they perceived to be effective collaborators which replicated work conducted in the UK (Downe et al. 2009). In addition to making peer nominations the participants were invited to describe the attributes of the nominated person that influenced their nomination. The peer nomination tool was purposely developed for this study and was adapted from the tool used in the study by Downe et al., (2009). The details of this study are presented in Chapter 8. The results of Phase 2 identified the participant sample for the third phase of the study.

5.4.3: Phase 3: In-depth Interviews with Effective Interprofessional Collaborators

This third phase of the study interviewed consenting peer nominees using a mix of interview techniques, each deliberately designed to explore more deeply the experiences of working in this context. Attitudes and beliefs of individuals and the culture of organisations are often difficult to describe and define as they historically evolve over time influenced by many factors that become embedded in the fabric of the organisation. Therefore, to uncover information that may be held at an unconscious level, different techniques were used to maximise the effectiveness of the exploratory process.

Six interview techniques or methods were used in a progressive manner throughout the interview to move the participants' thinking from the conscious to unconscious levels. These included: questions exploring definitions of interprofessional collaboration; vignettes to describe collaborative clinical exemplar; descriptions of relationships and the unwritten ground rules of the organisation; verification of the CVF results from their perspective and finally an exercise in photo elicitation. Each of the interview techniques is more fully described in Chapter 9 and the thematic analysis findings of the interview data are described in Chapter 10.

5.4.4 Post-script Implementation exemplar: an unconventional approach to change

Analysis and interpretation of the data obtained through the three phases of the study provided insights for implementation in practice. In this section, the process of implementation of a clinical practice change using these new insights is described.

The following chapters describe each of the three individual study phases and methods in detail including reference to the relevant literature for each; the specific methods used, an analysis and a separate discussion of each phase. Phases 1a and 1b have been published in peer reviewed journals during my candidature (Adams, Dawson & Foureur 2016a; Adams, Dawson & Foureur 2016b). These articles are included in full in PDF format as Appendices 5 and 6. The information

contained in the following chapters has been modified to exclude the repetition of information that was required for the article but which is found elsewhere in the thesis; such as a description of the study site. While each publication has its own reference list, all references used are presented in the final list of references at the end of this thesis.

5.5: Readiness for Change: defined and described

In order to assess the organisational readiness to change the concept must first be defined and described. A systematic review that examined the conceptualisation and measurement of readiness for change (Weiner, Amick & Lee Shouu-Yih 2008) revealed that there were very few studies that clearly and definitively described readiness for change. There was little differentiation between organisational readiness in terms of operational requirements for change and a philosophical or psychological readiness for change. In addition, there were few instruments that had been reliably validated to accurately assess and measure readiness for change.

Given this dearth of reliable information at the time this study commenced I turned to one theory of organisational readiness for change (Weiner 2009) and adopted the definition used in this theory as well as a suggested approach to measurement. For this study, organisational readiness for change could be established if it was possible to identify a shared psychological state between participants with respect to their commitment to change and change efficacy, or the shared belief in their capability to achieve the change (Weiner 2009). The theory of organisational readiness to change described by Weiner (2009) is relevant for this study as it describes how collective behaviour change is required to successfully and effectively implement change.

Whilst the focus is on organisational change, the impact of an individual's readiness to change must also be considered. Factors that influence the individual's participation in change are based on their assessment of the value and the appropriateness of the change to them; knowledge of the change and confidence in personal efficacy; perceived level of support, the ability to be involved in the specifics of implementation and experience with effective change (Holt et al. 2010; Rogers 2003; Weiner 2009).

Weiner suggests the following strategies could be useful in determining the current readiness or valence for change: highlighting the discrepancy between current and desired performance levels, fomenting dissatisfaction with the status quo and creating an appealing vision of an alternative situation (2009, p7). Given the lack of reliable tools for measuring readiness for change the survey tools chosen for this study; the *Toolkit* and CVF, were considered appropriate

to address the strategies suggested by Weiner (2009): the *Toolkit* results aim to describe the consistency in clinicians' attitudes, the CVF compares the current and preferred cultures and measures the incongruence and the interview data explores clinician's attitudes to the current culture with respect to IPC and the effectiveness of relationships within the team.

5.6: Ethical Approval

Ethical approval for the study was granted by the Northern Sydney & Central Coast Health Human Research Ethics Committee in November 2009 (0911-313M). In considering the ethics of conducting this research I determined that the benefits from exploring issues pertaining to interventions in birth, specifically VBAC, have significant potential health benefits in reducing morbidity and mortality for women and in reducing financial burden to the health system. Considering that the risk to the participants, the midwives and obstetricians, involved in this research are assessed as being minimal, the research is determined to be a low risk study which could benefit the participants, and ultimately birthing women, more than do harm. If there can be strategies developed to improve the intervention rates without increasing harm it would seem almost unethical not to explore the possibilities.

The ethical principles that are adhered to throughout the study are those of informed consent to participate through the provision of information sheets and consent forms and opportunities to clarify any questions prior to consent; ensuring anonymity of survey responses through not collecting identifying data and through publishing only aggregated results; ensuring the confidentiality of interview participants and their non-identifiability in any publication or presentation arising from the interview data. These documents are presented in Appendices 7 and 8.

In accordance with the ethical approval requirements I comply with the safe storage requirements of the data collected:

- The hard copies of documents generated during the conduct of the study have been retained in a locked filing cabinet and will be shredded five years after the completion of the study. These documents include the Competing Values Framework survey, the Vaginal Birth After Caesarean surveys, the nomination forms, the transcribed interview data and the participant consent forms
- Data collated from the surveys are stored in a password protected electronic database and will be permanently deleted five years after the completion of the study.

- The audio taped interviews have been downloaded to my computer and password protected and will be erased five years after the completion of the study.

I believe that I complied with the ethical requirements of a research study as determined by Northern Sydney & Central Coast Health Human Research Ethics Committee. With the completion of this study and submission of the thesis I will continue to comply with the requirements for safe storage and subsequent destruction of material.

5.7: Trustworthiness of the Study

Establishing trustworthiness is an important process for the study particularly for the qualitative component. Deliberate strategies were required during the interview process which continued into the analysis and presentation phases. A range of techniques are recommended to achieve trustworthiness which include constant comparison of data, peer review, reflexivity, triangulation, member checking and an audit trail (Creswell & Plano Clark 2011; Dye et al. 2000; Lincoln & Guba 1985).

During the interview process, I was cognisant of my role as a senior clinician within the Organisation and the potential impact that may have on the research. There was potential for participants to be conscious of the seniority and discipline differentials between us which could impact on the willingness or ability to disclose honestly and openly. There is also a risk in any interview situation that a relationship of imbalanced power can be created by virtue of the construct of the process by the interviewer (Kvale 2006; Sorsa, Kiikkala & Åstedt-Kurki 2015). I identified that I could not be in control of the participants' reactions, however, I could control my facilitation and interpersonal skills and believe these to be sufficiently developed to enable effective communication.

It was important that I acknowledged my assumptions, values and beliefs on the subject matter to remain objective in the process. This required balancing the roles of the naïve questioner and the reflexive enquirer to enable deeper exploration of the participants' thoughts and feelings during the interview process. This was achieved through using bracketing technique (Fischer 2009; Rolls & Relf 2006; Sorsa, Kiikkala & Åstedt-Kurki 2015) where I set aside my assumptions to enable the participants' descriptions of their reality to be articulated and not interpreted through the lens of my beliefs. At other times, I drew on my own experiences to explore a line of questioning to create new understandings. The ethical consideration with bracketing, therefore is to balance the risk of manipulating the situation with the benefit of deeper exploration.

There is some criticism of bracketing in research methodology with the belief that it is not possible to completely disregard or separate one's beliefs, values and attitudes as they are fundamental to the individual (Tufford & Newman 2012). However, a deliberate process of reflexivity to make assumptions and preconceptions more overt at a conscious level can enable the researcher to set these aside during the interview and the data analysis phases. This becomes a process of suspension rather than complete denial of one's values, beliefs and attitudes in order to raise curiosity about the subject (LeVasseur 2003).

The interview data were analysed using a constant comparative process where I was both attentive to emerging themes and tentative in conceptualisation of these themes to be sufficiently flexible to reorder and reconsider throughout the process (Dye et al. 2000). The final themes underwent a process of peer review to reduce bias and to seek clarity after a process of personal immersion in the data.

A process of triangulation was undertaken in the final analysis which moved between the qualitative and quantitative data that revealed or further explained the association between the two. This was a recommended approach for trustworthiness but also a crucial component of the sequential explanatory design of the study.

5.8: Reflections

There was a significant turning point described in this chapter and that was the change in research design from the original to the revised design. The original design followed that of other units in the UK that had used the *Toolkit* and from reports from the authors (Baldwin et al. 2010) there had been demonstrable success. Unfortunately, in the research site of this study there was insufficient engagement to facilitate the same process. The data findings, that will become more apparent in the following chapters, revealed a low level of engagement, divergence in attitudes and a predominant culture that was not conducive to innovation and change. Aside from the formal research process as the researcher I experienced many encounters from clinicians at the site describing the low value placed on this project and on the intention to change the VBAC rates. At this stage, there was more value from my perspective in exploring what these attitudes were about and hence the focus of the study changed.

5.9: Summary

This chapter has presented a broad overview of the sequential, mixed methods study designed in three phases. Phases 1-3 were conducted at a research site in a health service/district in a major city in NSW. A postscript section has been included that presents a study of the

implementation of change in a new setting in the far north of NSW, where I had taken up a leadership position.

In the following chapters, each of the phases of the study will be described in more detail.

Chapter 6: Phase 1a - Assessing clinicians' attitudes towards VBAC

6.1 Introduction

This chapter describes Phase 1a of the study and provides details of the aim, study design, participants and an in-depth description of the survey tool used. The results will provide insight in to the attitudes of clinicians to VBAC.

6.2: Overview of Methods - Phase 1a- Assessing Clinicians' Attitudes Towards VBAC

Aim: To explore the attitude of clinicians towards VBAC to identify whether there was a positive or negative orientation to supporting VBAC and the degree of consistency in attitudes between the two professions.

Study Design: A quantitative research methodology that used a previously developed survey instrument, the *Toolkit* (National Health Service Institute for Innovation and Improvement 2007). The VBAC section of the *Toolkit* was used for a self-assessment process by participants to thirteen aspects of care with respect to VBAC.

Participants: All midwives and doctors employed full-time or part-time at the research site. This totalled 120 clinicians consisting of 100 midwives and 20 obstetricians of varying grades.

6.3: Choice of Survey instrument – the Toolkit

The concept of the *Toolkit* was introduced to me during the International Confederation of Midwives Congress in Glasgow, 2008. I was sufficiently impressed with the methodology used with the *Toolkit* and the results that the project had gained in the UK that it prompted me to replicate the project work. In addition, together with the authors of the *Toolkit*, I presented the subject matter at the launch of the 2010, NSW Maternity – Towards Normal Birth policy directive on behalf of the NSW Ministry of Health where significant interest was demonstrated in its methodology. Positive aspects of the *Toolkit* design are the self-assessment process exploring characteristics of the organisation, the proposed interprofessional engagement in the assessment process and the action research-type method used to implement agreed strategies for change. The process would be contextually based and participatory which are two approaches known to increase the success rate of implementation strategies for change (Alexander & Hearld 2011; Brennan et al. 2012; De Bono, Heling & Borg 2014; Guerrero & Kim 2013; Krein et al. 2010; Lavoie-Tremblay et al. 2015).

Despite my attraction to the *Toolkit*, I also searched for alternate toolkit-type instruments available and appropriate for use in maternity care. The search strategy conducted included

instruments designed for interprofessional engagement, specifically suitable for obstetricians and midwives; that included an initial assessment process as opposed to retrospective evaluation and ideally used an action research method for implementation. At the time in 2009, there were no instruments described in the literature that matched the design of the *Toolkit*. There were packages described as toolkits that provided a suite of resources that could be implemented for quality improvement such as clinical practice guidelines and consent for care. A similar toolkit has more recently been developed (Smith et al. 2016) but this was not available at the commencement of this study. Therefore, I felt confident in my choice of the *Toolkit*.

The *Toolkit* did not undergo any formal process of testing in terms of validity and reliability in the development of the original tool or in subsequent work by the authors. However, evidence from the health facilities that have used the *Toolkit* have demonstrated that facilities that had lower rates of intervention and improved clinical outcomes had characteristics that were on the light side of the scale and the converse. This demonstrates the face validity of the *Toolkit* in that it does seem to demonstrate what it has intended to demonstrate.

6.3.1 Description of the *Toolkit*

The design of the *Toolkit* provides a mechanism for organisations to undertake a self-assessment process where a comparison can be made between themselves and high performing organisations. There are four sections to the *Toolkit*; the first describes overall characteristics of the organisation and the other three describe specific areas of clinical care: Pregnancy and Labour, Vaginal Birth after Caesarean and Elective Caesarean. For each section, there is a table with statements about clinical care on the y-axis (such as “*Labour is managed to optimise a normal outcome*” p34), with five options to choose from on the x-axis describing different attitudes, practices and opinions related to the statement. The table uses dark colours for the options on the left side, which then become lighter in colour towards the right side of the table. The characteristics that are more prevalent in organisations with higher intervention rates or less optimal outcomes are on the dark side and characteristics that are regarded as more desirable for improved outcomes are on the right side of the table. The description suggests moving more to the light side away from the dark when an organisation is effective and efficient in terms of improved outcomes. Table 2 shows an example of the format from the Vaginal Birth after Caesarean (VBAC) section of the *Toolkit*. Appendix 4 describes all options for each item in more detail.

Table 2: An example of the questions regarding VBAC contained in the Toolkit

Labour is managed to optimise a normal outcome	Women are treated as high risk obstetric cases – continuous monitoring, early epidural 'just in case' Baby must be delivered in 6 hours	These women are clearly more at risk. If labour slows down for any reason it is an indication for CS	Individual clinicians vary in their approach. Each woman has a different management plan.	We have written guidelines but not all the clinicians use them in practice.	All staff follow agreed good practice guidelines. Women receive written information about the guidelines for VBAC.
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(*National Health Service Institute for Innovation and Improvement, 2007, p34)

The *Toolkit* uses a self-assessment process and requires multidisciplinary engagement, to identify the characteristics of an organisation that might indicate potential areas for change. A collaborative decision would then be made to determine which characteristics were appropriate and desirable for change to become more closely aligned with high performing organisations; and thus, improve outcomes. An action research-type process would then be used as a method to design potential changes for implementation with cyclic evaluation and re-modelling required depending on outcomes.

One of the key findings of the systematic review by (Greenhalgh et al. 2004) highlighted the paucity of research indicating the steps that must be taken when moving towards a state of readiness for change. The *Toolkit* provides a methodology to assess readiness for change that could be applied to this organisation and then steps developed to move in a deliberate and targeted manner for change.

For this study the concept of organisational readiness for change could be established if it was possible to identify a shared psychological state between participants with respect to their commitment to change and change efficacy, or the shared belief in their capability to achieve the change (Weiner 2009). The theory of organisational readiness to change described by Weiner (2009) is relevant for this study as it describes how collective behaviour change is required to effectively implement any change. Whilst the focus is on organisational change, the impact of an individual's readiness to change must also be considered. Factors that influence the individual's participation in change are based on their assessment of the value and the appropriateness of the change to them; knowledge of the change and confidence in personal efficacy; perceived level of support and the ability to be involved in the specifics of

implementation (Holt et al. 2010; Rogers 2003). As previously identified, a six-fold improvement in current practices in relation to VBAC was required to meet the mandated requirements of the Maternity-Towards Normal Birth policy at this site. Therefore, I hoped to be able to identify a commitment to, and a shared belief in the changes required and the ability to effect change.

This introductory section has described the instrument to be applied in a study designed to identify the attitudes of clinicians at the research site towards VBAC as a beginning step in identifying strategies for change. In the following section I describe Phase 1 study in detail.

6.3.2: Administration of the *Toolkit*

Clinicians were informed of the purpose of the proposed *Toolkit* survey at strategic opportunities such as scheduled multidisciplinary forums. Clinicians were advised that completion of the survey would be deemed as consent according to the requirements of the ethical approval process and if they did not consent then they should not complete the survey. One hundred and twenty surveys were printed on distinguishable purple paper. Only one of the four sections of the *Toolkit* were used and that was the Vaginal Birth after Caesarean (VBAC) as the aim of this phase of the study was to explore the attitudes of clinicians towards VBAC. The design of the *Toolkit* supports the use of all four sections or part thereof depending on the purpose of the assessment without compromising the integrity of the findings. In other words, each section can be a standalone tool.

Most clinicians received a copy of the survey personally from the researcher. Forms were also provided to the managers in each of the clinical areas to reach clinicians working out of hours shifts. Survey boxes for receipt of the completed survey were placed in all clinical areas and clinicians were invited to post the completed form in the box, anytime over a four-week period in June 2010.

The front page of the survey described the purpose of the survey and instructions for completion. In addition to the *Toolkit*, demographic information about the participant was collected that indicated the discipline (midwifery or obstetrics), age, predominant area of practice (antenatal, birth, postnatal) and length of time employed in the service. The survey was otherwise anonymous.

Surveys were anonymously returned in post-boxes placed in each clinical area at the end of a two-week period. Survey data were entered into an excel spreadsheet for analysis by the researcher using simple descriptive statistics.

6.4: Results

Of the 120 surveys distributed 31 were returned (25.8%). Four of the 20 Obstetricians (20%) responded and 27 of the 100 midwives (27%). Not all respondents completed all data items which gave a range to responses of 27-31 of a possible 31. This survey was distributed simultaneously with the following CVF survey. Whilst there were four Obstetricians who completed the survey only three provided responses to the *Toolkit* section (15%) giving an overall response rate of 25% for the *Toolkit* component.

Demographic Characteristics of Participants

The largest group of participants were clinical midwives (71%). As described in Figure 8 most of the participants were aged between 40-50 years and had been working within the organisation for 1- 5years (42%) (Figure 9). Only three of the four obstetricians who responded completed all data items therefore the results need to be interpreted with this in mind.

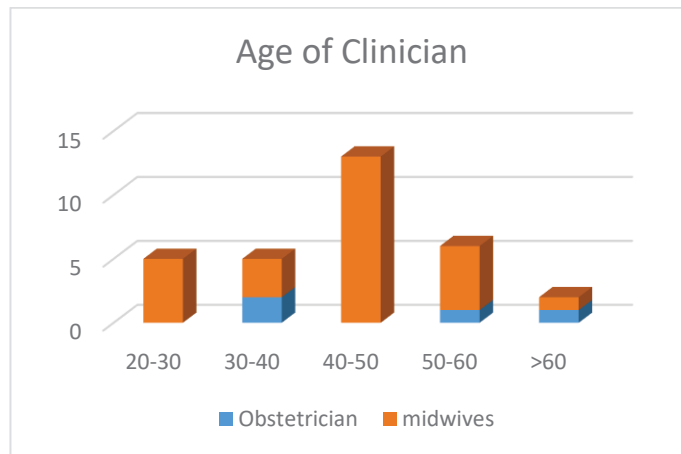


Figure 8: Demographic Characteristics of Participants

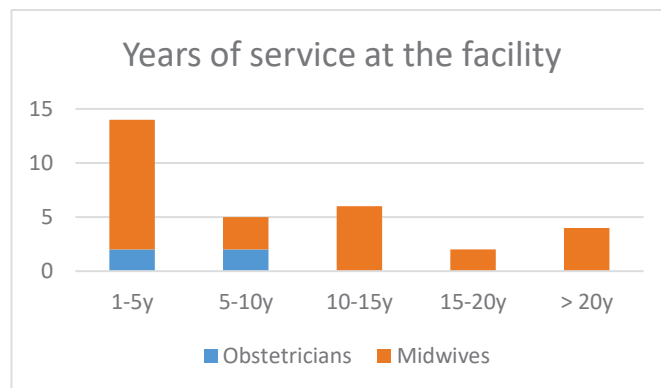


Figure 9: Years of service of participants at the facility

Toolkit –VBAC section results

The results of all the responses are tabulated on the colour coded *Toolkit* template which provides a visual cue as to whether the responses are on the light side, the dark side or a mixture of placements (Appendix 4). An example is provided here of one statement (Table 3); the line labelled OB (Obstetrician) and MW (Midwife) is the number of respondents from each professional group who chose that response. As the numbers are small the results are expressed as numbers and not percentages of the total responses. This example demonstrates that the attitudes of participants to this statement are more on the dark side.

Table 3: Example of responses to *Toolkit* statements

Consumers' experiences & feedback inform service development	Consumer representation is a nuisance – we do it to tick the box	We react to complaints and consumer satisfaction surveys	There is some consumer representation in the service	Consumer representation reflects the local community	There are formal & informal routes for consumer involvement throughout the service.
OB	0	2	0	0	1
MW	2	11	6	0	5

There were 13 statements for the respondents to consider. Four of the statements demonstrated divergent responses within and between professional groups. This divergence is an important finding since care planning and advice for women aims to be consistent and coordinated. The literature described in Chapter 2 highlighted the negative effect that divergence in clinician attitudes has on women's satisfaction with care (Goodall, McVittie & Magill 2009; Meddings et al. 2007; Moffat et al. 2006). In addition, the *Toolkit* was developed on the characteristics of maternity services that were high performing in terms of low intervention rates and thus on the light side of the spectrum.

The statements where divergence was noted are:

- Women who have had a CS or a traumatic birth experience receive information about maternity events to allow them to make informed choices about care in a future pregnancy
- Consumers' experiences and feedback inform service development
- We are committed to the philosophy of facilitating a normal birth with women who have experienced a CS

- Labour is managed to optimise a normal outcome

The details of each statement with divergent responses are provided here.

Obstetricians to midwives’ divergence as well as midwives to midwives’ divergence in response to one statement:

Women who have had a CS or a traumatic birth experience receive information about maternity events to allow them to make informed choices about care in a future pregnancy.

All three of the obstetricians who completed all parts of the survey rated this item on the light side of the scale. This suggests that they agree with the statement that women have sufficient information available to facilitate decision-making regarding VBAC options for their next birth. The midwives differ in their opinion to the obstetricians and differ in their opinion to their own midwifery colleagues. The responses are spread across the continuum but with the majority on the dark side (N=6,6,7) that describes either little to no support for women in decision-making (Table 4).

Table 4: Divergence of opinion on Information Available to Women

Women who have had a CS or traumatic birth receive information about maternity events to allow them to make informed choices about care in a future pregnancy	Women are given information only if they ask. Usually, it is the postnatal midwife who is left to answer any questions. There is no formal record of plans for next pregnancy.	The DR on call sees the woman for a postnatal medical review and answers any questions she may raise.	An informal discussion takes place with each woman but is not documented and no plan for the future is made.	DRs & MWs discuss the birth events with each woman and document the discussion in the record. The information is not included in the discharge summary	DRs & MWs discuss the birth events with each woman and document the discussion outcomes in the record. Women receive written information about the reasons for their CS. This is copied to the GP and MSP midwife.
OB	0	0	0	2	1
MW	6	6	7	4	2

Obstetricians to Obstetricians’ divergence and midwives to midwives’ divergence on two statements:

Consumers’ experiences and feedback inform service development.

Two of the three obstetricians are on the dark side of the scale and one on the lightest side which demonstrates a difference in their opinion. Many of the midwives are on the darker side and using the words contained in the *Toolkit*, they consider that consumer involvement is either a “nuisance” (N=2) or that the organisation is “reactive” (N=11) to consumer complaints as opposed to being actively engaged with consumers (Table 3 used as the example above).

We are committed to the philosophy of facilitating a normal birth with women who have experienced a CS.

There is similar divergence with this item with two of the three obstetricians and 15 of the midwives on the dark side of the scale with the opinion that if a woman requests a CS this request would be accepted after telling her of the relative risks and benefits. However, 7 of the midwives and one of the obstetricians have differing opinions in that VBAC would be explored with all women rather than accepting the request for CS. There is also a knowledge gap in the responses with one of the midwives describing a dedicated clinic for VBAC which does not exist in this organisation (Table 5).

Table 5: Divergence of Philosophy of Facilitating VBAC

We are committed to the philosophy of facilitating normal birth with women who have experienced CS	Women have already made their minds up when they book. If they ask for CS we accept their choice. Staff avoid discussing mode of delivery in early pregnancy	If women ask for CS we accept her choice after telling her about the relative risks and benefits of CS and VBAC	If women ask for CS with no clear indication, we go through the motions of asking for a second opinion before we say yes.	Dedicated multidisciplinary VBAC clinics provide information and support to those undecided about mode of birth	All staff are able to discuss the benefits of VBAC. The possibility of VBAC is explored with all women.
OB	0	2	0	0	1
MW	0	15	3	1	7

Midwives to midwives’ divergence in one statement:

Labour is managed to optimise a normal outcome.

The midwives’ responses are evenly spread across the continuum for this statement. The options range from the women being treated as high risk for labour (N=3) with an absolute time limit for birth to occur, to the fact that individual clinicians have different management plans for all women (N=9) and the impression that not all clinicians follow the established guidelines in the care of these women (N=2). The remaining 6 midwives are on the lightest side of the spectrum and agree that guidelines are followed and that women receive adequate information (Table 6).

Table 6: Divergence of Opinion on Managing Labour to Optimise Normal Outcome

Labour is managed to optimise a normal outcome	Women are treated as high risk obstetric cases – continuous monitoring, early epidural ‘just in case’ Baby must be delivered in 6 hours	These women are clearly more at risk. If labour slows down for any reason it is an indication for CS	Individual clinicians vary in their approach. Each woman has a different management plan.	We have written guidelines but not all the clinicians use them in practice.	All staff follow agreed good practice guidelines. Women receive written information about the guidelines for VBAC.
OB	0	0	3	0	0
MW	3	5	9	2	6

For the remaining nine statements, there are similar responses from all clinicians which are distributed between the dark side, middle range or on the light side for different items.

6.5: Discussion of the results

Response rate

The response rate to the survey was 25.8% of the clinicians at this site. The findings need to be considered carefully in that they may not represent the attitudes of all clinicians at the research site. The response rate is discussed further when the limitations of this study are considered.

Knowledge Gap

Some of the data items suggest a knowledge gap in operational aspects of the service. An example of this is the agreement with the statement that there is a dedicated VBAC clinic in this organisation, which is not correct. This could be explained by the clinicians' primary area of work. If working in the postnatal or birth area, they may not be aware of the services provided in the antenatal clinic. However, this could also be an indication of the lack of integration of the services within the organisation. Regardless of primary place of work it is important that all clinicians are aware of the available services to provide accurate information to all women throughout their journey.

There is lack of clarity in the process of providing information to women after experiencing a CS or traumatic birth between clinicians. Some clinicians agree with the statement that the responsibility for this was left to the midwives on the postnatal ward, other midwives agree that there is an informal process that may or may not be documented. Others believe that both the obstetricians and the midwives formally discuss the events with the women and make formal documentation. Information exchange to support women in their understanding of events and to facilitate decision-making for future pregnancies is essential. The clinicians in this organisation are uncertain as to how that occurs or who is responsible to ensure it occurs for the woman. Again, this may be explained by experience of working in different clinical areas or could indicate the value placed on providing information to women.

The response to the statement: *We take pride in our VBAC rates* could be interpreted as either a knowledge or attitudinal gap. In regards to data on VBAC, 63% (N=17) of the participants believe that most staff do not know what the VBAC rate is and 7.4% (N=2) state that data is not actually collected on VBAC rates. These data are required to be collected for government reporting purposes, therefore clinicians may not know this, or the organisation does not provide the data to clinicians. This response may also suggest the low level of value placed on data describing outcomes including VBAC success rate for women.

Attitudes and Opinions

The importance of care planning during the antenatal period to support women in their choice for VBAC is varied amongst clinicians. Women surveyed about VBAC care planning appreciated the discussions early in their pregnancy to focus on their choice of mode of birth throughout the pregnancy (Emmett et al. 2006; Goodall, McVittie & Magill 2009). Two of the three obstetricians and ten of the midwives' state that women would not be seen until 36 weeks' gestation to plan

the mode of birth. For many women, this would be too late to be adequately prepared from their self-reported perspective. None of the participants responded with the option that *women and professionals are well informed about VBAC* or that *choices are confirmed early in pregnancy*, which is the option on the lightest side of the continuum, an attribute of a high performing organisation.

The responses vary between obstetricians and midwives regarding clinical care in labour. One possible reason for this is that the three obstetrician respondents answered from the perspective of their own clinical practice and midwives responded from their experience during labour and birth with a variety of obstetric clinicians. When considering management of labour to maximise a normal outcome, all three obstetricians believe that individual clinicians vary in their approach to labour and birth and that each woman has a different management plan. Nine of the midwives agree with this approach to clinical practice in this setting.

Three of the midwives believe the baby must be born within 6 hours of labour commencement; five thinks that a slowing in the progress of labour was a reason for CS. Others believe that some clinicians do not follow the established guidelines and the remaining six midwives believe that everyone follows the guidelines. These variations in responses could indicate either personal attitudes or variation in what is observed in clinical practice between different clinicians in this setting. This degree of variation in responses suggests divergence in opinion or practice which would result in different opportunities being available for women at differing times dependent on the clinicians on duty. The variation between clinicians in opinions is not consistent with effective and cohesive team work and supports the evidence that outcomes may not be due to the woman's clinical history but to the characteristics of the place where she births (Lee et al. 2013; O'Leary et al. 2007; Women's Healthcare Australasia 2014).

There is divergence between the midwives regarding the interventions in relation to the commencement of labour. The majority (N=20) are on the dark side of the continuum and believe a CS should be performed on the due date or at most at 41 weeks' gestation. This is in opposition to the few midwives (N=4) who are on the light side who would individualise the care to each woman. The management of induction of labour is also similar in that most of the midwives err on the side of caution with 48% (N=12) supporting an artificial rupture of membranes but not the use of any oxytocin agent despite evidence and clinical practice guidelines supporting this practice (Harper et al. 2012; Ravasia, Wood & Pollard 2000). Two of the three obstetricians are also of the same opinion. There is a similar response for the

augmentation of labour with 88% (N=17) of the midwives and 100% (N=3) of the obstetricians on the darker side preferring CS if labour did not progress at their preferred rate.

In countries with high VBAC rates, clinicians attribute the success rate to the structure of the maternity care system, to the cooperative relationship between midwives and obstetricians, and to the care offered during pregnancy and birth (Lundgren et al. 2015). The design of the *Toolkit* also supports this finding in that the characteristics of organisations that are on the light side of the continuum are more likely to achieve lower intervention rates and improved overall outcomes. The overall responses to each statement in this assessment demonstrate that 40.4% were on the dark side of the middle option, 32.93% mid-range and 26.64% on the light side of the spectrum which provides insight into the performance rating of the hospital with respect to intervention.

The data describing clinical outcomes of the research site presented earlier indicate that there is a higher rate of intervention when compared to peer hospitals. The responses to the *Toolkit* provides an impression of divergence in knowledge and attitude between clinicians to key areas of care regarding VBAC which may indicate an association with the negative clinical outcomes and will be considered with data obtained in the next phases of the study.

6.6: Limitations

The response rate to the *Toolkit* survey was 25.8% of the potential cohort and the results cannot be generalised to the overall knowledge about, and attitudes to, VBAC within this organisation. Of relevance is the finding that in the same year as the *Toolkit* survey the NSW state government administered a survey to this same population exploring workplace characteristics and attributes (ORC International 2011) that received a response rate of 18% (CI 3%). The authors of that study described an 18% response rate as being a representative sample of the facility population. These low response rates may suggest more about the organisation by the silence and non-engagement in the process which is an important characteristic to consider as the exploration unfolds.

Research Q1a): Does this organisation exhibit the characteristics associated with readiness for change to comply with policy to reduce interventions in birth? The divergence in attitudes revealed by the *Toolkit* results are not consistent with high performing organisations where intervention rates are likely to be low. The shared psychological state between participants required for readiness for change is not evident in these results.

6.7: Conclusion

The design of the *Toolkit* suggests that there is an association between the number of items scored towards the light side of the continuum with lower intervention rates and improved outcomes. This variation in outcomes is thought to be influenced by the characteristics of the organisation. In this survey, the attitudes and knowledge of participants were assessed and most responses were toward the dark side of the continuum. My interpretation is that the attitudes are not conducive to supporting the implementation of a policy that aims to reduce overall intervention in birth and support for normal birth. This is evident in the high CS and low VBAC rates. Further examination of the organisational characteristics is warranted to provide insight as to why this hospital has the lowest success rate for VBAC amongst peer hospitals.

6.8: My reflections

The response rate to the survey was disappointing as I naively anticipated enthusiasm for the research that matched my own. My initial reaction was that the data would not be meaningful as it may not be representative of the population. However, the lack of participation could have been due to lack of motivation for participation or perhaps a sign of something else. That something else could be of greater importance than a survey response rate especially if it is linked with unstated or unmet needs from clinicians who may be disenfranchised and have become disengaged from extraneous activities in the workplace. Three quarters of the clinicians did not respond and those who did had divergent attitudes to many aspects of care of women eligible for VBAC. The responses demonstrated characteristics that are not consistent with a high performing organisation. The results of phase 1b that describes the predominant culture could confirm or refute these speculative thoughts and therefore strengthens the validity of the research method in exploring this complex phenomenon from multiple angles.

The following chapter presents phase 1b of the study designed to further explore and define the predominant culture type within this organisation.

Chapter 7: Phase 1b – Defining the predominant culture of the organisation

7.1: Introduction

As described in the preceding chapter, the survey assessing clinician attitudes towards VBAC at the research site revealed a low response rate reflecting a low engagement with even the idea of VBAC or change in this setting. The results from 25.8% of the eligible population demonstrated a divergence of attitudes to VBAC between and within professional groups on four statements and a wide range of responses to the remaining nine statements. Exploration of the predominant culture of the organisation in 1b of this phase is a valuable adjunct to these findings that could inform strategies for change towards increasing the rate of VBAC.

Part 1b comprises a survey-based study using a well-validated instrument, the Competing Values Framework (Cameron & Quinn 2006), to identify the predominant culture of the organisation. A peer-reviewed article describing this part of the study was published during my candidature (Adams, Dawson & Foureur 2016a) and is included in Appendix 5 in PDF format. I have modified the content of the article to reduce information that has already been presented in this thesis which includes background and context for the study and details of the research site. Table and Figure numbers have been altered to be congruent throughout the thesis.

7.2: Study Design and Methods

An exploratory design using a 2-part self-administered, staff survey was used. Part of the survey aimed to explore the attitudes of clinicians towards VBAC and was described in chapter 6 and part 1b aimed to assess the culture of the organisation using the CVF and is reported in this chapter.

7.3: Choice of Survey Instrument - Competing Values Framework (CVF)

The tool selected to assess the culture of the organisation and its readiness for change was the CVF. This is a validated instrument that has been described in the literature in over 1000 studies, across disciplines, to describe the typology of organisational culture (Cameron & Quinn 2006).

The results of a systematic review (Scott et al. 2003) of the instruments available for cultural assessment specifically suitable for healthcare services was used to select the most appropriate instrument for use in this study. Further analysis of the nine instruments described in this review was conducted for the specific purpose of this study. The instruments that were designed to survey only one professional group were excluded as the intention for this study was to survey all midwifery and medical staff working in maternity. Instruments were also eliminated if the origin of data elements could not be defined.

The two most appropriate instruments for this study were the CVF and the Organizational Culture Inventory. These two instruments had the additional strength of examining the values and beliefs of the participants that informed their opinions about their working environment and could provide a depth of understanding to the results. The Organizational Culture Inventory was later eliminated, as it was under copyright and expensive to purchase. The CVF was the instrument chosen for this study to survey all maternity staff. This instrument had the strength of examining the values and beliefs of the participants that informed their opinions about their working environment. CVF was also cited as the most frequently used to measure organisational culture in health services research (Helfrich et al. 2007)

7.3.1: Description of the CVF

The CVF was developed empirically in the early 1980s based on Jung's model of psychological archetypes and research on indicators for organisational effectiveness (Cameron & Quinn 2006). The framework has a typological design that identifies four *types* of cultures that exist within an organisation: Clan, Adhocracy, Hierarchy and Market with each describing the values, basic assumptions and attributes that are recognised within a team or organisation.

Each of the culture types are described as follows by Cameron *et al* (Table 7) with the competing values in opposite quadrants of the table and hence the origin of the name of the framework.

The predominant culture is determined by the participants' rating of six specific dimensions of the organisation: the dominant characteristics, organisational leadership, management of employees, organisational glue, strategic emphasis and the criteria of success. There are four descriptors for each of the six dimensions and the participant provides a score in rank order of preference. The options are listed as A, B, C and D and the responses provide an indication of the culture type: A=Clan, B=Adhocracy, C=Market and D=Hierarchy for each dimension as described in Table 8 for the dimension of Dominant Organisational Characteristics.

Table 7: Competing Values Framework (Cameron & Quinn, 2006)

<p>Clan</p> <p>Predominant feeling of teamwork and trust amongst colleagues with an orientation towards collaboration and cohesion.</p> <p>The glue of this organisation is a sense of commitment and loyalty.</p>	<p>Adhocracy</p> <p>Emphasis on innovation and risk taking and is a dynamic and creative workplace which encourages individuality and flexibility.</p> <p>The glue of this organisation is a commitment to innovation and experimentation.</p>
<p>Hierarchy</p> <p>A very structured place to work with success defined in terms of smooth and efficient operations.</p> <p>Adherence to rules, regulations, policies and procedures is the glue of this organisation</p>	<p>Market</p> <p>A focus on results and outputs in a controlled and stable environment where leaders are hard driving producers.</p> <p>An emphasis on winning is the glue of this organisation.</p>

Table 8: CVF Dominant Organisational Characteristics (Cameron & Quinn 2006)

1. Dominant Characteristics		Now	Preferred
A	The Maternity Service is a very personal place. It is like an extended family. People seem to share a lot of themselves	10	40
B	The Maternity Service is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks	20	30
C	The Maternity Service is very results-orientated. A major concern is with getting the job done. People are very competitive and achievement-orientated.	40	20
D	The Maternity Service is very a controlled and structured place. Formal procedures generally govern what people do.	30	10
Total		100	100

Although not explicitly described in words, the responses to the dimensions assess characteristics of the organisation that include congruence of values between the individual and the organisation, the perception of individual value of participants' in the organisation and their self-efficacy (or how effective the individual believes they can be).

The participant is invited to divide 100 points between each option in rank order providing the highest score to the descriptor that best fits their impression of the organisation as it is today. After completing the scores relevant to “now”, the participant is invited to score how they would “prefer” the organisation to be in five years if there was to be successful change. A summative

calculation of the scores is performed using the Organisational Cultural Assessment Instrument (OCAI) (Cameron & Quinn 2006). The OCAI uses an ipsative rating scale which has advantages over a likert scale method in that it provides a greater differentiation in scores and thereby could more accurately define the cultural uniqueness that exists within the organisation.

The results are then graphically represented in a table divided into four quadrants, one for each culture type. The final graph provides a visual representation of the results which is intuitively appealing and has greater explanatory value than written descriptors. The predominant culture can be identified at a glance. Specific attention should be given to where the difference between the scores for now and the preferred is greater than ten points (Cameron & Quinn 2006).

The design of the tool facilitates an overall assessment of the predominant culture, as well as assessment of the individual dimensions. This information is valuable if the organisation wishes to scrutinise potential areas for change that will result in an overall cultural shift.

Identification of the current culture type and the preferred type is also essential for change management. Where there is significant divergence in the desired predominant culture types there can be variation in perceptions in espoused values, aspirations and direction (Cameron & Quinn 2006). The energy, motivation and engagement by members of the organisation can be affected by this incongruence and risks the organisation's ability to achieve the desired change (Cameron & Quinn 2006). The degree of incongruence provides an indication of the readiness of the organisation to undergo change. In addition, there is an indication of which dimensions of the organisation may require the most attention for the change to be implemented successfully.

7.3.2: Administration of the CVF Tool

The tool was tested at a local university prior to implementation at the study site and minor amendments made. The university students and academic staff recommended that the scores should be out of 10 rather than 100 for greater ease of division for nominating a score. Communication with the authors of the CVF provided reassurance that changing the scoring in the proposed manner may alter the variance in scores but would not make a difference to the reliability of the sum scores. The authors were supportive of customising the format for the users' preference.

For this research some of the language in the descriptors was changed to better fit the context of a maternity service. For example, "the organisation" was changed to "the Maternity Service". The amendments were not considered to change the meaning of the questions but rather described in language that would have greater face validity for the participants. The CVF tool

was administered concurrently with the *Toolkit* as detailed in Chapter 6 above. Therefore, the administration process described above is applicable here and the demographics of the cohort of participants is identical.

7.4: Data Analysis

The responses to each of the six questions on the CVF survey tool were recorded in an excel spreadsheet and a simple arithmetic calculation performed. The average score for each of the A, B, C and D responses were calculated for the overall “Now” and “Preferred” responses. These scores were then plotted on the Organizational Culture Profile tool (Cameron & Quinn 2006) in each of the four quadrants and the points connected to form a kitelike shape (Figure 10). The same process of calculation and plotting was conducted for the six individual dimensions except that the average scores were used for each individual question rather than all six questions together as in the first step (Figure 11).

7.5: Results

Of the 120 surveys distributed 31 were returned (25.8%). Four of the 20 Obstetricians (20%) responded and 27 of the midwives (27%). The largest group of participants were clinical midwives (71%). Many of the participants had been working within the organisation for 1- 5years (42%) and were aged between 40-50 years (see Chapter 6, Section 6.4)

The survey respondents described the predominant culture of their organisation as one of Hierarchy with a focus on Market (Figure 10). They identified that teamwork and collaboration was low and of even lower was a culture that encouraged innovation and flexibility. Respondents expressed their preference for a culture that was different to the current one, with a preference for a Clan culture and an increase in Adhocracy with less control, regulation and less focus on outputs.

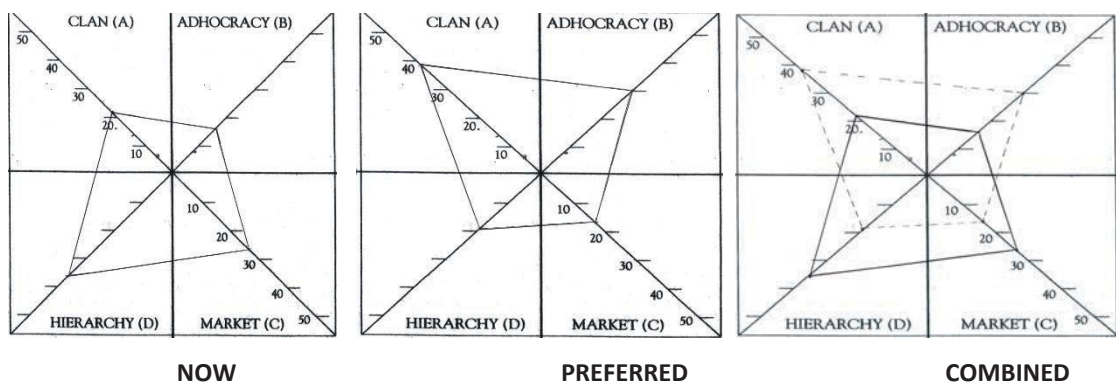


Figure 10: CVF Result Now, Preferred and Combined

Combining the two results onto the same plot provides a clear indication of the incongruence between the participant's assessment of the culture now and what would be preferred.

The results of the six individual dimensions are expressed in Figure 11 as a combined result of the "now" and "preferred" cultures. Each demonstrates incongruence between the predominant cultures "now" to what is preferred. In each dimension there is a preference for an increase in both Clan and Adhocracy cultures with a decrease in both Hierarchy and Market. For most of the dimensions there is a difference of greater than ten points.

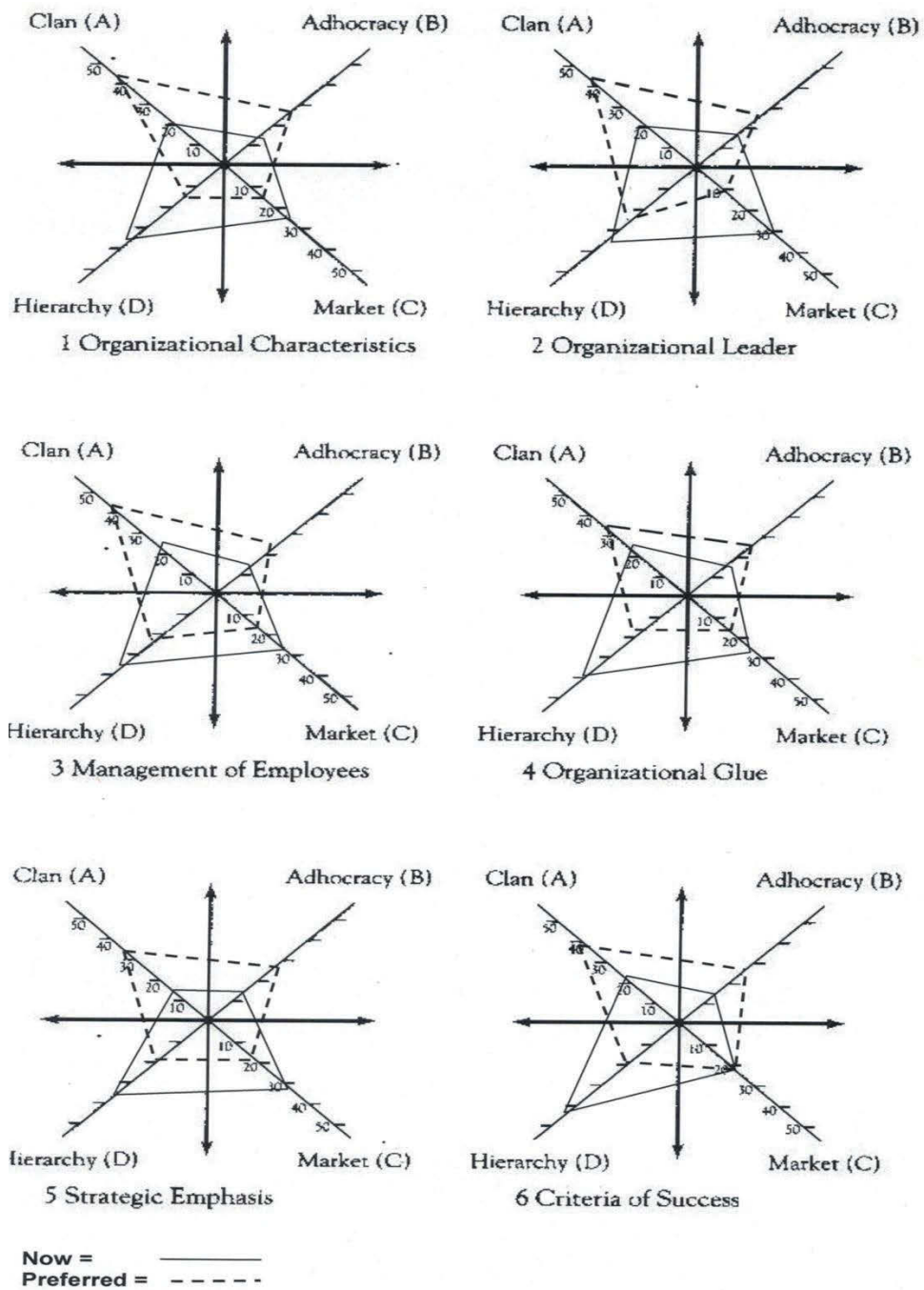


Figure 11: CQF Results for six Individual Dimensions, Now and Preferred

7.6: Discussion

The response rate to the survey was 25.8% and the results must be considered in this context. The predominant culture, as expressed by the results, is the impression of the small percentage of respondents which may limit the inferences that can be drawn. Coincidentally, in the same year another survey was administered to this same population by the state government; also exploring workplace characteristics and attributes. The research site had a response rate of 18% with a confidence interval of 3% which the authors describe as being a representative sample of the facility population (ORC International 2011). The low response rates may, however, suggest more about the organisation by the silence and non-engagement in the process and is noteworthy as mentioned in the limitations in Chapter 6.

Most respondents were those aged 40-50 years (42%) and those who had worked for the organisation for 1-5 years (45%). Midwives were more likely to respond with 27% of the potential cohort returning a survey as opposed to 20% of the obstetricians.

Predominant Culture

The results demonstrated that the majority of the respondents perceived the predominant culture of the organisation to be hierarchical with a focus on rules, regulations and control. The Adhocracy culture scored the lowest value of all four culture types. There are opposing values between the two cultures of Hierarchy and Adhocracy, which would result in less opportunity for innovation, flexibility or implementation of new ideas in the organisation. This organisation will need to implement significant changes to meet the mandated government policy it is important to recognise that the respondents do not perceive there to be an environment that is ready to accept innovation.

Market culture scored the second highest and Clan third. The maternity service has a focus on meeting performance indicators and target measures, with less focus on collaborative engagements with members of the team who are participating in achieving the performance measures. The overall result indicates that at present the characteristics of this maternity unit are not consistent with that of a high performing organisation (Jones, Jimmieson & Griffiths 2005). That is, an organisation that requires interprofessional collaboration and team work to meet performance indicators. As mentioned previously, the inferences that could be drawn from a low response rate is limited, however, respondents have stated that there is lack of team work and engagement and if this is prevalent across the service then this may indicate a lack of motivation to be involved in activities including this survey.

Preferred Culture

The results of the hypothetical scoring for the future culture indicate that respondents would prefer an organisation with characteristics that were opposite to that of today. The graph depicts almost a mirror image of the results in the opposite quadrants. Respondents would prefer the organisation to have a collaborative, cohesive team where innovation is encouraged in an environment of flexibility and risk taking. There are greater than ten points difference in each of the quadrant scores between the now and preferred cultures, which according to this framework design, warrants attention. The results demonstrate that there is a need for cultural change within the maternity service if the planned implementation of the government policy is to be successful and sustained.

The results also show greater than 10 points difference for each of the six individual dimensions with a predominance of cultures in the lower quadrants and a preference for the opposite cultures in the future. In each of the individual dimensions respondents had a desire for the Clan culture indicating the perception of their own value to, and within, the organisation. Some of the descriptors for this culture are feelings of teamwork and trust, an orientation towards collaboration and cohesion; a sense of commitment and loyalty where work is done together. If this is the workplace respondents would prefer, then by deduction, this is not how the current environment is viewed.

The second preferred culture was Adhocracy with a dynamic and creative workplace where individuality and flexibility is encouraged and a preference to be leaders in innovation. These characteristics were not recognised in their workplace today. Most the dimensions have greater than ten points difference between respondents' assessments of the current culture and their preferred culture.

The overall findings of the CVF were that the current predominant culture is one of Hierarchy. Market is the next predominant with the lowest ratings for Adhocracy and Clan. The preferred predominant culture types were Clan and Adhocracy; then a lower prevalence of Market and lowest to be Hierarchy. The same order of current to preferred culture types is observed with all six of the individual dimensions: Organisational characteristics, leadership, management of employees, organisational glue, strategic influence and criteria for success.

Significance for an Organisation

All organisations have, and need to have elements of each culture type and depending on the nature of the organisation there may need to be predominance of one culture over another. For

example, retail and trade organisations generally have a predominance of a Market culture to remain competitive (Cameron & Quinn 2006). In addition, organisations generally evolve over time in response to evidence, innovation and maturation which may see the movement from predominance of one culture type to another. Organisations developed at the turn of the 20th Century demonstrated a reliance on processes that were efficient and effective as markers of success of productivity and competitiveness. Emerging organisations at that time adopted characteristics espoused by the sociologist Weber to be important for success that included rules, hierarchy, accountability, impersonality and separate ownership (Weber 1947). A predominance of hierarchy, or bureaucracy, was considered important for the development of stable, efficient and effective services where formalised rules and regulations governed how the people were to perform. In more recent times the approach with emerging or developing organisations, or approaches to management, has seen a greater emphasis on employee inclusion, engagement, innovation and flexibility with leadership styles that are facilitative and transformative (Cunningham et al. 2002; Dopson, Fitzgerald & Ferlie 2008; Lavoie-Tremblay et al. 2015). This indicates a move away from the predominant characteristics of the Hierarchy culture-type.

Descriptors used in the CVF for Hierarchy culture do not focus on personal attributes or human factors, but more on business orientated processes. As listed above in Table 7, the glue that holds the organisation together is described quite differently between the culture types. For Clan it is a sense of commitment and loyalty to the organisation; with Adhocracy there is commitment to innovation and experimentation; Market has an emphasis on winning and for Hierarchy an adherence to rules, regulations, policies and procedures. Perhaps even more obvious is the dimension of management of the employees (Table 9) where the means of achieving effective management range from responding to employee needs (Clan) to re-engineering processes (Hierarchy). The difference in descriptors is consistent for all six dimensions of the CVF.

If there is acceptance of the fact that emerging or developing organisations and leadership styles are moving away from the characteristics of Hierarchy culture-type and have a greater focus on employee inclusion and engagement, then the results of the CVF for this study suggest this organisation may not have transitioned or matured to a culture-type that supports a more contemporary approach.

Table 9: CVF of Human Resource Management (Cameron & Quinn 2006)

<p>Clan</p> <p>HR Role: Employee champion</p> <p>Means: responding to employee needs</p> <p>Ends: cohesion, commitment, capability</p> <p>Competencies: Morale assessment; management assessment; systems improvement</p>	<p>Adhocracy</p> <p>HR Role: Change agent</p> <p>Means: facilitating transformation</p> <p>Ends: organisational renewal</p> <p>Competencies: Systems analysis; organisational change skills; consultation and facilitation</p>
<p>Hierarchy</p> <p>HR Role: Administrative specialist</p> <p>Means: Re-engineering processes</p> <p>Ends: Efficient infrastructure</p> <p>Competencies: Process improvement; customer relations; service needs assessment</p>	<p>Market</p> <p>HR Role: Strategic business partner</p> <p>Means: aligning HR with business strategy</p> <p>Ends: bottom line impacts</p> <p>Competencies: general business skills; strategic analysis; strategic leadership</p>

There was a significant discrepancy between the participants' descriptions of the culture today and the preferred predominant culture. The discrepancy data is often the most powerful data if a change of some kind is proposed for the organisation (Cameron & Quinn 2006). The visual representation of this discrepancy (Figure 9) suggests the participants would prefer the characteristics of the organisation to be opposite to what they are today. Given the contrast in the prevalence, or relevance, of human factor elements between the culture types, the participants may be suggesting there is currently more importance placed on the rules and processes than the people for whom the rules and processes are designed. The potential risk of the situation where there is complete divergence between the current and the preferred cultures is disengagement of the participants or the inability to meet their full potential due to the lack of opportunity for participation in a culture where procedures govern what people do (Cameron & Quinn 2006).

In the original process of testing the validity and reliability of the CVF tool by the authors the Hierarchy culture was strongly associated with resistance or reactive orientation to change and low participant morale (Cameron & Quinn 2006). The predominance of a Hierarchy culture may be suited to some organisation types but perhaps not one where change is proposed without additional considerations of change management strategies.

7.7: Readiness to Change: reshaping capabilities

The overall results of this study indicate a lack of readiness to change but a strong preference from respondents for the culture to be different. Acknowledging this incongruence and harnessing the desire to be different may influence a change in the culture to one where change is valued. In a workplace that is perceived to have strong human relations values (Clan) or open systems values that encourage flexibility (Adhocracy), there are more positive views towards change and a greater willingness to be engaged in change processes (Jones, Jimmieson & Griffiths 2005). Jones *et al* (2005) further describe such an organisation as having reshaping capabilities that are dynamic and responsive to external need or internal desire. Reshaping capabilities include attributes such as individual responsiveness, engagement, a commitment to personal and professional development and a willingness to perform. These attributes can positively affect workers' overall competence and thereby increase efficacy in change processes. There is, therefore, a relationship between the reshaping capabilities and the rate of successful change (Jones, Jimmieson & Griffiths 2005).

When reshaping capabilities are low and change is required, such as in the case of the implementation of government policy, organisational tension can develop which can jeopardise the change process. Respondents in this study suggest they do not have a strong sense of trust, cohesion or collaboration in their team.

In addition, the findings show that respondents believe that there is an under appreciation of their individuality and potential for creative participation in an environment focused on performance. Tension from such unmet needs and the inability to meet personal potential can lead to disengagement and reduced efficacy (Kennedy & Lyndon 2008; Manley 2008; Paré *et al.* 2011; Veronesi 2009; Weiner 2009; West *et al.* 1999).

Historical Influences on Change Readiness

Tensions have also been historically evident in maternity care between obstetricians and midwives where professional boundaries have become territorial and fiercely contested (Benoit *et al.* 2010; Hastie & Fahy 2011; Reiger & Lane 2009; Vernon 2015). In Foucauldian terms, the scientific knowledge of childbirth was traditionally held by obstetricians and hence professional power was held by them to the exclusion of other disciplines and in particular midwifery (Foucault 1980). Reforms in maternity care in recent times have resulted in changes in the roles and responsibilities for maternity carers. These changes have been most evident with the development of midwifery-led models of care with midwives regaining the responsibility for women assessed as having normal clinical risk and collaborating with obstetricians where risk is

identified. Despite sound evidence for the effectiveness of midwifery-led models of care, (Sandall et al. 2016; Tracy et al. 2013) the translation into practice and the transition to collaborative models of care continues to be challenged by the inability, or reluctance, to relinquish, or modify, former roles and responsibilities (Hastie & Fahy 2011; Lane 2006; Newnham 2010, 2014; Reiger & Lane 2009).

In appreciating the existence of historical tensions between healthcare teams and the difficulties with translation of evidence into practice, gaining an understanding the predominant culture of an organisation and its readiness for change is critical. Such knowledge will enable decision makers to design appropriate strategies so that change can be effectively implemented. For this maternity service, the initial follow-up plan was for an action research project where the clinicians would be invited to contribute to the development of strategies to implement the government policy. Respondents have nominated that they would prefer to be included in teamwork, they would prefer the opportunity to be creative and to develop new ideas and that they would like some direction but not to be overly controlled. The cyclical nature of action research methodology may be the key to the successful implementation of this government policy and should be considered in the final recommendations.

It is not possible to determine whether behaviours or organisational characteristics require change if there has been no measurement of the current situation. The CVF provides a way of measuring a baseline; the information can then be used to design interventions to influence the desired changes.

As described in Chapter 3, the research questions are posed to direct the line of enquiry and the answers will be revealed throughout the findings. However, I will explicitly note these as I move through the findings:

Research Q1: What is the organisational culture in a hospital context where CS rates are high? The results of the CVF describe what the culture is like in this organisation which has a high CS rate; it is one of hierarchy with less focus on teamwork, collaboration, flexibility and innovation
Research Q1a) Does this organisation exhibit the characteristics associated with readiness for change to comply with policy to reduce interventions in birth? A shared psychological state between participants with respect to their commitment to, and valence for, change was described as characteristics required for readiness to change. The CVF results provided suggest that participants do not feel valued as part of the organisation and are not provided with the opportunity for engagement in innovative change. The current characteristics are not conducive

to readiness for change. However, there is incongruence with how they would prefer the culture which may offer a possibility for change

7.8: Limitations

The limitations identified in Chapter 6 in the description of the results of the *Toolkit* are consistent with the response rate to the CVF. A response rate 25.8% is low and the results cannot be generalised to the overall perception of the predominant culture of the organisation. The low response rate may suggest more about the organisation by the silence and non-engagement in the process and is noteworthy when exploring characteristics of an organisation in relation to their readiness to change.

7.9: Conclusion

In healthcare systems where interprofessional collaboration is not evident and where tensions continue between professional boundaries of responsibility there is a threat to the delivery of safe and effective care. In order to change what may be an historical legacy of hierarchical structures there first needs to be recognition of the situation; an intention to change the status quo and then purposeful strategies to support change towards interprofessional collaboration.

The CVF is a valuable tool to assess the predominant culture of an organisation as part of preparatory work prior to the implementation of change to increase the opportunity for success.

7.10: My reflections: Does this organisation have a culture for change?

This study so far has demonstrated that the cultural characteristics that are required to enact change in a workplace are not evident in this organisation. These characteristics, or reshaping capabilities, include strong human relations values, open systems values that encourage flexibility, individual responsiveness, engagement, a commitment to personal and professional development and a willingness to perform (Jones, Jimmieson & Griffiths 2005). The literature suggests that there is a direct correlation between these reshaping capabilities and the rate of successful change in organisations (Jones, Jimmieson & Griffiths 2005).

There is evidence from phase 1a that there are issues concerning the attitudes and knowledge of clinicians in the study organisation about the risks and benefits of VBAC, as well as available services and management in labour. The knowledge gaps and attitudes favouring interventions in birth provide insight into the change required to implement the Maternity - Towards Normal Birth Policy. The results of the CVF tool suggest that this organisation has a predominant culture type of hierarchy with divergence on performance domains of those who would be involved in

the change; such as commitment, cohesion, collaboration and innovation. This cultural type does not favour reshaping capabilities.

The evidence thus far describes an organisation that does not have the capacity for the changes required to achieve a reduction in overall CS and an increase in successful VBAC. Given the identified evidence in Chapter 2 of the maternal (Deneux-Tharaux et al. 2006; Liu et al. 2007; Tharpe 2008) and neonatal (Tracy, Tracy & Sullivan 2007) morbidity and mortality associated with CS, the organisational culture as it currently exists may be contributing to the less than optimal clinical outcomes of women.

Despite the CVF results indicating a lack of organisational readiness to change, or change commitment and change efficacy, participants showed a strong preference for the culture to be different. Of all six dimensions included in the CVF, participants showed the greatest preference for the Clan culture and a predominant feeling of teamwork, participation and trust amongst colleagues with an orientation towards collaboration and cohesion. A sense of commitment and loyalty are often evident in organisations that exhibit Clan culture. In comparison with the current Hierarchical culture as found in this study, Clan culture facilitates environments where members are empowered. A workplace that exhibits Clan culture has a propensity for high levels of staff participation, interprofessional communication and strong recognition of the contributions of all staff (Cameron & Quinn 2006).

The *Toolkit* used in this study to assess clinicians' attitudes and knowledge was developed based on the characteristics identified in high performing maternity services with respect to intervention rates and clinical outcomes. The characteristics and attributes also describe the attributes that exist when there is effective collaboration (D'Armouri et al. 2005; Petri 2010; Rose 2011). In organisations where the attributes and characteristics of effective collaboration exist the organisation is likely to function effectively and this may extend to improved outcomes for the users of the service. The CVF results indicate that the participants did not assess the organisation to be an effective one as the attributes for collaboration were low scoring. There was a lack of cohesion, teamwork and commitment; limited opportunity for engagement and participation with a controlling leadership style. Collaboration that is effective and collaborative relationships that are authentic could be the key to enabling change to occur that could be successful and sustainable.

Throughout this first phase of the study I developed a greater understanding of the context for this change process. I had naively anticipated the development of a participatory action research methodology to implement strategies to increase the successful VBAC rate. Like researchers

before me, I had not fully appreciated the influence of the context in the change process. In this organisation, there were divergent attitudes and beliefs regarding the safety and efficacy of VBAC which needed to be exposed to implement effective strategies for change. Identifying the predominant culture of Hierarchy was critical to understanding where the participants were placed in their capacity to engage with, and commit to the proposed changes. The participants revealed that they work in a structured environment where adherence to rules, regulations, policies and procedures held the organisation together and was the marker of success. There was little evidence of the attributes of an effective organisation in terms of reshaping capabilities for adopting change and little evidence of effective collaboration. This organisation seemed to be *stuck* in the bureaucratic style common in early 20th century organisations (Weber 1947) and appeared not to have transitioned or matured to a culture-type that supported a more contemporary approach.

At this point in the study a decision was made to further explore the concept of interprofessional collaboration and the effect this could have on the organisation's readiness for change; how to move an organisation that is *stuck*. The next chapter describes Phase 2 of the study which is an exploration of interprofessional collaboration. The aim was to gain a better understanding of effective collaboration from participants who are identified by their peers as having the attributes of an effective collaborator. The unfolding and discovery of information through the first phase informed the next phase which is consistent with the study design of a descriptive study using sequential explanatory mixed methods.

Chapter 8: Phase 2 - Identifying effective interprofessional collaborators to be change agents

8.1 Introduction

As revealed in the previous chapter, the results of the CVF survey indicated that the predominant culture of this organisation was one of hierarchy where adherence to rules, regulations, policies and procedures held the organisation together. There was little evidence of the attributes of an effective organisation in terms of reshaping capabilities for adopting change and little evidence of effective collaboration. There was a lack of readiness for change but a desire for the culture to be different with greater collaboration and cohesion between the teams. Collaboration that is effective and collaborative relationships that are authentic, have been observed in organisations where there is readiness for change and can have a direct effect on the safety and quality of care (Carayon & Wood 2010; Cornthwaite, Alvarez & Siassakos 2015; Corwin, Corbin & Mittelmark 2012a; Downe, Finlayson & Fleming 2010; Lewin & Reeves 2011; Lyndon et al. 2014; Taylor et al. 2011; van Helmond et al. 2015). Effective collaboration may be the key to increasing reshaping capabilities and thereby the readiness for change.

It was at this point of the study that the focus changed from the proposed participatory action research to one that explored interprofessional collaboration (IPC). The low participation in phases 1a and 1b, the divergent attitudes to VBAC and the culture being described as one that lacked collaboration, cohesion and teamwork influenced the change of focus for the second and third phases of the study to a more in-depth exploration of the characteristics of the culture. A description of the study design is provided here.

8.2: Background and Context

An examination of the concept of interprofessional collaboration (IPC) and the relationship to readiness for change and impact on clinical outcomes is the focus of the next phase of this study. An article describing this phase of the study was published (Adams, Dawson & Foureur 2016b) during the candidature and is presented in full in PDF format in Appendix 6. The content of the original article has been modified to remove or reduce information presented thus far in the thesis. As the concept of interprofessional collaboration (IPC) is a new concept in the exploration process of this study, it is worthwhile to discuss the relationship of IPC in the process of exploring the readiness for change of this organisation.

Large gaps exist in our knowledge regarding the factors that underpin decisions to carry out interventions during childbirth. It has been suggested that variation in intervention rates may

be a result of effective collaboration between health care providers (Australian Department of Health and Aging 2009; Downe et al. 2009; Downe, Finlayson & Fleming 2010; Hastie & Fahy 2011; Monari et al. 2008; Simpson, James & Knox 2006). It is apparent that aspects of team work or team dynamics have an influence on clinical outcomes because in organisations where midwives and obstetricians trust each other to confidently discuss and debate clinical decision-making lower rates of intervention have been noted (National Health and Medical Research Council 2010; National Institute for Innovation and Improvement 2006). Therefore, exploration of the concept of IPC is required provide insights and direction for change to improve the provision of maternity care.

In recent years, there has been increased integrated of IPC into health policy and service development as a strategy for improving quality and safety (Australian College of Midwives 2013; Health Professions Network Nursing and Midwifery Office 2010; National Health and Medical Research Council 2010; New South Wales Health 2010; Thannhauser, Russell & Scott 2010). IPC is described and defined as where different disciplines have shared objectives, decision-making, responsibility and power that they use to solve problems or plan care to facilitate the best outcomes for those in their care. IPC is best achieved where there is combined education and training, where relationships based on mutual trust and respect can be nurtured and where open communication and the awareness, and acceptance of the roles, responsibilities and skills of others is evident (Petri 2010).

Improvements in clinical health outcomes, cost effectiveness and consumer satisfaction have been recognised where teams are described as having effective and authentic IPC (Corwin 2009; Corwin, Corbin & Mittelmark 2012b; Downe, Finlayson & Fleming 2010; Engel & Prentice 2013; Miller et al. 2008; Ødegård & Strype 2009; Schmitt 2001). The opposite situation is also evident; where there is an absence of IPC there is a risk to the safety and quality of care. This has been especially evident where strong professional territorial boundaries exist that may be threatened by the change of roles, responsibility and accountability for care (Grudinschi et al. 2013; McIntyre, Francis & Chapman 2012; Munro, Kornelsen & Grzybowski 2013; Reiger 2006; Reiger & Lane 2009; Salhani & Coulter 2009; Willis 2006). Tensions arise where IPC is required, that is where risks are identified and deliberate interactions between midwifery and obstetric teams is required (Menke et al. 2014; Munro, Kornelsen & Grzybowski 2013; Raab et al. 2013).

In addition, inquiries into maternal mortality in the UK report a direct correlation between poor interpersonal communication skills within and between midwifery and obstetric teams and adverse outcomes (Centre for Maternal and Child Enquiries 2011; Lewis 2004; Raab et al. 2013).

Similar results have been identified in the Australian health care system (Leonard, Graham & Bonacum 2004; Wilson et al. 1995). One report cited that 25% of critical incidents resulting in adverse outcomes for patients were directly attributed to aspects of team work, and in particular, ineffective communication (Clinical Excellence Commission 2010). Thus, specific recommendations have been implemented to improve collaborative team work and clinical outcomes.

Given this evidence it would seem imperative that to improve clinical outcomes in healthcare deliberate efforts should be made to improve aspects of collaborative team work. Phase 2 of this study aims to provide insight into a process of identifying individuals, and their attributes, who staff perceive to be effective collaborators and change agents. Phase 2 describes the process peer nomination process that was undertaken to recruit suitable individuals who would later be invited to participate in developing strategies to improve rates of CS and VBAC at the study site.

8.3: Study design and methods:

Aim: The aim of this phase of the study is to identify a cohort of maternity clinicians who have the necessary attributes of effective collaborators and who are willing to be engaged in further exploration of the concept of interprofessional collaboration (Phase 3).

Study Design: A descriptive study was undertaken using a mix of methods. A staff survey was undertaken to nominate effective collaborators and the attributes seen as collaborative. Non-participant observation using field notes to capture the responses of those staff members on receiving the news that they had been nominated as effective collaborators was also undertaken.

The recruitment process replicated work previously undertaken in the UK that explored the concept of collaboration in maternity services (Downe et al. 2009). In the UK study, all clinicians from the maternity service were invited to nominate three colleagues whom they identified as being effective collaborators. Downe and colleagues (2009) described this as an effective process to engage clinicians who possessed the key attributes more likely to engender collaboration. Such collaboration could facilitate the change processes necessary to embed clinical practice guidelines in everyday practice. The research identified an incidental positive effect of the peer nomination process of an increase in staff morale because of peer recognition.

Participants: All midwives and doctors employed full-time or part-time at the research site. This totalled 120 clinicians consisting of 100 midwives and 20 obstetricians of varying grades. To ensure anonymity, no data were collected on those who provided a nomination.

8.4: Development and Administration of the Peer Nomination Tool

A nomination tool was developed that used a simple template for participants to provide names and was like a voting or ballot paper. The tool was printed on identifiable purple stationery consistent with the previous organisational culture survey. Participants were invited to nominate one midwife (MW) and one obstetric (OB) colleague whom they considered to be an effective collaborator. The nomination form was printed in a manner that encouraged the respondent to nominate only one person from each discipline.

In addition, the participants were given the option to describe the attributes of their nominee that contributed to their perception of the person's effectiveness as a collaborator. This information would be important in determining what set these individuals apart from their colleagues and to identify similarities with identified characteristics from other studies. This part of the nomination process was made optional because the primary intent of the process was to recruit participants to participate in phase 3, the interview process.

The nomination process was conducted over a 4-week period in July 2011. There were 120 nomination forms printed and most staff received their form, in person, from the researcher. Some forms were provided to the midwifery managers in each of the clinical areas to reach clinicians working on evening shifts and weekends. By the end of July all 120 forms had been distributed. Survey boxes were placed in all clinical areas and staff were invited to post the completed form. The staff were encouraged to participate and reminded of the close date each week through the usual communication strategies in the unit at that time.

Following receipt of completed nomination forms data was entered into an excel spreadsheet and analysis of the data undertaken. The top five nominees in each discipline were notified of their nomination. Non-participant observation using field notes was carried out to record the verbal and non-verbal responses of staff members on receiving the news that they had been nominated as effective collaborators.

8.5: Data Analysis

The Nomination Survey tool was analysed using both quantitative and qualitative processes. The number of nominations each candidate received was calculated to determine who received the highest number of nominations. This would identify which candidates would be invited to participate in phase 3, the interview. The attributes of each of the nominees were then grouped into categories through a process of categorical analysis. Rank ordering of the categories of the attributes most frequently described was undertaken. Content analysis (Krippendorff 2008) was used to examine the field notes, key participant verbal and non-verbal responses were noted and patterns across responses identified.

8.6: Results

There were 120 surveys provided to the staff with 39 completed surveys returned (32.5%). Ten obstetric medical staff and 19 midwives (MW) received nominations. As described in Table 10, these nominees were from a range of roles and level of seniority; the medical staff ranged from senior consultant to junior registrar in training and the midwives ranged from those in consultancy roles to midwives who were recently graduated.

Table 10: Demographics of Nominees

Role	Number N (%)	Gender		Responsibility
		M	F	
Obstetric Medical Staff N = 10				
Consultant obstetrician	5 (50)	4	1	Staff specialist role with additional responsibility for training/supervision
Senior registrar in obstetrics training (> 4 th Year)	3 (30)	2	1	Supervision of more junior registrars
Registrar in obstetrics training (≤ 4th year)	2 (20)	0	2	
Midwives N = 19				
Clinical midwifery consultant	2 (11)	0	2	Senior clinician with responsibility for education and service development across all clinical areas
Clinical midwifery specialist	3 (16)	0	3	Midwife with extended level of autonomy because of expertise
Clinical midwifery specialist / midwifery group practice	5 (26)	1	4	Working in primary continuity of care model across the continuum of care
Registered midwife ≥ 8 th Year	6 (32)	0	6	Most senior level of clinical midwife
Registered midwife < 8 th year	3 (16)	0	3	

Attributes of Effective Collaborators

The nomination form gave the clinicians an option to describe the attributes of the nominee that identified them as an effective collaborator. Of the 39 respondents, there were 17 (44%) who described the attributes for both the obstetric medical staff and the midwives. The remaining 22 participants did not provide a descriptor for either group. The overall result was that 90% of the medical staff who were nominated had a description provided and 10 of the 19 midwives (53%).

A content analysis of the attributes was conducted with five emergent categories: *communication, attitude, knowledge, skills* and *being pro-normal birth*. The rank ordering of these attributes from highest to lowest is demonstrated in Table 11 with the distribution for the combined group and then divided into the two discipline groups of obstetrics or midwifery. Some of the nominees had more than one attribute described, for example, the obstetrician with the second highest number of nominations was described using all five categories.

Table 11: Rank Order of Attributes of Effective Collaborators

		Combined professional groups N=29	Obstetricians N=10	Midwives N=19
Combined rank order	Attribute	N	N (%)	N (%)
1	Communication	15	8 (53)	7 (47)
2	Attitude	13	5 (38)	8 (62)
3	Knowledge	7	2 (29)	5 (71)
4	Skills	6	2 (33)	4 (67)
5	Pronormal Birth	6	2 (33)	4 (67)

Four of the five categories were articulated in an obvious manner and the category of attitude emerged from analysis of descriptive words. The attribute of communication was described overtly: *“excellent communicator”, “good communication skills”* or in other terms synonymous with effective communication skills such as *“listens”* and *“able to discuss [cases]”*. Knowledge and skills were also overtly described: *“skilled”, “experienced practitioner”, “respected clinically”, “knowledgeable”* and *“strong midwifery knowledge”*.

The category of attitude emerged from several descriptions that were consistent with the Oxford Dictionary definition of attitude:

“the way that you think and feel about somebody/something; the way that you behave towards somebody/something that shows how you think and feel” (Hornby et al. 2005).

The behaviour of an effective collaborator was described in terms of the contribution to the team:

“Works collaboratively with midwives... excellent team professional”

However, most of the attributes were described using adjectives to demonstrate the way the nominee worked or behaved within the team:

“Supportive, relaxed approach, values midwives”

“Great with women, helpful & supportive; approachable, respectful, measured”

“calm, pleasant but positive approach”

“Lateral thinker, passionate, objective/analytical”.

Most respondents described communication (OB = 80%, MW = 37%) and attitude (OB = 50%, MW = 42%) as the attributes that set the nominee apart as an effective collaborator. These attributes were rated higher than clinicians having the required professional skills (OB = 20%, MW = 21%) and knowledge (OB = 20%, MW = 26%).

The fifth category of being supportive of normal birth could also be considered as an attribute of attitude because it describes how the person thinks or feels about birth and about intervention. However, this attribute was deliberately categorised separately because it was specific to the intent of the work in the facility to reduce intervention in birth and not necessarily relevant to collaboration overall. An interesting result was that skills and being pro-normal birth were rated of equal importance for both professional groups (OB = 20%, MW = 21%).

Nominee Scoring

Nominees scored 1 point for each nomination received. The five highest scoring nominees from each discipline were then invited to participate in the next phase of the study. Invitation was based on the number of nominations and not on the description of attributes (Table 12). There were two obstetricians and two midwives who declined participation because they would not be available at the time of phase 3. The nominees with the next highest scores were then approached to participate to ensure an equal number from each discipline.

Non-participant Observation Findings

All 29 nominees received a letter of acknowledgment informing them of their nomination as well as the attributes described by the nominator where applicable. In addition, the five highest scoring nominees from each group were provided with an invitation to participate in the next phase which was an interview exploring their attitudes and impressions of IPC in their workplace.

Table 12: Rank order, nomination numbers and attributes described for each nominee

Rank Order	Number of Nominations	Communication	Attitude	Skills	Knowledge	Birth	Pro Normal
Obstetric medical staff (N= 10)							
1	8	√					
2	6	√	√	√	√		√
2	6	√	√				
3	5	√	√				√
4	4	√	√				
5	3		No attributes described				
5	3	√					
6	2		√				
7	1	√					
7	1	√		√	√		
Midwives (N = 19)							
1	6	√	√	√	√		√
2	4	√	√	√	√		
2	4	√	√				
3	3	√	√	√	√		
3	3	√	√	√	√		
3	3		No attributes described				
3	3		No attributes described				
4	2		No attributes described				
4	2		No attributes described				
5	1		√	√			
5	1		√				
5	1						√
5	1	√					√
5	1	√	√				√
6	5 Nominees received one nomination and no attributes described						

During the process of informing the participants of their nomination observations were made of their reactions which were then documented as field notes. The reactions by most nominees were of genuine surprise at being nominated:

MW: *That is so exciting...I am very surprised...what happens now?*

MW: *I can't believe that...Really?...That is unbelievable*

OB: *Really...that's great...I am surprised. It will be great if we can make some changes here*

Nominees were not only surprised about the nomination but also about the specific attributes that their colleagues described:

MW: *Really that is great...I didn't think people knew me that well*

OB: *that's great...amazing. I do try to collaborate with everyone...that's nice that the MW feel I value them...*

The body language suggested the nominees were humbled or embarrassed by the recognition:

OB: *Oh that's a nice thing to say thank you* [Looks down away from interviewer]

OB: *Thank you* [Blushes...looks away from interviewer]

MW: *Thank you, I'm blushing...I was surprised* [giggles]

Only the highest scoring obstetrician and midwife were advised of their ranking. The others were either advised that they received nominations or that they were one of the highest scoring and therefore eligible to participate in the collaborative project. The reactions of the two highest scorers were also one of genuine surprise and disbelief:

OB: *"Really...I really got the highest number... I do try ...thanks"*

MW: *"How exciting is that...wow...that is so nice"*.

Only one nominee specifically asked about the number of nominations she received and wanted to know who had nominated her. She had received a high number of nominations and was eligible to participate in the next phase but would not be available because of a change in place of employment:

"Did I get one of the highest votes?...Do I get to know who voted for me?...I am really disappointed that I will be leaving and not able to join the project...I think it is a really good idea...good luck" (MW).

For one nominee, this was described as the first time she had felt visible in the organisation. She further described this as “... one of the benefits of the study, the personal benefit I’m very flattered and very happy to participate” (MW3). For another MW, this was the first project she had been included in and she stated:

“I think it is very interesting what we are doing and I am glad that I am part of it...hopefully it will result in some changes that we can put in place... I would like to see some changes happen really. Yes I think it’s good that we are working alongside the doctors as well because that is the main problem with communication”

This nominee later came to the interview phase of the study with enthusiasm to participate and a preparedness beyond what was expected. There were pages of notes presented on her reflections of the relationships within the organisation and ideas for possible solutions. There was acute recognition of the value of her nomination and she wanted to fulfil the responsibility she would now have on this collaborative project.

8.7: Discussion

Despite evidence that demonstrates the benefits of IPC in reducing the incidence of adverse clinical events, challenges continue to exist in the successful development of teams that could be described as effective and authentic in their collaborative function. One of the challenges could be in recognising the most appropriate participants to be engaged in planning and leading the changes toward greater collaboration. This article describes one method used to identify and recruit individuals from two professional groups who were considered by their peers to be good collaborators.

Consistent with other studies (Corwin, Corbin & Mittelmark 2012b; D'Armouri et al. 2005; Downe et al. 2009; Lewin & Reeves 2011) the attributes used to describe effective collaborators in the nomination process were predominantly related to their communication skills and overall attitudes rather than their clinical skills and knowledge. This may be because of the presumed competency level within disciplines with respect to skills and knowledge. What sets individuals apart then is their ability to communicate effectively. Effective interprofessional communication has not been overtly evident in healthcare settings and could be a result of the historical, hierarchical structure that has separated medicine and nursing/midwifery disciplines in education and learning environments. In Foucauldian terms, the scientific knowledge of childbirth was traditionally held by obstetricians and hence professional power was held by them to the exclusion of other disciplines and in particular midwifery (Foucault 1980). If there is

segregated education and knowledge acquisition, there will be an imbalance of power by the fact that some are excluded from gaining that knowledge.

This segregation of learning has generally continued in clinical settings. The compartmentalisation of roles may not facilitate or encourage the development of professional relationships or provide an acute understanding and appreciation of the contribution of different professions. The concept of interprofessional education has been promoted as one method to overcome segregation and promote more effective team work, and where the attributes of IPC; such as mutual respect and trust, shared decision-making, responsibility and power; can be developed. This may then improve the quality of care.

There were several positive benefits of using the nomination method to recruit participants that warrant consideration. First, this was an efficient method to identify participants who were likely to have attributes that would be useful in exploring IPC. There was the potential that these participants would have the capacity to work effectively in a team and have insight into solutions to impact positively on the whole maternity unit. They were described as effective communicators with attitudes that encouraged engagement such as being approachable and being supportive.

Second, by inviting all staff members at the research site to be involved in the process of nomination demonstrated a philosophy of collaboration consistent with the aim of the collaborative project to manage the changes. This could be positive role modelling for the project especially with the recruitment of those whom the staff members had elected to participate.

In addition, the process identified participants who may have been different to those normally identified by the organisation or managers. This was consistent with the findings in the study by Downe et al, (2009). If making the organisation's unconscious culture more visible is considered important to the change process, this peer recruitment process may contribute to achieving this aim. The participants themselves felt more visible than they had previously, because they had obviously been recognised by their peers working beside them on a regular basis.

Finally, the positive effect that the nomination process had on the successful participants could have increased their willingness to engage, increased the value of the participation process and thereby may result in a more productive and effective contribution.

8.8: Limitations

The limitations for phase 2 are consistent with those of phases 1a and 1b in relation to the low response rate. It is not possible to speculate whether the nominees would have been the same if more participants responded.

In addition, a limitation was in the design of the nomination tool that gave the participant the option of describing the attributes they recognised in their nominee. 44% of the respondents provided a description and there may have been a higher response rate with a design that encouraged a description.

8.9: Conclusion

This method of peer nomination to recruit collaborators for a project is not often used in health care settings. However, it is philosophically consistent with the aim of exploring IPC and engagement. The recruited participants were more likely to have the attributes that would be of benefit to this type of study. The positive reaction that the participants had to the nomination provided encouragement that there were individual benefits to this process beyond attaining the required interview cohort and could be considered as a method for other studies where similar themes are to be explored.

In healthcare systems where IPC is not evident and where tensions continue between professional boundaries of responsibility there is a threat to the delivery of safe and effective care. To change what may be an historical legacy of hierarchical structures there first needs to be recognition of the situation; an intention to change the status quo and then purposeful strategies to support change toward IPC. The nomination process described here may be one such strategy to identify those who may be best placed to engage in the work to influence change.

8.10: My reflections

As a result of the peer nomination process 10 clinicians (OB=5, MW=5), nominated by their peers as effective collaborators, accepted the invitation to join the next phase of the study to further explore the concept of IPC at this site. Similar to the UK study (Downe et al. 2009) the positive effect that the nomination process had on the successful participants could have increased their willingness to engage, increased the value of the participation process and thereby may result in a more productive and effective contribution. This final point may be worthy of greater consideration as to what influences individuals' engagement, non-engagement or disengagement.

As the researcher, I was progressively developing a sense of the attitudes within the maternity service with respect to collaboration, team work and the team dynamics. The response rates for the VBAC *Toolkit* and the CVF survey (25%) and the peer nomination process (32%) were all lower than anticipated and may have been an indication of the level of engagement of the clinicians in the service activities. As mentioned previously in Chapter 4, discussions at the research site identified a division among the teams in their impression of the effectiveness of the collaborative approach to care, with a suggestion that it was more rhetoric than reality. The VBAC surveys in Chapter 6 identified a team that were not consistent in their attitudes and practices with respect to woman eligible for VBAC and the CVF results in Chapter 7 identified a predominant culture type that did not facilitate or encourage engagement and participation. Participants identified an absence of commitment, cohesion and collaboration and I wondered what effect this might have on the next phase of the study. However, more importantly I wondered about the overall effect of the culture on the participants in their professional roles and for the women and families using the service in terms of satisfaction with care and overall outcomes from a quality and safety perspective.

The intention of the study design was for each phase to inform the next influenced by the nature of the data obtained. As mentioned previously, the original design included a focus group with those identified as effective collaborators to further explore the CVF results and the VBAC *Toolkit* results. This exploration would form the diagnostics to guide the development of strategies for change for VBAC. Being immersed in the research process as well as being a clinician at the research site I felt that there was more to be gained by exploring the concept of IPC through individual interviews rather than through a focus group method. I sensed that there were concepts that might exist at both the conscious and unconscious levels that needed to be revealed. Being interviewed individually rather than in a group could be more effective in mining deeper into the unconscious rather than contributing to group think. Individual interviews could also provide the opportunity for participants to share more sensitive details and information that may be difficult to discuss in a group especially when discussing workplace culture and relationships.

My sense was that the clinicians' views and practices may have evolved over time while working in the organisation and they may not be able to identify the origins of their behaviours, or recognise the potential benefits or risks of some of their behaviours. My impression of rhetoric versus reality arose when one professional group espoused the values of collaboration being part of the current culture with an immediate negative response from others; a palpable divergence.

The next chapter describes Phase 3 of the study where the concept of IPC is explored from the perspective of the clinicians nominated as effective collaborators. The nominees were interviewed using a range of techniques to elicit a greater understanding of a complex concept. This exploration aimed to gain new insights that could have a positive effect on the culture of this organisation.

Chapter 9: Phase 3-Exploring interprofessional collaboration through in-depth interview

9.1: Introduction

As detailed in the previous chapter, phase 2 involved a process of nominating clinicians who were perceived as effective collaborators. This resulted in the recruitment of 10 clinicians (OB=5, MW=5) who consented to participate in the next phase of the study, an in-depth, individual interview to explore the concept of IPC. Due to the complex nature of the multi-method interview design, this phase of the study is reported in two chapters. This chapter presents an overview of, and rationale for, the multi-method interview design. The subsequent chapter presents the findings of the interview.

Understanding IPC in the context of the research setting was an important platform to move forward in the implementation phase of the study where collaboration is necessary. The healthcare literature has described the benefits of IPC in improving clinical outcomes (Baggs et al. 1999; Kear & Ulrich 2015; Wakefield et al. 2009; Wheelan, Burchill & Tilin 2003) and recommendations have been made to prioritise the integration of models of care that are focused on collaboration to achieve improvements (D'Armouri et al. 2005; Gagliardi, Dobrow & Wright 2011; Rice et al. 2010; Yan, Gilbert & Hoffman 2007). However, the theoretical underpinning of IPC appears to be less developed than the impetus for implementation (D'Armouri et al. 2005; Haldal 2010; Willumsen 2008). In the absence of solid theoretical frameworks, constructivist theorists suggest that individuals will develop a personal meaning of phenomena or concepts based on their own belief systems and experiences (Fosnet & Perry 2005). This can result in developing a lay definition rather than one that is based on theory (Bleakley 2013). A clear definition of IPC is therefore essential so that agreement can be reached so there can be a standardised approach to the integration of ICP into models of care.

There is a paucity of information from the perspective of clinicians that describes how IPC develops or evolves; how IPC happens or does not happen and what an organisation might *look like* when IPC is effective, or conversely when it is not effective. This may be due to a lack of opportunities to engage clinicians so they can articulate their understanding of IPC. Therefore, the use of several interview techniques in this phase of the study was designed to provide clinicians with multiple opportunities to express their understanding of IPC so that patterns could be identified to contribute to an informed understanding of the conceptual ideology; that of IPC.

The design of the interview used several different techniques to elicit data from the conscious mind as well as, potentially, from the unconscious. Each component aimed to delve deeper into the unconscious using techniques that have the potential to expose elements of the shadow organisation or from the hospital's unconscious (Allen & Kraft 1983, 1984; Allen & Pilnick 1973). An important part of this process was making the invisible more visible to understand if change was required, and if so what changes and what strategies would be most appropriate for that change. Since the aim of the interview was to gain a more accurate description of the culture of this setting with respect to IPC, then the data obtained would support this method of enquiry.

This chapter describes the interview techniques that were used beginning with a series of questions that were relatively simple and somewhat predictable in an interview; eliciting the participants' understanding of the subject matter. Participants' descriptions of their experience of IPC through vignettes then aimed to determine the congruency between their understanding of IPC and how they identified that IPC was evident in clinical practice. As the researcher, I then wanted to explore the same subject matter from different approaches that would define IPC in practice without using the term *Interprofessional collaboration*. Subsequent questions aimed at identifying the unwritten ground rules of the organisation and a photo elicitation technique was used to reveal more insights from an unconscious level. I hoped that these techniques could enable access to a more accurate impression of the reality or rhetoric of IPC in this organisation. Each of the sections will be described more fully.

The anticipation was that the participants' descriptions would demonstrate an understanding of the elements within the definition of IPC used for this study:

“an interpersonal process characterized by healthcare professionals from multiple disciplines with shared objectives, decision-making, responsibility, and power working together to solve patient care problems; the process is best attained through an interprofessional education that promotes an atmosphere of mutual trust and respect, effective and open communication, and awareness and acceptance of the roles, skills, and responsibilities of the participating disciplines” (Petri 2010, p79).

Therefore, an examination of the descriptors and exemplar provided by the participants aimed to develop a deeper understanding of IPC from the participants' social reality. The following section will provide a more detailed description of each method of the interview process.

9.2: Study design and Methods

The aim of phase 3 of the study was to explore the understanding of IPC in one maternity hospital setting. The design involved In-depth, individual interview using 6-steps with a range of interview techniques which are further described below. The interview questions did not undergo a prior process of piloting prior to the participants' interviews.

9.2.1 The participants

The participants are 10 clinicians, evenly divided between midwives (N=5) and obstetricians (N=5), who had been nominated by their peers as effective collaborators and who consented to participate. Table 13 describes their demographic characteristics.

Table 13: Interview Participants

Role	Number N (%)	Gender	
		M	F
Consultant Obstetrician	2	1	1
Senior Registrar in Obstetrics training (> 4 th Year)	2	1	1
Registrar in Obstetrics training (\leq 4 th Year)	1	0	1
Clinical Midwifery Consultant	1	0	1
Clinical Midwifery Specialist / Midwifery Group Practice	1	0	1
Registered Midwife \geq 8 th Year	1	0	1
Registered Midwife < 8 th Year	2	0	2

Recruitment and Consent Process

The highest scoring, peer-nominated, effective collaborators from the phase 2 study were invited to participate in the interview. Participants were provided with the information sheet (Appendix 7; location deidentified for the purposes of this document) explaining the study prior to the scheduled interview time and again at the time of the interview. They were provided with an opportunity to clarify the information if required. Each of the participants was then invited to complete the consent form (Appendix 8; location deidentified for the purposes of this document) to verify their willingness to participate. All ten of the participants signed the consent form prior to proceeding. These consent forms have been stored securely as required through the ethical approval process.

6 Step Interview Process

The interviews were conducted in a quiet office in the Maternity Unit at the research site with only the participant and me, as the interviewer and researcher, present to minimise distractions and to provide a space where potentially sensitive information could be shared whilst maintaining confidentiality

A one hour long, 6-step interview process was used. The 6 steps were:

- Defining Interprofessional Collaboration
- Description of IPC vignettes
- Exploring Interprofessional relationships using Semi-structured questions
- Completing “Unwritten Ground Rules”
- Verification of CVF study findings
- Photo-elicitation process

Each interview was audio recorded and fully transcribed for analysis. The interviews were conducted by the researcher who was personally known to each participant. Each step of the multi-method interview is described in detail in the following pages.

Step 1 - Defining Interprofessional Collaboration

All participants were aware that the study involved exploration of the concept of IPC. They were also aware that they were invited to participate as they were assessed by their peers as having the attributes of an effective collaborator. So the first question was a simple one and deliberately designed as an icebreaker to allay any anxieties at the beginning of a one-hour interview. Each participant was asked “*how would you define collaboration?*” and then whether the definition would change if they were asked “*what is interprofessional collaboration?*”.

In addition, the responses to this question could provide evidence of the consistency of the definition and understanding of the concept of IPC between participants as well as identification of the attributes of an effective collaborator.

Step 2 - Vignettes

In this section participants were invited to describe an incident / event in their workplace that demonstrated IPC. The example provided could describe where IPC was present or where it was not. Vignettes have been used extensively and effectively in qualitative research, a hypothetical scenario is provided to the participant to comment on from the perspective of their real world and value system (Jackson et al. 2015; Jenkins et al. 2010) which is especially significant when

sensitive or anti-social issues are being explored such as drug use (de Macedo, Khanlou & Villar Luis 2015). This form of storytelling about real life events can be a powerful medium for the narrator to make sense of situations and in doing so can reveal the values and attitudes of the narrator. However, one of the potential limitations of a fictitious scenario is that it may not be sufficiently realistic for the narrator to relate to. A vignette based on a real event can be more effective in demonstrating the participants' depth of understanding of the subject being examined (Wright, Heathcote & Wibberley 2014).

In the case of this interview the participants could describe their professional relationships and work place activities in relation to IPC from a known work environment and known experiences. This can be an effective method of tacit knowledge sharing and may provide insight into the consistency or disparity in the understanding of IPC between participants. Informal discussions at the research site leading up to this study described IPC in terms of team work, collegiality and cooperative behaviours. Whilst these attributes are desirable, they do not describe the depth and breadth of effective collaboration.

Step 3 – Exploring Interprofessional Collaboration using Semi-structured questions

The line of enquiry in this section was regarding the relationships between the professions and how confident the participant felt to discuss and debate clinical care. The participants were asked specifically:

What are relationships like around here?

How confident do you feel working with the interprofessional team?

Can you openly discuss and debate issues that occur within the interprofessional team?

Aspects of the definition of IPC such as *shared decision-making* and *power* could be demonstrated through the responses to these questions. In an environment where IPC flourished there would be trusting relationship and confidence between professions which could also indicate *acceptance of roles, skills and responsibilities* that complement one another for the sum of the woman's care. Again, this technique of enquiry involved probing deeply but in a more subtle manner to uncover the participants' reality of IPC.

Step 4 – Exploring Unwritten ground rules

Participants were asked about the unwritten ground rules (UGRs) of their organisation to elicit what happens in the workplace as opposed to what is required to happen or what the organisation think happens. The UGR technique was employed to draw descriptions from the participants' unconscious mind to make the invisible more visible.

UGRs have been described as the rules that define the expected and accepted norms of behaviour in the workplace. These rules are generally unwritten but become the individual's and the group perception of the way things are done. They have been described as the quiet information you may give to a colleague in order for them to manage and survive in the workplace (Scott-Morgan 1994). The combined set of these UGRs are what generally makes up the culture of a particular organisation (Simpson & Cacioppe 2001).

One complexity that emerges when trying to identify the culture is the realisation that the culture that is espoused may not be consistent with what the culture is. How things are supposed to be done in the organisation or how one thinks they are done may not be how they are done. Studies have demonstrated disparity that can exist between what is thought to happen and what happens in the workplace or how things really are (McGovern 1995; Simpson 2009). Enabling people to identify the obvious as well as the unconscious culture of their organisation can be achieved by describing or revealing the UGRs.

An organisation's culture can be an abstract concept that can be difficult to articulate whereas UGRs can provide a language to more accurately describe the participants' reality of the organisation (Jeansonne 2010; Simpson 2008; Simpson 2009; Simpson & Cacioppe 2001). UGRs become the carriers of the culture, they are what the participants know and experience (Simpson & Cacioppe 2001).

Method

Participants were given a phrase and asked to add words to complete a sentence that described their experience of the work environment or the UGRs. The phrases were deliberately chosen to elicit attitudes towards the attributes described in the definition of interprofessional collaboration (Petri 2010). For example, the participants' response to the stem phrase would describe the anticipated attribute in a negative or positive manner depending on their perception of the workplace culture in relation to that attribute. If being open and honest earned you respect, then that word or a similar derivative of that would be provided and vice versa. The validity of the stem phrase and attribute combination were verified with Steven Simpson, the creator of the globally acclaimed UGRs, in a workshop in Sydney (Knox & Simpson 2010). The stem phrases and the attributes used are listed in Table 14:

Table 14: Phrases for Unwritten Ground Rules

Stem Phrase	Anticipated Positive Attribute/s
Around here being open and honest gets you....	Respect
Around here people are treated with...	Respect, shared power
Around here when you come with a new idea....	Communication
Around here when you need help....	Team work, shared objective & responsibility
Around here when you tell someone something in confidence...	Trust

Step 5 – Verification of Competing Values Framework Findings

The Competing Values Framework (CVF) has been previously described in Chapter 7. In this part of the interview participants were provided with the results of the survey that was conducted in their facility in 2010. The aim of the initial survey was for staff to identify the predominant culture of the organisation in preparation for implementation of a government policy directive and for this information to be used in designing the required strategies for change. The survey did achieve this aim; however, the low response rate of 25.8% was a limitation to the generalisability of the results. Therefore, the rationale for incorporating the results in discussion in the interview was that it provided an opportunity to discuss the initial CVF results and gauge the participants’ impressions. This was a way to provide some verification of initial results and to provide further insights into the participants’ overall perceptions of the organisation.

Method

Participants were given a description of the CVF tool, the purpose and what the results could demonstrate. They were then shown the graphs of the CVF results for the predominant culture assessed *Now* and the *Preferred*. They were invited to provide comments from their perspective of the predominant culture in their workplace. Again, the intention was to gain a deeper understanding of the situation in this organisation.

Step 6 - Photo Elicitation

The final section of the interviews employed an exercise in photo elicitation to draw descriptions from the participants’ unconscious mind to make the invisible more visible. Photo elicitation is a research method with origins in anthropology and sociology. In studies in the 1950’s when study subjects were shown photos they were observed to have greater stimulation of latent memory and increased emotional statements that produced richer data than those engaged in conventional interview techniques alone (Collier 1957). Since Collier’s work, photo elicitation

interview (PEI) has gained increased popularity as a valid research methodology in varied disciplines including health (Copeland, Dahlen & Homer 2014; Fritz & Lysack 2014; Hammond, Homer & Foureur 2014; Kantrowitz-Gordon 2013; Sandhu, Birchwood & Uptegrove 2013; Shell 2015; Tran Smith et al. 2015), education (Epstein et al. 2006; Rasmussen 2004; Smith & Barker 2004), sociology (Clark-Ibanez 2004), retail (Pauwels 2015; Petermans, Kent & Van Cleempoel 2014) and agriculture (Kong et al. 2014). The information gained from PEI has the potential to stimulate a greater depth of response than when a participant is constrained by the structure of interview questions.

There is a physiological explanation for this depth of response. The areas of the brain that interpret or process visual stimuli are older in terms of evolutionary development than the areas that process verbal information. Therefore visual and verbal stimuli that require interpretation and response utilises more of the brain's capacity which in turn produces different types of information (Harper 2002). PEI can *"mine deeper shafts into a different part of human consciousness than do words-alone interviews"* (Harper 2002, pp 22-23).

Method

The participants were given a photo (Figure 12) of a group of animals feeding in a game park in Africa and were asked to interpret this as it related to their current workplace. The photo did not have any symbols or direct reference to a hospital environment and the animals were used as metaphors for professionals who would be present in a hospital environment.

The photo had a group of wildebeests and a group of warthogs feeding from the same feed lot of hay that was spread on the ground. Two different species of animal were depicted and each with different characteristics, different appearance and different behaviour patterns in the wild. Despite their differences the two species are seen together feeding from the one pile of hay in apparent harmony. They are different but can co-exist in the same space and neither is a predator to the other. However, each species has a characteristic difference that could be interpreted in a particular way. The wildebeest has an impressive set of horns that are used in battle as a mechanism of protection. The warthogs naturally bend their front legs to a kneeling position to reach the ground when eating. In this photo, they could be seen to be kneeling before the wildebeests. There are an equal number of wildebeests and warthogs in the photo. However, the larger size of the wildebeests may appear to give them a more prominent presence.

This photo was chosen as there was a potential to elicit opposing interpretations from participants. The photo could demonstrate IPC between two different groups who are working together in apparent harmony despite their differences. Conversely, some of the physical traits of the animals could be interpreted in a negative way suggestive of dominant and submissive behaviour. The participants' impression of their current work place with respect to IPC could evoke a corresponding descriptive response to the image.

The photo was used as the last step in the interview. The aim of using different tools throughout the interview was to elicit information from a conscious as well as potentially a sub-conscious level. Words-alone interview technique and photo elicitation techniques, for example, have the potential to draw on different thought processes which may provide varying perspectives on the one subject matter.

The participants were presented with the image and the interviewer stated:

"I'm going to use a photo from my recent trip to Africa and I just want you to have a look and think about it in terms of what we were talking about...interprofessional collaboration. What do you see in that picture?"



Figure 12: Animals on the African Plains (photo taken by C. Adams 2011)

Limitations

The choice of this photo and the fact that there was only one photo chosen could be described as a limitation to this section of the interview. The choice of photo was determined by myself as the researcher which could be interpreted as a subtle manipulation of the situation to elicit a particular response. Whilst the possibility of manipulation is acknowledged, the choice was

made after a period of reflexive examination. My interpretation of the content of the photo was that it could be either an exemplary example of collaborative behaviour or the converse. The interpretation would be from the participants' lens influenced by their experience within the team.

9.3: Data Collection and Analysis

Each of the interviews was scheduled for a time convenient to the participant and in consideration of their clinical responsibilities. The interviews were conducted in a quiet office in the Maternity Unit at the research site with only the participant and me, as the interviewer and researcher, present to minimise distractions and to provide a space where potentially sensitive information could be shared whilst maintaining confidentiality. The interviews were conducted between 4th August and 7th September 2011; the average duration of the interviews was 48 minutes with a range of 18 to 66 minutes. The interviews were audio-taped with consent from the participants and the data transcribed verbatim.

After each interview, I offered additional time for the participants to remain in the interview room to discuss any additional thoughts or feelings that may have arisen during the process. The exploration of relationships within the working environment did evoke some raw emotions and revelations for some of the participants and it was important for me to monitor their emotional status before departing. In addition, I offered a contact phone number to call if there were any additional concerns or thoughts.

9.4: Thematic Analysis

A process of thematic analysis was used to examine the participant responses to identify patterns across and within responses. Multiple examinations were conducted of the interview transcripts to identify concepts, themes, naming and verification of themes to describe participants' impression of IPC in their workplace (Braun & Clarke 2008). To facilitate the iterative process of data analysis the transcripts were reorganised so the responses to each question from each participant were analysed simultaneously. This divided the material into manageable volumes that were also contextually similar. Different colours were used to identify and differentiate common words, concepts or ideas within the transcripts which became the different codes. A process of constant comparison was used to examine these codes to identify connection and association which eventually evolved into the themes. Journal notes written as a reflection after the interviews were also considered as a means of confirming the analysis.

An example is provided here from the data from the photo elicitation. The participants used words that differentiated the size, stance and positioning of midwives and obstetricians in the workplace. This differentiation provided an impression of power, a defined hierarchy and status differences. There was unanimous agreement between the two groups of clinicians that this difference existed and was embedded in the workplace. My observations made in the journal reflections used words such as “*known hierarchy*”, “*accepted position*”, “*expected position*”. The coding analysis and reflections evolved into the theme “Knowing your place”.

Obstetrician	Midwife	Minor Themes	Final Theme
wildebeast	warthog	Different animals	Knowing your place
Big	little	Different Size	
Bigger	small		
Standing up	On their knees	Stature / status, Power difference	
	Hands and knees		
	Heads down		
	kneeling		
	Bums in the air		
top	Bowing to them		
powerful	scavenging		
lurking	Group together		
	huddled		
Wildebeest territory	pushing in	Defined place	
	Overstep the mark		
	Position should be		
<p><i>“this sort of warthog looks like he might sort of pushing in a bit more than he should be in terms of the wildebeest territory...sometimes people do overstep the mark in terms of what their position should be” (Obst 2)</i></p>			
<p><i>“warthogs...on their knees scavenging up for a bit of food. Whereas the wildebeests are right in. They just go wherever they want. Whereas little warthogs are around the edge” (MW1)</i></p>			

The emergent themes from the data were analysed using an approach informed by social constructivism. The theory of Social Constructivism describes how individuals’ knowledge and behaviours are influenced by their immersion in, and interaction with, their social environment and the meaning they construct to make sense of experience and place (Bettinger 2007; Crotty

1989; Guba & Lincoln 1989; Patton 1990). The perceptions and beliefs of the individual about that social environment then become embedded for them into the fabric of that environment and becomes their reality (Hunter & Krantz 2010; Thomas et al. 2014).

This approach was relevant as the aim was to construct knowledge of the participants' reality and the meaning that IPC has in their professional lives. The interview data were not meant to determine the true reality of the environment being studied, but rather the language would communicate the social construct of that environment from the participants' perspective. The participants' reality would be relevant and valid for this environment and not necessarily relevant to other environments or real for other groups.

Using a social constructivist approach appreciates that the knowledge gained is from those who are directly experiencing the phenomena. This can yield rich and meaningful data which is relevant to this specific group in the lived experience but with limited generalisability (Polit & Beck 2012). In addition, the constructivist paradigm presumes that close interaction between the participant and the enquirer can maximise the knowledge gained by the process. The voices and interpretations of the participants are crucial to the process and add depth to the data obtained (Polit & Beck 2012). However, the researcher must be cognisant of the potential for subjective interaction with participants in the interpretation of their reality.

Verification of Emergent Themes

The de-identified interview data were shared with an independent reviewer for analysis. This reviewer was a midwife employed elsewhere than the research site and who was not involved with the research. As the researcher, I was immersed in the data through the interview process, during the transcriptions and during the analysis and needed an objective independent opinion to verify the themes. Whilst the naming of the themes varied between us, the sentiment of the themes was consistent which gave me a sense of confidence in the analysis. Following discussion and deconstruction of the content, the names of the themes remained as initially determined by myself with confidence that the content was consistent between myself and the independent reviewer.

Rigour and Trustworthiness of Qualitative Research

As described previously in Chapter 5, Section 5.7 the trustworthiness of qualitative research needs to be considered and deliberate steps taken to ensure this rigour. I have undertaken a process of constant comparison during the examination of the data to determine themes and a process of peer review to limit my bias and subjective analysis.

Throughout the process of the interviews as well as the analysis of data I was cognisant of the clinical leadership role that I had amongst the participants and the responsibility that I held for practice change. It was extremely important to the process to separate the duality of my roles as a senior clinician and as the researcher.

I was also cognisant of my philosophical stance in relation to birth and effective teams. This was achieved through using bracketing technique (Fischer 2009; Rolls & Relf 2006; Sorsa, Kiikkala & Åstedt-Kurki 2015) where I set aside my assumptions to enable the participants' descriptions of their reality to be articulated and not interpreted through the lens of my beliefs. The ethical consideration with bracketing, therefore is to balance the risk of manipulating the situation with the benefit of deeper exploration.

9.5: Summary

In this chapter I have provided a description of the multi-method interview design used for the qualitative component of the study with methodological justification for the choice of each technique. IPC is a complex concept that can be hard to define and therefore in this research it was important to approach the interview in a manner that provided sufficient scope to reveal the overt, conscious as well as the unconscious understanding of IPC from the perspective of clinicians in one major maternity hospital in NSW.

In the next chapter I will describe the findings for each of the six steps in the interview process separately. The thematic analysis of these findings will start to provide the reader with an impression of the understanding as well as the existence of IPC in this organisation prior to the presentation of these findings in Chapter 11.

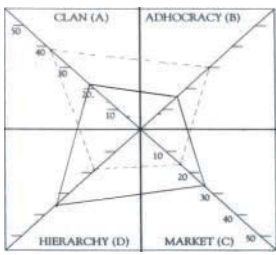

Chapter 10: Interview Findings-Describing the State of Interprofessional Collaboration

10.1: Introduction

The findings of the multi-method interview designed to reveal the overt, conscious as well as the unconscious understanding of IPC in one major maternity hospital in NSW are presented in this chapter. The interview was a complex undertaking with 8 hours and 26 minutes of audio files and 175 pages of transcription generated, and so the process of presenting the detailed findings is similarly complex and lengthy. Each step of the interview presents a deepening and shared perspective of an organisation without an apparent ability to embrace positive steps towards becoming a high functioning organisation. Summary sections are signposted throughout the chapter to provide succinct overviews of the deepening perspectives generated.

This chapter begins with an overview of the findings presented in Table 15 that details the six steps of the interview, their focus and the findings of each step. A synthesis of the findings is presented in the subsequent chapter.

Table 15: Overview of the 6-step Interview and Findings

Step	Interview step	Focus of interview	Key Findings/themes
1	Semi-structured opening questions	a. Defining interprofessional collaboration b. Describing the attributes of effective collaborators	<ul style="list-style-type: none"> • Personality • Authentic communication • Knowledge and skills • Respect • Role definition • Trust
2	Vignettes	Describing an IPC incident in the workplace	<ul style="list-style-type: none"> • 2 positive IPC examples • 6 negative, lack of IPC examples • 2 unable to provide an example
3	Exploring Interprofessional relationships using Semi-structured Questions	a. What are Interprofessional relationships like here? b. How confident do you feel working with the team?	<ul style="list-style-type: none"> • Building Trust over Time • Communication is a key • Physical and philosophical barriers to overcome • Working the margins • Avoidance behaviour • Protective behaviours
4	Unwritten ground rules	Finish the statement	<ul style="list-style-type: none"> • Around here being open and honest gets you...<i>everywhere and nowhere</i> • Around here people are treated...<i>differently</i> • Around here when you come with a new idea...<i>nothing happens</i> • Around here when you need help...<i>you can get it ...from some...for some things</i> • Around here when you tell someone something in confidence...<i>you know who to tell</i>
5	Competing Values Framework revisited		<ul style="list-style-type: none"> • predominance of hierarchy is a barrier to change • predominant culture of clan with adhocracy would be an enabler for change
6	Photo Elicitation Interview		<ul style="list-style-type: none"> • Knowing your Place • Adaptation for Survival • Doing your own thing

10.2: Semi-structured opening questions

Step 1a- Defining Interprofessional Collaboration

Most of the participants express a similar definition of IPC that includes many of the concepts by Petri (2010); descriptions of working together in a team with more than one person from a different professional group; working towards a common goal that is achieved through mutual trust and respect, and with effective communication skills; recognition of different roles and responsibilities, and IPC contributes to outcomes. For two midwives IPC is a new term and they are unsure of the meaning.

For one midwife and one obstetrician there is also a hierarchical differentiation included with an expectation *“that someone needs to take charge”* with *“a recognition of a higher authority”* (MW). This midwife further describes *“a vertical midwifery doctor arrangement more than a horizontal”* (MW3) and goes on to describe how this vertical relationship plays out through the way introductions are made to women. Midwives introduce themselves to women by their role and first name: *“hi I’m [MW 3] and I’m looking after you today”*. This midwife commented that obstetricians generally introduced themselves to women as Dr X and then this midwife would follow that lead and refer to Dr X and take care not to use the doctor’s first name in front of the woman. This midwife participant regards this behaviour as one of the many ways in which hierarchy in the maternity unit is reinforced and maintained.

A pattern emerges in the analysis of the participants’ responses that collaborative behaviour occurs more often, or more overtly, between midwives and between midwives and women than between obstetricians:

“I mean there’s midwives and doctors there’s always going to be that sort of trying to find somewhere that you’re comfortable with together. I think midwives collaborate all the time and I think that’s where they come from the very beginning they collaborate with women, then they learn from a very early beginning to collaborate with doctors. I don’t think that doctors collaborate with midwives as well. I think midwives do it a lot better than doctors do” (MW3).

From most of the responses there is a sense of defined roles and responsibilities that divides the care provided for women. The different professions are responsible for, and respected for, different aspects of care that make up the whole care of women. Midwives are advocates and guardians of what is considered clinically normal and obstetricians are responsible for managing

the abnormal situations. Where the domains of practice between obstetric and midwifery care intersect is the opportunity where IPC can be a point of collaboration or conflict:

“the greatest area of collaboration is across the midwifery and obstetrics in our unit and ...that’s where I see the main perhaps difference in attitude comes in...trying to bridge those two views is often quite challenging” (OB2).

Conversely there is a negative impression of what happens when individuals want to do all roles or have responsibility for all work rather than remaining within their defined or expected scope of practice or responsibility. A sporting analogy is given that describes collaboration in terms of the complement of any skills of different players that come together to deliver a successful outcome. However, players should not take on or excel in all roles and when they try to there can be difficulties in relationships and quality of care:

“[in] cricket where you can have Glen McGrath who’s the greatest bowler in the world but if he doesn’t have the Mark Waugh to take the catches for him he’s buggered. Mark Waugh is a lousy bowler and Glen McGrath is a lousy catcher but together a formidable team...the problem we have in the modern era is everybody wants to be a catcher and a bowler...just do your bit well” (OB1).

One obstetrician is critical of attempts to mandate or legislate collaborative care as a model and believes that collaboration is achieved by the relationship that evolves or develops between members of a team. This participant adds that a collaborative relationship built on trust and respect does not need to be mandated or given a title as it merely exists: *“It’s trying to scientificise and formalise something which probably exists as a working relationship” (OB1)*. However, this obstetrician states that expecting professionals to be naturally collaborative is risky and that one’s ability to develop a collaborative relationship could be jeopardised by the expectation that the relationship must exist.

At the research hospital, there is a model of midwifery care called Midwifery Group Practice (MGP) which is described as a collaborative model of care with midwives as the primary carers for a cohort of women with defined consultation and referral pathways with obstetricians. MGP is the one model that is specifically described as a collaborative model of care whereas other services describe the way they may collaborate with other colleagues or professional groups. Many of the participants comment about MGP and often in a disparaging manner about the nature of the relationship which they regard as uncooperative and not collaborative:

“the midwifery group practice has a reputation of being more on the normal side of things... it has been criticised that they are unwilling to engage in the other half of the service if their women are deviating off that normal path...that’s where the sort of collaboration should happen quite nicely there but I think due to certain perceptions of fixed views it seems to limit collaboration often” (OB2)

Step 1b- Describing Attributes of effective collaborators

Seven categories emerge from the participants’ descriptions when asked about the attributes of an effective collaborator. These include positive personal attributes (Personality), effective communication skills (Communication), good clinical skills and knowledge (Knowledge/skills), respect (Respect), good understanding of role definitions and responsibilities (Role definition) and trust (Trust). The frequency of these categories as they appeared in the interviews was counted and listed in Table 16. The distribution is also listed for the combined group and then divided into the individual professional groups of obstetricians and midwives. As the table reveals, the personal attributes of the individual and their communication skills are ranked more highly than other attributes.

Table 16: Rank order of attributes of effective collaborators

Combined order	Rank	Attribute	Combined professional groups (N)	OB N=5	MW N=5
1		Personality	9	5	4
2		Communication	8	4	4
3		Knowledge/skills	7	5	2
4		Respect	5	4	1
5		Role definition	4	1	3
7		Trust	2	0	2

The attributes identified by the participants to describe effective collaborators are predominantly related to their overall attitudes or personality (N=9) and communication skills (N=8). These are ranked higher than their clinical skills and knowledge (N=7) which is consistent with the literature on IPC (Corwin, Corbin & Mittelmark 2012b; D'Armouri et al. 2005; Downe et al. 2009; Lewin & Reeves 2011). More of the obstetricians than the midwives state that knowledge and skills are important attributes (OB=5 vs MW=2). However, throughout the following sections of the interviews all participants acknowledge the importance of knowledge and skills. In addition, it is the presence of sound knowledge and skills that facilitates the development of other attributes such as trust and respect. The fact that this information emerged throughout the interview further justifies the multi methods chosen for the interviews.

The participants' views of the attributes of an effective collaborator are illustrated in the following section.

The attributes of an effective collaborator

Personality

The attribute of personality is the highest ranked quality (N=9). Personality is described overtly by some using the actual word personality: *"I think it's very personality driven"* (MW1). Others describe characteristics that may make up a person's personality that include having a *"calm and empathetic manner"*, being *"genuine"* which included the notion of *"honesty, credibility"* and being authentic and *"humble"* leaving *"your ego at home"*.

Effective Communication

Ranked highly and equally between the two professions is the quality of effective communication skills. Communication is described by some as the key to achieving authentic collaboration. These skills included *active listening skills, being truly present during conversations, speaking the same language* that could be *understood by all those involved*:

"be able to express how you feel...so contribute to the discussion...and give others space to talk" (MW4)

"how we measure ourselves in terms of our success ... is a lot more than just able to do the forceps delivery correctly, it includes the communication with those around as well as communication with the woman and her family" (OB2)

Clinical knowledge and skills

More obstetricians felt that knowledge and skills are attributes important to an effective collaborator (N= OB 5, MW 2). The midwives who do discuss knowledge and skills felt very strongly that where midwives do not have, or do not demonstrate, their clinical skills and knowledge there is a potential for the relationship between professional groups to be damaged or for one group to take control over the situation. The obstetricians are more direct in their requirement for sound clinical skills and knowledge:

"You got to be good at what you do...clinically competent in terms of brains and physically competent in terms of techniques" (OB1)

Knowledge and skills are also linked to gaining respect from others; the two seem to be inextricably linked. There is admiration expressed when skills and knowledge are evident:

“the ideal requirement [is to] be clever in terms of knowledge be clever in terms of skill but be humble in terms of capacity to listen and respect each other” (OB1).

Role definition: *knowing the boundaries*

Role definition, or at least understanding of roles and responsibilities, is a prevalent attribute especially for the midwives. There seems to be a requirement for both the professions to understand roles and responsibilities and respect each other’s scope of practice or sphere of influence. This is especially important *“to optimise the quality of the service that we provide”* (OB4)

Trust (and respect) *develops through sound/good clinical knowledge and skills*

Trust is an attribute identified by two midwives and none of the obstetricians. The midwives link trust to the requirement for good clinical skills *“to build the trust with the other profession”* (MW1).

To trust someone is to have confidence and belief in that person and be free from suspicion and doubt. Whilst the obstetricians do not mention the word trust in their dialogue they do mention respect and in relation to the clinical skills of the other person. It may be possible that when a person is respected for their clinical skills they may also be trusted in those clinical skills.

In analysing the complete interview material, it is apparent that every participant mentions all the above attributes through their vignettes and explanations but do not necessarily list them when asked this targeted question. This again demonstrates the importance of using different interview techniques to draw out the impressions of, and experience with, IPC.

Summary Step 1:

Most of the participants (N=8) could define IPC and all ten could identify the attributes required to be an effective collaborator consistent with the literature. Relationships and effective communication emerged as important concepts for effective IPC which develop through trust and respect linked to sound knowledge and clinical competence. There is identification of separate roles and responsibilities and a suggestion from at least two participants that a hierarchical structure exists between the professional groups.

10.3: Step 2-Vignettes: Exploring IPC

Participants presented a mixture of positive IPC vignettes (N= MW 1, OB 1) and negative examples (N=MW 2, OB 4) and two examples of situations that are not relevant to the definition of IPC. It is noteworthy that these two non-IPC examples are from the two midwives who previously stated that they were unsure about a definition of IPC. It is also noteworthy that from participants who were nominated as effective collaborators, there were only two participants who could describe a positive example they had either witnessed or had been involved with.

One example of IPC in action where the attributes of an effective collaborator are demonstrated is provided by one midwife. The example describes an incident where a woman experienced shoulder dystocia during the birth when this midwife was relatively inexperienced in her career. The midwife called for assistance when the dystocia was recognised; the doctor who assisted encouraged her with the manoeuvres until she nominated she felt out of her depth and beyond her experience level and asked the doctor to take over care. Afterwards the doctor sat with her *“he took the time and had the calm”* (MW4). He talked through the case and *“just the language he used and eye contact and the respect he showed sitting down and debriefing”* resulted in the midwife feeling trusted, respected and confident for future situations.

This example describes attributes of trust, respect, open communication, positive interpersonal skills and the difference that the midwife perceived this had on her ongoing confidence and perhaps competence in dealing with this kind of emergency in birth in the future.

This midwife adds that this has not always been her experience in this facility working with this team. For this reason, she appreciated this interaction and believed this had a positive impact on her ongoing effectiveness: *“So not everyone is like that no...but I hang on to that positive experience because there is positive too”* (MW4).

The examples where there was not effective IPC (N= MW 2, OB 4) involved situations where the skills and knowledge of the clinician were not at the expected standard which resulted in lack of trust and respect for that clinician. There are also descriptions of ineffective communication and tensions in relationships that result in defensive and avoidance behaviours being displayed.

All the vignettes describe the attributes required for IPC. Where the example demonstrates ineffective IPC the participant describe this in terms of the absence of some or all of the required attributes; whether that was trust, respect, effective communication or knowledge and skills.

Summary Step 2:

The vignettes describe how relationships are built over time, that there is a detrimental effect on IPC where collaborative attributes are not evident and IPC influences the quality of clinical care. Participants emphasise that relationships cannot be mandated or immediately created; they need time to develop and evolve: *“you can’t just create a relationship, and you need to have trust and unless you have that, ultimately collaboration won’t work... It’s an evolving relationship”*. The successful development of relationships depends on attributes such as trust and respect which are influenced by demonstration of knowledge and skills and effective communication: *“essentially it is a breakdown in collaboration and team work when you have people disagreeing”*. Where these attributes are not recognised and relationships are not developed there is a risk that control is taken over by one group over another, usually the obstetricians over the midwives, which then threatens role definition and consequently the relationships. This is summarised in the quote: *“If someone’s not looking and doing their job right, another person feels they have to take control”*. Participants note in this situation that control can continue to be exerted in ever perpetuating cycles until something can break the cycle.

Participants regard the effectiveness of the woman’s care as caught in the middle of this perpetuating cycle with a risk to the quality and safety of care. The descriptions evoke images of tension, aggression and unprofessional behaviour in the presence of the woman:

“the VMO (visiting/consultant medical officer) stood behind the curtain didn’t come in, communicated through the curtain” (MW2)

“actual conflict on a delivery room which is highly detrimental to patient care but also very detrimental in terms of collaboration and working together as a team” (OB2)

“just bulldozing when they don’t need to be there...everyone is angry, and the patient loses” (OB5).

The imagery portrayed by participants during the interviews of the working environment is akin to descriptions of conflict or battle and has been reported in research elsewhere in maternity care (Hastie & Fahy 2011). There is an ever-present threat that control will be taken by another

clinician, which is usually the obstetrician over the midwife; there are contested territorial areas which have played out in the birth space and often over the woman who is the voiceless victim and the potential loser in the battle. Safety zones, such as the curtain which the VMO chose to separate himself from the midwife and the woman in the quote above, are identified that offer some protection during periods of tension that enable interactions to occur without clinicians being present together.

The analysis reveals that, using the language of battle, the contesting teams are positive that there would be opportunity to be on the same side but this was only after you could prove yourself in battle; after you have survived the battles. The midwife's positive vignette reveals a win with one obstetrician who "*had the calm*" but the midwife also realises that there would continue to be battles with others.

10.4: Step 3 - Exploring Interprofessional relationships using Semi-Structured Questions

Step3a- Describing Interprofessional Relationships

In describing what interprofessional relationships are like around their workplace most of the participants (N=7) used positive descriptors and could respond immediately: "*I would say mostly relationships are very good...*". Two participants responded with negative sentiments explaining that it's "[not] *the best, the most conducive, um, relationships or environment*" (MW1).

On further analysis of the seven positive responses they are not definite about exactly how good the relationships are with the use of words such as *mostly, generally, some*. For all participants, the next words describe the negative side to the positive response. The responses seem to suggest that "*relationships are good but...*" with an ensuing description of why relationships are not the most conducive to the development of collaborative teams in this setting. Exploring below the surface of relationships that seem to be *good* amongst *good people* that made the workplace *a really nice place* reveals a different situation. The good people in the nice place didn't necessarily mean that the relationships are professionally effective or conducive to collaboration.

The thematic analysis of responses reveals the following six themes: *Building trust over time, physical and philosophical barriers to overcome, working the margins, avoidance and protective behaviours*.

Listening to the participants' words at the time of the interview and during subsequent analysis I developed an image of a cause and effect pattern of behaviour which would continue in a

perpetual cycle unless there was a deliberate intervention to change. The pattern seemed to be like this: for there to be effective collaboration there needs to be a relationship between people; these relationships develop over time and rely on the development of trust and respect. This trust and respect is achieved through effective communication and recognition of roles and responsibilities with good skills and knowledge. Barriers have developed over time because the relationships have not developed which leads to avoidance behaviour as a protective mechanism and this decreases the opportunity to communicate effectively to develop a better understanding of roles and responsibilities to develop trust and respect. When this cycle continues, there is potentially a risk to the effectiveness, or even the existence of, IPC.

The emergent themes describe this cyclic behaviour in more detail:

Building Trust over Time

Participants are definite that relationships cannot be mandated or immediately created; they need time to develop and evolve. The successful development of relationships depends on attributes such as trust and respect which are influenced by the demonstration of knowledge and skills and effective communication. Where these attributes are not recognised and relationships are not developed there is a risk that control is taken over by one group over another, usually the obstetricians over the midwives, which then threatens role definition and consequently the relationships. This situation can continue in ever perpetuating cycles until the cycle is broken.

“So with the registrars, for example, the more you work with them the more they get to know you, you get to know them and you build that trust” (MW1)

“you can’t create collaborative relationships, they evolve...you can’t legislate relationships... what it is really is mutual respect for other people and you develop that because you see the other person as a person, you have a relationship” (OB1)

Physical barriers to overcome

Barriers are described that limit the connection to each other; these barriers are either physical or philosophical. The physical barriers include curtains that separate clinicians, different designated clinical areas, different work place arrangements such as handover time that limit communication and interactions:

“the VMO stood behind the curtain didn’t come in, communicated through the curtain” (MW2)

“it’s difficult, because we do ‘hand-overs’ separate to each other, and that kind of in itself creates barriers because doctors are handing over to doctors and midwives are handing over to midwives...in essence that is a breakdown of communication” (OB4)

Philosophical Barriers to overcome

The philosophical barriers describe the clinical difference of opinion especially with respect to the importance of attempting to limit the rate of intervention in birth. Many of the midwives perceive they have a greater focus on minimising intervention and they perceive a different focus from their obstetric colleagues. This philosophical difference influences avoidance behaviour and side stepping consultations with individuals:

“trying to bridge those two views is often quite challenging ...midwifery group practice...has been criticised that they are unwilling to engage in the other half of the service, if their women are deviating off that normal path and similarly there are some of my obstetric colleagues who seem very quick to label things as abnormal, almost knee jerk reaction” (OB2)

“the whole Towards Normal Birth [policy] which is what women want and what we’re trying to aim for, for 2015...I only see one doctor who supports it here. The other doctors are mistrustful of it and they teach the younger training doctors to be mistrustful of it as well” (MW3)

Working the margins

Understanding roles, responsibilities and scope of practice is integral to developing effective collaboration. A lack of understanding of roles, however, could contribute to uncertainty in behaviour with other colleagues and could potentially jeopardise the trust and respect between colleagues. An example of this is the understanding that midwives are responsible for the care of women where no clinical risks are identified and the obstetricians would be engaged once risk develops or assistance is required. Whilst this seems to be clearly defined, the success of this situation is reliant on effective communication between clinicians who share respect and trust: *“that’s where the sort of collaboration should happen quite nicely there but I think due to certain perceptions of fixed views it seems to limit collaboration often” (OB2)*

Participants describe examples from their experience where clinicians overstepped the defined boundaries of their role into others’ jurisdictions that creates tension and potential disengagement. Others describe clinicians who are not competent in skills within their domain

but overstep the boundary into the domain of other clinicians. This intrusion across professional boundaries strains relationships which then leads to mistrust and disrespect which then affects collaboration which then potentiates the mistrust and the situation continues in a cyclic pattern:

“they check the woman, what’s she doing in the bath...and dramatise and I’m thinking... have I missed something. So I question it [my practice] because [of] their fears and they need to obviously do their job properly or the job that they’re equipped to do.” (MW4)

“I often hear...about people who have ‘fallings-out’ with midwifery staff, often to the point of actual conflict on a delivery room which is highly detrimental to patient care but also very detrimental in terms of collaboration” (OB2)

Avoidance behaviour

Avoidance behaviour is frequently described by participants. For some this avoidance is patterned or learned behaviour influenced by incidents experienced previously in their career. For other participants, the avoidance is more relevant to individuals they work with in the present time. The avoidance generally occurs as a protective mechanism against a physical or emotional threat:

“The midwives were very, very protective at that other place...because they knew about the bad behaviour of.... some of the obstetricians. The midwives stuck together...You can't call that collaboration...that's just, living in fear. It's like you're not on the same team and you've got to, be defensive about the other team coming too close” (MW1)

“And I know there are those that I would probably avoid for whatever reason whether it's because of lack of respect of your own abilities or the profession as a whole or belittling of your knowledge and experience...I think that you probably just make a mental note of that and you go elsewhere” (MW2)

“the juniors they do pay attention to who [VMO] is on call. They will tend to check with the more senior registrars about management plans in anticipation...make sure that there is a plan in place and they know exactly what to do and how to I guess argue or explain the situation so that things that should be done get done [they develop a system to work around the people who are on call]” (OB3).

Protective behaviours

Although the perception is that relationships are good in this facility there are references made to negative behaviour traits that permeate the responses. There are adjectives and descriptors of aggressive, patronising, intimidating and exclusionary behaviour. These traits are not attributed to the entire team, but the participants could identify the perpetrators and had learnt to adopt protective behaviour strategies:

“confidence...and at times where it’s not present I think that’s where that becomes hurt and you feel attacked and sometimes pinned, pinned down” (MW4)

Summary Step 3a:

With respect to relationships in this organisation they appear to be good on the surface but deeper examination reveals an environment where there are physical and psychological barriers to overcome with time for the relationships to be effective. Clinicians have learnt to work at the margins and have developed avoidance and protective behaviours to manage the relationships.

Step 3b - Confidence in interprofessional teams

Participants were asked to describe how confident they felt working in teams of different professions and whether their confidence influenced their ability to openly discuss and debate issues especially in relation to the provision of clinical care and care planning.

All the participants state they feel confident working within the interprofessional team and can openly discuss and debate issues. However, most of the participants then add that this confidence is influenced by who was in the team at that time, the familiarity they have with each other and the quality of the relationship they have developed. When the person is known to them and they have shared previous positive experiences there is confidence in interactions. Conversely, where there is no established rapport there is usually a lack of confidence that could even affect the way that participant would practice or behave. For some this lack of an established relationship leads to feelings of intimidation and nervousness:

“I feel confident with the ones that, know me...It does depend on who I'm with... that condescending behaviour...telling me things I already know...it comes across, condescending, patronising” (MW1)

Confidence levels are also affected for some participants by the seniority of people in the team and their role within the service. The visiting medical officers (VMOs) are one group within the whole team that seem to have less of a relationship with those who work regularly in the service.

VMOs at this facility have allocated sessions in the antenatal clinic and share the on-call roster in the birthing environment. Therefore, they are less visible than the staff specialists and the registrars who work alongside the clinicians daily. By this work arrangement, the VMOs have less opportunity to develop professional relationships:

“Depends ...I feel pretty confident to be able to debate and discuss. Ah, medical, no. Not with the VMOs at all” (MW1).

For one participant, there is a gender issue that creates lack of confidence for her. There is an admission that she owns this feeling and it is her issue but it remains a reason for different behaviour in the team:

“It's the males [pause] Um and, that sort of, booming voice. Big male thing. So it's probably stuff about me Um [pause] Yeah... I do get intimidated by that” (MW1)

For another participant, it is the variation in age that influences the degree of confidence to discuss and debate:

“I'm not as confident maybe to talk to some of the senior doctors as I am to talk to the younger doctors” (MW3).

Previous experiences colour the present

There are comments made about past experiences that influence the way participants behave today within the current team. In the formative years as a beginning or novice practitioner there were incidents of aggressive behaviour perpetrated from senior clinicians either in the form of verbal abuse or physical threats with instruments and equipment thrown at them or at others as witnessed by the clinicians. A response to this, either as a conscious or subconscious response, is to expend additional energy to ensure there is nothing for the perpetrator to criticise or complain about. Some of the clinicians practice in fear of retribution:

“I've seen stuff thrown across the room by an obstetrician because a midwife didn't open the right size of gloves. That behaviour stays with you” (MW1)

This particular midwife felt protected from this behaviour by her senior midwifery colleagues and mentors in her formative years. That protection influences the way she attempts to protect the student midwives she works with today:

“I expect other midwives to protect other midwives. I don't like when I hear that a student midwife was yelled at... or degraded...that goes back to the old glove throwers. I get very protective of that” (MW1)

One participant also reflects on experiences in the past where overt bullying behaviour was evident. For this participant, this behaviour had positive results in holding clinicians accountable for their actions and encouraged them to develop skills and knowledge to avoid repetition of the error:

“if you got the VE [vaginal examination] wrong ...she’d say you’re a bloody idiot to the midwife, and the girl possibly would go home and think geez I’m hurt badly, and they come back resilient and do something better” (OB1)

The concerns raised by this participant are not necessarily the lack of bullying but that the current systems have not replaced the bullying behaviour of the past with a system that would ensure safe and accountable practice. The current process of formal examination of adverse incidents has taken a systems approach with no examination of an individual’s practice that may contribute to the outcome:

“I remember being sort of bludgeoned over the head by [Dr] when you got one [VE] wrong, then you learnt. But we don’t do that anymore” (OB1).

The personality of the team members involved makes a difference to the confidence level of participants in interactions. In situations where the person has an approachable amenable persona the participant is more likely to be confident to engage in debate and conversations. Conversely, different personalities lead to avoidance behaviour even when the participant assesses themselves as being confident and well skilled:

“I don’t know if it’s personality or if it was the way I did my training in the hospital system whether you never question the medical staff’s judgement...there are those that I would probably avoid for whatever reason whether it’s because of lack of respect of your own abilities or the profession as a whole or belittling of your knowledge and experience. And that just comes with the way that you’ve been dealt with in previous experiences I suppose” (MW2)

“Good examples, Dr [XXX] is a wonderful example of someone that collaborates well ... he never makes you feel like an idiot. He always listens with intent to go forwards with the communication” (MW2)

There is a sense of seeking out like-minded colleagues who the participants feel confident and comfortable with to discuss and debate issues. This could be in the form of a preliminary discussion as a sounding board prior to going to the person they are to report to. On occasions

information was not disclosed to the right person, they were avoided or side stepped in preference to another. The clinical risk with this avoidance behaviour occurs when the person who needs the information to provide safe and effective care may not have the accurate information in a timely manner:

"[Dr] was notified about the transfer but sometimes the midwife at [hospital XXX] would not tell the delivery suite at [Hospital YYY] and so suddenly out of the blue this woman would rock up and we would go who the heck is she, what's going on and then she would say [Dr] has it all organised" (OB3)

"...the registrar wasn't sure, it's very hard, they are trying to find their ground in terms of leadership and in terms of collaboration and they are trying to, you know, develop themselves clinically and professionally ...[the midwives] were trying to ring me because they know me and told me to come and sort it out and that again, is fine, but it's difficult on the junior registrar because ultimately they need to be learning about those things" (OB4)

Summary Step 3b:

Many of the participants feel confident working in the interprofessional team depending on who the people are and what the issue is. Confidence is at times negatively affected by personality, age and gender with participants developing avoidance behaviour or seeking out like minded colleagues for assistance and support. For some the avoidance behaviour is influenced by past experiences that have coloured present feelings and behaviours. The risk with this lack of confidence and avoidance behaviour is the lack of collaboration when an issue arises and a like-minded person is not available.

10.5: Step 4-Unwritten ground rules

The responses to each of the unwritten ground rules are described here:

Around here being open and honest gets you... *everywhere and nowhere*

Most participants provided a negative response to this phrase: *"I can't actually say what I was going to say because it might be a swear word"* (MW 5). One obstetrician's response is positive but with a suggestion that this is not always the case: *"generally you just get feedback ... you don't necessarily get attacked or victimised or anything"* (OB3).

The response in the workplace to being open and honest depends on who is present at the time and the circumstances. In the care of women, participants are more likely to be open and honest about the clinical information shared with both their colleagues and the women. They perceive that this is likely to gain respect and trust. However, in team meetings and planning sessions, participants are more likely to be closed or selective with information and *“careful...about how much to disclose”* (MW 1) due to uncertainty about the response. There is a sense of mistrust and cautiousness and a need for self-protection, *“I would say it just makes problems worse”* (MW 5), or protection of others: *“we weren’t really open and honest ...it was thinking of protecting that relationship at the time”* (OB2).

Some participants use words that suggest physical harm from being open and honest:

“gets you kicked in the teeth...and then being jumped on from a high” (MW 2)

For one obstetrician, there is a sense that to be able to develop relationships *“you make yourself vulnerable by ... being open and honest”* (OB1). This is considered a risk and if it did have a positive result then there would be personal gain through the development of a trusting relationship. However, a negative response would require a personal investment in attempts to recover from that situation. This could also lead to avoidance of a similar situation in the future as a protective mechanism.

Overall there is a sense that participants prefer to be selective about when and with whom they are open and honest. With some they know they would gain respect and trust from being open and honest, with others they need to protect themselves against a negative reaction and in some situations, there is avoidance as a protective mechanism.

Around here people are treated...*differently*

All five midwives and two of the obstetricians provided a negative response to this phrase. There is a sense that people are treated differently depending on their years of experience as a clinician, years of work at this hospital, the model of care they worked in and the perception by others of their knowledge and skills:

“Depends on who... I don't think they are always treated with respect...for their knowledge and skills” (MW1)

“that is tough I don’t think I could answer” (OB4)

“there’s a reasonable amount of personal respect for people” (OB1)....

This UGR was deliberately used to determine the respect and shared power within the team. The word *respect* is used in both the positive and negative responses.

Around here when you come with a new idea...*nothing happens*

Of all the phrases offered to the participants this phrase evokes the most emotional response and the most consistently negative attitude. For all participants, there is a range of negative descriptions of their own and others' experience with attempts to implement change or suggest a new idea. For some there is absolute blockage to innovative ideas:

"We try to do some innovations or, have some ideas and they can be pushed back for years...It's sort of... [sighs] stuck" (MW1)

"There's a big 'can't do' attitude around here I reckon" (OB1)

If ideas are acknowledged they may *"not always [be] actioned or listened to"*, not be actioned at all or the time lag for development or implementation of the idea is unreasonably protracted. Whilst there may be *"good will to want to change things there is a lot of inertia to change"* (OB2).

Ideas that could potentially have a financial benefit to the organisation are more likely to be acknowledged than innovative ideas that may improve clinical outcomes or that are based on evidence. The reaction that participants have experienced themselves, or observed in others when ideas have not been acknowledged, is avoidance. This may be avoidance of coming up with new ideas or avoidance and disengagement with processes of change out of frustration with the inability for change:

"puts you off...You then don't... keep trying all the time...It's frustrating" (MW1)

Around here when you need help...*you can get it ...from some...for somethings*

The response to this phrase reveals an overwhelming positive sense in the workplace that people are willing to offer help when asked. In exploring this further, it is apparent the response is related to providing help in the clinical environment in the direct care of women and babies. Participants have confidence that their colleagues would support them especially if there are issues of safety involved. There is again a sense of knowing who to ask. Even though all participants perceive that if they ask for help they would get it, there is also a sense that help may not be provided by all colleagues. Knowing who to ask, who you could trust to assist and how to ask for that assistance made a difference:

"You know who to ask...and who it's not even worth asking" (MW2)

Knowing who to ask for help and who to trust could also have a potential negative impact on the workplace and on the delivery of safe care. There is a perceived risk if clinicians do not have anyone around who they could trust and they seek an alternate opinions or support from other colleagues who may not have jurisdiction or responsibility for that support or assistance:

“A lot of people ... shop around and there’s too many people here...There’s people who are very approachable, very trustworthy ... but they’re not always around or available and [they] tend to sidestep them” (OB1).

Most participants perceive that if they ask for help they would receive this and conversely most participants perceive from the previous UGR that if they come up with a new idea this would not be acknowledged or not acted on. There did not seem to be a correlation for the participants between the notion that if they came up with a good idea they would be given help to develop or implement the idea. Therefore, the participants were then deliberately asked to differentiate the two and once again there is a sense that help was only available for somethings and especially not for new ideas or for change:

“No I think the new ideas is a real problem...I think there is a lot of people who are just interested in doing status quo, not realising that it could actually be better” (OB2).

Around here when you tell someone something in confidence...you know who to tell

For this phrase, all ten participants have either overt doubt or some degree of suspicion that the information would be kept confidential. The participants know who they can trust and who they can share information with and have confidence that the information would not be shared or that gossip would not eventuate:

“it’s probably going to be told everywhere...I think there’s a lot of gossiping going on around here” (MW3)

“It’s a joke, this is the worst place I’ve ever worked... it appals me” (OB1)

Summary of Interview Step-4

The specific attributes that are explored through the UGRs in this part of the interview and in line with the attributes of IPC are: respect, trust, shared power, communication, team work, shared objectives and responsibility.

The analysis of the responses to all the UGRs show the participants describe this organisation as a place where being open and honest gets you everywhere and nowhere; where people are treated differently; where nothing happens when you come up with new ideas; where you can

get help from some for somethings and not others and where you must know who to trust to tell something in confidence. Therefore, the culture as perceived by these participants is one where there is lack of trust, lack of respect; where power, objectives and responsibility are not shared; where effective communication and team work are not pervasive.

The participants used strong descriptive language when completing some of the statements. For example, being open and honest would usually be considered a valuable attribute in anyone including work colleagues. For some this was not the case instead it *“gets you kicked in the teeth...and then being jumped on from a high”* (MW 2). There is also a belief that trust is less evident than that experienced anywhere else: *“It’s a joke, this is the worst place I’ve ever worked. I’ve never known so many busy bodies as I do in this place and it appals me”* (OB1).

The responses to the UGRs provides an image of a workplace that does not have the attributes of an effective organisation or one that is conducive to change. In addition, the culture is described as having inertia when new ideas are promoted and participants have experienced this over the duration of their experience in this workplace: *“have some ideas and they can be pushed back for years...It’s sort of... [sighs] stuck”*.

10.6: Step 5- Verifying the findings of the Competing Values framework

In this section of the interview the participants were shown a graphical representation of the results of the survey conducted in 2010 (see Chapter 7, Section 7.5) that identified the predominant culture to be one of hierarchy with least emphasis on teamwork and encouragement of new ideas and innovation. All ten participants agree with this analysis. All participants also agree that all four cultures are important within an organisation, but it is the predominance or focus of a culture they would like to see adjusted.

Hierarchy seemed to feature as a discussion point for most of the participants with the impression that if there is less of a hierarchical culture there would be greater scope to increase the other cultures and perhaps increase the scope of innovation in teams. There is a sense that there is a *“hierarchical model of just being told what to do from the top”* and that there needs to be certainty that whoever is in that top position has the right direction to ensure clinical safety. If there is a structure where there is greater teamwork and collaborative, respectful relationships, *“bring[ing] this clan up to pace with the rest”* then the hierarchy would not need the *“strictness and rigidity”* and there could be a greater possibility for change.

The participants describe the negative impact of a hierarchical culture on their ability to implement change. They identify opportunities to improve the quality of care that would

ultimately improve the experience for the women and the staff and could describe the clinical area that could benefit the most from reorganisation of work processes: *"I would love to see the clinics change, clinics are horrible here, no-one likes working in them"* (OB4). However, these changes have not been possible and this inability to effect change has led to decreased motivation and enthusiasm to engage in further change processes: *"In terms of the inability to innovate...it really does seem to be extremely difficult even in the face of good evidence that has come in...making change is difficult"* (OB2)

The participants were shown the results of the second part of the survey where respondents were asked to imagine how they would like the organisation to look in five years if there was to be successful change. The desire was for less predominance on hierarchy with a desire to work more as a team with recognition of initiatives with greater flexibility in work practices. They preferred a work place that was dynamic and changing. All ten participants agree that a change in culture is desirable and the suggested change is away from a predominance of hierarchy.

There is a desire amongst the participants for the culture to be different to today and to be like that expressed in the CVF survey results. For some there is optimism that this could be achieved and that the organisation is *"poised to change"* and that there is opportunity and *"hope that things can change"*. One participant wonders *"what we are doing wrong that has us on the flip side so I guess the challenge is to work out what we are doing wrong because then we know how to fix it"* (OB5). For others there is a feeling that change is achievable but it would require considerable effort, *"it's a hard uphill battle"* (MW2)

Summary of Interview Step-5

The design of each section of the interview process was to extrapolate information from participants that would contribute to an accurate understanding of their workplace from the perspective of IPC. The previous CVF survey findings were verified by these participants that the predominant culture is one of hierarchy with a *"strictness and rigidity"* where individuals, teamwork and innovativeness are not valued or appreciated. There is a sense that this contributes to the inability for change and innovation to be successful. Participants do recognise that all culture types are important, but that the predominance needs to change to develop a culture more conducive to teamwork, innovation and then, inadvertently patient safety.

All participants agree that the Clan culture is the least predominant of all four culture types. Some of the descriptors for this culture are feelings of teamwork and trust, an orientation towards collaboration and cohesion; a sense of commitment and loyalty where work is done

together. If this is the workplace participants would prefer, then by deduction this is not how the current environment is viewed. The overall results of the initial CVF survey, and then confirmed by these participants, indicates a lack of readiness to change but a strong preference from participants for the culture to be different.

In addition, the initial survey to staff was a paper based anonymous survey with the responses limited to a scoring system of the organisations' characteristics. The advantage of using the CVF results in an interview setting is that the participants had the ability to contribute descriptors and exemplar that adds a rich dimension to the previous quantitative data. For example, participants sought change but they *"think it's a hard-uphill battle", "there just seems to be a complete lack of vision and a brick wall that is met", "it really does seem to be extremely difficult even in the face of good evidence"*. These kinds of descriptions provide emotion to the responses as well as the depth of the feelings; the frustration is almost tangible in the choice of words. For these reasons using this method in the interview was beneficial in providing a better understanding of the reality of the participants' world from the participants' perspective. This approach provided an opportunity to discover the organisation's unconscious culture, or the shadow organisation, to make the invisible more visible to understand what needs to change and then to develop accurate strategies for change.

The interview data in the first two sections provides an impression that IPC in this organisation is perhaps more rhetoric than reality. Hearing the participants discuss the results of the CVF also confirms this impression. All ten of the participants spoke emotively about their frustrations with the apparent inability to effect change, the inertia of the organisation and the concerns this raised for them in terms of the delivery of safe care. Apart from the negative impact of being in an organisation that is too rigid to change in the face of sound evidence, participants are concerned, not only about the affect this has on them personally and as clinicians but also the impact this could have on the women in their care. However, amid the negativity there remains altruism that can be harnessed to influence the process for change.

10.7: Step 6-Photo Elicitation

When presented with the photo (Figure 12, Chapter 9, Section 9.2) most of the participants were very quick to respond with descriptions that drew comparisons between the image and their workplace and colleagues:

"I'd tell you straight away what I think. I see these [wildebeests] as sort of...obstetricians. They're the big...um...wildebeests standing up. And I, I don't like to

say it but I see the midwives as the little warthogs going along...like beside, sort of, on their knees" (MW 1).

For two participants (OB3 and OB5) there was a degree of discomfort with comparing the photo to their workplace or more specifically to the people in their workplace. Even though the photo could represent a positive example of IPC, these two participants felt that the researcher's intention was to describe the workplace in a negative way:

"I don't really want to comment on that...I am not quite sure where you want me to go here" (OB3)

"I can see what is possibly being implied but I don't think this is actually the way I see our work environment...I don't think it's related at all to us" (OB5).

This participant (OB5) did not offer any further interpretation as she did not believe this was a representation of her workplace. Two more probing questions were asked of OB5 to invite additional interpretation from any perspective, but there was an unwillingness to continue: *"I don't see a link, no" (OB5)*. In respect of the participant the interview was gently terminated at this point and an invitation extended to make any additional general comments from the whole interview process.

In contrast two of the participants interpreted the picture with a positive lens that suggested that effective team work despite differences that created personal satisfaction could then improve the overall environment:

"There are two animals working together ...in the same place and not being too upset with each other" (OB1)

"different animals that are all doing the same thing and they are all eating together and they are working in harmony... so actually if individuals get individual satisfaction from this, then as a unit it is a much happier environment to be in" (OB3)

Nine of the ten participants described the wildebeests as representing the obstetricians and the warthogs as the midwives. Those (N=4) who provided commentary on the one warthog eating alone separated from the herds suggested that this represented a MGP midwife. They suggested that the MGP midwives work more on their own, are more isolated from the rest of the team and at times *"just do... [their] own thing"*.

Emergent Themes

There were three emergent themes from the photo elicitation interview data: *Knowing your Place*, *Adaptation for Survival* and *Doing Your Own Thing*.

Knowing your Place

In nature hierarchies develop in different ways but with the commonality of communicating to, or interacting with, others from a dominant or submissive position. This positioning can be based on attributes of the animals such as the size and strength. Or the status can be achieved through an act to achieve dominance such as an aggressive encounter (Markham 2008). These hierarchies are then maintained by the same differentiating attributes or success at nominated encounters. The animals know their place within that hierarchy.

In a similar manner, participants had an understanding that a hierarchy exists between the members of the team, they know their place within the hierarchy and can easily identify characteristics of the members of the hierarchy. Most participants describe the wildebeests as having a greater stature, are more powerful, have more obvious weaponry and have control over the activities and these animals represent the obstetricians. They have a consistent impression of which animal represents which discipline in maternity care and which attributes define them in terms of the hierarchical positioning:

“I see these as...obstetricians...they're the big, um, wildebeests.... They can just go wherever they want and get their hay...Big horns...big sharp horns” (MW1)

“Big powerful bullies [obstetricians] with horns at the top of it all...and the rest of us snuffling around at their feet” (MW2).

“I'm looking that's warthogs, midwives and wildebeests who are obstetricians...and there's the big guys which are the wildebeests seem to be quite comfy around the little guys, interesting they both have fantastic weapons...but they're not using them” (OB1)

Similarly, the warthogs are described as representing the midwives and in contrast to the wildebeests they are of smaller stature and at the feet of the larger obstetricians or in submissive positions and are seen to be “scavenging” for some of the action as midwives:

“The workers are on their hands and knees... snuffling around at their feet” (MW2).

“this warthog [midwife] looks like he might sort of be pushing in a bit more than he should be in terms of the wildebeest territory...sometimes people do overstep the mark in terms of what their position should really be doing” (OB2).

Although there are an equal number of the two species of animals in the photo some of the participants perceive there to be a greater number of wildebeests. Their size and stature gives them a greater sense of presence in the group suggesting that obstetricians have a higher profile or presence than their midwifery colleagues.

Within the group of wildebeests, identified as the obstetricians, there is also differentiation of their positioning based on their role and status within the team:

“There are probably some staff specialists at the front. And they're the VMOs [Visiting Medical Officers] down ...In the big high...hay area” (MW1).

“where is the lion, where is [Dr] out there, he is stalking somewhere in the grass, that is what I am worried about...the danger of what lays outside of where they are” (OB4)

In describing these two professional groups working together there is an image emerging of harmonious relationships when everyone is cognisant of the hierarchy and manages to remain within the boundaries of that hierarchy. There is uncertainty as to what would happen if that equilibrium is to be upset or changed.

Adaptation for Survival

Adaptation for survival in evolutionary terms could relate to the Darwinian theory of natural selection (Darwin 1859) or survival of the fittest (Spencer 1864). A species manages to survive because of the strength of attributes which enables them to adapt to unfavourable conditions. Participants describe the animals demonstrating behaviour traits that support or influence their survival in the group or at least to create more conducive conditions for survival.

The animals remain together in the environment but there are deliberate attempts to manage the situations for survival. For example, the wildebeests (obstetricians) have greater access to food which could be a direct link to survival. However, the warthogs (midwives) persist in trying to gain access and “scavenged” for their food. There are suggestions of inequity between the groups between those who have food and those who struggle to get enough:

There is also a sense of wariness of others similar behaviour to how an animal would behave towards a predator. This adaptive behaviour is between members of the same profession and across professions. One participant is concerned about how relationships would be if there is a

change to the financial earning capacity of the obstetricians: *"I'd love to see that effect if they got poor I don't know how we would fare in that situation"* (OB1). Provided the status quo is maintained with sufficient food for all, relationships would be harmonious. However, if there is a threat to livelihood the relationships may change especially when obstetricians are described as *"not...intrinsically good people ... they are intrinsically lucky people"* (OB1).

There is a sense of tribal protectiveness amongst the species with the group huddled for security: *"they're all huddled together really tight... little warthogs... all sticking together over here"* (MW1). For one participant, there is not sufficient wariness to secure protection. There is a sense of nervousness about the animals eating grass when they should be aware of the potential predators amongst them: *"where is the lion, where is [Dr] out there, he is stalking somewhere in the grass, that is what I am worried about...really no-one is looking at the bigger picture which is [Dr] lurking"* (OB4).

This tribal mentality is also described as a mechanism to rise up against the others and gain greater control: *"There's more workers than there are big people...so the ground swell I think could work...steam roll them out of the way...chop them off at the ankles... [that is a collaborative idea]"* (MW 2).

Doing your own thing

Many of the animals are described as *"doing their own thing"* or words to that effect. Given that the theme of the interviews is on IPC the photo evokes descriptions of members of the team who are more inclined to be doing their own thing, working on their own and being disengaged from the group activity. Most participants could see individuals or groups of colleagues in their workplace represented in the photo that would be doing their own thing and not necessarily working together:

"That's probably a MGP midwife, the poor thing out there" (MW 1).

"Warthogs...I see them with their heads down and I think that a lot of work colleagues [midwives] here go along in their day to day job doing the minimal...we could do with lifting our heads a bit more to what is going on" (MW 5).

"some people are sleeping up the back and so there are quite a few people who may be just happy to chug along with the status quo, people have got their heads down..." (OB2).

“doctors and midwives with a common goal...but each doing their own thing at the moment, even though they are mostly grouped together...and really no-one is looking at the bigger picture...” (OB4).

Doing Your Own Thing is incongruent with the philosophy of collaboration. The participants describe behaviour of disengagement, disinterest, positioning themselves away from colleagues with their backs turned away, their head down and not aware of the bigger picture. It is interesting to note that some participants recognise the warthog eating away from the group as a MGP midwife. Given that MGP is a model of care based on collaboration there is a disparate perception of them doing their own thing and not involved with the whole group.

Summary of Interview Step-6

The method of photo elicitation interview (PEI) was used as the final step in the in-depth semi-structured interviews with participants exploring their impression of interprofessional collaboration in their workplace. This method was chosen to stimulate a greater depth of response as often participants can be constrained by the conventional structure of interview questions.

For most participants, there is an immediate response when the photo is examined and they can draw a comparison between the animals and the relationship with colleagues in their work environment. These participants can identify individuals, professional groups and behavioural traits from the people in their real world as depicted by animals in the photo. For two of the ten participants, there was a presumption that the photo was being used in a manipulative way to evoke a negative description of the work environment: *“I can see what is possibly being implied but I don’t think this is the way we are ...I don’t think I don’t think it’s related at all to us” (OB5).* There was little further description offered by this participant.

With respect to the philosophy of IPC, the three emergent themes from the interview data: *Knowing your Place, Adaptation for Survival* and *Doing Your Own Thing* provides strong evidence from the participants of the nature of IPC at the research site. By isolating and examining some of the words from Petri’s definition (2010) such as *shared objectives, decision-making, responsibility, and power; atmosphere of mutual trust and respect, effective and open communication, acceptance of the roles, skills, and responsibilities of others* it is evident that the reality as described by this group is not one of IPC. There is strong hierarchical construct in the team with evident power struggles, fear, avoidance behaviour and disengagement as a means for protection and survival. This is consistent with other studies that have explored IPC

(Grudinschi et al. 2013; Keller et al. 2013; Rice et al. 2010) and specifically in maternity care (Hastie & Fahy 2011; McIntyre, Francis & Chapman 2012; Munro, Kornelsen & Grzybowski 2013; Reiger & Lane 2009).

The participants recruited to this study were those nominated by their peers as being effective collaborators. They have attributes that set them apart from their peers. However, their own descriptions of their workplace reveal that effective collaboration amongst their peers is threatened by strong hierarchies, adaptive behaviour to survive and disengagement as a protective mechanism. This insight into the work environment is invaluable if collaboration is presumed or if strategies are to be implemented for change that rely on collaborative behaviour

Photo Elicitation as an Effective Techniques

In terms of PEI this is an effective method to elicit different descriptions and emotions from participants than the words-alone questions. The imagery is deep and the adjectives used are more powerful than the words used in the previous interview components in this study. The idea of midwives *scavenging and huddled together* for protection amidst the *big powerful bullies* with *big sharp horns* is evocative to the reader and suggests a hostile environment with unequal relationships and power struggles. PEI can enable the participant to respond with greater spontaneity, greater clarity and with less constraint as they are describing what has been already formulated in the photo as opposed to their opinion with words-alone techniques (Emmison & Smith 2000; Pauwels 2015; Petermans, Kent & Van Cleempoel 2014). The participants feel safer to reveal the reality of their world through the PEI as the picture has already been created for them.

10.8: Discussion

The participants understand IPC and the attributes required to be an effective collaborator. They can describe what IPC *looked like* from a behavioural and attitudinal perspective in the workplace. Few of the participants could recall a situation that demonstrated effective IPC, they explained that IPC was less likely to occur unless there are effective relationships where trust and respect are evident. Where relationships are not developed, participants describe avoidance or protective behaviour and the act of deliberately seeking out of like-minded colleagues. This avoidance behaviour then jeopardises the possibility for relationships to be developed and the circuitous cycle continues. The first three steps and line of questioning were effective in slowly revealing the nature of the workplace of these participants which they highlight as risking the quality and safety of the care provided: *“everyone is angry, and the patient loses”* (OB5).

Using a method to identify the UGRs during the interviews was effective in revealing attributes in a more subtle manner than asking overt questions. For example, asking a participant if people were trusted or respected in the workplace may have resulted in different answers to those gained using this method. Participants did not need to think about the response, they were spontaneous and descriptive.

The responses to the UGRs provides an image of a workplace that does not have the attributes of an effective organisation or one that is conducive to change. There were strong emotions expressed by the participants of disappointment, frustration, exasperation and hesitance to continue to actively engage in the workplace especially with respect to promoting change. The culture is described as having inertia when new ideas are promoted and participants have experienced this over the duration of their experience in this workplace where individuals may: *“have some ideas and they can be pushed back for years...It's sort of... [sighs] stuck”* (MW1).

The initial findings of the CVF survey are verified by the participants in interview with unanimous agreement of the predominance of a culture of hierarchy with less emphasis on teamwork, collaboration and innovation. With an organisation described as being *“stuck”* this is consistent but also important in describing the reasons for the current situation and a solution for moving forward. Like the findings of the initial survey, these participants prefer the organisation to be different than it is today and wish to be valued as a team member and engaged in change.

Using PEI technique was effective in being able to draw out evocative impressions, thoughts and emotions from the participants. The responses from PEI seemed spontaneous with descriptions and interpretations flowing as soon as the photo was visualised. Whereas in the previous questions the participants seemed to be more measured and deliberate, carefully choosing the right words to describe their thoughts.

In terms of a useful interview technique, PEI was effective and contributed a deeper dimension to the interview data than the previous methods. In terms of IPC, the data provided by these participants describes a workplace that does not have the attributes consistent with the definition of IPC used for this study. There is a pervasive impression of a hierarchical structure that is medically dominated rather than a shared power structure: *“The workers [midwives] are on their hands and knees... snuffling around at their [obstetricians] feet”*. This is not consistent with the definition of “shared objectives, decision-making, responsibility, and power”. In addition, there is a suggestion of a status differential between the professions in terms of wealth and condition with the obstetricians *“in real good condition”* and the midwives *“scavenging up for a bit of food”*.

The formal definition of IPC describes relationships of mutual trust and respect between the professional groups (Petri 2010). Participants in this study describe relationships of wariness and mistrust: *“where is the lion, where is [Dr], he is stalking somewhere in the grass...the danger of what lays outside of where they are”*. There is also a lack of respect *“steam roll them out of the way...Chop them off at the ankles”, “Big powerful bullies [obstetricians]”*.

There is awareness and acceptance of the roles, skills, and responsibilities of the participating disciplines as described in the definition. However, there is also recognition that the boundaries should be maintained: *“this warthog [midwife] looks like he might sort of be pushing in a bit more than he should be in terms of the wildebeest territory”* (OB2). The professional relationships are harmonious when the participants remain within their own *“territory”*.

In maternity care, there is the potential for conflict in the space that intersects the accepted domains of practice of the midwifery and the obstetric professions; in that grey area between what is assessed from a clinical perspective as normal or abnormal. This area may be where IPC could be truly tested or could become evident. Where there is mutual trust and respect for individual roles, responsibility and expertise there could be a smooth transition between primary responsibility for care as the borders of clinical normality change. At this point the wildebeests and the warthogs could be *“two animals working together ...in the same place and not being too upset with each other”* (OB1); *“lots of different people, different animals...all eating together and they are working in harmony...”* (OB3).

Research Question 1a): a. Does this organisation exhibit the characteristics associated with readiness for change to comply with policy to reduce intervention in birth? These findings further confirm previous findings of a lack characteristics required for readiness for change. There is no shared psychological state between participants with respect to their commitment to change and change efficacy. The participants strongly described an organisation that had system inertia where change had not been possible in their experience.

10.9: My reflections / Impressions of the In-depth Interview

From a research perspective, the interview data was fascinating and revealing and clearly described how the workplace relationships were for these participants. As the researcher participating in the process I was on the one hand excited about the revelations and how the data could be used for the study purposes. On the other hand, I was shocked by the intensity of the emotions of the participants as they described the negative aspects of their workplace.

I felt strong emotions from the participants of disappointment, frustration, exasperation and hesitation to continue to actively engage in the workplace especially with respect to promoting change. There was a palpable feeling of helplessness in the workplace despite a desire to create a positive change. I had the impression that the participants were in their most genuine state when describing the photo and almost as if they could not stop the words. The photo was a powerful mechanism to unlock conscious and unconscious thoughts and feelings and gave me a deeper insight into what relationships were really like on a personal level for the participants especially in terms of protective mechanisms for survival, wariness of predatory behaviours and disengagement from the pack.

In my reflections in chapter 6 on the low response rate to the survey I speculated that the lack of participation could have been due to lack of motivation for participation or perhaps a sign of something else. That something else could be of greater importance than a survey response rate especially if it is linked with unstated unmet needs from clinicians who may be disenfranchised and have become disengaged from extraneous activities in the workplace. The interview data adds to this speculation with the participants revealing workplace relationships that are sub-optimal and not conducive to achieving self-determination or self-efficacy. There may indeed be unmet needs but which have now been stated.

In addition to the overall benefit in gaining new knowledge through the study, as the interviewer I observed potential positive benefits for some of the participants through revelations that occurred. Studies have identified that an interview process provides participants with the opportunity to be listened to, to have a time for self-reflection and the possibility of gaining new personal knowledge (Wolgemuth et al. 2015). This opportunity could lead to the participant gaining a deeper understanding of self as an unpredicted consequence of exploring ideas that arose through the interview (Birch & Miller 2000; Campbell et al. 2010). In this interview one participant recognised for the first time how experiences from her formative years as a midwife had shaped her current practice:

“so maybe that has shaped me. Oh! Gosh! [pause] That’s so interesting...[pause]. Do I have to say any more? So it’s what happens to you early on, in your career can definitely influence, how you, how your expectations and behaviours are later on. That’s very interesting. Wow. I’ll stop talking...it feels like a counselling session” (MW1).

10.10: Conclusion

The 6-Step in-depth, interview process was one component of the mixed method design to gain an understanding of IPC in this organisation; the method was effective in achieving this aim. The

descriptions provided by one cohort of participants suggest that this organisation does not have the characteristics or attributes required for readiness to change or the reshaping capabilities to facilitate readiness for change. The organisation is dysfunctional with respect to readiness to change with system inertia stifling the ability to move towards greater effectiveness. These findings provided verification that the correct decision was made in changing from the original study design. The likelihood that a collaborative participatory action research project would be successful within this organisation in its current state is low.

A synthesis of the findings and the emergent themes from this phase together with those from phases one and two is presented in the next chapter. The synthesis is facilitated by viewing the findings through the lens of a model drawn from social cognitive neuroscience that sheds light on the behaviour of individuals in this organisation.

Chapter 11: Triangulation and synthesis using the lens of Social Cognitive Neuroscience

11.1: Introduction

The findings from Phases 1, 2 and 3 have been discussed separately in previous chapters. This chapter draws together the findings of each phase in a process of data triangulation and interpretation that reveals the extent of this organisation's lack of readiness to change. The data from each phase provided deepening insights into the organisation's characteristics, increasing clarity about how these characteristics have contributed to the state of un-readiness and apparent inability to embrace change. In this chapter, the findings are considered through a theoretical framework from the field of social cognitive neuroscience which not only assists with the triangulation and interpretation of the data but could also provide a way forward in developing reshaping capabilities for this organisation.

The chapter begins with a brief overview of the findings of the three phases of the study to facilitate this process.

Overview of the study

A review of the publicly available outcome data revealed the research site had the highest CS rate amongst peer hospitals in NSW and the lowest successful VBAC rate. The *Toolkit* results from the Phase 1a survey described divergent opinions and philosophy between clinicians with respect to VBAC and the importance of normal birth. The results were predominantly on the dark side of the table which suggested that the organisation did not have the characteristics of a high performing organisation as described by the *Toolkit* authors (Baldwin et al. 2010). The CVF survey results in Phase 1b described the culture as predominantly hierarchical with less evidence of teamwork, cohesion and collaboration. The participants preferred the culture to be the opposite of its current state. In working towards greater collaboration, the participants in Phase 2 were able to identify peers whom they considered to be effective interprofessional collaborators who could work as change agents to increase collaboration in the organisation. They were able to identify the qualities that made them so. The third and final phase where 10 peer nominated participants were interviewed provided an illuminating and deeper description of a dysfunctional culture without the characteristics or attributes required to support IPC and a readiness to change or the reshaping capabilities to facilitate readiness for change. The evidence from different sources and participants revealed that this organisation exhibits system inertia that stifles its ability to move towards greater effectiveness.

The most illuminating phase of this study was the interview process; the data obtained was rich, evocative and revealing. Participants were able to explain the complex concept of IPC through the varied exploratory techniques that helped them move from a relatively superficial, conscious level into what I hoped was a more unconscious level. What they revealed were power struggles, fear, avoidance behaviour and a pervasive level of disengagement with the organisation. I searched for a way to understand how this culture had emerged and how it could be assisted to move in a more positive direction. Ultimately, I identified a theoretical model from social cognitive neuroscience that focuses on the behaviour of individuals in organisations to be helpful in this interpretation.

This model provided a way to understand the existing culture and at the same time provided insights into how this organisation could move from being *stuck* to one that has reshaping capabilities and a readiness to embrace change. The model is called the SCARF model (Rock 2008) and it is explained here in detail first then applied to the data as a lens through which data triangulation is achieved.

11.2: Triangulation Process

A process of triangulation was used to synthesise the data from each phase. The process of analysis was complex and sequentially revealed through each phase of the study. Each part of the data could stand in isolation and could still provide insight into the lack of readiness for change of this organisation. However, when all parts were examined in the triangulation process they enhanced, complemented and corroborated each other and strengthened the understanding of why and how system inertia and disengagement had developed. For example, divergent opinions and philosophy between clinicians with respect to VBAC revealed in Phase 1a were placed in context of an organisation that had a predominant culture of hierarchy where teamwork, collaboration or cohesion were not evident as demonstrated in Phase 1b. The merging picture of an organisation that lacked the characteristics that would support readiness to change was strengthened through the data in Phase 3. The predominant hierarchy culture created barriers to change that resulted in participants' *knowing their place, adapting for survival* and *doing your own thing* which then further explained the divergent opinions and philosophy between clinicians revealed in Phase 1a. Through the process of triangulation of going back and forth between all the data it was possible to demonstrate the interrelatedness of all the data. Overlaying the SCARF model helped to explain why this organisation may be *stuck* and but also provided a mechanism to move forward.

11.3: Social Cognitive Neuroscience

The emergence of new knowledge from the field of social cognitive neuroscience has increased the understanding of what enables people to exhibit adaptive social behaviours that can improve thinking and performance, generally, and in organisations in particular. An understanding of the neuro-biological foundations that influence the way people relate to one another offers insights into what facilitates engagement, teamwork, collaboration and the development of a culture that is ready, and embraces, change and innovation (Gordon et al. 2008; Lieberman & Eisenberg 2008; Rock 2008; Rock & Cox 2012).

The underpinning premise of the model arises from the utilisation of functional magnetic resonance imaging in studies that have been able to determine that brain wave patterns are similar in response to both physical and social experiences (Lieberman & Eisenberg 2008; Rock 2008). These studies observed that when a person experiences a situation that evokes social pain or negative emotions, the brain reacts with similar patterns to when a person experiences physical pain. Therefore, a person's social needs may be considered in the same way by the brain as the body's physical need for food and water. The consequences of these social needs not being met may be similar to the physical results of being starved or in pain (Rock 2008).

11.4: Approach-Avoid Response and Teamwork

To further explain the significance of this concept requires a description of the brain's organisation of the approach–avoid response. The amygdala area in the limbic system of the brain is wired to react positively to situations which are likely to be pleasurable or provide a reward (Rock 2008). The response evoked is one of approach and engagement, which will then remain imprinted for when similar events occur. A surge of the hormones dopamine (Arias-Carrión, Stamelou, Murillo-Rodríguez, Menéndez-González, et al. 2010; Hamid et al. 2015) and oxytocin (Nawijn et al. 2016; Preckel et al. 2014; Rock 2008) during pleasant experiences contributes to increased engagement and overall sense of satisfaction. Conversely, the brain will react with avoidance behaviour if a situation produces a negative or undesirable response (Gordon et al. 2008; Rock 2008). There is more likely to be a release of adrenaline creating higher cortisol levels in a fight or flight response. This reaction may be strongest when the situation threatens safety or survival and then becomes an automatic, reflexive response often before the person is consciously aware of the need to react. This reflexive response is described as an amygdala hijack as the higher thinking and reasoning function of the pre-frontal cortex is bypassed, or hijacked, by the stored memory in the amygdala and a reflex response is initiated (Goleman 1995; Rock 2009).

The importance of this approach–avoid response for leaders of change is in the understanding of the effect this can have on a person’s ability to problem solve, to be motivated, to collaborate and work effectively in a team. The frequency and duration with which the activation of the avoid response occurs can reduce a person’s creativity, increase stress levels and impair cognitive ability. During the period of an avoid response, oxygen and glucose are used for survival or protection against the threat. This results in less oxygen and glucose being available for higher level prefrontal cortex activity, such as that required for creative and analytical thinking (Arnsten 1998). Thinking and behaviour responses during this time will be influenced by stored memory and habitual behaviour, with less capacity for development of new thoughts.

Unfortunately, the avoid response often happens when people are working in teams (Rock 2009). The leader’s aim, therefore, is to be cognisant of these concepts, anticipate the occurrence and have a repertoire of techniques to maximize the possibility for the approach response, to increase engagement. The theoretical thinking is that through facilitating a sense of social connectedness an increase in effective collaboration in team activities is likely to occur.

11.5: The SCARF Model and it’s Five Domains

A conceptual model, SCARF, has been developed that offers a framework to describe the activation of either the approach or avoid response (Rock 2008). The model can be used to facilitate a leader’s ability to raise unconscious processes to a more conscious level to work proactively in teams to achieve approach (reward) responses. This SCARF model describes five domains of human social experience that the brain frequently monitors; Status, Certainty, Autonomy, Relatedness, Fairness, with each letter (S, C, A, R, F) indicating a domain, as described in the following:

Status: refers to how an individual sees themselves positioned in relation to those around them and their sense of importance in any particular social context (Rock & Cox 2012). Generally, people have a conscious awareness of their position in any group and when that positioning is affirmed there is more likely to be a reward or approach response. Feeling better than another or about yourself in a social situation, decreases cortisol levels producing feelings of satisfaction and pleasure, which encourages increased social interactions. Status is thought to have a direct association on longevity and health (Rock 2008) as the positive feelings are a consequence of a reduction in cortisol levels. The opposite effect occurs if someone experiences social isolation, exclusion or ostracism, which are the ultimate threats to status.

Certainty: refers to ones need for clarity and ability to make accurate predictions about the future (Rock & Cox 2012). Certainty creates a rewarding response in the brain and creates

reactions of comfort in the conscious and sub-conscious mind. Thought patterning in new experiences requires more resources for processing and prediction and may distract the individual, which can decrease potential creativity and productivity in the moment. Where there is greater certainty there is greater potential that the individual can be engaged, and participate to their full potential without distraction. Change processes can create the greatest threat to certainty. This uncertainty can be minimised by providing sufficient and appropriate information and clarity, which may ultimately influence the adoption of change.

Autonomy: refers to the perception of having some control over one's environment and the sense of having choices available. People have a fundamental need for personal control which automatically produces a reward response and reduces stress levels (Rock 2008). Without a sense of autonomy, it may be difficult for an individual to reframe a situation and provide options, alternatives or to problem-solve. Intrinsic motivators, or personal motivation, can influence an active choice to do something whereas extrinsic motivators, such as mandated policy, have actually been shown to reduce intrinsic motivation to perform a task (Rock & Cox 2012). Extrinsic motivators can increase a reward response by providing some individual flexibility about how that task could be undertaken; for example, a mandated policy could achieve greater acceptance if individuals are given options of how this could be implemented.

Relatedness: refers to a sense of connection to, and security with, another person or group. Humans have an innate desire to belong to a group, where others are considered as friend rather than foe; where others are more similar than dissimilar. Feelings of social discomfort can evoke a threat response, which can then prevent or inhibit social engagement and relationship development. Participants need to be able to trust one another to be comfortable and confident to share ideas and participate. People feel greater trust and empathy toward people who are similar to themselves (Rock & Cox 2012).

Fairness: refers to non-biased and equitable exchange between people which can be in distribution of material items or in terms of sharing of oneself in terms of time, recognition and acknowledgement of performance. Individuals have an intrinsic need for situations to be fair and equitable in terms of conditions, status and transparency. Where fairness is perceived, more positive emotions are experienced and motivation for collaboration and engagement increased (Cacioppo & Patrick 2008; Tabibnia & Lieberman 2007). In terms of staff wellbeing and workforce retention fairness was cited by 75% of staff as the factor that influenced voluntary turnover (Wayne 2015) providing an indication of the importance of this domain in terms of personal satisfaction.

11.5.1: Relationship between Social Domains

Whilst each of these domains can be defined individually it must also be appreciated that they do not necessarily function in isolation. Situations and experiences can evoke a response in more than one domain simultaneously or consecutively. For example, people with high status are more trusting of people than those with lower status because high status individuals believe people will behave with good intentions towards them. Status and relatedness are directly linked in this situation (Rock & Cox 2012).

Certainty and Relatedness can also be directly related as there is a certain degree of ambiguity or uncertainty in trying to guess, or mentalize, what the other person is thinking or feeling in a social encounter. Increased brain activity is required in simulating different scenarios to increase certainty which can then impact on the ability to relate effectively (Jenkins & Mitchell 2010). Increasing the connection between the groups who are in and out of defined social networks can reduce the threat caused by uncertainty and reduce the negative impact on relatedness, which is particularly relevant in interprofessional teams.

Fairness and Relatedness also have an important relationship which could have origins in primal survival needs. Where there is an equitable distribution of what is important; money, food, opportunity; there is a greater sense of cooperative behaviour observed (Tabibnia & Lieberman 2007). This is particularly evident in the workplace where equality can result in improved intrinsic motivation and morale with the potential for improved workplace culture.

11.5.2: SCARF and Change

The SCARF model describes how the activation of a person's approach (reward) response can potentially increase engagement, collaboration, cooperation and productivity in a change process. The neuroscience behind SCARF is not as new as the acronym. SCARF provides a language to explain and describe the neuroscience of the physical responses to actual or potential barriers to change. By isolating the social domain that is being, or could be threatened, can facilitate the development of strategies to reduce stress responses and create conditions conducive to greater collaboration, cooperation and productivity.

SCARF assists in understanding that a change process is likely to threaten some or all of the social domains. In a change process, it is therefore important to increase opportunities to maximise reward responses in the easiest manner possible. For example, a practice development project that encouraged a degree of autonomy in design, with a team who developed shared goals to increase relatedness and fairness, would be more likely to engage the team and decrease threat responses. Insights gained from SCARF suggest the key to leading change and managing change

effectively may be to have the activity and responses of the brain at the forefront of your mind (Rock 2009; Whiting et al. 2012).

11.6: Seeing the data Through the Lens of SCARF

Since assessing readiness for change to implement a mandated government policy was the focus of this study, gaining insights from neuroscience into what facilitates engagement, teamwork, collaboration and the development of a culture that is ready for, and embraces change and innovation is crucial. Viewing the themes identified in the study data through the lens of the SCARF model enables a recognition of social domains that are rewarded or threatened in this setting that influence the lack of readiness for change. There is evidence of avoidance and development of adaptive behaviours for survival, which is an underlying premise of the SCARF model.

In the following sections the data are interpreted in relation to the five SCARF domains: Status, Certainty, Autonomy, Relatedness and Fairness. Whilst the descriptions are presented as linear the reality is that one experience can create an approach or avoid response in some or all the domains simultaneously. The more domains that are positively affected will result in a greater positive reaction influenced by the release of dopamine (Arias-Carrión, Stamelou, Murillo-Rodríguez, M, et al. 2010; Hamid et al. 2015) and oxytocin (Nawijn et al. 2016; Preckel et al. 2014; Rock 2008). These hormonal surges can result in increased engagement and overall sense of satisfaction; the converse is also possible.

Status and the Hierarchical Organisation

Participants described the culture of this organisation as one of hierarchy. A hierarchy describes a system where members of an organisation are arranged in rank order according to status and / or authority (Butler 2015). Each member of the hierarchy is aware of their position and therefore their relative status and authority to others. In this organisation, this was described as *“recognition of a higher authority...a vertical midwifery doctor arrangement more than a horizontal”* (MW3). This midwife perceived that as a midwife she was positioned lower on the hierarchical ladder and was of a lower status than an obstetrician. This status differential was determined by profession rather than personal qualities and attributes.

A picture of a traditional hierarchical structure emerged during the interviews with participants describing power and control being exercised by obstetricians over midwives and by senior staff over junior staff; evident in the theme of *knowing your place*. In this type of environment, the domain of status would more likely be continuously threatened for midwives and junior staff

who recognised they did not hold equal power or control in the organisational structure. In order to minimise the effect of the threat response social adaptive behaviour is likely to occur that renders the person with lower status, silent and compliant, as a survival mechanism. The participants who identified a lack of visibility and low value within the hierarchy may have experienced lower dopamine-reward for their status domain and therefore may experience greater risk of a threat-response when interacting together.

The lack of visibility of clinicians is evident in the field notes taken of the reactions when clinicians were advised of their nominations as effective collaborators described in phase 2. The reaction was one of surprise and disbelief that others in the organisation recognised their attributes: *"I can't believe that...Really?...That is unbelievable"* (MW1). For one clinician, this was the first occasion during her period of employment that she felt visible or recognised. She saw this as a unique and important opportunity and was acutely of the value of her nomination.

In an organisation with authentic collaboration, midwifery and obstetrics would be recognised as two professions that have different roles and responsibilities of equal importance and status in the care of a woman / baby in childbirth. In such an environment, there is likely to be less threatening situations related to status. In this organisation, the data from the CVF survey and interviews revealed the perception of a status differential that is likely to have continuously threatened interprofessional collaboration.

The PEI revealed that both obstetricians and midwives saw the midwives positioned at the feet of the obstetricians or in other words, of a lower status. There was a sense that if this positioning was respectfully maintained and each group stayed within their own territorial domains, there could be harmony. If there was a crossing of the professional boundaries, status would be threatened which would result in tension between the professional groups as articulated by one obstetrician during the interview:

"this warthog [midwife] looks like he might sort of be pushing in a bit more than he should be in terms of the wildebeest territory...sometimes people do overstep the mark in terms of what their position should really be doing" (OB2).

This positioning was also described by many of the participants as a stored memory from experiences during their impressionable years as novice clinicians, resulting in a present tacit understanding of status differentials. For some, aggressive behaviour perpetrated in the past appeared to have influenced the development of avoidance and protective behaviour in the present. This protective behaviour in the present hinders the development of effective

relationships. Ironically a person with perceived high status may react with aggression and confrontational behaviour if that status is threatened (Rock & Cox 2012). The “*glove throwers*” (MW1) of the past could have been reacting to their own status-threat. However, inadvertently the glove throwers’ behaviour influenced the present-day status-threat-avoidance behaviour of clinicians who were the victims of the glove throwers. The imagery from the interview data clearly indicated that for many of the participants their status is frequently threatened which has resulted in difficulty in developing relationships that are authentic and effective.

Certainty and the Uncertainty of Childbirth

Variation exists in the degree that individuals require certainty, as well as variation in tolerance levels in managing a situation of uncertainty or ambiguity (Rock & Cox 2012). What we do know is that everyone has a need for certainty in some form and in the absence of certainty individuals may mentalise, or create, their own certainty from the information that they do know (Jenkins & Mitchell 2010). The accuracy of the created situation will influence the degree of resolved certainty for this occasion. Avoidance behaviour identified in the themes of *doing your own thing* and *working at the margins* could be adaptive behaviour strategies created as a result of this mentalisation process. Without clarification or provision of the required information uncertainty will continue together with some form of adaptive behaviour.

By their very nature, pregnancy and childbirth are situations of uncertainty; certainty of the outcomes is not always possible to predict or ensure. However, what we do have a degree of certainty about is that where there is continuity of care with shared philosophy and shared practice approaches, outcomes for women are improved (Homer et al. 2001; Ma et al. 2012; Sandall et al. 2016). The lack of cohesion and collaboration between professional groups described by many aspects of the hierarchical culture inhibits or restricts consistency and certainty in philosophy and practice. This uncertainty is evident in the divergent results from the *Toolkit* where the value placed on normal birth was described as low. This was also echoed in the interview material where it was stated that “*the whole Towards Normal Birth [policy] ... the other doctors are mistrustful of it and they teach the younger training doctors to be mistrustful of it as well*” (MW3). This variance in philosophy disseminated to novice practitioners in their formative years of training can perpetuate divergent philosophies that shape future practice.

Examples of how this plays out are described in clinical practice for such things as VBAC, MGP and water immersion in labour where interviewed clinicians doubted their decision-making and their practice when questioned by higher status colleagues:

“they check the woman, what’s she doing in the bath...and dramatise and I’m thinking... have I missed something. So I question it [my practice] because [of] their fears...” (MW4).

In circumstances such as this, clinicians can become distracted by the perceived challenging behaviour of being questioned and are less likely to have the ability to effectively describe their rationale for decisions. There is increased oxygen and glucose consumption in dealing with the threat with less available for prefrontal cortex thinking activity. In questioning her own practice, certainty was threatened for this midwife and possibly her status simultaneously as she was being challenged by the group that is assessed as having higher status in this culture. The ability to describe decision-making is threatened if there are increased levels of cortisol and even more so if an amygdala hijack occurs based on any previous experience. A twofold effect can occur: an emotional reaction of avoidance experienced by the clinician during the interaction; and possible change in care to the woman based on creating uncertainty and not on clinical evidence; the woman may be unnecessarily removed from the bath in this example. The avoidance behaviour by the midwife could also reward the status of the obstetrician which in turn influences the obstetrician’s stored memory for experiences in the future. If the midwife is unable to increase certainty by articulating her decision-making, the obstetrician continues to experience uncertainty in her skills and knowledge. In a future similar situation, uncertainty could persist and the obstetrician may continue to challenge and question this midwife and possibly other midwives.

The difference that certainty can make was evident in recall of the shoulder dystocia incident by this same midwife where the obstetrician took the time to respectfully and collaboratively debrief after the emergency which reduced her stress and provided a conducive environment for learning:

“He really helped me and I think that set me up for the next time ... I think it just clicks. I don’t know something calmed me down and gave me that confidence” (MW4).

Autonomy, Power and Control

Autonomy (Adhocracy) is the competing value to hierarchy as detailed in the CVF archetypes and all participants preferred autonomy to be the dominant archetype in this organisation. The evidence from a range of data has revealed that the power and control exerted in the hierarchical structure appears to have diminished the autonomy of the majority with limited intrinsic motivation to continue to engage.

This organisation's lack of innovation, flexibility and creativity coupled with the lack of team engagement does not provide sufficient opportunity for the clinicians to participate in, or influence any change strategies. One's personal sense of self-determination and self-efficacy is threatened when choice is denied. Participants described their frustration with the system inertia as: *"[I] think it's a hard-uphill battle"; "there just seems to be a complete lack of vision and a brick wall that is met"; "it really does seem to be extremely difficult even in the face of good evidence"*. One also described how the system inertia has resulted in disengagement from creating any new ideas: *"puts you off...You then don't... keep trying all the time...It's frustrating"* (MW1).

Participants had a concern for the quality of care provided if changes could not be implemented and if they could not be involved in that change process. Despite this concern most of the participants have developed avoidance responses to facilitate their own emotional protection from the frustration and disappointment with the system inertia rather than taking a proactive stance in making change possible. One obstetrician remained optimistic and had an intrinsic motivation to explore the cause of the inertia and to do something to fix the problems: *"I guess the challenge is to work out what we are doing wrong because then we know how to fix it"* (OB5). Amidst the milieu of frustration and dissatisfaction of the other participants the risk is that the enthusiasm of this one participant may diminish if not given an opportunity to exercise autonomy in exploring solutions or if the sense of relatedness to the social group is also threatened.

The two theoretical frameworks of Rogers (2003) and Rycroft-Malone (2004) described in Chapter 4 suggest that change can be implemented more effectively if the participants value the change and can have some influence in the design and / or implementation process. Using the insights from SCARF it is apparent that the lack of autonomy in the culture of this organisation will continue to threaten implementation of change until participants can achieve an increased sense of control in / or involvement with the change.

Autonomy of roles and responsibility

Midwifery and obstetrics are two defined professions that have complementary skills and roles in the care of women in childbirth. The identified scope of roles and responsibilities, as previously described, sees midwives responsible for care where there is no identified clinical risk and obstetricians being engaged where risks are identified or assistance required. In an effective organisation where authentic collaboration is evident, these roles would be respected and each profession would be autonomous in the delivery of care for defined groups of women based on

clinical risk. However, autonomy of practice appears to be often threatened in this organisation at the point of care where a midwife is required to consult with an obstetrician. For many midwives, this was the point at which the midwives' autonomy was preserved by avoidance behaviour such as *working the margins*, *side-stepping* an obstetrician known to have an opposing philosophy or just *doing your own thing*, as these quotes illustrate:

"Depends ...I feel pretty confident to be able to debate and discuss. Ah, medical, no. Not with the VMOs [visiting medical officer/consultant] at all" (MW1).

"...there are those that I would probably avoid for whatever reason whether it's because of lack of respect of your own abilities or the profession as a whole or belittling of your knowledge and experience" (MW2).

Such avoidance behaviour threatens the development of crucial interprofessional relationships based on trust and respect. The skills, knowledge and attitudes of clinicians cannot be observed whilst avoidance behaviour is prevalent which then threatens the development of trust and respect and the cycle continues to be perpetuated.

Relatedness

As humans we have a fundamental need to belong and to avoid social exclusion which creates strong internal motivation to adapt behaviours to remain in good standing with our social group (Heatherton 2011). Despite this fundamental social need there are more examples of exclusionary behaviour displayed in this organisation than connectedness. There is evidence of physically separate clinical areas of practice and managerially separate aspects of practice that are not integrated. Physical and philosophical barriers prevent the development of authentic relationships and can perpetuate disengagement.

Adding the pervasive status difference to this lack of structural support for relationship development results in the minimisation of trust and respect between professional groups. There is a strong sense that *"you can't create collaborative relationships, they evolve... what it is really is mutual respect for other people..."* (OB1). However, the evolution period takes time and during that time-lag participants admit to having developed avoidance behaviours that jeopardise the development of relationships and the threat continues.

The low level of engagement to the invitation to participate in this study in Phases 1 (Toolkit and VBAC = 25.8%) and 2 (Peer nomination = 32%) suggest a low level of connectedness to the organisation, a low desire to remain in good standing with the organisation and low intrinsic motivation to be actively engaged. Examining this response rate in relation to SCARF offers more

insight to what is happening for clinicians than merely examining the response rate from a research methodological point of view. Unmet material and symbolic needs as expressed in terms of the social domains could be a more accurate and compelling reason for low response rate rather than merely disinterest in participation in this research. Beyond the life of this research, this is an important concept for this organisation to be aware of and even have responsibility for further investigation in terms of improving clinical outcomes as well as wellbeing of clinicians.

Relatedness and Clinical risk

The emergent theme of *doing your own thing* is not consistent with the need to adapt social behaviour to be connected and to increase social inclusion. It is possible that this adaptive behaviour has become a protective mechanism from the threat to relatedness. The risk is that social exclusion and isolation continues and opportunities for collaborative relationships are jeopardised.

Clinicians who are *working the margins* may have situated themselves between social groups, that of the professions of obstetrics and midwifery, and are not completely connected to either. This is described above where the scope of practice requires interprofessional collaboration in clinical care that can be affected negatively or positively depending on the nature of the relationships; *“trying to bridge those two views is often quite challenging”* (OB2). This is on the one hand a risk to the quality and safety of care and on the other a threat to the development of collaborative relationships at a point where there are historical contested territories between professional groups (Hastie & Fahy 2011; Reiger & Lane 2009). This situation is also an example that demonstrates how two social domains may be threatened simultaneously: certainty and relatedness.

If oxytocin is believed to play a part in relatedness in that it reduces social stress, reduces activation in the amygdala, improves the processing of social and emotional information and increases attachment and empathy towards others (Rock & Cox 2012), then this organisation could benefit from an increase in this neuro-hormone. Relationships are not *“the best, the most conducive”* (MW1); the tension and avoidance behaviour is likely to be fuelled by adrenaline. Opportunities that encourage oxytocin release need to be sought.

Even in the presence of an established relationship there are risks when participants defer to those they can relate to and avoid others with whom they should communicate or negotiate. Being continuously on the lookout for a friend and avoiding a foe is a stressful situation that can increase cortisol and adrenaline levels and puts at risk the ability to relate and communicate

effectively: “where is the lion, where is [Dr] out there, he is stalking somewhere in the grass, that is what I am worried about...really no-one is looking at the bigger picture which is [Dr] lurking” (OB4). This obstetrician described being distracted whilst on the lookout for the predatory doctor and is almost fearful for other colleagues who may not be as wary as he in their behaviour and their preparedness. Being on guard and on high alert can reduce the ability to be in the moment with higher level thinking and to be engaged physically as well as mentality in what needs to occur, especially in a clinical setting. This distraction can also negatively affect communication, problem solving, skills and knowledge (Rock 2008).

Reducing threats in other social domains may be required to influence relatedness. For example, if participants have less threat to status through feeling genuinely more visible amongst individuals and professional groups, have greater certainty regarding their colleagues’ trust and respect for their clinical skills and knowledge, have more autonomy in active involvement with operational and organisational change, there may be less threat to relatedness.

Fairness Reflected by Status, Certainty, Autonomy and Relatedness

A sense of inequity increases cortisol levels and there are many examples provided in the data not overtly labelled as fairness but which threaten this social domain. The recognition of status difference, the control of the hierarchy with little individual recognition in the team, the inability to participate in change initiatives all suggest a state of inequality. There is a perceived unequal distribution of activity and food for survival with the more powerful obstetricians getting the lion’s share. Fairness for these participants is a direct consequence of the threats from the other four domains; inequality in status threatens fairness, uncertainty and lack of transparency threatens fairness and so on.

Fairness and Unwritten Ground Rules

The UGRs component of the interview data strongly expressed threats to the fairness domain with the overall perception that “[a]round here people are treated differently”. Each of the statements for the UGR were deliberately crafted to assess the qualities required for effective collaboration that could be seen in a high performing organisation: respect, communication, team work and shared power, decision making and responsibility. For each of these qualities the data demonstrated a negative response and a strong sense of inequity. This is a work place where being open and honest gets you everywhere and nowhere; where people are treated differently; where nothing happens when you come up with new ideas; where you can get help from some for some things and not others and where you must know who to trust to tell

something in confidence. The data revealed a threat to fairness with each statement posed and an overwhelming sense of inequity throughout the organisation.

An avoid (threat) response is evident where participants described the need to seek out those with whom they have trust and respect and by deduction avoiding those who they did not trust or respect. This avoidance behaviour was especially evident as described by one participant: when one is open and honest that *“gets you kicked in the teeth...and then ... jumped on from a high”* (MW 2). Professional behaviour requires clinicians to be open and honest, but these participants reported that they were more likely to be punished for these commendable qualities. To avoid this aggressive response some participants described changing their natural behaviour: *“we weren’t really open and honest ...it was thinking of protecting that relationship at the time”* (OB2).

Fairness and Autonomy and the Current Culture

The description of the hierarchical culture described an unequal distribution of power and control: *“[it’s a] hierarchical model of just being told what to do from the top”*. Certainty that whoever was in that top position had the right direction and motivation to ensure clinical safety could reduce threats to fairness but participants did not suggest confidence that this was so. Poignant to the fairness domain was the preference for the culture to be opposite to how it is today with increased autonomy and relatedness to each other as well as to the organisation.

The preferred culture could increase autonomy with active participation in innovation and change. Participants described a strong intrinsic motivation to be involved in change: *“I would love to see the clinics change, clinics are horrible here, no-one likes working in them”* (OB4) and did not have certainty as to why this could not occur: *“In terms of the inability to innovate...it really does seem to be extremely difficult even in the face of good evidence that has come in...making change is difficult* (OB2). In this organisation, it was apparent that the threat to fairness has been sustained for such a long period that it has led to an adaptive behaviour response of becoming disengaged: *“puts you off...you then don’t... keep trying all the time...It’s frustrating”* (MW1).

As mentioned above, in a workplace where equality is evident intrinsic motivation and morale are increased with the potential for improved workplace culture. As lack of fairness is an indicator of satisfaction in the workplace and a strong motivator for voluntary staff turnover (Wayne 2015), decreasing threat to this domain is paramount to workplace engagement and becoming unstuck in order to embrace change.

11.7: Conclusion

Viewing the data through the lens of SCARF revealed that the social domains of the participants in this study were more threatened than rewarded; there were more examples of avoidance behaviour than behaviour of active engagement. Continuation of this situation will threaten the possibility for the development of effective relationships and a culture of IPC, less opportunity for the development of reshaping capabilities and less possibility for successful implementation of changes in practice to increase normal birth.

Concerns should also be considered for the wellbeing of clinicians exposed to frequent and sustained levels of adrenaline and cortisol release that occurs when social domains are not met. Clinicians have adapted protective behaviour traits as a survival mechanism but one wonders about the long-term effect of this on their overall health status.

Studies that explored what influenced midwives to stay in the workforce revealed positive workplace cultures where there was autonomy, flexibility and control and a sense of being valued amongst colleagues and peers as fundamental (Crowther et al. 2016; Curtis, Ball & Kirkham 2006; Sullivan, Lock & Homer 2011). A systematic review that explored the reasons that influenced doctors' intention to leave cited low perceptions of organisational support and an effort – reward imbalance (Degen, Li & Angerer 2015). Improvements to workplace culture could have a flow on effect to increasing workforce retention and positive health effects from reduced exposure to sustained cortisol release.

Improved staff morale and satisfaction could create an overall improvement to the quality and safety of care in this organisation. The positive message from the participants engaged in this study was that they recognised the negative qualities of the organisation, they would prefer the culture to be different and they were motivated to be involved in influencing that change. This enthusiasm should be harnessed and utilised in any proposed change strategy. These factors will be considered in the next chapter with recommendations made for work place change to promote an approach response with active engagement.

Chapter 12: Engaging the Organisation for Change: recommendations

In suggesting a way forward with recommendations for effective change and improved workplace culture I have assumed that the workplace culture of this maternity service is not unique. This assumption is based on my experience in over three decades as a midwife working across many models of care in different countries where similar characteristics within and across professional groups have been observed. The assumption is also influenced by studies that revealed the reasons health professionals leave their workplace or the profession that include tensions arising from unmet social needs like those described in this study (Curtis, Ball & Kirkham 2006; Degen, Li & Angerer 2015; Sullivan, Lock & Homer 2011; Wayne 2015). I will return to those studies later in this chapter as they support what has been found and the recommendations arising from my study. In this chapter I make recommendations specifically for the study site as the data is most relevant to this site. However, these recommendations may resonate with other maternity services who may be experiencing similar situations, and therefore may provide a way forward.

12.1: Approach to increasing reshaping capabilities

This study has identified an organisation that does not exhibit readiness to change and does not have apparent reshaping capabilities. The recommended approach to acquiring reshaping capabilities is to purposefully and strategically lead change (Whiting et al. 2012) and to manage change *with the brain in mind* (Rock 2008). This recommendation is predicated on the belief that by maximising the opportunity for the social domains of participants to be orientated to an approach (reward) response, teamwork, collaboration and the development of a culture that is ready, and embraces, change and innovation can be facilitated.

Leadership

Leading change with the brain in mind will focus on the development of strategies to build capacity in those who will be leading the change. It would be anticipated that those chosen to lead would have qualities identified to be effective as a leader including developed communication skills, industry knowledge and competence, empathy and emotional intelligence (Feltner et al. 2008; Hopkins, O'Neil & Stoller 2015). In addition, those clinicians identified as change agents will need to be cognisant of the concepts of social cognitive neuroscience and the influence of social domains to maximise an approach response in the change process. This is also relevant to the change agents themselves in their own social adaptability to facilitate change. The organisation should be encouraged to invest in the development of key leaders to enable sufficient capacity to facilitate change.

Managing the change using SCARF will require a degree of prediction prior to encounters in project work to minimise threat and therefore threatening responses; recognise a threatened response and attempt to regulate or de-escalate behaviour during encounters and then to explain / interpret responses afterwards to positively influence future encounters. If SCARF is accepted as the underlying framework for change then the leaders will need to be cognisant and comfortable with the social domains of adaptive behaviour.

The leaders of change must also be cognisant of the variation in importance of each of the domains to themselves and within groups. For example, in one study a profile was established for the participating individuals (N=6,300) to determine the relative importance of each domain. Certainty was the most important domain for 46% of responders followed by 27% for relatedness (Rock & Cox 2012). This information would be useful to plan interactions and to regulate and explain adaptive behaviours for this group with a focus on ensuring a high level of certainty. However, it will not always be possible to know individuals' priorities but we can have certainty that all social domains can evoke a threat or reward response in all participants who have unimpaired brain functioning, and this provides a solid basis for an approach to change.

Leadership and support are required at all levels of the organisation for the recommendations to be implemented in an effective and sustained manner with a commitment to a whole of maternity service approach. Transforming the hierarchical culture of this organisation from one that exerts power and control to one that is inclusive and emancipatory will underpin change process.

The CVF results and interview data suggested there is little overall trust in relationships in this organisation. Designing a deliberate and purposeful process in choosing the leader of change is crucial to the potential success of any change process. Whilst support from those in the highest-level positions is imperative to success they are not necessarily the most appropriate leaders of change. There is greater possibility of a threatened response from a person seen as a boss than anyone else in the organisation (Rock & Cox 2012); this can threaten status, autonomy, relatedness and even fairness.

Operational Recommendations

At the commencement of this doctoral study eight years ago, I had naively planned an action research project to increase the successful VBAC rate as described in Chapter 5. This was without deliberate consideration of the context of that study environment. After thorough examination of that context I have gained a better understanding of what is required to move forward and thus the phases of the study have been valuable preparatory work. This style of preparatory work was effective in revealing the culture of the organisation. I recommend that this process be replicated in this organisation (or any other organisation facing similar issues) with steps taken to ensure wide participation from all staff within the unit. Wider participation may occur if the preparatory work occurs in a particular order and it is the ordering of steps to increase engagement that is the main focus of my recommendations.

I present four key recommendations for increasing the engagement and motivation of the whole of this organisation in practice change. The recommendations include: repeating the assessment of the organisational culture using a mandated approach to completing the Competing Values Framework; identifying peers within the organisation who are considered to be the best interprofessional collaborators, so that they can be invited to perform as change agents; creating cognitive dissonance by revealing the findings of the interview to the whole organisation and finally re-assessing the clinical knowledge, values, beliefs and attitudes of staff through the whole of service completion of the *Toolkit* to inform targeted strategic development by the change agents. I will address each of these recommendations in more detail.

Repeating the assessment of the organisational culture using the CVF

The CVF is an effective tool that can succinctly reveal the predominant culture as well as the characteristics of the organisation, the leadership, strategic emphasis, criterion for success and management of employees, as a benchmark measure. Participants' preferred culture indicates the degree of satisfaction with the current culture and the combined results provide an intuitive impression of the discrepancy between the current and the desired culture, more than words could provide.

My recommendation is that the CVF should be repeated in this organisation and the process should require 100% participation from all clinicians and support staff, not as a research process but as a formal organisational cultural assessment. If the whole population engages in the CVF a more accurate impression of the culture would be gained with increased confidence in the result. In addition, this would highlight the whole of service approach and the level of accountability expected from all. Executive leadership would be required to ensure this occurs.

In Chapter 3 the literature described that where a whole of service approach to change was adopted there were improved clinical outcomes in birth (Ma et al. 2012; Marshall, Spiby & McCormick 2015); this approach should be replicated `

Recommending mandatory completion of the CVF raises several concerns. I have previously noted that mandated or incentivised change is less effective than voluntary participation (Rock & Cox 2012) since there is potential for a threat response to participants' autonomy and perhaps fairness. This is one example where managing change with the brain in mind can be effective; in this situation if a representative stakeholder team is nominated to decide on how this process occurs, autonomy could be increased and sufficient information regarding the process could increase certainty. For example, setting an expectation that completion of the CVF will occur in the annual performance review that each staff member is required to undertake could increase certainty.

Repeating the Peer Nomination process

Replication of the peer nomination process is also recommended and like the CVF this would be most effective if it was mandatory to increase participation rates and a whole of service approach. The nominees would become the change agents for the action research component. Relatedness is likely to be rewarded in the group as they were nominated by peers and by the interprofessional teams for their effective collaborative qualities. The nominated obstetricians and midwives would be connected in a social network with similar qualities and shared purpose in the project. Status in this situation could be threatened or rewarded depending on the personal perception of status amongst the members. Effective facilitation skills of a leader, cognisant of the social domains would be essential to the process.

Creating Cognitive Dissonance through revealing Interview findings

There may be benefit in sharing the themes and poignant opinions from the interview data with all clinicians and support staff within the organisation in an unidentifiable version. The evocative and revealing impressions and imagery could create cognitive dissonance for some staff (Festinger 1957). Cognitive dissonance occurs in individuals where the attitudes, beliefs and practices revealed are incongruent with their own. When this occurs, staff may be motivated to influence a change or at least describe how the data is inaccurate. Through this process of self-analysis different data could be revealed or in fact confirmation of the accuracy of the data. This could be particularly effective in this organisation as at the commencement of this study there was an identified incongruence in the impression of the effectiveness of the collaborative

approach to care, with a suggestion that it was more rhetoric than reality. If clinicians did not believe the interview data to be true and accurate, the mere admission of this belief places a judgement on those who provided the data and therefore creates cognitive dissonance.

Participants in the interview described their frustration with an organisation that was *stuck* with system inertia which had prevented progression over time. If this impression is pervasive amongst clinicians the interview data may provide them with insight into some of the contributing factors. This could increase certainty in their informal experiences and impressions which could even be rewarding; a potentially motivating force to increase engagement towards changing the culture.

Benchmarking Attitudes using the *Toolkit*

In this study, the *Toolkit* was the first tool used and provided a benchmark of the attitudes and beliefs of clinicians to VBAC. I recommend the *Toolkit* is used after initial preparatory work is conducted to form the basis of an action research-type approach to change and innovation in whichever aspects of clinical practice require development. The design of the *Toolkit* with the intuitive coloured tables that indicate positioning from the dark to the light side in terms of a high performing organisation is effective and easy to interpret which makes this information on knowledge, attitudes and beliefs easily accessible.

The *Toolkit* design including the self-assessment process followed by strategies for change in the chosen areas of concern would be perfectly placed in an iterative research approach that was socially constructed and participatory in nature. Appreciating the current lack of reshaping capabilities, the most important intent of the project work would be to achieve an increase in engagement of clinicians that may facilitate the development of relationships where trust and respect for each other are authentic and where interprofessional collaboration flourishes. Therefore, the organisation of the method of engagement is not as important as the fact that it happens. The improvement process, whether that be increased VBAC, decreased CS, or any other measurable clinical outcome, is not as important as the process of authentic engagement and relationship development that may then create a positive culture for any practice improvement in the future.

As mentioned in Chapter 4 this maternity service has had little traction in the Essentials of Care (EOC) project even though participation was required by the NSW Health Department (Nursing and Midwifery Office 2008). The preparatory work undertaken through this study has provided greater insights into the culture of the organisation that may be valuable to consider in an EOC

framework. Participants in this study were able to describe what the workplace culture is like and how they would prefer it to be. This information may provide a foundation or platform to re-introduce EOC or a similar transformational practice development approach with interprofessional collaboration and engagement.

Question 2: These recommendations provide an answer to the research enquiry of how an organisation can be supported to develop a culture that embraces change and innovation. Strategies that maximise the opportunity for the social domains of participants to be orientated to an approach (reward) response rather than an avoid (threat) response. Investment in the development of leaders of change, skilled in techniques to predict and recognise potential and actual threats to social domains, and the ability to regulate reactive behaviour will be crucial. Using social cognitive neuroscience has not been a conventional methodology in health services to influence change but this research has revealed that this may now be the key to shift organisations with system inertia.

These recommendations may support the stakeholders at the study site as well as others interested in, or engaged in, influencing a positive workplace culture that embraces and has readiness for change. I have emphasised the contribution the culture and context of an organisation has on the effectiveness of collaboration between care providers and aspects of team work, or team dynamics that can in turn effect the quality and safety of care. Therefore, a targeted assessment that is contextually based to identify the facilitators and barriers to change is required. The tools used in Phase 1a and 1b would be a recommended starting point for organisations interested in assessing the readiness for change and the results could then influence the directions from that point forward. Where characteristics of a high functioning organising with readiness to change are revealed the next steps may be to embark on a planned process for change. Where these characteristics are not evident, planned deliberate strategies will be required that are contextually based, targeted to the revealed characteristics and responsive to the particular needs and demands of the organisation. This is consistent with the recommendations from the comprehensive systematic review described on page 34 of this thesis (Greenhalgh et al. 2004) that urged that to achieve an environment receptive for change there must be an initial evaluation or assessment process conducted to identify the facilitators and barriers to change.

12.2: Limitations of the Study

All research has limitations that may affect internal or external validity and applicability. Strenuous efforts were undertaken to ensure internal validity in the application of research methods that were congruent with the aims of the study and therefore able to generate reliable data in terms of survey responses and qualitative data that is trustworthy in terms of interviews with peer nominated collaborators in this organisation.

There are other limitations that may influence the ability to generalise the research data to the whole organisation in the study or to any other organisations. The first of these is the fact that the information was obtained from one Maternity Service within one tertiary hospital in an urban setting in Australia. The impressions gained from the participants in this setting and their realistic evaluation of their circumstances may not be applicable in another environment (Pawson & Tilley 2008).

Second, the response rate to the Phase 1a and 1b survey that assessed clinicians' attitudes to VBAC and explored the predominant culture and Phase 2 the nomination process that identified effective collaborators had low response rates from the potential cohort; 25.8% and 32% respectively. The responses need to be considered as the opinions and impressions of a small number of clinicians from the organisation and may not be indicative of all clinicians. However, when assessing the organisation's readiness to change and the reshaping capabilities this response rate could be considered as a possible indicator of the willingness to engage in the organisation's activities. The low response rate was also consistent with another survey conducted at the same organisation during the same time (ORC International 2011) which confirmed the pervasive picture of non-engagement.

The recruitment process to nominate effective collaborators aimed to engage a group of participants who could provide important insights into IPC that could then influence a way forward in terms of a culture change. With this aim in mind, the response rate was not as important as recruiting a cohort of participants who would have the required attributes to work effectively together as well as having the knowledge and experience that could strengthen opportunities for change.

12.3: Conclusion

At the commencement of this study I was intrinsically motivated to influence a change to the VBAC rate in one maternity setting. A mandated policy directive and my own concerns for the

rising rate of intervention in birth and the potential maternal and neonatal consequences influenced my motivation. My naïve enthusiasm led me to repeat the omission of others before me in considering the change management processes. That was, the lack of assessment of readiness to change before attempting to implement change (Greenhalgh et al. 2004). It became apparent in the early phase of the study that this organisation was not ready for change and the remainder of the study was occupied with revealing and measuring the reshaping capabilities. At the end of the study I am now back at the beginning and have an understanding of a change process that may be effective in this organisation. The study direction was not the intended one and the VBAC rate has not changed however, information that may be crucial to any or all future change strategies has been obtained.

As I am writing this thesis I am cognisant of some of the descriptions used for the culture of this organisation. It has been described in these pages as dysfunctional, has system inertia, that there is evidence of aggressive behaviour and a sense of power and control of some groups over others. Arguably the lack of readiness to change and reshaping capabilities is a risk to the quality and safety of care provided to women and babies in this organisation. The workplace culture is also potentially a risk to the clinicians where social domains are frequently threatened which may result in the stress-response neuro-hormones at frequently high levels. It is not my intention to denigrate this organisation or the clinicians within this organisation as I am eternally grateful for the participants' honesty, openness and willingness to share insights into what it is like to work at the research site. The participants engaged in the process with a desire to support change with genuine altruism and belief that the culture could be improved firstly for the women and babies which could then improve satisfaction for themselves. I am optimistic that an unconventional approach to change using social cognitive neuroscience and the SCARF model would be beneficial to this culture as well as the many other organisations which could be described in a similar manner.

The intention at this point was to implement the recommendations suggested in this chapter. Unfortunately, I was unable to participate personally in this process as circumstances led me to another position in another health service within NSW. The findings of this study and the recommendations will be provided to the research site and an offer of support to guide the process in the development phase. In the next chapter, provided as a postscript to this thesis, I present a study of an example of implementing SCARF to assist a change process in the new organisation to which I moved in 2012. I found many similarities in the new site to the research site with respect to reshaping capabilities, lack of collaborative relationships and system inertia. I used the knowledge gained from this research and in particular the knowledge from social

cognitive neuroscience and the SCARF model to lead the implementation of changes that had been unsuccessful for many years.

12.4: Reflections

At the end of the journey of this research I feel that I am now at the beginning to go forward to influence a change. The initial aim of this study was not achieved and the CS and VBAC rates at the research site remain unchanged. However, the type and volume of knowledge gained through the process may influence a change for this organisation in the future that could have greater sustainability. An important part of research is to describe and reveal when research does not go to plan, when outcomes are not what is expected and the learning from this may be greater than if the findings were successful. The story is important to tell even if it has become a different story through the process. One of the biggest lessons learnt personally from my immersion in this research is that what we may think we need to study is often not what needs to be studied. As a way of concluding this thesis I will provide a brief summary of the journey that places everything in perspective.

Learning about the *Toolkit* and the success that organisations had in the UK energised me to replicate this work to reduce intervention in birth. The study design was simple in terms of a methodical step wise approach from surveying clinicians and then leading into a participatory action research (PAR). Identified change agents, or leaders, would then be encouraged to engage in meaningful discussion and debate to develop strategies to implement change which would then lead to a reduction in the overall intervention rate in birth. The *Toolkit* authors had described the process as such and I observed reports from groups of maternity clinicians who had enjoyed success with the process; there was certainty to the methodology. As a novice researcher, I had a naïve belief that the methodology recommended by the authors of the *Toolkit* was sound enough to be replicated anywhere and I unwittingly repeated the actions of many before me in not assessing the context beforehand. Changes do need to be contextually sensitive and the challenge with this study was that the context (organisation) was not conducive to an action research project within the parameters of a Professional Doctorate

I then observed my own workplace through a different lens that revealed a very different landscape to the impression of the place where I had worked for many years. What surfaced from the data from the first phase of the study using the CVF was a description of an environment that felt controlled and where clinicians lacked visibility and with no sense of value and appreciation from or to the organisation. Clinicians could describe how they preferred their organisation to be which was very different to the existing culture. The degree of disparity

between the now and preferred provided an indication of the lack of readiness of the organisation to undergo change according the authors of the CVF (Cameron & Quinn 2006). This spoke volumes to me before I had the opportunity to hear their words. However, this prompted me to want to hear their words, I wanted to delve deeper into the culture of this organisation to discover the source and degree of disengagement of clinicians from the idea of change.

The change of direction of the research at this stage had to occur in order to expose the hospital's unconscious (Allen & Kraft 1983) or the shadow organisation that existed (Allen & Pilnick 1973) to find an effective method to move forward. Inviting participants, in interviews in phase 2, to describe what things were really like in this environment as opposed to what we think they are like provided greater insight than a PAR could achieve. The subsequent interview data were rich, evocative and revealing in the descriptions of how the participants perceived the relationships and social reality of their workplace and helped to make sense of the quantitative data.

My new knowledge about social cognitive neuroscience resonated as a mechanism to explain and interpret the social adaptive behaviours and the approach – avoid response of participants. I was fortunate enough to implement the SCARF model in another organisation, as described in the following chapter, and witnessed the effectiveness in facilitating increased engagement in an organisation that also had system inertia. In my clinical practice since this experience I have used SCARF successfully with individuals and teams with similar success to the exemplar described and I believe this is the greatest learning from this study: how SCARF can be used to influence increased engagement leading to system change. Chapter 3 described the minimal success in changing the rates of CS and VBAC and a possible solution to turning the intervention rate in childbirth around could be found by *SCARF-ing* organisations.

Chapter 13: Postscript implementation exemplar: An unconventional approach to change

Introduction

Proposed plans to implement change in the research site based on the findings of the study were not possible due to a change in my employed position. I re-located to a regional area of NSW where I recognised many similarities in organisational cultural issues inhibiting implementation of change strategies in the six maternity hospitals of the new health service. This motivated me to test out the insights gained and recommendations made from my original study in order to affect change in the new setting. This chapter describes that change process in a descriptive and interpretive clinical practice example.

As detailed in chapters 11 and 12, key elements that have the potential to increase the likelihood of success in change processes in complex health care systems were identified in the study undertaken in one tertiary maternity hospital in an urbanised setting in NSW, Australia. These elements included an awareness of the readiness for change within the organisation and utilisation of skilled leadership influenced by an understanding of social cognitive neuroscience. This chapter reveals a method for staff engagement that enables participation in the introduction of innovation or change interpreted through the lens of social neuroscience and the NeuroLeadership model of SCARF (Rock, 2008). The chapter begins by describing the new setting to which I had re-located; the strategies already developed and attempted following the mandated NSW Health policy, Maternity – Towards Normal Birth, and the successes and failures experienced. The chapter describes my informal impressions of the culture of the new organisation and its readiness for change and details how my understanding of SCARF facilitated a successful and sustained practice change.

The new setting: review of the change process 2010-2012

The new setting was located in a regional area of NSW, one thousand kilometres from the major urban centre in the capital city where I had undertaken my original research. This health service consisted of six maternity units with a combined rate of 2,800 births per annum. A review of the available data on the outcomes of these six units indicated a disparity across the region that could not be accounted for by demographics of the women birthing at these sites. The publicly available data (Centre for Epidemiology and Evidence 2014) revealed that the combined (elective and emergency) CS rates for three of the six hospitals where there is service capability for this procedure (Figure 13) have similar outcomes in sites 1 and 2 and disparate outcomes for site 3 (25.7% vs 22.6% vs 29.6%). The CS rate at site 3 is similar to the NSW state average (CS

31.1%). Interestingly the elective CS rate at site 3 is double that of site 2 (17.5% vs 9.5%). As previously discussed in early chapters of the thesis, the elective CS rate is where practices and outcomes can possibly be influenced by clinician attitudes and philosophies towards normal birth and particularly towards VBAC.

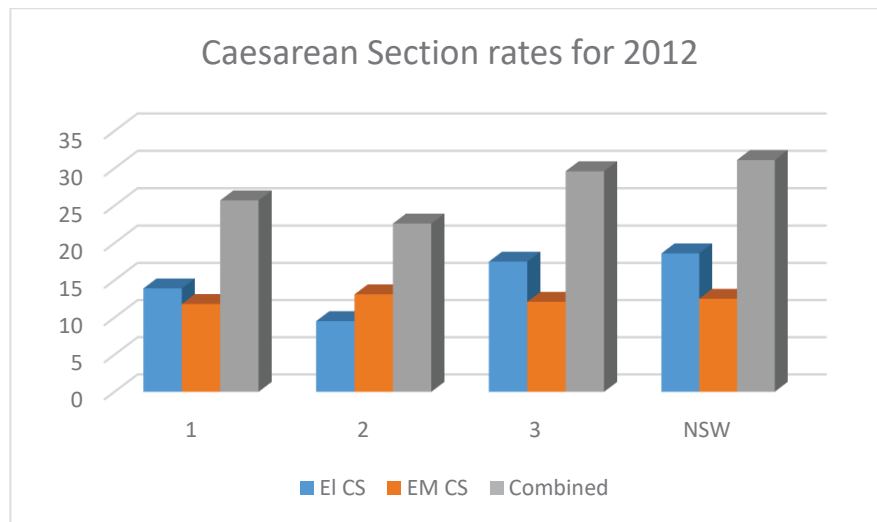


Figure 13: Caesarean Section rates for LHD2012

The data for VBAC (Figure 14) is also revealing for site 3 which had the lowest rate in this health service (7.1% vs 16.4% vs 17.9%) and less than the state average (7.1% vs 11%).

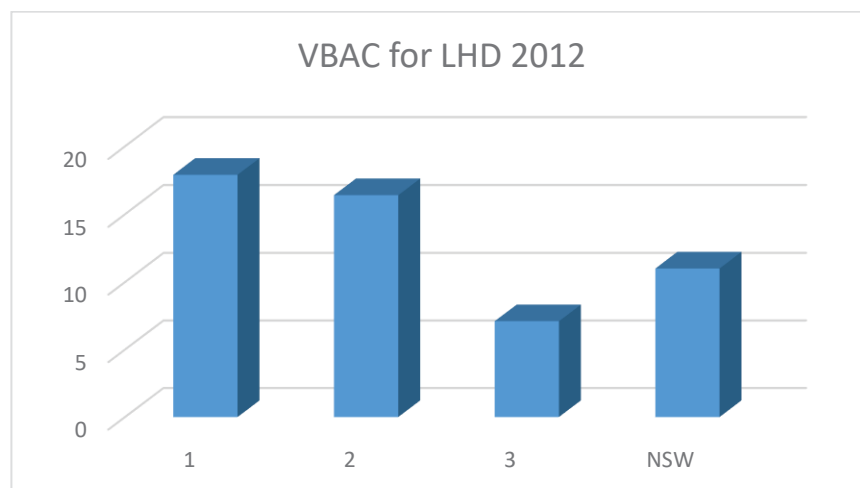


Figure 14: VBAC rates for LHD 2012

Whilst this health service has a lower CS rate and a higher VBAC rate than the state average for both, one hospital (site 3) stands out as having disparate outcomes. This is a similar situation to the outcomes observed in the research site of the study detailed in this thesis and similarly could pose a challenge to the implementation of the Maternity – Towards Normal Birth policy directive.

The leaders of this health service planned to have a coordinated approach to the implementation of this policy directive to standardise practices across its six maternity hospitals to achieve the 10 Steps to providing woman centred labour and birth care contained within the policy directive (see Chapter 2, Section 2.3). It was envisaged that each hospital would share resources, expertise and experience to implement the changes in an effective, efficient and uniform manner. Whilst there are many positive aspects to this approach, purposeful consideration needed to be given to the nature of this complex organisation and its six maternity facilities, each with unique characteristics and cultures. My research experience to this time had heightened my awareness of potentially unique, context specific characteristics of organisations that could influence the ability to implement change.

On arriving at the health service to take up the midwifery leadership position I reviewed progress on the policy directive. As a starting point I was invited to focus on Step 5 of the policy which required every maternity unit to offer water immersion during labour as a pain relief strategy for women (New South Wales Health 2010). Through a process of clinical observation, interviewing staff, recording reflections and analysis of a range of documents I discovered that in the intervening two years from publication of the policy directive in 2010 until February 2012, when I arrived, there had been many conversations, strategic meetings, business proposals, much enthusiasm and many opportunities to implement what was an evidenced based policy, responsive to women's requests and endorsed by the government. One unit had supported the practice of water immersion during labour and waterbirth prior to the policy directive in 2010 and four other units began to offer water immersion for labour by 2012. These four units became the sites for putting into practice the developing insights gained from my research as they had progressed with water immersion but were unable to progress any further to implement waterbirth. One facility unfortunately ceased labour and birth care in 2013 and therefore is not included in the strategies discussed in this chapter.

I focussed initially on developing relationships with key stakeholders within two of the maternity organisations yet to implement water birth to gain an understanding of the two cultures, including their readiness to change. These observations revealed that to date the activities utilised to drive the change process appeared to be of a circuitous nature with little forward progression. Contributing factors to this were that activities and conversations were problem based, with a focus on identifying barriers, rather than solution focused. This was compounded by the knowledge gap for some with respect to the risks and benefits of water immersion and even greater uncertainty as to how waterbirth actually occurred. There was limited certainty available to move beyond the perceived barriers. The progress of this organisational change

could be compared to a protracted labour where the contractions continue with a degree of regularity and at times with intense pain without evidence of progress. Augmentation was required to move beyond the period of inertia by applying insights from an understanding of the concepts of social cognitive neuroscience to enable the implementation and diffusion of this innovation. This involved utilising three main change process strategies while keeping the brain in mind; stakeholder engagement, promoting a solution focused approach and an innovative 'wet run', as described in the following section. I will firstly present the three strategies and then reflect on the 5 SCARF domains that inspired them (Rock, 2008).

Stakeholder Engagement

My observations and conversations revealed that stakeholders were not always together for discussions about the proposed changes which resulted in the information exchange being incomplete and piecemeal creating uncertainty. There was often duplication of information at meetings or there was a risk of omitting information since it was presumed that all stakeholders were cognisant of the issues from prior discussions.

A strategy to increase progress was to ensure all stakeholders attended the meetings, at the same time, to ensure consistency of information exchange and increased participation and engagement increasing certainty. The group was, and needed to be wide and diverse to incorporate the multifaceted nature of the change within the organisation. The stakeholder group included not only local maternity unit managers and clinical staff (obstetric and midwifery) but also representatives from the Health Service Executive and Clinical Governance groups and the Medical Emergency Team (MET) to ensure the safety of the proposed change and that there was robust guidance developed. Representatives from the health service plumbers and engineers were included to assist with logistical solutions to enable a high volume of water delivery and emptying of the bath in the shortest time possible if needed. The Work Health and Safety Officers advised on the potential self-care issues for staff to minimise risk when supporting a woman immersed in a bath. Virtual stakeholders who had experience with water immersion in other facilities in NSW and who could therefore contribute to the knowledge and operational considerations for implementation were also invited to be a resource for the individual members of the group. This increased knowledge also increased certainty.

The stakeholder group was chosen for the contribution they could individually and collectively make to the planning and implementation. In addition, their inclusion had a relationship to all the 5 social domains of SCARF as I predicted there could be a threat to each during the process of discussion and negotiation. This was a strategy to increase an approach response. For

example, there had been circuitous conversations regarding the increased infection risk during a water birth which had been one of the strongest barriers to implementation. The Infection Prevention and Control Specialist from a large metropolitan hospital who had a state-wide reputation as a leader in her field was nominated to be a virtual advisor for her local counterpart. This strategy considered the domains of status and certainty as knowledge gaps could be rectified with this virtual member and not amid the entire group which could potentially threaten the status of the Infection Prevention and Control Specialist. As each member of the group was allocated an external virtual resource person there was a sense of fairness which then resulted in reward to status as well as increasing relatedness within the group.

Promoting a Solution focused approach

As implementation of water immersion was required to become a reality the language needed to change. There had been a concentration on the issues surrounding implementation and the conversation inadvertently remained focussed on the barriers. Whilst identification of barriers is an essential element in the needs analysis for change, there does need to be a time where the focus shifts to a solution focused approach. With direct engagement, the philosophy of the meetings shifted to one that recognised that “...*this is going to happen so how can we make this happen together*”. This provided the group with the commitment for the change, highlighted an emphasis on solutions and invited participation and engagement from all stakeholders.

It became apparent in the round table discussions that there was some difficulty in conceptualising what immersion in water for labouring women involved. The words that clinical representatives used were interpreted differently by the plumbers and the engineers which created issues of unnecessary magnitude. For example, on one occasion when a midwife inadvertently used the word *tank* as opposed to *bath* or *pool* the plumber imagined a receptacle like a large water storage tank and the engineer contemplated weight loads and what modifications would be required to accommodate this tank in the existing structures. At this point I observed that the plumber and engineer had become disengaged with the discussion around the table and after questioning it became apparent they were both attempting to conceptualise what would be required of them in what was now perceived as a more complex operation. When the dimensions of the water immersion equipment were clarified the plumber physically relaxed, re-engaged in the conversation and provided realistic solutions to the issues.

This process of information clarification was with respect to the domain of certainty which had been threatened leading to disengagement. This was the primary domain of focus, however, there are often other domains threatened as a consequence of the threat to one domain;

certainty in this case. If certainty remained threatened this could have also threatened status as the plumber and engineer may have perceived a change to how they saw themselves in relation to the group which then could threaten the domain of relatedness. A simple miscommunication could have threatened many of the social domains for these two stakeholders which could then have led to barriers being maintained in the implementation process. As the leader in the group and being cognisant of what had occurred I was able to regulate the behaviour of these two stakeholders by changing the threats to approach responses which enabled them to re-engage in the process.

The “Wet Run”

Recognition of this inability to conceptualise the task provided an additional solution for the group to enable the abstract concepts to become more concrete. The idea of a “wet run” emerged which would involve all the stakeholders observing and / or participating in a simulated water immersion experience. The idea was to observe in real time what was being discussed around the table and to convert concepts into workable solutions.

A “wet run” was conducted at the two facilities and each one conducted in a way that considered the specific issues and opportunities for their site. This was important in recognition of the different environments as well as encouraging local participation and ownership that would facilitate implementation and sustainability of the change. Despite some site-specific variations, most of the considerations were the same and included assessment of the availability and suitability of equipment required; Work Health and Safety and Infection Prevention requirements; implementation of methods to manage emergency clinical situations and a program for clinician education and skill development.

Equipment realities

The ideal situation for water immersion during labour is for a fixed bath that is deep and wide enough to enable the woman to adopt positions of choice throughout the period of immersion as well as enable the birth of the baby to occur whilst fully submerged under the water to prevent a reflex gasp when exposed to the air. Currently there are no formalised requirements for the dimensions of the bath for water immersion; however, one of the barriers to implementation has been a perception within and across organisations that more specialised fittings and fixtures are required. During the “wet run” the normal domestic sized bath available in each unit was filled, a volunteer clinician immersed herself in the water, adopted several alternate positions that may be adopted during labour and for a birth. This demonstrated for

the audience the adequacy and appropriateness of the current baths or inflatable pools available in each unit and enabled progress to be expedited.

An additional stakeholder perception was that the bath needed to be free standing and accessible on all sides to enable the clinician to safely provide labour and birth care. The clinicians at one site extended the “wet run” method to include simulation of a water birth which was witnessed by the stakeholder group including the hospital Executive Officers. The simulation demonstrated aspects of care that included how equipment is used, how monitoring is attended, how the water temperature is maintained and how the birth of the baby occurs underwater and is then brought gently to the surface. This lifelike demonstration engaged the audience to the point they felt as though they had just witnessed the birth of a colleague’s baby and most of the previous misconceptions, apprehensions and hesitations faded as the baby was cuddled in the warm water by the new mother.

In addition to usual care, the clinicians need to be able to assist the rapid recovery of a woman in the event of a collapse. It was thought that some older maternity facilities could not meet these requirements as the fixtures were not necessarily designed to accommodate immersion for labour and birth since their baths were of a domestic style. This factor alone would prohibit implementation of water immersion in many facilities. However, with a solution focused approach it was possible to examine this issue with a lateral perspective. After the successful simulated waterbirth of the baby the team then simulated a maternal collapse and safe rescue from the domestic styled and sized bath.

Engagement, collaboration and participation by several different professions within the stakeholder group enabled the development of working solutions to an issue that had previously been perceived as the most significant risk to the practice of immersion in water during labour and waterbirth.

Progress

By mid-2013 all the maternity facilities in this health service with capability to support labour and birth offered women access to water immersion. This achievement was two years ahead of the 2015 target date and has continued as a sustained practice change into 2017. All facilities are now confident in supporting women in their choice for waterbirth. The clinical outcomes for women and babies have been audited with no change to the defined clinical indicators as a consequence of birth in water: neonatal admissions to Special Care Nursery, neonatal or maternal infections, significant perineal trauma. Clinicians have demonstrated an active and

enthusiastic engagement in a 'waterbirth' accreditation process which will ensure an ongoing competent and confident workforce to support women with this choice for labour and birth.

Interpretation of the change using the lens of SCARF

In the implementation of water immersion for labour and birth the leaders were required to engage the brain and particularly the amygdala in a positive way to enable thinking, exploring, and contemplation of change amongst the participants to increase preparedness for the operational aspects of the change.

The successful implementation of organisational change can be influenced by the readiness of that organisation to change. The readiness to change can include the identification of strong teams, a perception of being valued and respected and an appreciation for innovation and flexibility. Where these elements are not present the leaders of change may need to consider additional strategies separate to the actual change or intervention.

The SCARF model (Rock 2008) provides a framework that enables leaders to understand behaviours and be able to influence the modification of behaviour to be more adaptive to a situation. The social domains of **Status**, **Certainty**, **Autonomy**, **Relatedness** and **Fairness** provide a language that improves the ability of leaders to recognise or reappraise the emotional response to situations.

When involved in a change process the leader can be proactive and attempt to predict threat (avoid) responses and modify the situation to minimise the negative response. By actively attempting to reduce stress responses, a leader can create an environment conducive to greater collaboration, cooperation and productivity. SCARF can also be used after an event as a means of explaining behaviours which may then be modified in future events. In this clinical practice example, I consciously considered how to activate the social domains identified by SCARF in order to increase the participants' approach (reward) responses to maximise engagement, collaboration, cooperation and productivity in the change process. In the following section, each SCARF domain (Status, Certainty, Autonomy, Relatedness, Fairness) is examined to interpret how increasing rewards and decreasing threats may have contributed to the success of implementing water immersion in labour in these two clinical settings.

Status:

Increasing status reward

The inclusion of all stakeholders contributed to the positive perception of status. Although the practice of water immersion for labour and birth is a domain of maternity care, the plumbers, engineers and members of the MET were seated at the table, shoulder to shoulder with members of the health service executive and were invited to contribute equally. Their opinion was actively sought, they felt listened to and their suggestions were included in the overall change process. Studies in neuroscience have revealed that where there is status-confirming behaviour there can be activation in the reward neural circuitry of the brain (Rock & Cox 2012). By being authentically inclusive of the plumbers, for example, they would be more likely to participate by actively contributing to the discussion and this may even extend beyond their scope of expertise if they felt valued.

Reducing status threat

A reduced perception of status in a group can result in lowered cognitive capacity in the individual which may result in disengagement in participation (Rock & Cox 2012). Utilising virtual stakeholders provided this group with a peer to refer to for information or confirmation of ideas, external to the immediate discussion. This decreased the risk of a challenge to their status within the group. This was particularly evident with the information for infection prevention where peers with recent experience with water immersion could provide guidelines, results of audits of practices in other settings and advice to the local stakeholders, which in turn increased the confidence of the Infection Control staff to discuss new information within the group. As the facilitator and a confident practitioner with respect to water immersion I could have provided the data on the minimal risk of infection with this practice to the group which could have threatened the status of the local representative. Instead a clarifying conversation occurred sideways to the group, provided certainty which resulted in a confident report back to the group with maintenance of status.

Certainty:

Increasing reward from certainty

In this example, there was a significant degree of uncertainty regarding water immersion and the previous *ad hoc* format and structure of meetings did not always enable synchronous knowledge exchange to all, which then potentiated the uncertainty.

One of the most poignant examples of the disengagement then re-engagement through certainty occurred with the misconception by the plumber and engineer of the specification requirements of the bath. Their threat response was activated with evidence of an amygdala

hijack, their body language changed to one of withdrawal with possible increase in cortisol levels as a stress response. If this reaction had not been observed and regulated they may have remained disengaged and a solution to the current issue would have been delayed. With the provision of timely, accurate information, their certainty increased, there was an immediate reward response and they both approached the issue with feasible solutions.

Reducing threat of uncertainty

As uncertainty can invoke a threat response it is important to predict this occurrence where possible, prior to commencing a change process and then, mitigate the risk. Determining current knowledge and the provision of information can be a proactive approach to reducing uncertainty. For many members of the stakeholder group, there was also a misconception of the required dimensions of a bath for water immersion during labour which had never been confirmed or refuted. Providing the necessary information about the baths and a practical demonstration through the “wet run” provided the certainty they required to move ahead in their thinking and their solutions.

Autonomy:

Increasing rewards from autonomy

The development and implementation of the concept of a “wet run” demonstrated the domain of autonomy. Having a sense of control in the situation and not feeling threatened influenced one of the participants to be creative and take discussions to a life-like scenario. The reward response from this exercise heightened the enthusiasm in the group and increased the momentum for change.

The successful “wet run” increased the sense of autonomy for another group in a vicarious sense. They increased their creativity with a greater perception of control over the situation and inspired them to simulate a water birth. This not only assisted to make an abstract concept more concrete, but increased the sense of autonomy of the participants which in turn increased their motivation for continued engagement.

Reducing autonomy threat

Working within a team can potentially threaten autonomy by the mere fact of working together rather than individually. However, this can be reduced by allocation of responsibility for components of the change for which an individual must provide input. During the “wet run” responsibilities for specific observations were allocated to representatives from each

stakeholder group which minimised their involvement to areas in which they had greater certainty. For example, the Work Health and Safety Officer provided advice and options for the lifting techniques for the collapsed woman. This stakeholder did not need to be concerned with the clinical aspects of the birth of the baby which would potentially invoke a threat (avoid) response.

Relatedness:

Increasing reward from relatedness

There were several opportunities in this case example where relatedness was demonstrated. The fact that stakeholders became members of the group to drive the change was the first occasion where relationships were formed. They were from varied backgrounds but their new commonality was the project for implementation of water immersion.

The internal team members derived peer support from the virtual members through a process of relatedness and decreasing uncertainty. The result was that the stakeholders may have been able to experience greater trust and empathy towards those they felt shared a common purpose (Rock & Cox 2012).

Reducing threat from lack of relatedness

For some of the stakeholders there was lack of relatedness to labour and birth overall so to conceptualise water immersion and labour and birth was difficult. This was evident from those who would be responding to the MET call who expressed a level of concern about how they would manage their emergency activities in the event of a maternal collapse. The threat response could have translated into non-endorsement of the change for safety reasons. This was circumvented with the “wet run” which demonstrated the rescue process using the practice principles required. In experiencing a familiar situation, they could relate, enabled these stakeholders to positively engage with the process. With a sense of connectedness to the situation the perception of threat was reduced.

Fairness:

Increasing reward from fairness

The concept of the “wet run” was quite novel and successfully executed in the first facility. Other sites were supported to replicate this scenario so that they could share fairly in the perceived benefits in terms of personal reward for successful execution as well as the reward of progress that resulted in successful implementation of the innovation.

Reducing threat from unfairness

All the participants involved in the change needed to be provided with the same information to provide transparency. Changing the construct of the meetings to ensure that all stakeholders were present increased the opportunity for consistent information exchange which would result in fairness in knowledge acquisition. Open and effective communication is also a key to reducing perceptions of unfairness. Cultivating an environment where everyone has the sense that they can provide an opinion safely can reduce the threat response.

Conclusion

When a leader is cognisant of the SCARF domains and actively employs strategies to increase the approach response with participants, there is a greater opportunity for engagement. By actively attempting to reduce stress responses, a leader can create an environment conducive to greater collaboration, cooperation and productivity.

This example highlights the need to look beyond the issue that needs to be changed. What was required was an exploration of ways to improve key stakeholders' capacity to understand and to modify thinking and behaviour to become more adaptive and ready for change. This was influenced in this example using NeuroLeadership techniques and the SCARF conceptual model. The example of implementation of water immersion could seem a small step when considering organisational change; however, it is a step and one where a positive outcome could then be the motivator for broader organisational change. This example demonstrates how using insights from social cognitive neuroscience and the SCARF model can facilitate engagement to create change and that change could be a practice change such as water immersion or a whole of service change that may increase the quality and safety of care.

Leading change with the brain in mind provides new opportunities for leaders of organisations to create cultures that are more able to engage effectively, to develop authentic relationships, to establish environments that embrace change and innovation.

Reflection on this journey

During the process of the research and my reading on examples where the SCARF model had been implemented I was convinced on a theoretical level that this was an effective approach to increase engagement to facilitate change. However, I had not experienced the effectiveness first hand and especially not in the research site where my study was located, due to my changed circumstances. Therefore, I embraced the opportunity to test out the theory in an experiential manner. Initially implementation plans for Step 5 of the policy directive in the new health service

did not include use of the SCARF model. However, the more time I spent with clinicians I observed many behavioural similarities to the research site and so using SCARF became integral to my engagement with these new clinicians.

Prior to my first then subsequent meetings with the stakeholder group I predicted where social domains may be threatened and deliberately developed strategies to have in my repertoire of dialogue and actions to minimise the threats. This was particularly in relation to certainty as uncertainty seemed to be pervasive in discussions; I was forearmed with information and directions to increase approach responses.

Identification of threat responses prompted me to be deliberate in taking some kind of action to regulate this behaviour where possible. The example of the plumbers and engineers describes this well. After each meeting, I reflected on the conversations, the behaviours, the emotions and the progress and then decided on strategies and actions that may be useful in the next encounter. I found myself during these periods of reflection changing the SCARF model to a verb and recognised my actions as “SCARF-*ing*” the group.

My overall impression was of being overwhelmingly convinced that being cognisant of the threat to social domains is a key to facilitating and maintaining engagement in change processes. I witnessed firsthand the behaviour change with a threat as well as adaptive behaviour when the threat was mitigated.

I do acknowledge, however, that as the leader you cannot always accurately perceive or determine what the threat to an individual is or what may have evoked the threat. Confidence in the process can be strong together with humility that it is not infallible. There may be occasions where our personal interpretation of the response may not be accurate, but skilled facilitation and a repertoire of techniques may offer us certainty in this situation.

References

- Abenham, H., Azoulay, L., Kramer, M. & Leduc, L. 2008, 'Incidence and risk factors of amniotic fluid embolisms: a population-based study on 3 million births in United States', *American Journal of Obstetrics and Gynecology*, vol. 199, no. 1, pp. 1-8.
- Adams, C., Dawson, A. & Foureur, M. 2016a, 'Competing Values Framework: A useful tool to define the predominant culture in a maternity setting in Australia', *Women and Birth*.
- Adams, C., Dawson, A. & Foureur, M. 2016b, 'Exploring a Peer Nomination Process, Attributes, and responses of Health Professionals Nominated to facilitate Interprofessional Collaboration', *International Journal of Childbirth*, vol. 6, no. 4, pp. 234-45.
- Alexander, J.A. & Hearld, L.R. 2011, 'The science of quality improvement implementation: developing capacity to make a difference', *Medical Care*, vol. 49 Suppl, pp. S6-S20.
- Allen, R. & Kraft, C. 1983, 'Discovering your hospital's unconscious', *Hospital Forum*, no. January/february, pp. 11-7.
- Allen, R. & Kraft, C. 1984, *Transformations that last: a cultural approach*, Miles River Press, Alexandria, Vancouver.
- Allen, R. & Pilnick, S. 1973, 'Confronting the shadow organisation. How to detect and defeat negative norms.', *Organizational Dynamics*, vol. 1, no. 4, pp. 3-18.
- Althabe, F., Belizán, J.M., Villar, J., Alexander, S., Bergel, E., Ramos, S., Romero, M., Donner, A., Lindmark, G., Langer, A., Farnot, U., Cecatti, J.G., Carroli, G. & Kestler, E. 2004, 'Mandatory second opinion to reduce rates of unnecessary caesarean sections in Latin America: a cluster randomised controlled trial', *Lancet*, vol. 363 North American Edition, no. 9425, pp. 1934-40.
- Arias-Carrión, O., Stamelou, M., Murillo-Rodríguez, E., M, M.-G. & Pöppel, E. 2010, 'Dopaminergic reward system: a short integrative review', *International Archives of Medicine*, vol. 3, pp. 24-.
- Arias-Carrión, O., Stamelou, M., Murillo-Rodríguez, E., Menéndez-González, M. & Pöppel, E. 2010, 'Dopaminergic reward system: a short integrative review', *International Archives of Medicine*, vol. 3, p. 24.
- Arnsten, A. 1998, 'The biology of being frazzled', *Science*, vol. 280, no. 5370, pp. 1711-2.
- Australian College of Midwives 2013, *National midwifery guidelines for consultation and referral*, Australian College of Midwives, Canberra, Australian Capital Territory, Australia.
- Australian Department of Health and Aging 2009, *Improving maternity services in australia: The report of the maternity services review*, Commonwealth of Australia, Canberra.
- Australian Institute of Health and Welfare 2015, *Australia's mothers and babies 2013—in brief* Australian Institute of Health and Welfare., Canberra.
- Baggs, J., Schmitt, M., Mushlin, A., Mitchell, P., Eldrege, D. & Oakes, D. 1999, 'Association between nurse-physician collaboration and patient outcomes in three intensive care units ', *Crit Care Med.*, vol. 27, pp. 1991-8.
- Baldwin, J., Brodrick, A., Cowley, S. & Mason, N. 2010, 'An Innovative Toolkit to Support Normal Birth', *Journal of Midwifery & Women's Health*, vol. 55, no. 3, pp. 270-2.
- Baldwin, J., Brodrick, A., Mason, N. & Cowley, S. 2007, 'Maternity services. Focus on normal birth and reducing caesarean section rates', *MIDIRS Midwifery Digest*, vol. 17, no. 2, pp. 279-82.
- Béhague, D.P., Victora, C.G. & Barros, F.C. 2002, 'Consumer demand for caesarean sections in Brazil: informed decision making, patient choice, or social inequality? A population based birth cohort study linking ethnographic and epidemiological methods', *BMJ*, vol. 324, no. 7343, pp. 942-5.
- Ben-Gal, H.C. & Tzafrir, S.S. 2011, 'Consultant-client relationship: One of the secrets to effective organizational change?', *Journal of Organizational Change Management*, vol. 24, no. 5, pp. 662-79.

- Benoit, C., Zadoroznyj, M., Hallgrimsdottir, H., Treloar, A. & Taylor, K. 2010, 'Medical dominance and neoliberalisation in maternal care provision: The evidence from Canada and Australia', *Social Science & Medicine*, vol. 71, no. 3, pp. 475-81.
- Bettinger, T.V. 2007, 'Learning in Adulthood: A Comprehensive Guide (3rd ed.)', *Adult Education Quarterly*, vol. 58, no. 1, pp. 81-2.
- Birch, M. & Miller, T. 2000, 'Inviting intimacy: the interview as therapeutic opportunity.', *International Journal of Social Research Methodology* vol. 3, pp. 189-202.
- Bleakley, A. 2013, 'Working in "teams" in an era of "liquid" healthcare: What is the use of theory?', *Journal of Interprofessional Care* Vol. 27, Iss. 1, 201, vol. 27, no. 1.
- Braun, V. & Clarke, V. 2008, 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77-101.
- Brennan, S.E., Bosch, M., Buchan, H. & Green, S.E. 2012, 'Measuring organizational and individual factors thought to influence the success of quality improvement in primary care: a systematic review of instruments', *Implementation Science*, vol. 7, no. 1, pp. 2-19.
- Butler, S. 2015, *Macquarie Dictionary*, 6th edn, Macmillan Publishers Group, Australia.
- Cacioppo, J. & Patrick, B. 2008, *Loneliness: human nature and the need for social connection*, W.W Norton and Company, New York.
- Cameron, S. & Quinn, R. 2006, *Diagnosing and changing organisational culture: based on the competing values framework*, Jossey-Bass, San Francisco: .
- Campbell, R., Adams, A., Wasco, S., Ahrens, C. & Self, T. 2010, 'What has it been like for you to talk with me today?': the impact of participating in interview research on rape survivors ', *Violence Against Women.*, vol. 16, pp. 60-83.
- Carayon, P. & Wood, K. 2010, 'Patient Safety: The Role of Human Factors and Systems Engineering', *Studies in health technology and informatics*, vol. 153, pp. 23-46.
- Catling-Paull, C., Johnston, R., Ryan, C., Foureur, M. & Homer, C. 2011, 'Clinical interventions that increase the uptake and success of vaginal birth after caesarean section: a systematic review', *Journal Advanced Nursing*, vol. 67, no. 8, pp. 1646-61.
- Centre for Epidemiology and Evidence 2014, *NSW Mothers and Babies report 2012*, NSW Ministry of Health, Sydney.
- Centre for Epidemiology and Evidence 2016, *New South Wales Mothers and Babies 2014*, NSW Ministry of Health,. Sydney.
- Centre for Maternal and Child Enquiries 2011, 'Saving Mothers' Lives: reviewing maternal deaths to make motherhood safer: 2006–08. The Eighth Report of the Confidential Enquiries into Maternal Deaths in the United Kingdom', *BJOG*, vol. 118, no. (Suppl. 1), pp. 1–203.
- Chaillet, N., Dubé, E., Dugas, M., Francoeur, D., Dubé, J., Gagnon, S., Poitras, L. & Dumonta, A. 2007, 'Identifying barriers and facilitators towards implementing guidelines to reduce caesarean section rates in Quebec', *Bulletin of the World Health Organization*, vol. 85, no. 10, pp. 791-8.
- Chen, M.M. & Hancock, H. 2012, 'Women's knowledge of options for birth after Caesarean Section', *Women & Birth*, vol. 25, no. 3, pp. e19-26.
- Cho, C.E. & Norman, M. 2013, 'Cesarean section and development of the immune system in the offspring', *American Journal of Obstetrics and Gynecology*, vol. 208, no. 4, pp. 249-54.
- Clark-Ibanez, M. 2004, 'Framing the Social World With Photo-Elicitation Interviews', *American Behavioural Scientist*, vol. 47, no. 12, pp. 1507-27.
- Clinical Excellence Commission 2010, *Rising to Excellence. 2009 QSA Self Assessment: Supplementary Report.*, Clinical Excellence Commission, Sydney.
- Collier, J. 1957, 'Photography in anthropology: a report on two experiments', *American Anthropologist*, vol. 59, pp. 843-59.

- Collins, K., Onwuegbuzie, A. & Sutton, I. 2006, 'A model incorporating the rationale and purpose for conducting mixed methods research in special education and beyond', *Learning Disabilities: A Contemporary Journal*, vol. 4, pp. 67-100.
- Colman-Brochu, S. 2004, 'Deep vein thrombosis in pregnancy', *The American Journal of Maternal and Child Nursing*, vol. 29, no. 3, pp. 186-92.
- Committee on Quality of Health Care in America 2001, *Crossing the Quality Chasm: a new health system for the 21st Century*, Institute of Medicine, Washington.
- Copeland, F., Dahlen, H. & Homer, C. 2014, 'Conflicting contexts: Midwives' interpretation of childbirth through photo elicitation', *Women and Birth*, vol. 27, no. 2, pp. 126-31.
- Cornthwaite, K., Alvarez, M. & Siassakos, D. 2015, 'Team training for safer birth', *Best Practice & Research Clinical Obstetrics & Gynaecology*, vol. 29, no. 8, pp. 1044-57.
- Corwin, L. 2009, 'Factors and processes that facilitate collaboration in a complex organisation: a hospital case study', University of Bergen.
- Corwin, L., Corbin, J. & Mittelmark, M. 2012a, 'Producing synergy in collaborations: A successful hospital innovation', *The Innovation Journal*, vol. 17, no. 1.
- Corwin, L., Corbin, J. & Mittelmark, M. 2012b, 'Producing Synergy in Collaborations: A Successful Hospital Innovation', *The Innovation Journal: The Public Sector Innovation Journal.*, vol. 17, no. 1, pp. 1-16.
- Creswell, J., Klassen, A., Plano Clark, V. & Smith, K. 2011, *Best practices for mixed methods research in the health sciences*, National Institutes of Health, Bethesda.
- Creswell, J. & Plano Clark, V. 2011, *Designing and conducting mixed methods research.*, 2nd. edn, Sage, Thousand Oaks, California.
- Crotty, M. 1989, *The Foundation of Social Research: Meaning and Perspective in the Research Process*, Sage, London.
- Crowther, S., Hunter, B., McAra-Couper, J., Warren, L., Gilkison, A., Hunter, M., Fielder, A. & Kirkham, M. 2016, 'Sustainability and resilience in midwifery: A discussion paper', *Midwifery*, vol. 40, pp. 40-8.
- Cunningham, C., Woodward, C., Shannon, H., Macintosh, J., Lendrum, B., Rosenbloom, D. & Brown, J. 2002, 'Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural correlates', *Journal of Occupational and Organizational Psychology* vol. 75, pp. 377-92.
- Curtis, P., Ball, L. & Kirkham, M. 2006, 'Why do midwives leave? (not) being the kind of midwife you want to be', *British Journal of Midwifery*, vol. 14, no. 1, pp. 27-30.
- D'Armouri, D., Ferrada-Videla, M., San, L., Rodriguez, M. & Baelieu, M. 2005, 'The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks', *Journal of Interprofessional Care, (May 2005) Supplement 1: 116 – 131*, vol. Supp 1, pp. 116-31.
- Dahlen, H.G., Kennedy, H.P., Anderson, C.M., Bell, A.F., Clark, A., Foureur, M., Ohm, J.E., Shearman, A.M., Taylor, J.Y., Wright, M.L. & Downe, S. 2013, 'The EPIIC hypothesis: Intrapartum effects on the neonatal epigenome and consequent health outcomes', *Medical Hypotheses*, vol. 80, no. 5, pp. 656-62.
- Darwin, C. 1859, *On the Origin of the Species by Means of Natural Selection*, John Murray, London.
- De Bono, S., Heling, G. & Borg, M. 2014, 'Organizational culture and its implications for infection prevention and control in healthcare institutions', *Journal of Hospital Infection*, vol. 86, no. 1, pp. 1-6.
- de Macedo, J.Q., Khanlou, N. & Villar Luis, M.A. 2015, 'Use of vignettes in qualitative research on drug use: Scoping review and case example from Brazil', *International Journal of Mental Health and Addiction*, vol. 13, no. 5, pp. 549-62.
- Degen, C., Li, J. & Angerer, P. 2015, 'Physicians' intention to leave direct patient care: an integrative review', *Human Resources for Health*, vol. 13, no. 1, p. 74.

- Deline, J., Varnes-Epstein, L., Dresang, L.T., Gideonsen, M., Lynch, L. & Frey, J. 2012, 'Low Primary Cesarean Rate and High VBAC Rate With Good Outcomes in an Amish Birthing Center', *Annals of Family Medicine*, vol. 10, no. 6, pp. 530-7.
- Deneux-Tharoux, C., Carmona, E., Bouvier-Colle, M. & Bréart, G. 2006, 'Postpartum maternal mortality and cesarean delivery', *Obstetrics and Gynecology*, vol. 108, no. 3, pp. 541-8.
- Dopson, S., Fitzgerald, L. & Ferlie, E. 2008, 'Understanding Change and Innovation in Healthcare Settings: Reconceptualizing the Active Role of Context.', *Journal of Change Management*, vol. 8, no. 3, pp. 213-31.
- Downe, S., Byrom, S., Finlayson, K., Fleming, A. & Edge, E. 2009, *East Lancashire Childbirth Choices Project: Choice, safety and collaboration.*, University of Central Lancashire Lancashire, England.
- Downe, S., Finlayson, K. & Fleming, A. 2010, 'Creating a collaborative culture in maternity care', *Journal of Midwifery & Women's Health*, vol. 55, no. 3, pp. 250-4.
- Dye, J., Schatz, I., Rosenberg, B. & Coleman, S. 2000, 'Constant comparison method: A kaleidoscope of data', *The Qualitative Report*, vol. 4, no. 1/2.
- Eden, K., Perrin, N., Vesco, K. & Guise, J. 2014, 'A Randomized Comparative Trial of Two Decision Tools for Pregnant Women with Prior Cesareans', *Journal of Obstetric, Gynecologic & Neonatal Nursing*, vol. 43, no. 5, pp. 568-79.
- Emmett, C., Shaw, A., Montgomery, A. & Murphy, D. 2006, 'Women's experience of decision making about mode of delivery after a previous caesarean section: the role of health professionals and information about health risks', *BJOG: An International Journal of Obstetrics & Gynaecology*, vol. 113, no. 12, pp. 1438-45.
- Emmison, M. & Smith, P. 2000, *Researching the visual.*, Sage, London.
- Engel, J. & Prentice, D. 2013, 'The ethics of interprofessional collaboration', *Nursing Ethics*, vol. 20, no. 4, pp. 426-35.
- Epstein, I., Stevens, B., McKeever, P. & Baruchel, S. 2006, 'Photo Elicitation Interview (PEI): Using Photos to Elicit Children's Perspectives', *International Journal of Qualitative Methods* vol. 5, no. 3, pp. 1-9.
- Faisal, I., Matinnia, N., Hejar, A.R. & Khodakarami, Z. 2014, 'Why do primigravidae request caesarean section in a normal pregnancy? A qualitative study in Iran', *Midwifery*, vol. 30, no. 2, pp. 227-33.
- Farnworth, A., Robson, S.C., Thomson, R.G., Watson, D.B. & Murtagh, M.J. 2008, 'Decision support for women choosing mode of delivery after a previous caesarean section: A developmental study', *Patient Education and Counseling*, vol. 71, no. 1, pp. 116-24.
- Feltner, A., Mitchell, B., Norris, E. & Wolfle, C. 2008, 'Nurses' views on the characteristics of an effective leader', *AORN Journal*, vol. 87, no. 2, pp. 363-72.
- Festinger, L. 1957, *A Theory of Cognitive Dissonance*, Stanford University Press, California.
- Fischer, C.T. 2009, 'Bracketing in qualitative research: Conceptual and practical matters', *Psychotherapy Research*, vol. 19, no. 4-5, pp. 583-90.
- Flamm, B., Berwick, D. & Kabcenell, A. 1998, 'Reducing Cesarean Section rates safely: lessons from a "breakthrough series" collaborative', *Birth*, vol. 25, no. 2, pp. 117-24.
- Fosnet, C. & Perry, R. 2005, *Constructivism: a psychological theory of learning.*, 2nd edn, Teachers College Press, New York.
- Foucault, M. 1980, *Power/knowledge: Selected interviews and other writings 1972-1977*, Pantheon Books, New York.
- Foureur, M., Ryan, C., Nicholl, M. & Homer, C. 2010, 'Inconsistent evidence: analysis of six national guidelines for vaginal birth after cesarean section.', *Birth*, vol. 37, no. 1, pp. 3-10.
- Fraser, W., Maunsell, E., Hodnett, E. & Moutquin, J.M. 1997, 'Randomized controlled trial of a prenatal vaginal birth after cesarean section education and support program. Childbirth

- Alternatives Post-Cesarean Study Group', *American Journal Of Obstetrics And Gynecology*, vol. 176, no. 2, pp. 419-25.
- Fritz, H. & Lysack, C. 2014, "'I see it now": Using photo elicitation to understand chronic illness self-management/L'usage de la méthode de photo-interview pour mieux comprendre l'autogestion des maladies chroniques', *The Canadian Journal of Occupational Therapy*, vol. 81, no. 4, pp. 247-55.
- Gagliardi, A.R., Dobrow, M.J. & Wright, F.C. 2011, 'How can we improve cancer care? A review of interprofessional collaboration models and their use in clinical management', *Surg Oncol*, vol. 20, no. 3, pp. 146-54.
- Gardner, K., Henry, A., Thou, S., Davis, G. & Miller, T. 2014, 'Improving VBAC rates: the combined impact of two management strategies', *Australian & New Zealand Journal of Obstetrics & Gynaecology*, vol. 54, no. 4, pp. 327-32.
- Glasgow, J.M., Yano, E.M. & Kaboli, P.J. 2013, 'Impacts of organizational context on quality improvement', *American Journal of Medical Quality*, vol. 28, no. 3, pp. 196-205.
- Goleman, D. 1995, *Emotional Intelligence: Why It can Matter More Than IQ.*, Bantam Books, New York: Bantam.
- Goodall, K.E., McVittie, C. & Magill, M. 2009, 'Birth choice following primary Caesarean section: mothers' perceptions of the influence of health professionals on decision-making', *Journal of Reproductive & Infant Psychology*, vol. 27, no. 1, pp. 4-14.
- Gordon, E., Barnett, K., Cooper, N., Tran, N. & Williams, L. 2008, 'An "integrative neuroscience" platform: application to profiles of negativity and positivity bias', *Journal of Integrated Neuroscience*, vol. 7, no. 3, pp. 345-66.
- Greene, J. 2008, 'Is mixed methods social inquiry a distinctive methodology? ', *Journal of Mixed Methods Research.*, vol. 2, no. 1, pp. 7-22.
- Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P. & Kyriakidou, O. 2004, 'Diffusion of innovation in service organisations: Systematic review and recommendations', *The Milbank Quarterly*, vol. 82, no. 4, pp. 581-629.
- Gross, M.M., Mattern, A., Berlage, S., Kaiser, A., Lack, N., Macher-Heidrich, S., Misselwitz, B., Bahlmann, F., Falbrede, J., Hillemanns, P., von Kaisenberg, C., von Koch, F.E., Schild, R.L., Stepan, H., Devane, D. & Mikolajczyk, R. 2015, 'Interinstitutional variations in mode of birth after a previous caesarean section: a cross-sectional study in six German hospitals', *Journal of Perinatal Medicine*, vol. 43, no. 2, pp. 177-84.
- Gross, R., Ashkenazi, Y., Tabenkin, H., Porath, A. & Aviram, A. 2008, 'Implementing QA programs in managed care health plans: factors contributing to success', *International Journal Of Health Care Quality Assurance*, vol. 21, no. 3, pp. 308-24.
- Grudinschi, D., Kaljunen, L., Hokkanen, T., Hallikas, J., Sintonen, S. & Puustinen, A. 2013, 'Management challenges in cross-sector collaboration: elderly care case study', *The Innovation Journal: The Public Sector Innovation Journal.*, vol. 18, no. 2.
- Gu, C., Wu, X., Ding, Y., Zhu, X. & Zhang, Z. 2013, 'The effectiveness of a Chinese midwives' antenatal clinic service on childbirth outcomes for primipare: A randomised controlled trial', *International Journal of Nursing Studies*, vol. 50, no. 12, pp. 1689-97.
- Guba, E. & Lincoln, Y. 1989, *Fourth Generation Evaluation*, Sage, Newbury Park.
- Guerrero, E.G. & Kim, A. 2013, 'Organizational structure, leadership and readiness for change and the implementation of organizational cultural competence in addiction health services', *Evaluation and Program Planning*, vol. 40, no. 0, pp. 74-81.
- Gunnervik, C., Josefsson, A., Sydsjö, A. & Sydsjö, G. 2010, 'Attitudes towards mode of birth among Swedish midwives', *Midwifery*, vol. 26, no. 1, pp. 38-44.
- Habiba, M., Kaminski, M., Da Frè, M., Marsal, K., Bleker, O., Librero, J., Grandjean, H., Gratia, P., Guaschino, S., Heyl, W., Taylor, D. & Cuttini, M. 2006, 'Caesarean section on request: a comparison of obstetricians' attitudes in eight European countries', *BJOG: An International Journal of Obstetrics & Gynaecology*, vol. 113, no. 6, pp. 647-56.

- Hagedorn, H.J. & Heideman, P.W. 2010, 'The relationship between baseline Organizational Readiness to Change Assessment subscale scores and implementation of hepatitis prevention services in substance use disorders treatment clinics: a case study', *Implementation Science: IS*, vol. 5, pp. 46-.
- Hamid, A., Pettibone, J., Mabrouk, O., Hetrick, V., Schmidt, R., Vander Weele, C., Kennedy, R., Aragona, B. & Berke, J. 2015, 'Mesolimbic dopamine signals the value of work', *Nature Neuroscience*, vol. November 23.
- Hammond, A.D., Homer, C.E.S. & Foureur, M. 2014, 'Messages from Space: An Exploration of the Relationship between Hospital Birth Environments and Midwifery Practice', *HERD*, vol. 7, no. 4, pp. 81-95.
- Harper, D. 2002, 'Talking about pictures: a case for photo elicitation', *Visual Studies*, vol. 17, no. 1, pp. 13-26.
- Harper, L.M., Cahill, A.G., Boslaugh, S., Odibo, A.O., Stamilio, D.M., Roehl, K.A. & Macones, G.A. 2012, 'Association of induction of labor and uterine rupture in women attempting vaginal birth after cesarean: a survival analysis', *American Journal of Obstetrics and Gynecology*, vol. 206, no. 1, pp. 51.e1-e5.
- Harper, M., Byington, R., Espeland, M., Naughton, M., Meyer, R. & Lane, K. 2003, 'Pregnancy related death and health care services', *Obstet Gynecol* vol. 102, no. 2, pp. 273-8.
- Hastie, C. & Fahy, K. 2011, 'Inter-professional collaboration in delivery suite: A qualitative study', *Women and Birth*, vol. 24, no. 2, pp. 72-9.
- Health Professions Network Nursing and Midwifery Office 2010, *Framework for action on interprofessional education and collaborative practice*, World Health Organization., Geneva, Switzerland.
- Healy, S., Humphreys, E. & Kennedy, C. 2016, 'Midwives' and obstetricians' perceptions of risk and its impact on clinical practice and decision-making in labour: An integrative review', *Women and Birth*, vol. 29, no. 2, pp. 107-16.
- Heatherton, T. 2011, 'Neuroscience of Self and Self-Regulation', *Annual Review of Psychology Volume 62, 2011 Heatherton*, pp 363-390, vol. 62, p. 363.
- Heldal, F. 2010, 'Multidisciplinary collaboration as a loosely coupled system: Integrating and blocking professional boundaries with objects', *Journal of Interprofessional Care*, vol. 24, no. 1, pp. 19-30.
- Helfrich, C., Li1, Y., Mohr, D., Meterko, M. & Sales, A. 2007, 'Assessing an organizational culture instrument based on the Competing Values Framework: Exploratory and confirmatory factor analyses', *Implementation Science*, vol. 2, no. 13, pp. 1-14.
- Holt, D.T., Helfrich, C.D., Hall, C.G. & Weiner, B.J. 2010, 'Are you ready? How health professionals can comprehensively conceptualize readiness for change', *Journal of General Internal Medicine*, vol. 25, no. Suppl 1, pp. S50-S5.
- Homer, C., Davis, G., Brodie, P., Sheehan, A., Barclay, L., Wills, J. & Chapman, M. 2001, 'Collaboration in maternity care: a randomised controlled trial comparing community-based continuity of care with standard hospital care', *British Journal of Obstetrics and Gynaecology*, vol. 108, no. 1, pp. 16-22.
- Hopkins, M.M., O'Neil, D.A. & Stoller, J.K. 2015, 'Distinguishing competencies of effective physician leaders', *Journal of Management Development*, vol. 34, no. 5, pp. 566-84.
- Hornby, A.S., Wehmeier, S., McIntosh, C. & Turnbull, J. 2005, *Oxford Advanced Learner's Dictionary of Current English*, Oxford University Press.
- Hunter, J.L. & Krantz, S. 2010, 'Constructivism in cultural competence education', *Journal of Nursing Education*, vol. 49, no. 4, pp. 207-14.
- Institute for Innovation and Improvement 2006, *Delivering quality and value. Focus on: caesarean section.*, National Health Service, London.

- Jackson, M., Harrison, P., Swinburn, B. & Lawrence, M. 2015, 'Using a Qualitative Vignette to Explore a Complex Public Health Issue', *Qualitative Health Research*, vol. 25, no. 10, pp. 1395-409.
- Jeansonne, J. 2010, *Writing about the unwritten rules*, Article, Newsday, (Melville, NY).
- Jenkins, A. & Mitchell, J. 2010, 'Mentalizing under Uncertainty: Dissociated Neural Responses to Ambiguous and Unambiguous Mental State Inferences', *Cerebral Cortex*, vol. 20, no. 2, pp. 404-10.
- Jenkins, N., Bloor, M., Fischer, J., Berney, L. & Neale, J. 2010, 'Putting it in context: The use of vignettes in qualitative interviewing', *Qualitative Research*, vol. 10, no. 2, pp. 175-98.
- Jones, R., Jimmieson, N. & Griffiths, A. 2005, 'The Impact of Organizational Culture and Reshaping Capabilities on Change Implementation Success: The Mediating Role of Readiness for Change', *Journal of Management Studies*, vol. 42, no. 2, pp. 361-86.
- Kantrowitz-Gordon, I. 2013, 'Distress after preterm birth: A discourse analysis of parents' accounts and photographs', Washington State University.
- Karlström, A., Engström-Olofsson, R., Nystedt, A., Thomas, J. & Hildingsson, I. 2009, 'Swedish caregivers' attitudes towards caesarean section on maternal request', *Women and Birth*, vol. 22, no. 2, pp. 57-63.
- Kear, T. & Ulrich, B. 2015, 'Trends in Nursing: The role of interprofessional collaboration in supporting a culture of safety', *Nephrology News & Issues*, vol. 29, no. 9, pp. 21-6.
- Keller, K., Eggenberger, T., Belkowitz, J., Sarsekeyeva, M. & Zito, A. 2013, 'Implementing successful interprofessional communication opportunities in health care education: a qualitative analysis', *International Journal of Medical Education*, vol. 3, pp. 253-9.
- Kennedy, H. & Lyndon, A. 2008, 'Tensions and teamwork in nursing and midwifery relationships.', *Journal Obstet Gynecol Neonatal Nurs*, vol. 37, no. 4, pp. 426-35.
- Kennedy, H.P., Grant, J., Walton, C., Shaw-Battista, J. & Sandall, J. 2010, 'Normalizing Birth in England: A Qualitative Study', *Journal of Midwifery & Women's Health*, vol. 55, no. 3, pp. 262-9.
- Kitson, A., Rycroft-Malone, J., Harvey, G., McCormack, B., Seers, K. & Titchen, A. 2008, 'Evaluating the successful implementation of evidence into practice using the PARIHS framework: theoretical and practical challenges', *Implementation Science*, vol. 3, no. 1.
- Klein, M.C., Kaczorowski, J., Hall, W.A., Fraser, W., Liston, R., Eftekhary, S., Brant, R., Mâsse, L., Rosinski, J., Mehrabadi, A., Baradaran, N., Tomkinson, J., Dore, S., McNiven, P., Saxell, L., Lindstrom, K., Grant, J. & Chamberlaine, A. 2009, 'The attitudes of Canadian maternity care practitioners towards labour and birth: many differences but important similarities', *Journal Of Obstetrics And Gynaecology Canada: JOGC* vol. 31, no. 9, pp. 827-40.
- Knox, G. & Simpson, K. 2010, 'Perinatal high reliability. ', *American Journal of Obstetrics & Gynecology.*, vol. 204, no. 5, pp. 373-7.
- Koh, K.L. 2012, 'Organizational factors impacting implementation of culturally competent care modules in a large health maintenance organization', ProQuest Information & Learning, US.
- Kong, T.M., Kellner, K., Austin, D.E., Els, Y. & Orr, B.J. 2014, 'Enhancing Participatory Evaluation of Land Management through Photo Elicitation and Photovoice', *Society & Natural Resources*, vol. 28, no. 2, pp. 212-29.
- Krein, S.L., Damschroder, L.J., Kowalski, C.P., Forman, J., Hofer, T.P. & Saint, S. 2010, 'The influence of organizational context on quality improvement and patient safety efforts in infection prevention: A multi-center qualitative study', *Social Science & Medicine*, vol. 71, no. 9, pp. 1692-701.
- Kringos, D.S., Sunol, R., Wagner, C., Mannion, R., Michel, P., Klazinga, N.S. & Groene, O. 2015, 'The influence of context on the effectiveness of hospital quality improvement

- strategies: a review of systematic reviews', *BMC Health Services Research*, vol. 15, no. 1, pp. 1-13.
- Krippendorff, K. 2008, *Content analysis. An introduction to its methodology*, Sage, United Kingdom.
- Kvale, S. 2006, 'Dominance through interviews and dialogues.', *Qualitative Inquiry*, vol. 12, no. 3, pp. 480-500.
- Kwahk, K.-Y. & Lee, J.-N. 2008, 'The role of readiness for change in ERP implementation: Theoretical bases and empirical validation', *Information & Management*, vol. 45, no. 7, pp. 474-81.
- Lancaster, P., Huang, J. & Pedisich, E. 1995, *Australia's Mothers and Babies 1992* AIHW National Perinatal Statistics Unit,. Sydney.
- Lane, K. 2006, 'The plasticity of professional boundaries: A case study of collaborative care in maternity services', *Health Sociology Review*, vol. 15, no. 4, pp. 341-52.
- Latta, G.F. 2009, 'A process model of organizational change in cultural context (OC³ model): The impact of organizational culture on leading change', *Journal of Leadership & Organizational Studies*, vol. 16, no. 1, pp. 19-37.
- Lau, R., Stevenson, F., Ong, B.N., Dziedzic, K., Treweek, S., Eldridge, S., Everitt, H., Kennedy, A., Qureshi, N., Rogers, A., Peacock, R. & Murray, E. 2016, 'Achieving change in primary care--causes of the evidence to practice gap: systematic reviews of reviews', *Implementation Science: IS*, vol. 11, pp. 40-.
- Lavendar, T., Hofmeyr, G., Neilson, J., Kingdon, C. & Gyte, G. 2006, 'Caesarean section for non-medical reasons at term', *Cochrane Database Systematic review*, PubMed.
- Lavoie-Tremblay, M., O'Connor, P., Lavigne, G.L., Briand, A., Biron, A., Baillargeon, S., MacGibbon, B., Ringer, J. & Cyr, G. 2015, 'Effective Strategies to Spread Redesigning Care Processes Among Healthcare Teams', *Journal of Nursing Scholarship*, vol. 47, no. 4, pp. 328-37.
- Lee, Y., Roberts, C., Patterson, J., Simpson, J., Nicholl, M., Morris, J. & Ford, J. 2013, 'Unexplained variation in hospital caesarean section rates', *Medical Journal of Australia*, vol. 199, pp. 348-53.
- Leonard, M., Graham, S. & Bonacum, D. 2004, 'The human factor: the critical importance of effective teamwork and communication in providing safe care', *Quality & Safety in Health Care*, vol. 13, no. 1, pp. 85-90.
- LeVasseur, J. 2003, 'The Problem of Bracketing in Phenomenology', *QUALITATIVE HEALTH RESEARCH* vol. March, pp. 408-20.
- Lewin, S. & Reeves, S. 2011, 'Enacting 'team' and 'teamwork': Using Goffman's theory of impression management to illuminate interprofessional practice on hospital wards', *Social Science & Medicine*, vol. 72, pp. 1592-602.
- Lewis, G. 2004, *Confidential Enquiry into Maternal and Child Health Improving care for mothers, babies and children Why Mothers Die 2000-2002*, RCOG Press, London.
- Lieberman, M. & Eisenberg, N. 2008, 'The pains and pleasure of social life', *NeuroLeadership Journal* vol. 1, pp. 1-21.
- Lincoln, Y. & Guba, E. 1985, *Naturalistic inquiry*, Sage Publications, Newbury Park, CA.
- Litorp, H., Mgaya, A., Kidanto, H.L., Johnsdotter, S. & Essén, B. 2015, 'What about the mother?' Women's and caregivers' perspectives on caesarean birth in a low-resource setting with rising caesarean section rates', *Midwifery*, vol. 31, no. 7, pp. 713-20.
- Litorp, H., Mgaya, A., Mbekenga, C.K., Kidanto, H.L., Johnsdotter, S. & Essén, B. 2015, 'Fear, blame and transparency: Obstetric caregivers' rationales for high caesarean section rates in a low-resource setting', *Social Science & Medicine (1982)*, vol. 143, pp. 232-40.
- Liu, S., Liston, R., Joseph, K., Heaman, M., Sauve, R. & Kramer, M. 2007, 'Maternal mortality and severe morbidity associated with low-risk planned cesarean delivery versus planned

- vaginal delivery at term', *Canadian Medical Association Journal*, vol. 176, no. 4, pp. 455-60.
- Lomas, J., Enkin, M., Anderson, G.M., Hannah, W.J., Vayda, E. & Singer, J. 1991, 'Opinion leaders vs audit and feedback to implement practice guidelines. Delivery after previous cesarean section', *JAMA*, vol. 265, no. 17, pp. 2202-7.
- Lundgren, I., van Limbeek, E., Vehvilainen-Julkunen, K. & Nilsson, C. 2015, 'Clinicians' views of factors of importance for improving the rate of VBAC (vaginal birth after caesarean section): a qualitative study from countries with high VBAC rates.', *BMC Pregnancy Childbirth.*, vol. 15, no. 196.
- Lyndon, A., Zlatnik, M., Maxfield, D., Lewis, A., McMillan, C. & Kennedy, H. 2014, 'Contributions of clinical disconnections and unresolved conflict to failures in intrapartum safety', *Journal Obstet Gynecol Neonatal Nursing*, vol. 43, pp. 2-12.
- Ma, R., Lao Terence, T., Sun, Y., Xiao, H., Tian, Y., Li, B., Yang, M., Yang, W., Liang, K., Liang, G., Li, H., Geng, L., Ni, R., Qi, W., Chen, Z., Du, M., Zhu, B., Xu, J., Tao, Y. & Zhang, L. 2012, 'Practice audits to reduce caesareans in a tertiary referral hospital in south-western China', *Bulletin of the World Health Organization*, vol. 90, no. 7, pp. 488-94.
- Manley, K. 2008, 'The way things are done around here'—Developing a culture of effectiveness: A pre-requisite to individual and team effectiveness in critical care', *Australian Critical Care*, vol. 21, no. 2, pp. 83-5.
- Manley, K., McCormack, B. & Wilson, V. 2008, *International Practice Development in Nursing and Healthcare*, Blackwell, UK.
- Manohar, S., Woods, C.F.G. & Lindow, S.W. 2015, 'Individual consultant practice does not affect the overall intervention rate: a 6-year study', *Journal of Perinatal Medicine*, vol. 43, no. 1, pp. 37-41.
- Markham, A. 2008, 'Adaptive Social Hierarchies: From Nature to Networks', *World Scientific Review Volume*, vol. 10, no. 21, pp. 1-53.
- Marshall, J.L., Spiby, H. & McCormick, F. 2015, 'Evaluating the 'Focus on Normal Birth and Reducing Caesarean section Rates Rapid Improvement Programme': A mixed method study in England', *Midwifery*, vol. 31, no. 2, pp. 332-40.
- Martin, T., Hauck, Y., Fenwick, J., Butt, J. & Wood, J. 2014, 'Evaluation of a next birth after caesarean antenatal clinic on women's birth intention and outcomes, knowledge, confidence, fear and perceptions of care', *Evidence Based Midwifery*, vol. 12, no. 1, pp. 11-5.
- McGovern, P. 1995, 'Learning from the Gurus: Managers' Responses to The Unwritten Rules of the Game', *Business Strategy Review*, vol. 6, no. 3, p. 13.
- McGrath, P. & Ray-Barruel, G. 2009, 'The easy option? Australian findings on mothers' perception of elective Caesarean as a birth choice after a prior Caesarean section', *International Journal of Nursing Practice*, vol. 15, no. 4, pp. 271-9.
- McIntyre, M., Francis, K. & Chapman, Y. 2012, 'The struggle for contested boundaries in the move to collaborative care teams in Australian maternity care', *Midwifery*, vol. 28, no. 3, pp. 298-305.
- McMormack, B., Rycroft-Malone, J., Harvey, G., Kitson, A., Seers, K. & Titchen, A. 2002, 'Getting evidence into practice: the meaning of 'context'', *Journal of Advanced Nursing*, vol. 38, no. 1, pp. 94-104.
- Meddings, F., Phipps, F.M., Haith-Cooper, M. & Haigh, J. 2007, 'Vaginal birth after caesarean section (VBAC): Exploring women's perceptions', *Journal of Clinical Nursing*, vol. 16, no. 1, pp. 160-7.
- Menke, J., Fenwick, J., Gamble, J., Brittain, H. & Creedy, D.K. 2014, 'Midwives' perceptions of organisational structures and processes influencing their ability to provide caseload care to socially disadvantaged and vulnerable women', *Midwifery*, vol. 30, no. 10, pp. 1096-103.

- Miller, K., Reeves, S., Zwarenstein, M., Beales, J., Kenaszchuk, C. & Gotlib Conn, L. 2008, 'Nursing emotion work and interprofessional collaboration in general internal medicine wards: a qualitative study', *Journal of Advanced Nursing*, vol. 64 no. 4, pp. 332–43.
- Moffat, M., Bell, J., Porter, M., Lawton, S., Hundley, H., Danielian, P. & Bhattacharyac, S. 2006, 'Decision making about mode of delivery among pregnant women who have previously had a caesarean section: a qualitative study', *BJOG An International Journal of Obstetrics and Gynaecology*, vol. 114, no. 1, pp. 86-93.
- Monari, F., Di Mario, S., Facchinetti, F. & Basevi, V. 2008, 'Obstetricians' and midwives' attitudes toward cesarean section', *Birth*, vol. 35, no. 2, pp. 129-35.
- Mone, F., Harrity, C., Toner, B., McNally, A., Adams, B. & Currie, A. 2014, 'Predicting why women have elective repeat cesarean deliveries and predictors of successful vaginal birth after cesarean', *International Journal of Gynecology & Obstetrics*, vol. 126, no. 1, pp. 67-9.
- Munro, S., Kornelsen, J. & Grzybowski, S. 2013, 'Models of maternity care in rural environments: Barriers and attributes of interprofessional collaboration with midwives', *Midwifery*, vol. 29, no. 6, pp. 646-52.
- Myers, S. & Gleicher, N. 1988, 'A Successful Program to Lower Cesarean-Section Rates', *New England Journal of Medicine*, vol. 319, no. 23, pp. 1511-6.
- Myers, S. & Gleicher, N. 1993, 'The Mount Sinai cesarean section reduction program: An update after 6 years', *Social Science & Medicine*, vol. 37, no. 10, pp. 1219-22.
- National Center for Health Statistics 2010, *Healthy People 2010 Mid Course Review*, US Department of Health & Human Science, Hyattsville.
- National Health and Medical Research Council 2010, *National Guidance on Collaborative Maternity Care*, Canberra.
- National Health Service Institute for Innovation and Improvement 2007, *Pathways to success: A self-improvement toolkit. Focus on normal birth and reducing caesarean section rates* NHS Institute for Innovation and Improvement, Coventry, England.
- National Institute for Innovation and Improvement 2006, *Delivering quality and value Pathways to success: a self improvement toolkit. Focus on normal birth and reducing Caesarean section rates* 1st edn, National Institute for Innovation and Improvement, Coventry UK,.
- Nawijn, L., van Zuiden, M., Koch, S., Frijling, J., Veltman, D. & Olff, M. 2016, 'Intranasal oxytocin increases neural responses to social reward in post-traumatic stress disorder', *Social Cognitive and Affective Neuroscience*, vol. 123.
- Nembhard, I.M. & Edmondson, A.C. 2006, 'Making it safe: the effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams', *Journal of Organizational Behavior*, vol. 27, no. 7, pp. 941-66.
- New South Wales Health 2010, *Towards Normal Birth*, Sydney.
- Newnham, E. 2010, 'GENERAL SECTION: Midwifery directions: The Australian maternity services review', *Health Sociology Review*, vol. 19, no. 2, pp. 245-59.
- Newnham, E. 2014, 'Birth control: Power/knowledge in the politics of birth', *Health Sociology Review*, vol. 23, no. 3, pp. 254-68.
- Nold, H. & Michel, L. 2016, 'The performance triangle: A model for corporate agility', *Leadership & Organization Development Journal*, vol. 37, no. 3, pp. 341-56.
- Nursing and Midwifery Office 2007, *Glueing it together: Nurses, their work environment and patient safety*, NAMO, Sydney.
- Nursing and Midwifery Office 2008, *Essentials of Care* NSW Ministry of Health, Sydney.
- O'Leary, C., de Klerk, N., Keogh, J., Pennell, C., de Groot, J., York, L., Mulroy, S. & Stanley, F. 2007, 'Trends in mode of delivery during 1984-2003: can they be explained by pregnancy and delivery complications?', *BJOG: An International Journal of Obstetrics & Gynaecology*, vol. 114, no. 7, pp. 855-64.
- Ødegård, A. & Strype, J. 2009, 'Perceptions of interprofessional collaboration within child mental health care in Norway', *Journal Of Interprofessional Care*, vol. 23, no. 3, pp. 286-96.

- ORC International 2011, *2011 YourSay Workplace Survey*.
- Ovretveit, J. 2011, 'Understanding the conditions for improvement: research to discover which context influences affect improvement success', *British Journal Quality & Safety*, vol. 20(Suppl 1). pp. 18-23.
- Paré, G., Sicotte, C., Poba-Nzaou, P. & Balouzakis, G. 2011, 'Clinicians' perceptions of organizational readiness for change in the context of clinical information system projects: insights from two cross-sectional surveys', *Implementation Science*, vol. 6, no. 15, pp. 1-14.
- Patton, M. 1990, *Qualitative Research & Evaluation Methods*, 3rd edn, Sage, London.
- Pauwels, L. 2015, 'Participatory' visual research revisited: A critical-constructive assessment of epistemological, methodological and social activist tenets', *Ethnography*, vol. 16, no. 1, pp. 95-117.
- Pawson, R. & Tilley, N. 2008, *Realistic Evaluation*, Sage Publishing., London.
- Petermans, A., Kent, A. & Van Cleempoel, K. 2014, 'Photo-elicitation: Using photographs to read retail interiors through consumers' eyes', *Journal of Business Research*, vol. 67, no. 11, pp. 2243-9.
- Petri, L. 2010, 'Concept Analysis of Interdisciplinary Collaboration', *Nursing Forum*, vol. 45, no. 2.
- Polit, D. & Beck, C. 2012, *Nursing Research Generating and Assessing Evidence for Nursing Practice*, 9th edn, Wolters Kluwer/ Lippincott Williams & Wilkins, Philadelphia.
- Preckel, K., Scheele, D., Kendrick, K., Maier, W. & Hurlmann, R. 2014, 'Oxytocin Facilitates Social Approach Behavior in Women', *Frontiers in Behavioral Neuroscience*, vol. 8, no. 191, pp. 1-9.
- Raab, C., Will, S., Richards, S. & O'Mara, E. 2013, 'The Effect of Collaboration on Obstetric Patient Safety in Three Academic Facilities', *JOGNN: Journal of Obstetric, Gynecologic & Neonatal Nursing*, vol. 42, no. 5, pp. 606-16
- Rasmussen, K. 2004, 'Places for children—Children's places', *Childhood*, vol. 11, no. 2, pp. 155-73.
- Ravasia, D.J., Wood, S.L. & Pollard, J.K. 2000, 'Uterine rupture during induced trial of labor among women with previous cesarean delivery', *American Journal of Obstetrics and Gynecology*, vol. 183, no. 5, pp. 1176-9.
- Reiger, K. 2006, 'A neoliberal quickstep: contradictions in Australian maternity policy', *Health Sociology Review*, vol. 15, no. 4, pp. 330-40.
- Reiger, K. & Lane, K. 2009, 'Working together: collaboration between midwives and doctors in public hospitals', *Australian Health Review*, vol. 33, no. 2, pp. 315-24.
- Reime, B., Klein, M., Kelly, M., Duxbury, N., Saxell, L., Liston, R., Prompers, F., Entjes, R. & Wong, V. 2004, 'Do maternity care provider groups have different attitudes towards birth?', *BJOG: an International Journal of Obstetrics and Gynaecology*, vol. 111, pp. 1388-93.
- Rice, K., Zwarenstein, M., Conn, L., Kenaszchuk, C., Russells, A. & Reeves, S. 2010, 'An intervention to improve interprofessional collaboration and communications: A comparative qualitative study', *Journal of Interprofessional Care*, vol. 24, no. 4 pp. 350-61.
- Robson, S., Tan, W., Adeyemi, A. & Dear, K. 2009, 'Estimating the Rate of Cesarean Section by Maternal Request: Anonymous Survey of Obstetricians in Australia', *BIRTH*, vol. 36, no. 3.
- Rock, D. 2008, 'SCARF: a brain-based model for collaborating with and influencing other', *Neuroleadership Journal* vol. 1, pp. 1-9.
- Rock, D. 2009, 'Managing with the Brain in Mind.', *Oxford Leadership Journal*, vol. 1, no. 1, pp. 1-10.
- Rock, D. & Cox, C. 2012, 'SCARF in 2012: updating the social neuroscience of collaborating with other', *Neuroleadership Journal*, no. 4, pp. 129-42.

- Rogers, E. 2003, *Diffusion of Innovations*, 5th edn, Free Press, New York.
- Rolls, L. & Relf, M. 2006, 'Bracketing interviews: addressing methodological challenges in qualitative interviewing in bereavement and palliative care', *Mortality*, vol. 11, no. 3, pp. 286-305.
- Rose, L. 2011, 'Interprofessional collaboration in the icu: how to define?', *Nursing in Critical Care*, vol. 16, no. 1, pp. 5-10 6p.
- Rosen, T. 2008, 'Placenta accreta and cesarean scar pregnancy: overlooked costs of the rising cesarean section rate', *Clinics in Perinatology*, vol. 35, no. 3, pp. 519-29.
- Rossi, A. 2008, 'Maternal morbidity following a trial of labor after cesarean section vs elective repeat cesarean delivery : a systematic review with metaanalysis', *American journal of obstetrics and gynecology*, vol. 199, no. 3, pp. 224-31.
- Salhani, D. & Coulter, I. 2009, 'The politics of interprofessional working and the struggle for professional autonomy in nursing', *Social Science & Medicine* vol. 68, pp. 1221-8.
- Sandall, J., Soltani, H., Gates, S., Shennan, A. & Devane, D. 2016, 'Midwife-led continuity models versus other models of care for childbearing women', *Cochrane Database of Systematic Reviews* vol. 4, Wiley.
- Sandhu, A., Birchwood, M. & Upthegrove, R. 2013, 'The subjective experience and phenomenology of depression following first episode psychosis: A qualitative study using photo-elicitation', *Journal of Affective Disorders* vol. 49, pp. 166-74.
- Scaffidi, R.M., Posmontier, B., Bloch, J.R. & Wittmann-Price, R. 2014, 'The relationship between personal knowledge and decision self-efficacy in choosing trial of labor after cesarean', *Journal of Midwifery & Women's Health*, vol. 59, no. 3, pp. 246-53.
- Schmitt, M. 2001, 'Collaboration improves the quality of care: methodological challenges and evidence from US health care research', *Journal of Interprofessional Care.*, vol. 15, no. 1, pp. 47-66.
- Scott-Morgan, P. 1994, *The Unwritten Rules of the Game: Master Them, Shatter Them, and Break Through the Barriers to Organizational Change*, McGraw-Hill Companies, Pennsylvania.
- Scott, T., Mannion, R., Davies, H. & Marshall, M. 2003, 'The quantitative measurement of organizational culture in health care: a review of the available instruments', *Health Services Research*, vol. 38, no. 3, pp. 923-45.
- Sharpe, A.N., Waring, G.J., Rees, J., McGarry, K. & Hinshaw, K. 2015, 'Caesarean section at maternal request--the differing views of patients and healthcare professionals: a questionnaire based study', *European Journal Of Obstetrics, Gynecology, And Reproductive Biology*, vol. 192, pp. 54-60.
- Shell, L. 2015, 'The picture of happiness in Alzheimer's disease: Living a life congruent with personal values', *Geriatric Nursing*, vol. 36, no. 2, Supplement, pp. S26-S32.
- Shorten, A., Shorten, B., Keogh, J., West, S. & Morris, J. 2005, 'Making choices for childbirth: a randomized controlled trial of a decision-aid for informed birth after cesarean', *Birth: Issues in Perinatal Care*, vol. 32, no. 4, pp. 252-61.
- Shum, P., Bove, L. & Auh, S. 2008, 'Employees' affective commitment to change: The key to successful CRM implementation', *European Journal of Marketing*, vol. 42, no. 11-12, pp. 1346-671.
- Siddiqui, S.A. 2013, 'Obstetric factors for unsuccessful trial of labor in second-order birth following previous cesarean', *Annals of Saudi Medicine*, vol. 33, no. 4, pp. 356-62.
- Simpson, K., James, D. & Knox, G. 2006, 'Nurse-physician communication during labour and birth: implications for patient safety', *Journal Obstetrics Gynaecology Neonatal Nursing*, vol. 35, pp. 547-56.
- Simpson, S. 2008, *Bad Behaviours Toxic Cultures: How employee behaviours contribute to organisational culture*, Keystone Management Services, Queensland.
- Simpson, S. 2009, 'The invisible rules.', Interview, vol. 15, Haymarket Business Publications Ltd, pp. 28-9,

<https://www.lib.uts.edu.au/goto?url=http://search.ebscohost.com/login.aspx?direct=true&db=heh&AN=40400632&site=ehost-live>.

- Simpson, S. & Cacioppe, R. 2001, 'Unwritten ground rules: Transforming organization culture to achieve key business objectives and outstanding customer service', *Leadership & Organization Development Journal*, vol. 22, no. 8, pp. 394-401.
- Sloan, N.L., Pinto, E., Calle, A., Langer, A., Winikoff, B. & Fassihian, G. 2000, 'Reduction of the cesarean delivery rate in Ecuador', *International Journal Of Gynaecology And Obstetrics*, vol. 69, no. 3, pp. 229-36.
- Smith, F. & Barker, J. 2004, 'Contested spaces: Children's experiences of out of school care in England and Wales', *Childhood*, vol. 7, no. 3, pp. 315-33.
- Smith, H., Peterson, N., Lagrew, D. & Main, E. 2016, *Toolkit to Support Vaginal Birth and Reduce Primary Cesareans: A Quality Improvement Toolkit.*, California Maternal Quality Care Collaborative, Stanford California.
- Sorsa, M., Kiiikkala, I. & Åstedt-Kurki, P. 2015, 'Bracketing as a skill in conducting unstructured qualitative interviews', *Nurse Researcher*, vol. 22, no. 4, pp. 8-12.
- Spencer, H. 1864, *The Principles of Biology*, Williams and Norgate, London.
- Spiby, H., Marshall, J., Craig, J. & McCormick, F. 2011, *Evaluating the Focus on Normal Birth and Reducing Caesarean Section Rates Rapid Improvement Programme*, NHS Institute for innovation and Improvement., London.
- Sullivan, K., Lock, L. & Homer, C.S.E. 2011, 'Factors that contribute to midwives staying in midwifery: A study in one area health service in New South Wales, Australia', *Midwifery*, vol. 27, no. 3, pp. 331-5.
- Tabibnia, G. & Lieberman, M. 2007, 'Fairness and Cooperation Are Rewarding. Evidence from Social Cognitive Neuroscience', *Annals of the New York Academy of Science*, no. 1118, pp. 90-101.
- Taylor, S., Dy, S., Foy, R., Hempel, S., McDonald, K.M., Øvretveit, J., Pronovost, P.J., Rubenstein, L.V., Wachter, R.M. & Shekelle, P.G. 2011, 'What context features might be important determinants of the effectiveness of patient safety practice interventions?', *BMJ Quality & Safety*, vol. 20, no. 7, pp. 611-7.
- Teddlie, C. & Tashakkori, A. 2009, *Foundations of Mixed Methods Research*, Sage., London.
- Thannhauser, J., Russell, S. & Scott, C. 2010, 'Measures of interprofessional education and collaboration', *Journal of Interprofessional Care*, vol. 24, no. 4, pp. 336-49.
- Tharpe, N. 2008, 'Postpregnancy genital tract and wound infections', *Journal of Midwifery & Women's Health*, vol. 53, no. 3, pp. 236-46.
- Thomas, A., Menon, A., Boruff, J., Rodriguez, A.M. & Ahmed, S. 2014, 'Applications of social constructivist learning theories in knowledge translation for healthcare professionals: a scoping review', *Implementation Science: IS*, vol. 9, pp. 54-.
- Torraco, R. 2016, 'Writing Integrative reviews of the Literature: methods and purpose', *International Journal of Adult Vocational Education and technology*, vol. 7, no. 3, pp. 62-70.
- Tracy, S., Hartz, D., Tracy, M., Allen, J., Forti, A., Hall, B., White, J., Lainchbury, A., Stapleton, H., Beckmann, M., Bisits, A., Homer, C., Foureur, M., Welsh, A. & Kildea, S. 2013, 'Caseload midwifery care versus standard maternity care for women of any risk: M@NGO, a randomised controlled trial', *Lancet*, vol. 382 no. 9906, pp. 1723-32 10p.
- Tracy, S., Peat, B. & Roberts, C. 2000, 'Rates for obstetric intervention among private and public patients in Australia: a population based descriptive study', *BMJ*, vol. 321, pp. 137-41.
- Tracy, S., Tracy, M. & Sullivan, E. 2007, 'Admission of Term Infants to Neonatal Intensive Care: A Population-Based Study', *Birth*, vol. 34, no. 4, pp. 301-7.
- Tran Smith, B., Padgett, D.K., Choy-Brown, M. & Henwood, B.F. 2015, 'Rebuilding lives and identities: The role of place in recovery among persons with complex needs', *Health & Place*, vol. 33, no. 0, pp. 109-17.

- Tufford, L. & Newman, P. 2012, 'Bracketing in Qualitative Research', *Qualitative Social Work*, vol. 11, no. 1, pp. 80-9.
- Turner, C., Young, J., Solomon, M., Ludlow, J., Benness, C. & Phipps, H. 2008, 'Vaginal delivery compared with elective caesarean section: the views of pregnant women and clinicians', *BJOG: An International Journal Of Obstetrics And Gynaecology*, vol. 115, no. 12, pp. 1494-502.
- Usta, I., Hobeika, E., Abu Musa, A., Gabriel, G. Nassar, A. 2005, 'Placenta previa-accreta: risk factors and complications', *American Journal of Obstetrics and Gynecology*, vol. 193, no. 2, pp. 1045-9.
- van Helmond, I., Korstjens, I., Mesman, J., Nieuwenhuijze, M., Horstman, K., Scheepers, H., Spaanderman, M., Keulen, J. & de Vries, R. 2015, 'What Makes for Good Collaboration and Communication in Maternity Care? A Scoping Study', *International Journal of Childbirth*, vol. 5, no. 4, pp. 210-23.
- Vernon, L. 2015, 'A Brief Overview of How Male Medicine Co-Opted the Midwife's Role in the Birth Process', *Open Journal of Nursing*, vol. 5, pp. 758-64.
- Veronesi, J. 2009, 'Is your workforce engaged to be satisfied?', *Home Health Care Management & Practice*, vol. 21, no. 2, pp. 124-6.
- Wakefield, A., Carlisle, C., Hall, A. & Attree, M. 2009, 'Patient safety investigations: the need for interprofessional learning', *Learning in Health & Social Care*, vol. 8, no. 1, pp. 22-32.
- Wax, J.R., Cartin, A., Pinette, M.G. & Blackstone, J. 2005, 'Patient Choice Cesarean--The Maine Experience', *Birth: Issues in Perinatal Care*, vol. 32, no. 3, pp. 203-6.
- Wayne, L. 2015, 'Addressing Voluntary Employee Turnover: Exploring the Relationship between Rock's SCARF Factors and Voluntary Employee Turnover', Brandman University, California.
- Weaver, J., Statham, H. & Richards, M. 2007, 'Are There "Unnecessary" Cesarean Sections? Perceptions of Women and Obstetricians About Cesarean Sections for Nonclinical Indications.', *BIRTH*, vol. 34, no. 1, pp. 32-41.
- Weber, M. 1947, *The Theory of Social and Economic Reform.*, Free Press., New York.
- Weiner, B., Amick, H. & Lee Shouou-Yih, D. 2008, 'Conceptualization and Measurement of Organizational Readiness for Change: A Review of the Literature in Health Services Research and Other Fields.', *Medical Care Research and Review*, vol. 65, no. 4, pp. 379-436.
- Weiner, B.J. 2009, 'A theory of organizational readiness for change', *Implementation Science: IS*, vol. 4, pp. 1-9.
- West, E., Barron, D.N., Dowsett, J. & Newton, J.N. 1999, 'Hierarchies and cliques in the social networks of health care professionals: implications for the design of dissemination strategies', *Social Science & Medicine*, vol. 48, no. 5, pp. 633-46.
- Wheelan, S., Burchill, C. & Tilin, F. 2003, 'The link between teamwork and patients' outcomes in intensive care units', *American Journal of Critical Care*, vol. 12, pp. 527-34.
- White, H.K., le May, A. & Cluett, E.R. 2016, 'Evaluating a midwife-led model of antenatal care for women with a previous cesarean section: A retrospective, comparative cohort study', *Birth: Issues in Perinatal Care*, vol. 43, no. 3, pp. 200-8.
- Whiteman, M., Kuklina, E. & Hillis, S. 2006, 'Incidence and Determinants of Peripartum Hysterectomy', *Obstet Gynecol*, vol. 108, pp. 1486-92.
- Whiting, E., Jones, E., Rock, D. & Bendit, X. 2012, 'Lead change with the brain in mind', *NeuroLeadership Journal*, no. 4, pp. 109-21.
- Whittemore, R. & Knafl, K. 2005, 'The integrative review: updated methodology', *Journal of Advanced Nursing*, vol. 52, pp. 546-53.
- Willis, E. 2006, 'Introduction: taking stock of medical dominance', *Health Sociology Review*, vol. 15, no. 5, pp. 421-31.

- Willumsen, E. 2008, 'Interprofessional collaboration – a matter of differentiation and integration? Theoretical reflections based in the context of Norwegian childcare', *Journal of Interprofessional Care*, vol. 22, no. 4, pp. 352-63.
- Wilson, R., Runciman, W., Gibberd, R., Harrison, B., Newby, L. & Hamilton, J. 1995, 'The Quality in Australian Health Care Study', *Medical Journal of Australia* vol. 163, pp. 458-71.
- Wise, A., Clark, V. 2008, 'Strategies to manage major obstetric haemorrhage', *Current Opinion in Anaesthesiology*, vol. 21, no. 3, pp. 281-7.
- Wolgemuth, J.R., Erdil-Moody, Z., Opsal, T., Cross, J.E., Kaanta, T., Dickmann, E.M. & Colomer, S. 2015, 'Participants' experiences of the qualitative interview: Considering the importance of research paradigms', *Qualitative Research*, vol. 15, no. 3, pp. 351-72.
- Women's Healthcare Australasia 2014, *Benchmarking Maternity Care Individual Report 2012/13*, Canberra, Australia.
- World Health Organization 1985, 'Appropriate technology for birth', *Lancet* vol. 2.
- Wright, J.M., Heathcote, K. & Wibberley, C. 2014, 'Fact or fiction: exploring the use of real stories in place of vignettes in interviews with informal carers', *Nurse Researcher*, vol. 21, no. 4, pp. 39-43.
- Yan, J., Gilbert, J. & Hoffman, S. 2007, 'World Health Organization study group on interprofessional education and collaborative practice', *Journal of Interprofessional Care*, vol. 21, no. 6, pp. 588-9.

Appendices

Appendix 1: Maternity - Towards Normal Birth Policy Directive

Policy Directive



Ministry of Health, NSW
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Maternity - Towards Normal Birth in NSW

Document Number PD2010_045

Publication date 29-Jun-2010

Functional Sub group Clinical/ Patient Services - Maternity
Clinical/ Patient Services - Baby and child
Clinical/ Patient Services - Nursing and Midwifery
Personnel/Workforce - Learning and Development

Summary This policy provides direction to NSW maternity services regarding actions to increase the vaginal birth rate in NSW and decrease the caesarean section operation rate; to develop, implement and evaluate strategies to support women and to ensure that midwives and doctors have the knowledge and skills necessary to implement this policy.

Author Branch NSW Kids and Families

Branch contact NSW Kids & Families 9391 9503

Applies to Area Health Services/Chief Executive Governed Statutory Health Corporation, Board Governed Statutory Health Corporations, Affiliated Health Organisations, Affiliated Health Organisations - Declared, Public Hospitals

Audience Maternity services, Aboriginal Maternity Infant Health Services, child & family health services

Distributed to Public Health System, Divisions of General Practice, Health Associations Unions, Ministry of Health, Private Hospitals and Day Procedure Centres, Tertiary Education Institutes

Review date 29-Jun-2015

Policy Manual Patient Matters

File No. 09/638-3

Status Active

Director-General

This Policy Directive may be varied, withdrawn or replaced at any time. Compliance with this directive is **mandatory** for NSW Health and is a condition of subsidy for public health organisations.

NSW Health must adopt the following principles and implement the associated actions.



1. Have a written normal birth policy/guidelines, along with other relevant policies, that are routinely communicated to all health care staff

NSW Department of Health (DOH) will:

- develop the strategic policy – *Towards normal birth in NSW*
- include guidelines for the development and alteration of birthing rooms to support normal physiology
- recommend documentation of specific cultural requirements as well as women's specific wishes and needs in the antenatal period
- issue the Fetal Monitoring Policy Directive to provide guidance for fetal heart rate monitoring interpretation and appropriate use of electronic fetal heart rate monitoring and management of non-reassuring findings
- issue a policy directive, describing the approved clinical activity/interventions by role delineation of maternity services including vaginal birth after caesarean section operations (VBAC), induction of labour (IOL) and instrumental birth
- issue Induction of Labour Policy Directive and provide standardised approaches and guidance for appropriate selection and management of women for IOL to achieve vaginal birth
- explore mechanisms for women's right to refuse care while enabling clinicians to continue to provide care
- issue a framework for tiered maternity networks for both critical and planned consultation and referral.

The Area Health Service (AHS) will:

- communicate all NSW Department of Health maternity policy and guidelines to all maternity care clinicians
- implement all maternity care policy into AHS maternity service provision
- develop local guidelines for elective caesarean operation for less than 39 completed weeks gestation only where there is a medical indication, as per NSW policy directive (PD 2007_024)
- nominate senior staff to coordinate and report on audits of PD 2007_024 in all the maternity services across the AHS
- develop and alter the birthing environment to support normal physiology of labour
- undertake annual audits of documentation standards
- consider consumer involvement in the development and implementation of all *Towards normal birth* directions and actions.

Key Measures

- 1.1 All clinical staff are aware and familiar with maternity services policy directives (target 100% by 2015)
- 1.2 All maternity services staff have a clear understanding of the role delineation of their maternity service (target 100% by 2015)
- 1.3 All maternity services staff are aware of networking arrangements for consultation and referral when higher levels of care are required (target 100% by 2015)
- 1.4 All maternity services have a written normal birth policy (target 100% by 2015)





2. Train all health care staff in skills necessary to implement this policy

NSW Department of Health will:

- develop an interdisciplinary workshop for all health professionals involved in childbirth that helps build confidence in supporting women positively during pregnancy, labour and birth, without technological interventions and working with pain in uncomplicated labour. The workshop needs to be centrally developed and resourced followed by a program in all AHS across the state. Continuing professional development points must be applicable for all the disciplines. All health professionals involved in care of childbearing women should undertake the workshop, including midwives, obstetric staff (junior and senior) and GPs. Attendance at such a workshop could be built into AHS performance plans
- focus all education on evidence based care around precursors to caesarean section operations, such as external cephalic version to reduce breech presentations, judicious use of continuous electronic fetal monitoring, care in the second stage of labour, instrumental birth, breech, VBAC, Induction of Labour
- conduct Master Class in Vacuum Extraction workshops and explore opportunities to conduct further workshops for rural clinicians.

Area Health Services will:

- support attendance of all staff (including GP obstetricians in rural areas) at the interdisciplinary workshop
- Develop work patterns that embed cultural change in the workplace to ensure that all midwives work to their full scope of practice
- Develop work patterns that embed cultural change in the work place to ensure that appropriate escalation to attract medical review and/or attendance occurs when risk factors arise
- provide opportunities for interdisciplinary and interactive learning^{24,25}
- provide opportunities to midwives, GPs and obstetricians for networking and education/upskilling of staff
- implement care provision by the most appropriate clinician e.g. midwives caring for normal pregnancies and birth whilst consulting and referring when complications arise, as per NSW policy directive (PD2010_ACM Consultation and Referral Guidelines)
- include appropriate training and supervision of medical and midwifery trainees.

Key Measures

- 2.1 All maternity clinicians report that training increased their confidence in terms of mutual trust and respect between professions (target 100% by 2015)
- 2.2 All maternity clinicians report that training increased their confidence in communication and use of information to enhance decision making (target 100% by 2015)
- 2.3 All maternity clinicians attend interdisciplinary training days (target 100% by 2015)

24 O'Brien, M, Freemantle, N, Ozman, A, Wolf, F, Davis, D, & Herrin J 2001, Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* (Issue 2, Art.No: CD003030)
DOI: 10.1002/14651858.CD003030

25 Barr, H, Koppal, I, Reeves, S, Hammick, M & Frooth, D 2005, *Effective Interprofessional Education: Argument, Assumption & Evidence*. Oxford: Blackwell Publishing



3. Provide or facilitate access to midwifery continuity of carer programs in collaboration with GPs and obstetricians for all women with appropriate consultation, referral and transfer guidelines in place

NSW Department of Health will:

- issue policy directives, describing approved clinical activity/interventions by role delineation (see step 1)
- examine the feasibility of the introduction of acuity assessment methodology for day to day management of birthing units.

Key Measures

- 3.1 Percentage of women accessing midwifery continuity of carer programs (target at least 35% by 2015)
- 3.2 All women accessing midwifery continuity of carer programs receive postnatal care at home for at least 2 weeks after the baby is born (target 100% by 2015)
- 3.3 All women receive midwifery support at home for at least 2 weeks after the baby is born (target 100% by 2015 for metropolitan/regional services; target 80% by 2015 for rural/remote services)



Area Health Services will:

- plan and implement strategies to enable women the option of a program of care so that the woman has known midwives providing her individualised care. Collaborative midwifery/medical programs of care, with obstetric/GP obstetric and midwifery support and leadership should be available in labour wards appropriate for the role level of the maternity service
- plan and implement strategies to allow women to access comprehensive public antenatal care close to their home
- reconfigure staff deployment in order to provide one to one midwifery care in labour – resources may need to be reprioritised
- provide information to NSW DOH about the risks and impediments to implementing midwifery continuity of carer and collaborative programs by December 2010
- develop, implement and evaluate Midwifery Group Practices in collaboration with GPs and obstetricians in a range of settings in NSW
- ensure midwives have opportunities to work in continuity of carer programs and provide access to professional development and skill development where needed
- reform maternity services so that at least 35% of women in each Area Health Service access continuity of care programs before 2012
- reconfigure service delivery to increase access to obstetricians who support midwifery continuity of carer programs beginning in early pregnancy and continuing through pregnancy, labour, birth and through the postnatal period to 6 weeks after the baby is born
- ensure obstetric anaesthetic availability on site at Level 5 & 6 maternity services
- ensure that all maternity services delineated lower than level 5 that provide caesarean section operation have a dedicated anaesthetic service on standby/on call.

N.B. Further information on continuity of carer programs can be found in the document *Primary Maternity Services in Australia – A framework for implementation*. This is located at the following link: <http://www.ahmac.gov.au/site/home.aspx>



4. Inform all pregnant women about the benefits of normal birth and factors that promote normal birth

NSW Department of Health will:

- consult with the Department of Education (DET) regarding awareness of and access to school education campaigns to promote normal birth. This will increase awareness of programs of care that facilitate normal birth including assisting with the promotion and development of an education package for schools if agreed. Education may include: addressing fear of normal birth; the role of midwives, general practitioners and obstetricians in maternity services; the implementation of evidence based programs of care; and strategies to keep birth normal
- develop promotion of a normal birth package for the wider community in plain English and other languages. All women should have access to evidence based information and practical skills for keeping their first pregnancy and birth normal including programs of care that facilitate normal birth for all pregnant women. The promotional package will include: addressing fear of normal birth; role of midwives, general practitioners and obstetricians in maternity services; providing descriptions of evidence based programs of care; strategies to keep birth normal; and a standardised method to reach an agreed estimated date of birth (EDB)
- involve consumers in development of information packages
- use positive language to normalise the process of labour and birth
- develop a website to include facts and figures (Q&A or FAQs) about labour and birth, VBAC and keeping birth normal. A link to information on *Towards Normal Birth in NSW* will be provided
- explore opportunities for promoting labour and vaginal birth in the NSW Health publication *Having a Baby*
- educate media liaison personnel at DOH and in Area Health Services about the value of moving towards normal birth by developing and disseminating resources for purposes of consistency and commonality.

Area Health Services will:

- provide information for women and families on *Towards normal birth in NSW* for use in antenatal education
- provide antenatal groups to address normal fears of labour and birth, including practical skills for keeping the first pregnancy and birth normal including: coping with labour; an emphasis on the normality of pain in labour; normal length of pregnancy; implications of interventions in labour such as epidural anaesthesia; cardiotocography (CTG); IOL – all preparation for parenting education should have this incorporated into their curriculum
- provide antenatal groups/classes free of charge at the point of access for women who are potentially vulnerable due to recognised socioeconomic and lifestyle factors
- develop, implement and evaluate innovative ways to bring women together for information sharing and support, particularly women who are at risk of social isolation and those who may not normally access such services
- develop information about the value of labour and the implications of interventions in labour to be provided to women as part of routine antenatal care
- provide women desiring a vaginal breech birth access to clinicians that will support this choice.

Key Measures

- 4.1 All women receive information advising them of their options for place of birth and continuity of carer programs (target 100% by 2015)
- 4.2 All women from vulnerable groups have access to targeted antenatal education and support (100% by 2015)
- 4.3 Percentage of spontaneous vaginal births (target >70% by 2015)
- 4.4 Percentage of vaginal births (target >80% by 2015)
- 4.5 All maternity services undertake an annual audit of skin to skin contact within 1 hour of birth (target 90% by 2015)



5. Have a written policy on pain relief in labour that includes the use of water immersion in labour and birth

NSW Department of Health will:

- develop a leaflet for women talking positively about the use of water for pain relief and citing the evidence.

Area Health Services will:

- develop written policy on pain relief in labour that includes: providing a leaflet for women talking positively about the use of water for pain relief and citing the evidence; encouraging women to move around and adopt positions of choice; the use of water immersion in labour and birth.

Key Measures

- 5.1 All Area Health Services have a written policy on pain relief in labour (target 100% by 2012)
- 5.2 All women receive information about the use of water immersion in labour and birth (target 100% by 2015)
- 5.3 All maternity services offer access to water immersion in labour (target 100% by 2015)
- 5.4 All clinicians report confidence in promoting and supporting the use of water for pain relief (target 100% by 2015)



6. Have a written postdates policy/guideline that is routinely communicated to all health care staff

NSW Department of Health will:

- develop statewide guidelines based on the national antenatal care guidelines to enable accurate dating of women's pregnancies. These guidelines will provide a clear process for reaching an agreed due date.

Area Health Services will:

- implement statewide policy to standardise reaching an agreed due date.

Key Measures

- 6.1 All women have an agreed due date of birth documented in their health record (target 100%)
- 6.2 All Area Health Services have an area wide induction of labour policy regarding the management of postdates pregnancies (target 100%)





7. Provide or facilitate access to vaginal birth after caesarean section operation (VBAC) that is supported by a written vaginal birth after caesarean section operation policy/guideline

NSW Department of Health will:

- review the evidence regarding clinical practice and recommendations for VBAC to inform the development of guidance for clinical practice
- issue a policy directive describing the approved clinical activity/interventions by role delineation of maternity services including care of women planning VBAC (see step 1)
- develop statewide workshop of GPs, midwives and obstetricians to exchange views and skills regarding VBAC (see step 2)
- identify and promote NSW centres of excellence re VBAC outcomes.

Area Health Services will:

- develop a VBAC policy informed by current evidence for each maternity service able to provide VBAC
- establish interdisciplinary VBAC clinics at Level 4 and above maternity services
- implement tiered maternity networks for lower level services
- showcase centres of excellence, particularly in rural areas and use them as resources to replicate results in other facilities
- conduct an annual audit/report card of VBAC outcomes
- provide access to specialist obstetric anaesthetic services where necessary.

N.B. Some Area Health Services have expanded their scope to include Next Birth After Caesarean Section operation (NBAC) where all women who experienced a caesarean section operation attain support for their next birth.

Key Measures

- 7.1 Percentage of women receiving VBAC advice before the 16th week of pregnancy (target >75% by 2015)
- 7.2 Percentage of women who have a vaginal birth after one previous pregnancy delivered by caesarean section operation, i.e. primary caesarean section operation (targets >30% by 2012 and >60% by 2015)
- 7.3 All maternity services undertake an annual audit of compliance with VBAC policy (target 100% by 2015)
- 7.4 All maternity clinicians are informed of statistics relating to VBAC outcomes (target 100% by 2015)



8. Provide or facilitate access to external cephalic version

Area Health Services will:

- ensure all clinicians have access to expertise in External Cephalic Version (ECV) and identify where ECV is available
- ensure the provision of training packages and networked support for obstetric registrars
- provide access to opportunities for observation and clinical training
- provide access to ECV expertise at Level 4 and above maternity services only.

Area Health Services will consider the following for Level 5 and 6 maternity services:

- provide access to vaginal breech and vaginal twin birth services
- identify clinical expertise in vaginal breech birth and vaginal birth for twins
- identify centres of excellence for vaginal breech birth and vaginal birth for women having twins
- provision of training packages and networked support for obstetricians, obstetric registrars and midwives
- provide access to opportunities for observation and clinical training in these two areas
- provide access to expertise in services for twin vaginal birth in each AHS at Level 4 and above only.

Key Measures

- 8.1 All maternity services have guidelines for the provision of, or access to, ECV (target 100% by 2015)
- 8.2 All maternity services undertake an annual audit of provision and access to ECV (target 100% by 2015)
- 8.3 All staff are aware of the statistics relating to ECV uptake and outcomes (target 100% by 2015)



9. Provide one to one care in labour for all women experiencing their first labour or undertaking a vaginal birth after caesarean section operation, vaginal breech or vaginal twin birth

Area Health Services will:

- change maternity unit physical environments to facilitate electronic point of care documentation – this can reduce the time that midwives spend away from women and permit accurate, timely information to be recorded
- keep a woman's medical record with her throughout her intrapartum care
- implement local guidelines/protocols that discourage activities that separate midwives from the woman in labour. This includes the use of centralised monitoring systems as they discourage midwives from being with the woman in the labour room (the use of use of CTG /EFM should be in accordance with Safety Notice 004/07)

Key Measures

- 9.1 All women experiencing their first labour or undergoing induction of labour using oxytocics or undertaking a vaginal birth after caesarean section, vaginal breech or vaginal twin birth receive one to one care from a midwife in labour (target 100% by 2015)
- 9.2 All maternity services provide an environment designed to keep the midwife and the mother together (target 100% by 2015)



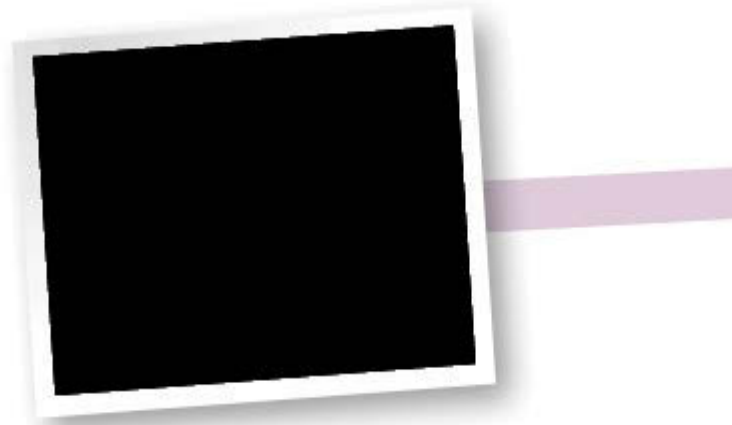
10. Provide formal debriefing in the immediate postpartum period for all women requiring primary caesarean section operation or instrumental birth with the opportunity for further discussion and information transfer

Area Health Services will:

- ensure women are offered the opportunity to talk about their birth experience with a midwife and/or doctor. This discussion should be recorded in the medical record
- provide services for ongoing counselling or support and referral as required in the postnatal period
- provide midwifery home visiting for at least 2 weeks after the baby is born which may extend to 6 weeks postnatal²⁶.

Key Measures

- 10.1 All women undergoing primary caesarean section operation or instrumental birth receive postnatal debriefing/counselling by a senior clinician (target 100% by 2015)



²⁶ World Health Organization, 1997, Care in normal birth: a practical guide. Report of a technical working group. Maternal and Newborn Health/Safe Motherhood Unit, www.who.int/making_pregnancy_safe/documents/who_fm_msm_9624/en/index.html

Appendix 2: Literature Review

Table 17: Integrative review of literature

Integrative review of literature on strategies to improve rates of CS and VBAC (1989-2009)

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Opinion leader / second opinion					
Lomas et al; 1991; Canada	1.Evaluate the effectiveness of 3 strategies to Increase TOLAC and VBAC 2. Control (1) vs Audit and feedback (2) vs nominated opinion leader engagement and education (3) 3 interventions were compared 1) 2) 3)	16 Community hospitals with \geq 10 obstetric beds from different counties randomly allocated in interventions; 76 physicians. 2 hospitals required per group (6) to reach 80% power for 25% increase in VBAC	Control vs Audit and feedback intervention = no difference, opinion leader group higher on TOLAC (46%) with successful VBAC rate of 85% TOLAC: 28.35 vs 21.4% vs 38.2% $p=0.007$ VBAC: 14.5% vs 11.8% vs 25.3% $p=0.003$ EI CS: 66.8% vs 69.7% vs 53.7% $p=0.001$	Nil	Seeking sustained change beyond study period = behavioural change
Althabe et al, 2004; South America	1.Determine whether mandatory second opinion would reduce CS 2.Established evidence based guidelines introduced & 2 nd opinion required prior to all non-emergency CS 3.Multi centre cluster RCT	36 eligible hospitals randomised in matched pairs: 18 intervention, 18 control	Relative rate reduction in CS = 7.3% (95% CI 0.2–14.5); mostly during labour (12.6%; 0.6–24.7). Did not reach 25% anticipated reduction. No difference to morbidity or mortality	intervention integrity questioned	Behavioural changes not observed to sustain change
Sloan et al, 2000; Ecuador	1.Aim to reduce overall CS by 25%	All women at the hospital who did not require mandatory CS	CS reduced by 4.5% ($P<0.001$) across 12 months	Single facility; 25% of cohort did not receive	Reduced rates only when consultant

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	2. Mandatory second opinion for all women requiring non-emergency CS 3. Quasi-experimental study with no randomisation (before and after assessment)	(N=1605). 1420 required for 80% power		2 nd opinion due to no available consultant	present, therefore generalizable behavioural change did not occur
Education / decision Aid					
Fraser et al, 1997; Nth America	1.Assess whether a prenatal education and support program would increase successful VBAC 2.Verbal education session vs information brochure 3.RCT	1275 women eligible for VBAC who intended to have a VBAC N=641, control N=634	No difference in the verbal vs brochure for attempt at VBAC (73% vs 69%; RR=1.1) or success (53% vs 49%, RR = 1.1). No difference in intended mode of birth when motivation assessed: Attempt with high motivation: 82% vs 82%, RR=1.0; VBAC: 61% vs 57%, RR 1.1.	Process of hospital selection not described therefore representative population not known	Determine education requirements Engage women before 20 weeks gestation
Farnworth et al, 2008, UK	1.Examine the impact of a decision support intervention on decision-making for VBAC 2.Routine practice with brochure for all; Additional education from DVD and midwife visit for intervention group 3.Mixed methods: quant: questionnaire to assess	32 women eligible for VBAC; 16 Control, 16 intervention; convenience sample	Decreased decisional conflict in intervention group but not stat. significant. No significant difference between groups in decision self-efficacy, knowledge and expectations. Qualitative themes suggest the decision difficulty for women in both groups.	Knowledge and expectation score not validated. No reference to power of sample size	

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	decision-making, self-efficacy, knowledge; qual: interview which was analysed thematically				
Shorten et al, 2005, Australia	1.To determine if a decision aid facilitates informed decision re mode of birth 2.All participants assessed at 4 points and intervention group given decision aid at 28 weeks gestation 3.Prospective multi-centre RCT,	227 eligible women from 3 public antenatal clinics and 3 private obstetric practices: Intervention N= 115, control N= 112	Mean difference in increased knowledge scores between 2 groups: 1.75 points (95% CI = 1.15-2.35 p<0.001); intervention group less decisional conflict p<0.05. Did not affect the decision on mode of birth	Blinding negated when woman discussed decision aid with carer.	Strategies to support clinicians with support for women
Continuity of care/r					
Homer at al, 2001; Australia	1.Test whether a model of continuity of care could reduce CS 2.Continuity of care provided by a known team of midwives and obstetricians 3.RCT	1089 eligible women randomised to continuity N=500, and to usual care N=539	Significant difference in CS rate: 13.3% in intervention group vs 17.8% (OR = 0.6, 95% CI 0.4-0.9, P=0.02)	Well designed RCT	Sample size not large enough to conclude safety for perinatal mortality
Subsequent Literature			Clinician Attitudes		
Hahiba et al, 2006, Europe	1.Explore the attitudes of obstetricians to perform a CS on maternal request in	8 European countries; hospitals with Neonatal Intensive Care Unit: 3 then	Likely factors to support maternal choice: country of practice (P<0.001), fear of litigation	Well designed study	Greater emphasis on the motivation of

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	absence of medical indication 2. Anonymous self-administered survey 3. Cluster sampling cross-sectional survey of obstetricians	recruited with NICU, 5 random samples stratified by geographical area (N=105 units; Physicians N=1530);	(=0.004), working in university hospital (P=0.001). Female with children less likely to agree (OR 0.29, (95% CI 0.20-0.42)		women's request is required
Weaver et al, 2007,UK.	1. To determine whether, and in what context, maternal requests for CS are made 2. Four sub-studies: a) Women's diaries recorded prospective experience; b) questionnaires from women recently given birth and may have discussed CS; c) semi-structured interviews with obstetricians regarding request for CS 3. Mixed methods: quantitative data from questionnaires, qualitative data from diaries and interviews which were thematically analysed	a) 2 district hospitals east Midlands: 23 multiparous and 41 primiparous pregnant women; b) 44 women interviewed after birth c) Obstetrician interviews: 24 in district hospitals (3), city hospital (1); 5 consultants with known strong views about CS purposive sample d) postal questionnaires completed: 785 consultants from the UK and Eire	Evidence of maternal request is weak All women believed in a reason for request; major factor fear for self, safest for baby. 76.8% Obstetricians cite maternal request as major factor affecting the rising CS rate. 67% cite fear of litigation 37% cite issues of training 24% cite Prev CS as a risk 23% cite current practice/guidelines 20.6% cite Breech presentation as a risk	Small number of women participants, results may not be generalizable to other areas	

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Chaillet et al, 2007, Canada	1. Examine obstetricians' barriers and solutions to implementation of guidelines for management of labour and VBAC 2. Focus groups and individual interviews 3. Qualitative study using focus groups and interviews, thematic analysis of data	3 hospitals in Montreal of different levels, 75% willing to participate.	Influencing factors: 1. Hospital: management 2. Department: leadership, policies organisation, economics, resources 3. Clinicians' motivation, attitudes, incl medico-legal concerns 4. Patient motivation	Single city	Engagement with clinicians in implementation strategies can increase compliance
Maternal Request for CS					
Flamm et al 1998, USA	1. Test hypothesis: structured collaborative effort can help to reduce CS rates safely 2. Participant organisations supported to implement change strategies 3. Action-research type approach with whole of service change	28 volunteer health services	15% of participating facilities reduced CS rate by $\geq 30\%$; additional 50% facilities achieved 10-30% reduction Cultural barriers to achieving reduced CS rates identified	Methods of data analysis not described. Study now nearly 20 years old	Whole of service change can be effective
Monari et al, 2008, Italy	1. Explore the attitudes of midwives and obstetricians toward CS	MWs N=148, OB N=100 selected from professional register	Considered CS in their unit too high: MWs 65% OB 34% (RR=1.92,95% CI 1.27-2.90, P<0.001)	Interviews conducted by female doctor, potential for professional / status bias.	Attitudes to CS differed by professional role

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	3. Structured interview with quantitative analysis of responses		Midwives regarded benefits to mother less(P=0.02) MWs greater support for VBAC: P <0.001		
Turner et al, 2008 Australia	1. To quantify the risk from vaginal delivery (VD) that pregnant women would be prepared to accept 2. Clinical scenario scripted questionnaire to elicit opinion on risk 3. Cross sectional survey: face-to-face interviews for nulliparous; postal questionnaire for clinicians	Nulliparous < 26 weeks randomly selected N=122; Clinicians recruited from professional register; Midwives N=84, Obstetricians N=166, urogynaecologists N=12, colorectal surgeon N=79	MWs and women more closely aligned in risk perception Women more willing to accept higher risk for all 17 potential complications of VD Likely to request CS: 2% women; 10% MWs, 21% obstet, 44% colorectal surgeons, 50% urogyn All risk averse for severe perineal trauma (mean utility score 0.32)	Single site for women	Attitudes to CS differed by professional role and for different clinical scenarios
Wax et al, 2005, USA	1.To determine obstetricians' attitudes and practices for patient choice for CS Questionnaire exploring attitudes to CS 3.Quantitative, anonymous self-administered questionnaire	Fellows of professional college invited to participate; 78 responded	84.5% willing to perform patient choice CS 21% desired CS for self or partner 82.1% suggest evidence supports maternal choice as valid, and 85.9% ethical considerations supports patient choice	Single state in USA similar studies done in US states found conflicting results e.g. Portland, Oregon 2-20% would perform CS for non-medical reasons	Maternal request is supported
Robson et al, 2009, Australia	1. explore the rates of maternal request for CS 3. Self-administered anonymous survey	1239 specialist obstetricians and 317 obstetric trainees across Australia	17% of CS are for maternal request 80% agreed to CS for maternal request	Responses subject to recall over time	Maternal request is supported

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	Quantitative analysis		14% would disguise the reason for CS if required		
Goodall et al, 2009, UK	1. Explore mother's perceptions of influences of health professionals on decisions for VBAC 3. Qualitative semi-structured interviews; interpretive phenomenology, thematic analysis	10 women with previous CS	Participants stated lack of knowledge to make informed decision, received probabilistic information, received latent communication; response was to relinquish control to health professionals	All white, British women and may not be generalisable to other populations	Aspects of communication between health professionals and women could be modified to increase VBAC attempts
Meddings et al, 2007, UK	1. To determine whether women could exercise informed choice for VBAC and their interpretation of their experience 3. Semi-structured interviews using a topic guide; Qualitative phenomenological study; content analysis of data	8 eligible women recruited; interviewed at 34 weeks and 6 weeks after birth	Themes: importance of informed choice and adequate information; recovery after birth, influences on bonding	Limitation to recruitment techniques (Community MWs selected from client base) could have led to biased sample	Psychosocial aspects need to be considered for women
Moffat et al, 2006, UK	1. To explore women's decision-making regarding mode of birth after a previous CS 3. Participant diaries, observations of clinical consultation and semi-structured interviews 6	Large teaching hospital, 26 eligible women	Women influenced by own experience e.g. clinical situations that changed during pregnancy Decisions for mode of birth evolved during pregnancy Uncomfortable with the responsibility for decision but wished to be involved;	Nil observed. Strength in prospective nature	Psychological factors need to be considered in decision-making

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	weeks after birth. Triangulated data analysis		Desire for information to be individualised		
M ^c Grath et al, 2009, Australia	1. To explore women's decision-making process CS after previous CS 3. Semi-structured interviews; Qualitative phenomenological study; thematic analysis of data	20 eligible women	80% of women chose CS due to fear of uterine rupture and desire to retain control Decision on mode of birth made prior to pregnancy by a majority.	Method of recruitment and decision for sample size not described	Psychological factors need to be considered in decision-making
Attitudes of practitioners towards CS					
Reime et al, 2004, Canada	1. To compare clinicians' self-reported practices, attitudes and beliefs about central issues in childbirth 3. Postal survey; Quantitative study with cluster analysis to create categories	Postal survey to all registered MWs in province, sample of GPs and obstetricians at one hospital Response MW N=55 (90.9%) GPs N=97 (69%) OB N=34 (89%)	Significant differences between clinician groups in 20 of 23 items in questionnaire. EI CS without medical indication is a woman's right: OB 50%, MWs 14.6% GP 13.6%. Belief that few women would choose VBAC: OB 27%, GP 21%, MWs 2.1% (P=0.001) Each professional group had shared beliefs to each other	Different practice arenas and exposure to different practice arenas (MWs vs GPs + OB) may have influenced opinions Sample of medical clinicians representative of one hospital	Divergence of opinion

Appendix 3: Contemporary Literature Review

Table 18: Contemporary Landscape of Literature

Contemporary Landscape: Integrated literature review 2010-2016 of strategies to improve CS and VBAC

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Education/Decision Aids					
Eden et al, 2014, Australia	1. To compare two decision-making aids on decision for VBAC 2. decision tools (one interactive, the other existing brochures on VBAC & CS) 3. RCT; pre& post birth assessment	Randomised 131 women eligible for VBAC. Convenience sample, 64 women per group required to detect an effect size of 0.5 difference in decision measures N 66 Interactive tool N 65 existing brochures	No change to the intended mode of birth after use of the decision tools Less decision conflict in 3 rd trimester with decision aid p= 0.003 Significant relationship between preferred mode of birth and actual mode p=<0.001	Insufficient number of women to formally evaluate decision difference by trimester	Recommendations: Leave decisions to later in pregnancy after initial information Individualise information to describe success rate for each woman
Continuity of care/r					
Gu et al, 2013, China	1. To determine efficacy of two models of care on decision for VBAC 2. Continuity of midwifery care vs standard obstetrician-led antenatal care. 3.RCT	Randomised 110 primiparous low risk women for 80% power 55 continuity midwife care 55 OB led antenatal care	Continuity of midwifery care reduced CS rates 33% vs 56%, increased VB rate 66% vs 43%. Increased satisfaction rates (P<0.0001), lower anxiety scores P<0.001)	Unblinded study	Recommendations Midwifery care a safe choice for women

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Tracy et al, 2013, Australia	1. To assess clinical and cost outcomes of caseload midwifery care compared with standard care 2. Eligible women from 2 sites randomised to caseload or standard care 3. Unblinded, randomised, controlled, parallel-group trial	871 to caseload, 877 to standard care	Significant decrease in EL CS (OR 0.72, 95% CI 0.52-0.99, p=0.05) Cost difference = \$566.00 (p=0.02)	Cross over of women, unblinded study for intervention but blinded for measurement of outcomes	
White et al, 2016, UK	1. Assess intended & actual mode of birth with a midwife-led VBAC service 2. Retrospective data comparison at 2 time intervals 2008 & 2011 3. Retrospective, comparative, cohort study	Two cohorts compared: 196 women with midwife-led (MW) care 209 women with Obstetric -led care (OB)	Intended VBAC: MW 93% vs OB 77% (aOR2.69). Actual VBAC MW 61% vs OB 46.9% (aOR1.79) Receiving midwifery care was the only factor that made a difference to decision-making	Cohort study potential confounding factors not considered including changes over time in practice, attitudes	Recommendations Midwifery care a safe choice for women

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Knowledge of VBAC and influence on decision-making					
Chen et al, 2011, Australia	1. determine knowledge of birth options after CS 3. Anonymous cross-sectional survey. Face validity of survey tested in pilot prior to implementation.	63 eligible women surveyed 75% (N=47) response rate; 33 eligible for inclusion. Recruited by advertising	60.6% of women (N=20) unaware of % occurrence of uterine rupture 48% (N=16) no knowledge of risks for newborn with CS 92% (N=22/24) who responded would choose CS 12.5% did not receive information on birth options	Limited sample size and survey conducted over short time period. ? representative sample as 50% were university educated	Not able to make informed choices for mode of birth due to knowledge gaps Recommendations Improved education available
Scaffidi et al, 2014, USA	1. Explore how knowledge & decision self-efficacy influenced decision for mode of birth 3. Cross sectional descriptive study using a Knowledge & Expectation tool & Decision Self-Efficacy scale administered at 22 weeks gestation	Convenience sample 51 women with prev CS. 45 women included in final analysis	Decision efficacy did not alter the mode of birth decision OR, 0.96; P=0.54); High knowledge scores were associated with decision for VBAC (55% vs 24%)	Original design powered to include 98 participants; 45 included in analysis. Knowledge & expectation scale not validated	Suggested if women are better informed they are more likely to choose TOLAC Recommendation is not consistent with other studies.
Women and Clinicians' attitudes to VBAC and CS					

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Faisal et al., 2013, Iran	1. Determine reasons Iranian primipis choose CS without medical indication 3. Semi-structured face-to-face interviews Qualitative interviews with thematic analysis	4 health centres; purposive sampling, 3 rd trimester primipis = 14 = until data saturation	Prevalent themes identified = Tocophobia; Fear of trauma to self & baby; lack of knowledge; trust in medical; distrust birth unit staff	Not representative sample of all Iranian women or generalisable	Recommendations Early assessment of women's perceptions; Education for clinicians re roles, attitudes, behaviours Guideline changes
Litorp et al, 2015, Tanzania	1. Explore women and clinicians' attitudes to CS 3. Qualitative: interviews with thematic analysis	29 participants: 13 women, 16 caregivers (midwives, medical staff)=saturation	OB & MWs more positive to CS than women. Religious, cultural factors were influential.	Specific contextual group limits generalisability	
Sharpe et al, 2015, UK	1. Explore views of women and clinicians to VBAC 3. Survey: using purposively developed tool (Questionnaire using hypothetical scenarios)	Convenience sample: 166 pregnant women, 31 midwives, 52 clinicians in 2 district hospitals	Divergence in attitudes between women and clinician groups: low risk scenarios women were supportive of choice of Elective CS. Main influencing factor was safety of the baby = Divergence in understanding of risk	Limited sample size; public facility; pilot questionnaire developed, no description of final version or validation	Recommendations: Counselling of women to include greater exploration of understanding of risk from woman's perspective

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
David et al. 2010, Australia	1. Determine the information needs of women in next birth after CS (NBAC) 3. Qualitative descriptive study; content analysis conducted. Data from telephone calls to hospital	170 telephone calls to a dedicated phone line made from NBAC women seeking information	Informational requirements of NBAC women categorised 41% women were seeking VBAC. 14% checking conflicting information. Knowledge gap exists for many women. No previous published data on the effect of woman initiated midwifery-led telephone advice line	Limitations: one cohort of women in public hospital setting	Opportunistic to have someone to speak to; health system is difficult to navigate
Deline et al. 2012, US culture specific (Amish)	1. Describe birth outcomes of one facility in relation to intervention rates 3. Retrospective analysis of medical records birth outcomes	All births (927) conducted at the birth centre 1993-2010	Overall intervention rates low; CS = 4%, TOLAC = 100% VBAC = 95% Consistent guidelines for all. Culture of expectation of TOLAC from women and clinicians can influence outcomes.	Findings are applicable to one specific cultural group and not generalisable	
Foureur et al, 2010, International	1. Assess the quality & ability of VBAC guidelines to guide clinical practice 3. Content analysis; Comparison of 6 guidelines	Purposive sample of guidelines representing key national authorities in 6 countries Six published guidelines	Guidelines are not consistent, not high level evidence but practice changed by it (ACOG) 30% less VBAC	Purposive sample of guidelines may reflect authors' bias	Recommendations Guidelines be updated to reflect current evidence

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Gardner et al, 2014, Australia	<p>1. Determine the combined effect of two management structures in improving VBAC rates</p> <p>2. Implementation of model of care for women with previous CS = responsibility for care allocated to 3 obstetricians, identified clinic for women with prev CS</p> <p>3. Prospective cohort study that compared the outcomes in a pre-post implementation design</p>	<p>Purposive sample of women with prev CS x 1 = 396</p> <p>350 women were required for study to have 80% power</p>	<p>Increased total VBAC rate 27% VBAC vs 17.2% pre = $p < 0.001$.</p> <p>Ethnic differences observed (South east Asian women preferred EL CS)</p>	<p>Single centre; non-randomised sample.</p> <p>Two interventions not studied independently, not generalisable.</p>	<p>Lead carer important for consistency due to different attitudes/preferences of clinicians.</p>
Powell Kennedy et al; 2010, UK	<p>1. Determine factors that foster or inhibit the support of normal birth</p> <p>3. Interviews with women and</p>	<p>Purposive sampling of 2 Trusts identified for work in normalising birth. Women N= 27; clinicians = 33 (MWs x 26, OB x 6, anaesth x 1)</p>	<p>Intervention rates varied between clinical teams.</p> <p>Divergent attitudes between MW & Ob about importance of normality of birth</p>	<p>2 public settings may not be generalizable.</p>	<p>Leadership was a key to implementation of factors to normalise birth.</p> <p>Strength is in the triangulation of data</p>

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	clinicians; observation of practices & organisational processes; review of guidelines; Interpretative qualitative study that combined institutional ethnography and narrative methods; thematic analysis of data		Influencing factors for intervention= ethos of normality, working the evidence, trusting women.		
Gross et al, 2015, Germany	1. Describe the variations in mode of birth after CS in relation to regional indicators 3. Examination of birth register data from 6 maternity facilities; Cross sectional study that compared outcomes for women eligible for VBAC	Birth data from 6 hospitals participating in the OptiBIRTH* RCT in 2011	Wide variations in clinical practices. VBAC planned in 36-49.8% P=0.003 Completed in 26-32.8% P=0.66 Variation in % of: VBAC initiated to completion = P<0.0001; all women with previous CS who completed VBAC = P<0.0001 Variation in mode of birth differed across regions	Data coding practices were inconsistent; clinical variables of the women not considered	Recommendation Consider organisational characteristics & regional patterns; also consider shared decision-making: women and clinician

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Ma et al, 2012. China	1. Assess the effectiveness of 3 phase intervention to reduce CS rates: 2. Education program to all staff & women & auditing surgeons' practice 3. Retrospective cohort study of all births in one facility over 6 years	Purposive sampling: Whole of service change = 25,280 births	20% reduction in CS over 6 yrs (40% vs 54.8%; P<0.001; OR: 0.56; 95% CI. VBAC increase (1.6% vs 6% P<0.001)	Specifics of the program / intervention methodology not described. Single site	
Martin et al, 2014, Australia	1. Evaluate NBAC services to improve the quality of care 2. Specific NBAC antenatal service implemented 3. Comparative descriptive study using validated assessment tools to assess confidence & self-efficacy; satisfaction with	Sequential sampling: NBAC: N=47 Control: N=45;	No difference to CS / VBAC rates between groups. At 36 weeks NBAC women had increased knowledge of behaviours to assist with labour (p=0.0004), higher self-efficacy scores (p=0.011).	Not an RCT Small sample size therefore under-powered; Participant burden may have influenced retention rate of participants	Consistent with other studies where intended mode of birth did not change but decision conflict & knowledge did Recommendation Increase MWs skills in counselling re fear

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	service 6 weeks after birth				
Gunnervik et al, 2010, Sweden	1. Investigate attitudes of Swedish midwives on mode of birth 3. Postal Survey Exploratory descriptive study using postal survey created for the study (survey has established face validity)	All Swedish Registered MWs invited (N=330); response rate 84% (N=278)	Overall homogenous attitudes. Divergence in attitude to current CS rate being appropriate (labour ward (LW) vs antenatal care (ACC) = $p<0.001$) MWs would agree to maternal request (ACC vs LW= $p<0.001$) Older age, longer time in ACC = agreement with CS as safe as VB	Validity of survey not described	Recommendation MWs reach consensus to develop consistency for women
Healy et al, 2016, International	1. Examine MWs & OB perceptions to risk and impact on care of women 2. N/A 3. Integrated review	14 articles met inclusion criteria	Overarching assumption of abnormality in birthing process leading to unnecessary surveillance / intervention Institutional risk management, lack of MW responsibility, fear of involvement in adverse outcomes, personal values	Nil	Recommendations Shift away from risk focus towards health may decrease intervention
Manohar et al, 2015, UK	1. Analyse the differences in obstetric intervention rates	All spontaneous labours one Trust hospital with 5500 births/year over 6 years (2006-2012)	Overall intervention rates did not differ; different clinicians showed preference for mode in an emergency FD vs CS	Cohort study potential confounding factors not considered including changes over time in practice, attitudes	Conclusions = standardise practices between facilities as intra-departments moderate own rates (did not seem to correlate to study)

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
	amongst obstetricians 2. N/A 3. Retrospective cohort study matching named consultant to birth outcomes		Stat sig difference in forceps (p=0.006) and CS (P=0.002) between consultants		
Marshall et al, 2015, UK	1. Evaluate the impact of implementation facilitative initiative to promote normal birth on CS rates 2. Self-assessment process using the "Focus on Normal Birth and reducing Caesarean section rates" 3. Mixed methods; data analysis of clinical outcomes, questionnaires to key stakeholders and semi-structured telephone interviews	20 UK Hospital Trusts selected from 64 applications based on characteristics. Outcome measures and questionnaires to key stakeholders = all 20 Trusts; telephone interviews in sample of 6 Trusts	Refer to the table Trust with lowest CS rate had characteristics of high interprofessional collaboration and 0.5% reduction in CS rate	No description of selection process for 20 trusts or 6 Trusts for interviews	Shared philosophy prioritising normal birth, clear interprofessional communication, strong leadership makes difference in context of care (identify barriers, facilitators)

Author, date & country	1.Aim 2.Intervention 3.Study design	Participants	Outcomes	Limitations	Comments
Determining maternal characteristics predictive of VBAC success					
Mone et al, 2014; UK	1. Compare the characteristics of women as predictors of success of VBAC 3. Descriptive, retrospective cohort study	Birth data for all women (893) with previous CS 2010-2012	Prevalent characteristics for Elective CS = < 2yr interval between births, BMI > 25, Predictors for success in VBAC = previous vaginal birth previous CS for delayed progress	Cohort study potential confounding factors not considered including changes over time in practice, attitudes	Recommendation; Clinician counselling to include factors that may influence greater success to aid decision-making
Siddiqui et al, 2013; Pakistan	1. Describe and define maternal/obstetric factors for unsuccessful VBAC 3. Cross sectional analytical study. VBAC success rates compared	122 eligible women offered VBAC. Required sample size = 116	Differences: unsuccessful VBAC N= 34 (27.9%); Maternal/obstetric factors: interval between pregnancies < 2yrs (OR = 2.5, P =0.026), BMI >25 (aOR, 4.08, P<0.001), gestation ≥ 40 weeks (OR = 3.6, p=0.017);	Outcomes may be specific to participant ethnicity	Defined guidelines with determinants considered can decrease rpt CS & useful for decision-making for women

Appendix 4: Pathways to Success: a self-improvement toolkit

Vaginal Birth after Caesarean (VBAC) pp32-34 (National Health Service Institute for Innovation and Improvement 2007)

Please tick one box of the five (5) options on right side of the statement in bold that is the best description of your attitude or opinion.

Postnatal Period Following the Caesarean Birth					
Women who have had a CS or a traumatic birth experience receive information about maternity events to allow them to make informed choices about care in a future pregnancy	Women are given information only if they ask. Usually, it is the postnatal midwife who is left to answer any questions. There is no formal record of plans for next pregnancy.	The doctor on-call sees the woman for a postnatal medical review and answers any questions she may raise.	An informal discussion takes place with each woman but is not documented and no plan for the future is made.	Doctors and midwives discuss the birth events with each woman and document the discussion and outcomes in the record. The information is not included in the discharge summary.	Doctors and midwives discuss the birth events with each woman and document the discussion and outcomes in the record. Women receive written information about the reasons for their CS. This is copied to the GP and MSP midwife.
OB	0	0	0	2	1
MW	6	6	7	4	2
There is a clearly defined discharge process	Women do not know when they are expected to go home. Delays in discharge process are caused by lack of planning (e.g. drug delays, Paediatric checks).	Women are told on the day that they will be discharged but plans may be disrupted by other influences e.g. bed shortages.	Midwives are not allowed to discharge women post CS. MSP midwives are reluctant to take over care.	There is a good discharge process within the unit but delays occur with pharmacy, paperwork etc.	Length of stay is confirmed or adjusted in the light of birth events. Women and families are involved in Length of Stay discussion.
OB	0	0	0	3	0
MW	1	4	1	12	7

Inter-pregnancy					
Women have access to support, advice and information about past and future pregnancies	Once we discharge women postnatally we are not responsible for them any more. If they want advice or help they should go to their own GP.	If we think women will need follow-up or support, we give them a maternity contact number but there is no organised process if they do ring.	There is no dedicated follow-up service that can be accessed by all women with concerns about birth.	Leaflets providing information about VBAC and obtaining support is widely available from Early Childhood Centres, GPs etc.	There is a clearly defined process for providing support and information. All women are given contact information for a range of agencies.
OB	1	0	2	0	0
MW	1	2	15	0	6
Consumers' experiences and feedback inform service development	Consumer representation is a nuisance - we do it to tick the box.	We react to complaints and consumer satisfaction surveys.	There is some consumer representation in the service	Consumer representation reflects the local community.	There are formal and informal routes for consumer involvement throughout the service.
OB	0	2	0	0	1
MW	2	11	6	0	5
Antenatal					
Women choose VBAC when clinically appropriate	<p>"Once a section always a section –the woman expects an operation."</p> <p>Midwives lack confidence and experience in VBAC.</p>	There is difference of opinion between clinicians. Midwives and women are confused about plans of care.	Clinician's support VBAC in some cases but decisions must be made by a senior doctor, women are not seen until 36 weeks in case other problems occur affecting delivery plans.	There is a designated appointment in early pregnancy to discuss VBAC. Other professionals respect the decision made.	Women and professionals are well informed about VBAC. Women arrive at their booking appointment confident about VBAC. Choices are confirmed early in pregnancy.

OB	0	0	2	1	0
MW	0	4	10	8	2
Midwives are skilled in risk assessment and confident in advising women about VBAC	Midwives actively avoid discussing mode of delivery after previous section.	Midwives feel empowered to discuss mode of delivery but are not allowed to make the final decision.	Midwives are able to discuss mode of birth with women but the decision for VBAC can only be made after discussion with consultant midwife or obstetrician.	All midwives are able to discuss and agree mode of birth with women. Women are cared for by midwives but have a named consultant.	All midwives are able to discuss and agree mode of birth and offer midwifery-led care without medical involvement.
OB	0	1	2	0	0
MW	0	10	14	1	0
We are committed to the philosophy of facilitating a normal birth with women who have experienced a CS	Women have already made their minds up when they book. If they ask for CS we accept their choice. Staff avoid discussing mode of delivery in early pregnancy.	If a woman asks for CS we accept her choice after telling her about the relative risks and benefits of CS and VBAC.	If women ask for CS with no clear indication, we go through the motions of asking for a second opinion before we say yes.	Dedicated multidisciplinary VBAC clinic provides information and support to those undecided about mode of birth.	All staff are able to discuss the benefits of VBAC. The possibility of VBAC is explored with all women.
OB	0	2	0	0	1
MW	0	15	3	1	7

Antenatal care is unaffected by previous CS	Following CS, this is automatically a high risk pregnancy and is managed by obstetricians.	These women may be at greater antenatal risk so should be seen in hospital as well as in the community.	All women with previous CS must be seen at least once by the obstetrician to confirm mode of delivery.	Women receive midwife-led care but are routinely offered an appointment with the obstetrician during their pregnancy.	Women who have had a previous CS receive midwife-led antenatal care. The referral criteria are identical with those for other pregnant women.
OB	0	0	3	0	0
MW	1	0	15	7	3
Labour and Birth					
We take pride in our VBAC rate	We don't routinely collect any figures on VBAC rates.	The majority of staff do not know what our VBAC rate is.	We can get information on VBAC rates if we ask.	Information about VBAC rates is displayed on notice boards.	Staff receive regular statistics detailing the CS rate and the VBAC rate. Women also receive information.
OB	0	2	1	0	0
MW	2	15	5	1	1
Labour is managed to optimise a normal outcome	Women are treated as high risk obstetric cases – continuous monitoring, early epidural 'just in case.' Baby must be delivered within 6 hours	These women are clearly more at risk. If labour slows down for any reason it is an indication for CS.	Individual clinicians vary in their approach. Each woman has a different management plan.	We have written guidelines but not all the clinicians use them in practice.	All staff follow agreed good practice guidelines. Women receive written information about the guidelines for VBAC.
OB	0	0	3	0	0

MW	3	5	9	2	6
Interventions are minimised to optimise VBAC outcomes	VBAC may be considered if labour begins before planned CS date at 39 weeks.	If labour hasn't started spontaneously by the due date, we would do an elective CS	If not in labour by 41 weeks we would do an elective CS.	If not in labour by 42 weeks we would do a CS.	Induction is offered at 42 weeks if conservative management is not appropriate.
OB	0	0	3	0	0
MW	4	4	12	2	2
Management of induction of labour	Women with previous CS are never induced.	We would consider ARM if cervix favourable.	We use ARM and syntocinon if the cervix is favourable.	ARM and syntocinon is used regardless of whether the cervix is favourable. Prostaglandins are not used for IOL.	The guidelines for IOL are identical for all women.
OB	0	2	1	0	0
MW	7	12	2	0	4
Management of augmentation of labour	We do not use syntocinon for augmentation – it is dangerous	We are cautious about syntocinon use – if labour is not progressing normally, it is an indication for CS.	We use syntocinon but modify the dosage regimen if there is a scar on the uterus.	We use the standard syntocinon regimen but allow less time for it to work before doing a CS.	We apply the same rules for augmentation to all women in labour.
OB	0	3	0	0	0
MW	5	17	0	0	3

Appendix 5: CVF Article

		ARTICLE IN PRESS	
WOMBI-565; No. of Pages 7		Women and Birth xxx (2016) xxx–xxx	
Contents lists available at ScienceDirect			
Women and Birth		journal homepage: www.elsevier.com/locate/wombi	
ORIGINAL RESEARCH – QUALITATIVE			
Competing Values Framework: A useful tool to define the predominant culture in a maternity setting in Australia			
Catherine Adams RM MaMid, Doctoral candidate*, Angela Dawson, Maralyn Foureur RM, PhD			
Faculty of Health, University of Technology Sydney, PO Box 123, NSW 2007, Australia			
ARTICLE INFO		ABSTRACT	
<i>Article history:</i> Received 20 April 2016 Received in revised form 13 August 2016 Accepted 11 September 2016		<i>Objective:</i> To identify the predominant culture of an organisation which could then assess readiness for change. <i>Design:</i> An exploratory design using the Competing Values Framework (CVF) as a self-administered survey tool. <i>Setting:</i> The Maternity Unit in one Australian metropolitan tertiary referral hospital. <i>Subjects:</i> All 120 clinicians (100 midwives and 20 obstetricians) employed in the maternity service were invited to participate; 26% responded. <i>Main outcome measure:</i> The identification of the predominant culture of an organisation to assess readiness for change prior to the implementation of a new policy. <i>Results:</i> The predominant culture of this maternity unit, as described by those who responded to the survey, was one of hierarchy with a focus on rules and regulations and less focus on innovation, flexibility and teamwork. These results suggest that this unit did not have readiness to change. <i>Conclusion:</i> There is value in undertaking preparatory work to gain a better understanding of the characteristics of an organisation prior to designing and implementing change. This understanding can influence additional preliminary work that may be required to increase the readiness for change and therefore increase the opportunity for successful change. The CVF is a useful tool to identify the predominant culture and characteristics of an organisation that could influence the success of change. © 2016 Australian College of Midwives. Published by Elsevier Ltd. All rights reserved.	
<i>Keywords:</i> Organisation Culture assessment Change readiness Competing values Maternity			
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http://dx.doi.org/10.1016/j.wombi.2016.09.005 1871-5192/© 2016 Australian College of Midwives. Published by Elsevier Ltd. All rights reserved.			
Please cite this article in press as: Adams C, et al. Competing Values Framework: A useful tool to define the predominant culture in a maternity setting in Australia. <i>Women Birth</i> (2016), http://dx.doi.org/10.1016/j.wombi.2016.09.005			

Appendix 6: Peer Nomination Article

Exploring a Peer Nomination Process, Attributes, and Responses of Health Professionals Nominated to Facilitate Interprofessional Collaboration

Catherine Adams, Angela Dawson, and Maralyn Foureur

BACKGROUND: When significant changes are required across an organization, a collaborative approach with wide stakeholder engagement may be beneficial. One of the challenges of stakeholder engagement lies with identifying the most appropriate participants who can most effectively facilitate the process of change.

AIM: This article aims to provide insight into a process of identifying individuals, and their attributes, who staff perceive to be effective collaborators, and change agents to decrease intervention in childbirth in one maternity setting in New South Wales, Australia.

METHODS: Midwives and obstetricians were invited to nominate a peer from each discipline who they believed to be an effective collaborator and describe the associated personal attributes of these individuals. The 5 highest scoring midwives and obstetricians were then invited to participate in a collaborative project.

FINDINGS: The attributes that were most recognized in the collaborators were their effective communication and overall positive attitudes. Collaborator's skills and knowledge were described less frequently. The nominees chosen identified that they were not usually selected by management for projects with some respondents feeling visible for the first time among their peers.

CONCLUSION: This method of peer nomination to recruit participants to facilitate collaborative organizational change may offer an effective method of engaging the whole team in such processes.

KEYWORDS: peer nomination; effective collaboration; interprofessional; health care

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Appendix 7: Participator Information Sheet



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INTERPROFESSIONAL COLLABORATION: WHAT DOES THAT LOOK LIKE?

INFORMATION FOR PARTICIPANTS:

MIDWIVES AND OBSTETRIC MEDICAL OFFICERS

Introduction

You are invited to take part in a research study that aims to explore the nature of interprofessional collaboration and what characteristics exist within an organisation to facilitate collaboration.

Background

In 2009 NSW Health implemented a policy directive, *Towards Normal Birth*, to encourage maternity services to develop and implement strategies to improve outcomes for women and babies in New South Wales. To achieve the key measures of the policy directive, it has been recommended that a collaborative approach be undertaken that involves multidisciplinary and across service participation.

Evidence from patient safety literature suggests that where there are effective collaborative systems in place there is a reduction in critical incidents and improved outcomes for patients. There is little evidence within maternity literature that describes or defines the characteristics of human behaviour or organisational systems that facilitate collaboration.

This study will be a descriptive study that aims to explore the characteristics of one organisation to gain a better understanding of interprofessional collaboration.

The study is being conducted within this institution by:

Cathy Adams Clinical Midwifery Consultant NSCCH, Professional Doctorate Student Faculty of Nursing, Midwifery & Health UTS and supervised by:

Prof Maralyn Foureur Professor of Midwifery Faculty of Nursing, Midwifery & Health UTS

Study Procedures

All midwifery and obstetric medical officers have been invited to nominate one medical officer and one midwife who demonstrate attributes of an effective collaborator. You have been recognised for your attributes and are being invited to participate.

The study will be conducted in two parts:

1. Semi structured interview of approximately one-hour duration to explore your thoughts

- on effective collaborative work environments.
2. Participation in a collaborative working party to assess the characteristics of the Maternity Service at XX Hospital. This will involve one half day workshop and 2-3 sessions of 2 hours duration to develop strategies for change. During these sessions, the interactions of the group will be observed and field notes taken.

If you agree to participate you will be asked to sign the Participant Consent Form.

Risks and Benefits

We are unable to promise you any individual benefits from participating in this research. However, it is hoped this research will shed light on ways to improve maternity practice through a greater understanding of interprofessional collaboration.

Costs

Participation in this study will not cost you anything.

Voluntary Participation

Participation in this study is voluntary. You do not have to take part in it. If you do take part, you can withdraw at any time without having to give a reason. Whatever your decision, please be assured that it will not affect your relationship with the staff or researchers interacting with you.

Confidentiality

To protect your privacy the interview data and field notes will have no identifiable information. All aspects of the study, including results will be confidential and only the researchers will have access to information on participants. All documents used and data generated throughout the study will be stored in a locked filing cabinet at the xx Hospital and destroyed 5 years after publication of the research outcomes. Individual participants will not be identifiable in any publications arising from this project. The audio-recordings, hand-written and transcribed notes will be de-identified thus removing all reference to individuals and institutions.

Further Information

Please read this information sheet and be sure you understand its contents before you decide whether or not to participate. After you have read this information, the researcher will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Cathy Adams on PH: [REDACTED].

Ethics Approval and Complaints

This study has been approved by the Human Ethics Review Committee. If you have any concerns with or complaints about the conduct of this study should contact the Executive Officer on 02 99268106 and quote protocol number 0911-313M(LR).

Appendix 8: Consent Form



Cathy Adams
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 University Technology Sydney
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INTERPROFESSIONAL COLLABORATION: WHAT DOES THAT LOOK LIKE?

CONSENT FORM FOR PARTICIPANTS:

MIDWIVES AND OBSTETRIC MEDICAL OFFICERS

I.....of.....
 have been invited to take part in a research study to explore the nature of interprofessional collaboration and what characteristics exist within an organisation to facilitate collaboration.

The aim and study design has been described to me by Cathy Adams and I understand that:

- the study is being conducted by Cathy Adams a Professional Doctorate student, UTS who will be supervised by Professor of Midwifery, Maralyn Foureur and has been approved by Human Ethics Review Committee (Harbour).
- I am being invited to participate in the study which will be conducted in two parts:
 - A semi-structured interview which will be of approximately one-hour duration which will be audiotaped
 - A working party to conduct an assessment of the maternity service at XX Hospital. This will consist of one half day session and 2-3 sessions of 2 hours. During these sessions the researcher will be taking field notes of the group behaviours
- the participants in the study will be my midwifery and obstetric colleagues from the XX Maternity Service.
- my participation is voluntary and that there are no perceived risks to me
- participation in this study will not cost me anything, nor will I be paid in addition to my work time
- I can withdraw at any time during the discussion without consequence
- I can receive a copy of the themes that emerge from the discussion and I can request a change if I believe the content is not accurate
- the information will be stored in a locked cabinet at XX and the electronic information stored in a password secured manner.
- this information will be destroyed five (5) years after completion of the study analysis
- if I have a complaint or concern about the conduct of this study I can contact Human Ethics Review Committee (Harbour) Executive Officer on 02 99268106 and quote protocol number 0911-313M(LR).

Name:.....Signature:.....Date:.....

Witness name:.....Signature:.....Date:.....